

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

Post-Effective Amendment No. 1
on
Form S-3
to
Form S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

EMCORE Corporation

New Jersey

*(State or other jurisdiction of
incorporation or organization)*

3674

*(Primary Standard Industrial
Classification Code Number)*

22-2746503

*(I.R.S. Employer
Identification Number)*

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10420 Research Road, SE
Albuquerque, New Mexico 87123
(505-332-5000)

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Approximate date of commencement of proposed sale to the public: From time to time after this post effective amendment becomes effective.

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

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(c) 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. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer", "non-accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

☐ Large accelerated filer

☒ Accelerated filer

☐ Non-accelerated filer

☐ Smaller reporting company

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 Securities and Exchange Commission, acting pursuant to Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. Neither we nor the selling stockholders named in this prospectus may sell the securities described in this document until the registration statement filed with the Securities and Exchange Commission is declared effective. This prospectus is not an offer to sell these securities and neither we nor the selling stockholders are soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION, dated February 25, 2009

9,400,003 Shares Common Stock

This prospectus relates to the registration for resale of up to 9,400,003 shares of our common stock.

The 9,400,003 shares of common stock relate to (i) 8,000,000 shares of common stock; and (ii) 1,400,003 shares of common stock issuable upon exercise of warrants. We issued the common stock and warrants to the selling stockholders named in this prospectus in a private placement that closed on February 20, 2008.

This prospectus will be used by the selling stockholders to resell their common stock. We will not receive any proceeds from this offering, though we may receive proceeds from any cash exercise of warrants by the selling stockholders. The registration of these securities does not necessarily mean that the selling stockholders will offer or sell all or any of these securities. We will incur the expenses in connection with the registration of these shares.

The selling stockholders from time to time may offer and resell the shares held by them directly or through agents or broker-dealers on terms to be determined at the time of sale. To the extent required, the names of any agent or broker-dealer and the applicable commissions or discounts and any other required information with respect to any particular offer will be set forth in a prospectus supplement that will accompany this prospectus. A prospectus supplement may also add, update or change information contained in this prospectus.

Our common stock is traded on The NASDAQ Global Market under the symbol "EMKR". The last reported sale price of our common stock on The NASDAQ Global Market on January 20, 2009 was \$1.18 per share.

**Investing in our common stock involves risks.
See "Risk Factors" beginning on page 5.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2009

You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with additional information or information different from that contained in this prospectus. Each selling stockholder is offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where those offers and sales are permitted. The information contained or incorporated by reference in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of shares of common stock offered by this prospectus.

In this prospectus, the “Company”, “EMCORE”, “we”, “us”, and “our” refer to EMCORE Corporation and its subsidiaries. Our fiscal year ends on September 30 of each calendar year. For example, fiscal year 2008 refers to the year ended September 30, 2008. EMCORE is a registered trademark of EMCORE Corporation. This prospectus contains product names, trade names and trademarks of EMCORE and other organizations.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. This means the securities described in this prospectus may be offered and sold using this prospectus from time to time as described in the “Plan of Distribution”. You should carefully read this prospectus and the information described under the heading “Where You Can Find More Information”. Under no circumstances should the delivery to you of this prospectus or any offering or sales made pursuant to this prospectus create any implication that the information contained in this prospectus is correct as of any time after the date of this prospectus.

PROSPECTUS SUMMARY

This summary highlights information about EMCORE Corporation and the offering contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus or otherwise incorporated by reference. You should carefully read the entire prospectus and other information incorporated by reference before making an investment decision, especially the information presented under the heading “Risk Factors”. In this prospectus, except as otherwise indicated or as the context may otherwise require, all references to “EMCORE”, “we”, “us” and “our” refer to EMCORE Corporation and its subsidiaries.

Business Overview

We are a provider of compound semiconductor-based components and subsystems for the broadband, fiber optic, satellite, and terrestrial solar power markets. We were established in 1984 as a New Jersey corporation. We have two reporting segments: Fiber Optics and Photovoltaics. Our Fiber Optics segment offers optical components, subsystems, and systems that enable the transmission of video, voice, and data over high-capacity fiber optic cables for high-speed data and telecommunications, cable television (“CATV”) and fiber-to-the-premises (“FTTP”) networks. Our Photovoltaics segment provides solar products for satellite and terrestrial applications. For satellite applications, we offer high-efficiency compound semiconductor-based gallium arsenide (“GaAs”) solar cells, covered interconnect cells (“CICs”) and fully integrated solar panels. For terrestrial applications, we offer concentrating photovoltaic (“CPV”) systems for utility scale solar applications as well as offering our high-efficiency GaAs solar cells and CPV components for use in solar power concentrator systems.

Our headquarters and principal executive offices are located at 10420 Research Road, SE, Albuquerque, New Mexico, 87123, and our main telephone number is (505) 332-5000. For specific information about our Company, our products or the markets we serve, please visit our website at <http://www.emcore.com>. The information contained in or connected to our website is not part of this prospectus.

Strategy

After completing several strategic acquisitions and divestitures over the past few years, we have developed a strong business focus and comprehensive product portfolio in two main sectors: Fiber Optics and Photovoltaics. Our principal objective is to maximize shareholder value by leveraging our expertise in advanced compound semiconductor technologies to be a leading provider of high-performance, cost-effective product solutions in each of the markets that we serve. Key elements of our strategy include:

Drive Business Growth, Reduce Cost, and Deliver Profitability.

With our enhanced product portfolio, expanded customer base, and established vertically-integrated, low-cost manufacturing infrastructure in our fiber optics business, we are better positioned than ever to leverage our resources and infrastructure to grow our revenue through new product introductions and gain market share. We expect several initiatives for cost reduction to come to fruition in fiscal 2009, which we believe will improve our gross profit and margins. We have also significantly reduced capital expenditures and have placed a greater emphasis on improving our working capital management. While we enjoy the moderate growth and greater visibility in our satellite photovoltaics business, we recognize the need for further investment in our CPV business to develop a more cost competitive design. Management is committed to achieving overall profitability once we deploy our Gen-III CPV system solution.

Focus Our R&D Effort on Cost Reduction and Market Share Gain.

We have invested substantially in research and development and product engineering over the past years. We have developed a clear path towards business growth and are recognized as a technology leader in both our Fiber Optics and Photovoltaics segments. In fiscal 2009, we will be focusing our R&D and product engineering efforts on product cost reduction and market share gain through more complete product solutions for our customers.

Grow Our Terrestrial Solar Power Business by Focused Effort and Strategic Partnership.

For our CPV component business, we intend to continue to secure and expand our leadership position by providing high-performance, reliable, and cost-effective products and excellent customer service. For our CPV system business, our business development focus will be in the U.S. market primarily due to the extension of the investment tax credit (ITC) and other favorable policies for renewable energy in the U.S. We expect our Gen-III CPV system solution to provide a competitive levelized cost of energy for utility scale projects in certain regions. We will continue to develop and expand strategic partnerships with major international companies to drive our business penetration and expansion into the international markets. We expect a substantial ramp-up of our CPV business to occur in the second half of 2009.

Pursue Strategic Acquisitions and Partnership Opportunities.

We are committed to the ongoing evaluation of strategic opportunities that can expand our addressable markets and strengthen our competitive position. Where appropriate, we will acquire additional products, technologies, or businesses that are complementary to, or that broaden the markets in which we operate. We plan to pursue strategic acquisitions and partnerships to increase revenue which will allow for higher overhead absorption and improved gross margins.

Issuer	EMCORE Corporation, a New Jersey corporation.
Selling stockholders	The shares of our common stock to be offered and sold using this prospectus will be offered and sold by the selling stockholders named in this prospectus or in any supplement to this prospectus. See “Principal and Selling Stockholders”.
Common offered	stock 9,400,003 shares of our common stock, no par value.
Common stock outstanding after this offering	78,337,504 shares as of February 17, 2009 (this figure does not include shares issuable upon the exercise of the warrants or any outstanding options for the purchase of our common stock).
Registration rights	Pursuant to a registration rights agreement that we entered into with the selling stockholders in connection with the private placement of the common stock and warrants, we have filed with the SEC a registration statement, of which this prospectus is a part. We are obligated under the registration rights agreement to keep the registration statement effective until the earlier of (1) the date on which the selling stockholders shall have sold all of the shares of common stock registered pursuant to the registration statement and (2) the first date as of which all of the shares of common stock registered pursuant to the registration statement may be sold without restriction pursuant to Rule 144 under the Securities Act (the “Registration Period”). We will be required to pay liquidated damages to the holders of the common stock if we fail to comply with our obligations to register the common stock within the specified time period and if we fail to keep this registration statement effective for the duration of the Registration Period, other than during grace periods that are permitted by the registration rights agreement. See “Description of Common Stock to be Registered —Registration Rights”.
No proceeds	We will not receive any proceeds from the sale by any selling stockholder of the common stock. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants, which will be used for general corporate purposes.
Trading	Our common stock is listed on The NASDAQ Global Market under the symbol “EMKR”.
Risk factors	See “Risk Factors” beginning on page 5 of this prospectus and other information contained, or incorporated by reference, in this prospectus for a discussion of factors you should consider carefully before deciding to invest in the common stock.

This prospectus covers the resale of up to 9,400,003 shares of our common stock. We issued and sold 8,000,000 shares of our common stock and warrants exercisable for 1,400,003 shares of our common stock to the selling stockholders in a private placement that closed on February 20, 2008. The summary below describes the principal terms of the offering. The “Description of Common Stock to be Registered” section of this prospectus contains a more detailed description of our common stock.

Issuer	EMCORE Corporation, a New Jersey corporation.
Selling stockholders	The shares of our common stock to be offered and sold using this prospectus will be offered and sold by the selling stockholders named in this prospectus or in any supplement to this prospectus. See “Principal and Selling Stockholders”.
Common stock offered	9,400,003 shares of our common stock, no par value.
Common stock outstanding after this offering	78,337,504 shares as of February 17, 2009 (this figure does not include shares issuable upon the exercise of the warrants or any outstanding options for the purchase of our common stock).
Registration rights	Pursuant to a registration rights agreement that we entered into with the selling stockholders in connection with the private placement of the common stock and warrants, we have filed with the SEC a registration statement, of which this prospectus is a part. We are obligated under the registration rights agreement to keep the registration statement effective until the earlier of (1) the date on which the selling stockholders shall have sold all of the shares of common stock registered pursuant to the registration statement and (2) the first date as of which all of the shares of common stock registered pursuant to the registration statement may be sold without restriction pursuant to Rule 144 under the Securities Act (the “Registration Period”). We will be required to pay liquidated damages to the holders of the common stock if we fail to comply with our obligations to register the common stock within the specified time period and if we fail to keep this registration statement effective for the duration of the Registration Period, other than during grace periods that are permitted by the registration rights agreement. See “Description of Common Stock to be Registered —Registration Rights”.
No proceeds	We will not receive any proceeds from the sale by any selling stockholder of the common stock. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants, which will be used for general corporate purposes.
Trading	Our common stock is listed on The NASDAQ Global Market under the symbol “EMKR”.
Risk factors	See “Risk Factors” beginning on page 5 of this prospectus and other information contained, or incorporated by reference, in this prospectus for a discussion of factors you should consider carefully before deciding to invest in the common stock.

RISK FACTORS

We have a history of incurring significant net losses and our future profitability is not assured.

We commenced operations in 1984 and as of December 31, 2008, we had an accumulated deficit of \$478.2 million. We incurred a net loss of \$53.4 million for the three months ended December 31, 2008, which included a \$33.8 million non-cash impairment charge related to goodwill and intangible assets. Our operating results for future periods are subject to numerous uncertainties and we cannot assure you that we will not continue to experience net losses for the foreseeable future. Although our revenue has grown in recent years, we may be unable to sustain such growth rates in light of potential changes in market or economic conditions. If we are not able to increase revenue and reduce our costs, we may not be able to achieve profitability.

We may be unable to obtain additional financing, increase our revenue and lower our costs of operations, which could adversely affect our ability to continue as a going concern.

Our ability to continue as a going concern is dependent upon our ability to obtain financing and achieve levels of revenue and cost reductions that are adequate to support our capital and operating requirements. No assurance can be given that we will be able to obtain additional financing on terms that are satisfactory to us or increase our revenue and reduce our operating costs to levels that will sufficiently support our capital and operating requirements. We may be unable to obtain adequate financing, increase our revenue and/or lower our costs. Our recurring losses raise substantial doubt about our ability to continue as a going concern. Our auditors have included in their report an explanatory paragraph regarding the recurring losses that raise substantial doubt about our ability to continue as a going concern.

We may not be able to increase or sustain our recent revenue growth rate, and we may not be able to manage our future revenue growth effectively.

Over the last five years, the Company's compound annual revenue growth rate exceeded 32%. We may not be able to increase or sustain this revenue growth rate. In February 2008, the Company acquired assets of the telecom portion of Intel Corporation's Optical Platform Division ("OPD"). In April 2008, the Company acquired the enterprise and storage assets of Intel Corporation's OPD business, as well as Intel's Connects Cables business. These acquisitions totaled approximately \$41.6 million or approximately 17% of total consolidated revenue in fiscal 2008. We may not experience similar growth of our total consolidated revenue or even similar revenue growth within our Fiber Optics segment in future periods. Accordingly, investors should not rely on the results of any prior quarterly or annual period as an indication of our future operating performance.

Our future revenue is inherently unpredictable. As a result, our operating results are likely to fluctuate from period to period, and we may fail to meet the expectations of our analysts and/or investors, which may cause volatility in our stock price and may cause our stock price to decline.

Our quarterly and annual operating results have fluctuated substantially in the past and are likely to fluctuate significantly in the future due to a variety of factors, some of which are outside of our control. Factors that could cause our quarterly or annual operating results to fluctuate include:

- market acceptance of our products;
- market demand for the products and services provided by our customers;
- disruptions or delays in our manufacturing processes or in our supply of raw materials or product components;
- changes in the timing and size of orders by our customers;
- cancellations and postponements of previously placed orders;
- reductions in prices for our products or increases in the costs of our raw materials; and
- the introduction of new products and manufacturing processes.

In addition, the limited lead times with which several of our customers order our products restrict our ability to forecast revenue. We may also experience a delay in generating or recognizing revenue for a number of reasons. For example, orders at the beginning of each quarter typically represent a small percentage of expected revenue for that quarter and are generally cancelable at any time. We depend on obtaining orders during each quarter for shipment in that quarter to achieve our revenue objectives. Failure to ship these products by the end of a quarter may adversely affect our results of operations.

Our credit facility agreement with Bank of America, N.A., contains customary covenants and defaults, including among others, limitations on dividends, incurrence of indebtedness and liens and mergers and acquisitions and may restrict our operating flexibility.

As a result of the foregoing, we believe that period-to-period comparisons of our results of operations should not be relied upon as indications of future performance. In addition, our results of operations in one or more future quarters may fail to meet the expectations of analysts or investors, which would likely result in a decline in the trading price of our common stock.

Our ability to achieve operational and material cost reductions and to realize production efficiencies for our operations is critical to our ability to achieve long-term profitability.

We have implemented a number of operational and material cost reductions and productivity improvement initiatives, which are intended to reduce our expense structure at both the cost of goods sold and the operating expense levels. Cost reduction initiatives often involve facility consolidation and re-design of our products, which requires our customers to accept and qualify the new designs, potentially creating a competitive disadvantage for our products. These initiatives can be time-consuming and disruptive to our operations and costly in the short-term. Successfully implementing these and other cost-reduction initiatives throughout our operations is critical to our future competitiveness and ability to achieve long-term profitability. However, there can be no assurance that these initiatives will be successful in creating profit margins sufficient to sustain our current operating structure and business.

Financial markets worldwide are currently in the midst of an unprecedented crisis which may have a materially adverse impact on the Company, our customers and our suppliers.

Financial markets are in an unprecedented financial crisis worldwide, affecting both debt and equity markets, which has substantially limited the amount of financing available to all companies, including companies with substantially greater resources, better credit ratings and more successful operating histories than us. It is impossible to predict how long this crisis will last or how it will be resolved. It may, however, have a materially adverse effect on the Company for a number of reasons, such as:

- The Company's historic lack of profitability has caused it to consume cash, through acquisitions, operations and as a result of the research and development and capital expenditures necessary to expand the market which the Company serves (particularly the terrestrial solar market), as discussed in more detail below. The Company may be unable to acquire the cash necessary to finance these activities from either the debt or the equity markets and as a result the Company may be unable to continue operations.
- The Company's fiber optics products are sold principally to large publicly held companies which are also dependent on public debt and equity markets. Our customers may be unable to obtain the financing necessary to continue their own operations.
- The market for the products of the Company's fiber optics customers, into which the Company's fiber optics products are incorporated, is dependent on capital spending from telecommunications and data communications companies, which may also be adversely affected by the lack of financing.
- The market for the Company's satellite solar cells may also be adversely affected by the worldwide financial crisis, because the market for commercial satellites depends on capital spending by telecommunications companies and the market for military satellites depends on resources allocated for military intelligence spending, which may be restricted. The market for the Company's terrestrial solar products is dependent on the availability of project financing for photovoltaic projects, which may no longer be available, and is also largely dependent on government support of various types, such as investment tax credits, which may no longer be available as governments allocate scarce resources to deal with the financial crisis.
- A reduction in the Company's sales will adversely affect the Company's ability to draw on its existing line of credit with Bank of America because that line of credit is largely dependent on the level of the Company's accounts receivable.

In addition, the worldwide financial crisis may adversely affect certain assets held by the Company. Historically, the Company has invested in securities with an auction reset feature ("auction rate securities"). Beginning in February 2008, the auction rate securities market experienced a significant increase in the number of failed auctions, resulting from a lack of liquidity, which occurs when sell orders exceed buy orders, and does not necessarily signify a default by the issuer. In February 2008, the auction market failed for the Company's auction rate securities, which meant the Company was unable to sell its investments in auction rate securities. At September 30, 2008, the Company had approximately \$3.1 million in auction rate securities. For failed auctions, we continue to earn interest on these investments at the maximum contractual rate as the issuer is obligated under contractual terms to pay penalty rates should auctions fail. The underlying assets for \$1.7 million of this total are currently AAA rated, the highest rating by a rating agency. The remaining \$1.4 million of investments are securities whose underlying assets are primarily student loans which are substantially backed by the U.S. Government. In October 2008, the Company received agreements from its investment brokers announcing settlement of the auction rate securities at 100% par value, of which \$1.7 million was settled in November 2008 and \$1.4 million is expected to be settled by June 2010. The Company classified \$1.7 million as a current asset and the remaining \$1.4 million as a long-term asset based on the expected settlement dates. Because we expect to receive full value for all securities, we have not recorded any impairment on these investments as of December 31, 2008. If we are unable to liquidate and settle these auction rate securities on favorable terms and conditions, such liquidity limitations could have a material adverse effect on the Company's business, financial condition, results of operations, and cash flow.

The market price for our common stock has experienced significant price and volume volatility and is likely to continue to experience significant volatility in the future. This volatility may impair our ability to finance strategic transactions with our stock and otherwise harm our business.

The closing price of our common stock fluctuated from a high of \$15.30 per share to a low of \$4.46 per share during the year ended September 30, 2008. As of February 17, 2009 our stock price was \$0.80. Our stock price is likely to experience significant volatility in the future as a result of numerous factors outside our control. Significant declines in our stock price may interfere with our ability to raise additional funds through equity financing or to finance strategic transactions with our stock. We have historically used equity incentive compensation as part of our overall compensation arrangements. The effectiveness of equity incentive compensation in retaining key employees may be adversely impacted by volatility in our stock price. In addition, there may be increased risk of securities litigation following periods of fluctuations in our stock price. These and other consequences of volatility in our stock price could have the effect of diverting management's attention and could materially harm our business, and could be exacerbated by the current worldwide financial crisis.

We have significant liquidity and capital requirements and may require additional capital in the future. If we are unable to obtain the additional capital necessary to meet our requirements, our business may be adversely affected.

Historically, the Company has consumed cash from operations. We had negative cash flow from operations of approximately \$21.1 million for the three months ended December 31, 2008. We have managed our liquidity situation through a series of cost reduction initiatives, capital markets transactions and the sale of assets. We had approximately \$75.4 million in working capital as of December 31, 2008. The global credit market crisis has had a dramatic effect on the markets we serve and has created a substantially more difficult business environment for us. We do not believe it is likely that these adverse economic conditions, and their effect on the technology industry, will improve significantly in the near term, notwithstanding the unprecedented intervention by the U.S. and other governments in the global banking and financial systems.

If our cash on hand is not sufficient to fund the cash used by our operating activities and meet our other liquidity requirements, we will seek to obtain additional equity or debt financing or dispose of assets to provide additional working capital in the future.

Due to the unpredictable nature of the capital markets, particularly in the technology sector, we cannot assure you that we will be able to raise additional capital if and when it is required, especially if we experience disappointing operating results. If adequate funds are not available or not available on

acceptable terms, our ability to continue to fund expansion, develop and enhance products and services, or otherwise respond to competitive pressures may be severely limited. Such a limitation could have a material adverse effect on our business, financial condition, results of operations and cash flow.

The market for our terrestrial solar power products for utility-scale applications may take time to develop, is rapidly changing and extremely price-sensitive, involves issues with which the Company has little experience, and is currently dependent on the policy decisions of governments both inside and outside the United States.

We have invested and intend to continue to invest significant resources in the adaptation of our high-efficiency compound semiconductor-based GaAs solar cell products for terrestrial applications, including the sale of both concentrator photovoltaics (“CPV”) components and systems. We generated our first revenue from the sale of CPV systems in 2008, which involved the design, manufacture and installation of large and complex structures intended for outdoor operation, with which the Company has had no previous experience.

Factors such as changes in energy prices or the development of new and efficient alternative energy technologies could also limit growth in, or reduce the market for, our terrestrial solar power products. In addition, we experienced difficulties in applying our satellite-based solar products to terrestrial applications. We may experience further difficulties in the future in competing with new and emerging terrestrial solar power products, which we have determined to be extremely price sensitive and rapidly changing as well as obtaining financing for utility-scale projects utilizing our technology, particularly in view of the current worldwide financial crisis.

We have determined that the terrestrial solar power business will require substantial additional funding for the hiring of employees, research and development and investment in capital equipment in order to successfully compete. In addition, historically much of the market for CPV systems has been outside the U.S. This has involved partnering with non-U.S. entities, which (because terrestrial solar power generation is a relatively new industry) may have little experience in the field and which may be new companies. Participation in non-U.S. markets will involve evaluation and compliance with non-U.S. laws, regulations, and government electric supply contracts which the Company has limited experience in. The rates available under non-U.S. government electric supply contracts are subject to policy decisions of these governments, which can change in unpredictable ways. Because of a reduction in rates offered under non-U.S. electric supply contracts, we believe that most of our future business in the near term will involve projects located within the United States, which has a substantially less developed program for encouraging the use of solar power and where the economic competitiveness of our products will be even more significant. There can be no assurance that our bids on solar power installations will be accepted, that we will win any of these bids, that our CPV systems will be qualified for these projects, or that governments will continue to offer electric supply contracts and other incentives that will make our products economically viable. If our terrestrial solar power cell products are not cost competitive or accepted by the market, our business, financial condition and results of operations may be materially and adversely affected.

Successful deployment of our solar power systems may require us to assume roles with respect to solar power projects with which we have limited or no experience (such as acting as general contractor) and which may expose us to certain financial risks (such as cost overruns and performance guaranties) which we may not have the expertise to properly evaluate or manage. In addition, since we cannot test our CPV components and solar power systems for the duration of our standard 20-year warranty period, we may be subject to unexpected warranty expense; if we are subject to warranty and product liability claims, such claims could adversely affect our business, financial condition, results of operations, and cash flow.

The competitive environment in which our CPV solar power systems business operates may require us to arrange financing for our customer’s projects and/or undertake post-sale customer obligations. If we are unable to arrange adequate financing or if our post-sale customer obligations are more costly than expected, our revenue and financial results could be materially and adversely affected.

We may arrange third-party financing for our end customer’s solar projects. Additionally, we may be required as a condition of financing or at the request of our end customer to undertake certain post-sale obligations such as:

- System output performance guaranties;
- System maintenance;
- Liquidated damage payments or customer termination rights if the system is not commissioned within specified timeframes;
- Guaranties of certain minimum residual value of the system at specified future dates; and
- System termination clauses whereby we could be required to buy-back a customer’s system at fair value on specified future dates.

Such financing arrangements and post-sale obligations involve complex accounting analyses and judgments regarding the timing of revenue and expense recognition and in certain situations these factors may require us to defer revenue recognition until projects are completed, which could adversely affect revenue in a particular period.

Due to the recent tightening of credit markets and concerns regarding the availability of credit, our customers may be delayed in obtaining, or may not be able to obtain, necessary financing for their purchases of solar power systems. If we are unable to arrange adequate financing or if our post-sale customer obligations are more costly than expected, our revenue and financial results could be materially and adversely affected.

Our Photovoltaics segment recognizes certain contract revenue on a “percentage-of-completion” basis and upon the achievement of contractual milestones and any delay or cancellation of a project could adversely affect our business.

Our Photovoltaics segment recognizes certain revenue on a “percentage-of-completion” basis and, as a result, revenue from this segment is driven by the performance of our contractual obligations. The percentage-of-completion method of accounting for revenue recognition is inherently subjective because it relies on management estimates of total project cost as a basis for recognizing revenue and profit. Accordingly, revenue and profit we have recognized under the percentage-of-completion method are potentially subject to adjustments in subsequent periods based on refinements in estimated costs of project completion that could materially impact our future revenue and profit.

As with any project-related business, there is the potential for delays within any particular customer project. Variation of project timelines and estimates may impact our ability to recognize revenue in a particular period. Moreover, incurring penalties involving the return of the contract price to the customer for failure to timely install one project could negatively impact our ability to continue to recognize revenue on a “percentage-of-completion” basis generally for

other projects. In addition, certain customer contracts may include payment milestones due at specified points during a project. Because our Photovoltaics segment usually must invest substantial time and incur significant expense in advance of achieving milestones and the receipt of payment, failure to achieve such milestones could adversely affect our business, financial condition, results of operations, and cash flows.

As supply of polysilicon increases, the corresponding increase in the global supply of silicon-based solar cells and panels may cause substantial downward pressure on the prices of our terrestrial solar power products, resulting in lower revenues.

As additional polysilicon becomes available, we expect solar panel production globally to increase. Decreases in polysilicon pricing and increases in silicon-based solar panel production could each result in substantial downward pressure on the price of solar cells and panels, including our terrestrial solar power products. Such price reductions could have a negative impact on our revenue, and our business, financial condition results of operations and cash flows may be materially and adversely affected.

We are substantially dependent on a small number of customers and the loss of any one of these customers could adversely affect our business, financial condition and results of operations.

In fiscal 2008, 2007 and 2006, our top five customers accounted for 46%, 49%, and 39%, respectively of our total annual consolidated revenue. There can be no assurance that we will continue to achieve historical levels of sales of our products to our largest customers. Even though our customer base is expected to increase and our revenue streams to diversify, a substantial portion of our net revenues could continue to depend on sales to a limited number of customers. Our agreements with these customers may be cancelled if we fail to meet certain product specifications or materially breach the agreement, and our customers may seek to renegotiate the terms of current agreements or renewals. The loss of or a reduction in sales to one or more of our larger customers could have a material adverse effect on our business, financial condition and results of operations.

Long-term, firm commitment supply agreements could result in insufficient or excess inventory or place us at a competitive disadvantage.

We manufacture our products utilizing materials, components, and services provided by third parties. We seek to obtain a lower cost of inventory by negotiating multi-year, binding contractual commitments directly with our suppliers. Under such agreements, we may be required to purchase a specified quantity of products or use a certain amount of services, which is often over a period of twelve months or more. We also may be required to make substantial prepayments or issue secured letters of credit to these suppliers against future deliveries. These contractual commitments, or any other “take or pay” agreement we enter into, allows the supplier to invoice us for the full purchase price of product or services that we are under contract for, whether or not we actually order the required volume or services. If for any reason we fail to order the required volume or services, the resulting monetary damages could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

We do not obtain contracts or commitments from customers for all of our products manufactured with materials purchased under such firm commitment contracts. Instead, we rely on our long-term internal forecasts to determine the timing of our production schedules and the volume and mix of products to be manufactured. The level and timing of orders placed by customers may vary for many reasons. As a result, at any particular time, we may have insufficient or excess inventory, which could render us unable to fulfill customer orders or increase our cost of production. This would place us at a competitive disadvantage to our competitors, and could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Long-term contractual commitments also expose us to specific counter-party risk, which can be magnified when dealing with suppliers without a long, stable production and financial history. For example, if one or more of our contractual counterparties is unable or unwilling to provide us with the contracted amount of product, we could be required to attempt to obtain product in the open market, which could be unavailable at that time, or only available at prices in excess of our contracted prices. In addition, in the event any such supplier experiences financial difficulties, it may be difficult or impossible, or may require substantial time and expense, for us to recover any or all of our prepayments. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Our operating results could be harmed if we lose access to sole or limited sources of materials, components or services.

We currently obtain some materials, components and services used in our products from limited or single sources. We generally do not carry significant inventories of any raw materials. Because we often do not account for a significant part of our suppliers’ businesses, we may not have access to sufficient capacity from these suppliers in periods of high demand. In addition, since we generally do not have guaranteed supply arrangements with our suppliers, we risk serious disruption to our operations if an important supplier terminates product lines, changes business focus, or goes out of business. Because some of these suppliers are located overseas, we may be faced with higher costs of purchasing these materials if the U.S. dollar weakens against other currencies. If we were to change any of our limited or sole source suppliers, we would be required to re-qualify each new supplier. Re-qualification could prevent or delay product shipments that could materially adversely affect our results of operations. In addition, our reliance on these suppliers may materially adversely 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 adversely affected.

If our contract manufacturers fail to deliver quality products at reasonable prices and on a timely basis, our business, financial condition and results of operations could be materially adversely affected.

We are increasing our use of contract manufacturers located outside of the U.S. as a less-expensive alternative to performing our own manufacturing of certain products. Contract manufacturers in Asia currently manufacture a significant portion of our high-volume fiber optics products. We supply inventory to our contract manufacturers and we bear the risk of loss, theft or damage to our inventory while it is held in their facilities.

If these contract manufacturers do not fulfill their obligations to us, or if we do not properly manage these relationships and the transition of production to these contract manufacturers, our existing customer relationships may suffer. In addition, by undertaking these activities, we run the risk that the reputation and competitiveness of our products and services may deteriorate as a result of the reduction of our ability to oversee and control quality and delivery schedules.

The use of contract manufacturers located outside of the U.S. also subjects us to the following additional risks that could significantly impair our ability to source our contract manufacturing requirements internationally, including:

- unexpected changes in regulatory requirements;
- legal uncertainties regarding liability, tariffs and other trade barriers;
- inadequate protection of intellectual property in some countries;
- greater incidence of shipping delays;
- greater difficulty in hiring talent needed to oversee manufacturing operations;
- potential political and economic instability; and
- potential adverse actions by the incoming Obama Administration pursuant to its stated intention to reduce the loss of U.S. jobs.

Prior to our customers accepting products manufactured at our contract manufacturers, they must requalify the product and manufacturing processes. The qualification process can be lengthy and expensive, with no guarantee that any particular product qualification process will lead to profitable product sales. The qualification process determines whether the product manufactured at our contract manufacturer achieves our customers' quality, performance and reliability standards. Our expectations as to the time periods required to qualify a product line and ship products in volumes to customers may be erroneous. Delays in qualification can impair the expected timing of the transfer of a product line to our contract manufacturer and may impair the expected amount of sales of the affected products. We may, in fact, experience delays in obtaining qualification of products produced by our contract manufacturers and, therefore, our operating results and customer relationships could be materially adversely affected.

If we do not keep pace with rapid technological change, our products may not be competitive.

We compete in markets that are characterized by rapid technological change, frequent new product introductions, changes in customer requirements, evolving industry standards, continuous improvement in products and the use of our existing products in new applications. We may not be able to develop the underlying core technologies necessary to create new products and enhancements at the same rate as or faster than our competitors, or to license the technology from third parties that is necessary for our products.

Product development delays may result from numerous factors, including:

- changing product specifications and customer requirements;
- unanticipated engineering complexities;
- expense reduction measures we have implemented and others we may implement;
- difficulties in hiring and retaining necessary technical personnel; and
- difficulties in allocating engineering resources and overcoming resource limitations.

We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully, if at all, or on a timely, cost effective or repeatable basis. Our future performance will depend on our successful development and introduction of, as well as market acceptance of, new and enhanced products that address market changes as well as current and potential customer requirements and our ability to respond effectively to product announcements by competitors, technological changes or emerging industry standards. 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. If we incur budget overruns or delays in our research and development efforts, our business, financial condition and results of operations may be materially adversely affected.

The competitive and rapidly evolving nature of our industry has in the past resulted and is likely in the future to result in reductions in our product prices and periods of reduced demand for our products.

We face substantial competition in each of our reporting segments from a number of companies, many of which have greater financial, marketing, manufacturing and technical resources than us. Larger-sized competitors often spend more on research and development, which could give those competitors an advantage in meeting customer demands and introducing technologically innovative products before we do. 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 and more efficient production of existing products by our competitors has resulted and is likely in the future to result in price reductions and increases in expenses and reduced demand for our products. In addition, some of our competitors may be willing to provide their products at lower prices, accept a lower profit margin or expend more capital in order to obtain or retain business. Competitive pressures have required us to reduce the prices of some of our products. These competitive forces could diminish our market share and gross margins, resulting in a material adverse affect on our business, financial condition and results of operations.

New competitors may also enter our markets, including some of our current and potential customers who may attempt to integrate their operations by producing their own components and subsystems or acquiring one of our competitors, thereby reducing demand for our products. In addition, rapid product development cycles, increasing price competition due to maturation of technologies, the emergence of new competitors in Asia with lower cost structures and industry consolidation resulting in competitors with greater financial, marketing and technical resources could result in lower prices or reduced demand for our products.

Expected and actual introductions of new and enhanced products may cause our customers to defer or cancel orders for existing products and may cause our products to become obsolete. A slowdown in demand for existing products ahead of a new product introduction could result in a write-down in the value of inventory on hand related to existing products. We have in the past experienced a slowdown in demand for existing products and delays in new product development and such delays may occur in the future. To the extent customers defer or cancel orders for existing products due to a slowdown in demand or in anticipation of a new product release or if there is any delay in development or introduction of our new products or enhancements of our products, our business, financial condition and results of operations could be materially adversely affected.

Our products are difficult to manufacture. Our production could be disrupted and our results will suffer if our production yields are low as a result of manufacturing difficulties.

We manufacture many of our wafers and devices in our own production facilities. Difficulties in the production process, such as contamination, raw material quality issues, human error or equipment failure, can cause a substantial percentage of wafers and devices to be nonfunctional. Lower-than-expected production yields may delay shipments or result in unexpected levels of warranty claims, either of which can materially adversely affect our results of operations. We have experienced difficulties in achieving planned yields in the past, particularly in pre-production and upon initial commencement of full production volumes, which have adversely affected our gross margins. Because the majority of our manufacturing costs are fixed, achieving planned production yields is critical to our results of operations. Because we manufacture many of our products in a single facility, we have greater risk of interruption in manufacturing resulting from fire, natural disaster, equipment failures, or similar events than we would if we had back-up facilities available for manufacturing these products. We could also incur significant costs to repair and/or replace products that are defective and in some cases costly product redesigns and/or rework may be required to correct a defect. Additionally, any defect could adversely affect our reputation and result in the loss of future orders.

Some of the capital equipment used in the manufacture of our products have been developed and made specifically for us, is not readily available from multiple vendors and would be difficult to repair or replace if it were to become damaged or stop working. If any of these suppliers were to experience financial difficulties or go out of business, or if there were any damage to or a breakdown of our manufacturing equipment at a time when we are manufacturing commercial quantities of our products, our business, financial condition and results of operations could be materially adversely affected.

We face lengthy sales and qualifications cycles for our new products and, in many cases, must invest a substantial amount of time and funds before we receive orders.

Most of our products are tested by current and potential customers to determine whether they meet customer or industry specifications. The length of the qualification process, which can span a year or more, varies substantially by product and customer, and thus can cause our results of operations to be unpredictable. During a given qualification period, we invest significant resources and allocate substantial production capacity to manufacture these new products prior to any commitment to purchase by customers. In addition, it is difficult to obtain new customers during the qualification period as customers are reluctant to expend the resources necessary to qualify a new supplier if they have one or more existing qualified sources. If we are unable to meet applicable specifications or do not receive sufficient orders to profitably use the allocated production capacity, our business, financial condition and results of operations could be materially 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 future market acceptance of our products. Because of the lengthy lead times required for product development and the changes in technology that typically occur while a product is being developed, it is difficult to accurately estimate customer demand for any given product. If our products do not achieve an adequate level of customer demand, our business, financial condition and results of operations could be materially adversely affected.

Shifts in industry-wide demands and inventories could result in significant inventory write-downs.

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

If future demand or market conditions are less favorable than our estimates, inventory write-downs may be required. We cannot assure investors that obsolete or excess inventories, which may result from unanticipated changes in the estimated total demand for our products and/or the estimated life cycles of the end products into which our products are designed, will not affect us beyond the inventory charges that we have already taken.

The types of sales contracts which we use in the markets which we serve subject us to unique risks in each of those markets.

In our Fiber Optics reporting segment, we generally do not have long-term contracts with our customers and we typically sell our products pursuant to purchase orders with short lead times. As a result, our customers could stop purchasing our products at any time and we must fulfill orders in a timely manner to keep our customers. Risks associated with the absence of long-term contracts with our customers include the following:

- our customers can stop purchasing our products at any time without penalty;
- our customers may purchase products from our competitors; and
- our customers are not required to make minimum purchases.

These risks are increased by the fact that our customers in this market are large, sophisticated companies which have considerable purchasing power and control over their suppliers. In the Fiber Optics market, we generally sell our products pursuant to individual purchase orders, which often have extremely short lead times. If we are unable to fulfill these orders in a timely manner, it is likely that we will lose sales and customers. In addition, we sell some of our products to the U.S. Government and governmental entities. These contracts are generally subject to termination for convenience provisions and may be cancelled at any time.

Cancellations or rescheduling of customer orders could result in the delay or loss of anticipated sales without allowing us sufficient time to reduce, or delay the incurrence of, our corresponding inventory and operating expenses. In addition, changes in forecasts or the timing of orders from these or other customers expose us to the risks of inventory shortages or excess inventory.

In contrast, in our Photovoltaics reporting segment, we generally enter into long-term firm fixed-price contracts, which could subject us to losses if we have cost overruns. While firm fixed-price contracts allow us to benefit from cost savings, they also expose us to the risk of cost overruns. If the initial estimates we used to determine the contract price and the cost to perform the work prove to be incorrect, we could incur losses. In addition, some of our contracts have specific provisions relating to cost, schedule, and performance. If we fail to meet the terms specified in those contracts, then our cost to perform the work could increase or our price could be reduced, which would adversely affect our financial condition. These programs have risk for reach-forward losses if our estimated costs exceed our estimated price.

Fixed-price development work inherently has more uncertainty than production contracts and, therefore, more variability in estimates of the cost to complete the work. Many of these development programs have very complex designs. As technical or quality issues arise, we may experience schedule delays and cost impacts, which could increase our estimated cost to perform the work or reduce our estimated price, either of which could adversely affect our financial condition. Some fixed-price development contracts include initial production units in their scope of work. Successful performance of these contracts depends on our ability to meet production specifications and delivery rates. If we are unable to perform and deliver to contract requirements, our contract price could be reduced through the incorporation of liquidated damages, termination of the contract for default, or other financially significant exposure. Management uses its best judgment to estimate the cost to perform the work and the price we will eventually be paid on fixed-price development programs. While we believe the cost and price estimates incorporated in the financial statements are appropriate, future events could result in either favorable or unfavorable adjustments to those estimates.

The risk of fixed price contracts in the photovoltaics market is increased by the new and rapidly changing nature of the terrestrial photovoltaics market and the Company's lack of experience in that market.

We are a party to several U.S. Government contracts, which are subject to unique risks.

In 2008, 5% of our revenue was derived from U.S. Government contracts. We intend to continue our policy of selectively pursuing contract research, product development and market development programs funded by various agencies of the U.S. federal and state governments to complement and enhance our own resources. Depending on the type of contract, funding from government grants is either recorded as revenue or as an offset to our research and development expense.

In addition to normal business risks, our contracts with the U.S. Government are subject to unique risks, some of which are beyond our control. We have had government contracts modified, curtailed or terminated in the past and we expect this will continue to happen from time to time.

The funding of U.S. Government programs is subject to Congressional appropriations. Many of the U.S. Government programs in which we participate may extend for several years; however, these programs are normally funded annually. Long-term government contracts and related orders are subject to cancellation if appropriations for subsequent performance periods are not made. The termination of funding for a U.S. Government program would result in a loss of anticipated future revenue attributable to that program, which could have a material adverse effect on our operations.

The U.S. Government may modify, curtail, or terminate our contracts. The U.S. Government may modify, curtail, or terminate its contracts and subcontracts without prior notice at its convenience upon payment for work done and commitments made at the time of termination. A reduction or discontinuance of these programs or of our participation in these programs would materially increase our research and development expenses, which would adversely affect our profitability and could impair our ability to develop our solar power products and services. Modification, curtailment or termination of our major programs or contracts could have a material adverse effect on our results of operations and financial condition.

Our contract costs are subject to audits by U.S. Government agencies. U.S. Government representatives may audit the costs we incur on our U.S. Government contracts, including allocated indirect costs. Such audits could result in adjustments to our contract costs. Any costs found to be improperly allocated to a specific contract will not be reimbursed, and such costs already reimbursed must be refunded. We have recorded contract revenue based upon costs we expect to realize upon final audit. However, we do not know the outcome of any future audits and adjustments and we may be required to reduce our revenue or profits upon completion and final negotiation of audits. If any audit uncovers improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U.S. Government. We have been audited in the past by the U.S. Government and expect that we will be in the future.

Our business is subject to potential U.S. Government review. We are sometimes subject to certain U.S. Government reviews of our business practices due to our participation in government contracts. Any such inquiry or investigation could potentially result in a material adverse effect on our results of operations and financial condition.

Our U.S. Government business is also subject to specific procurement regulations and other requirements. These requirements, although customary in U.S. Government contracts, increase our performance and compliance costs. These costs might increase in the future, reducing our margins, which could have a negative effect on our financial condition. Failure to comply with these regulations and requirements could lead to suspension or debarment, for cause, from U.S. Government contracting or subcontracting for a period of time and could have an adverse effect on our reputation and ability to secure future U.S. Government contracts.

We have significant international sales, which expose us to additional risks and uncertainties.

Sales to customers located outside the U.S. accounted for approximately 44% of our consolidated revenue in fiscal 2008, 27% of our revenue in fiscal 2007 and 24% of our revenue in fiscal 2006. 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 revenue as we seek international expansion opportunities. Because of this, the following international commercial risks may materially adversely affect our revenue:

- political and economic instability or changes in U.S. Government policy with respect to these foreign countries may inhibit export of our devices and limit potential customers' access to U.S. dollars in a country or region in which those potential customers are located;
- we may experience difficulties in the timeliness of collection of foreign accounts receivable and be forced to write off these receivables;
- tariffs and other barriers may make our devices less cost competitive;
- the laws of certain foreign countries may not adequately protect our trade secrets and intellectual property or may be burdensome to comply with;
- potentially adverse tax consequences to our customers may damage our cost competitiveness;
- currency fluctuations, which may make our products less cost competitive, affecting overseas demand for our products or otherwise adversely affect our business; and
- language and other cultural barriers may require us to expend additional resources competing in foreign markets or hinder our ability to effectively compete.

In addition, we may be exposed to additional legal risks under the laws of both the countries in which we operate and in the United States, including the Foreign Corrupt Practices Act.

We are increasing operations in China, which exposes us to risks inherent in doing business in China.

In May 2007, EMCORE Hong Kong, Ltd., a wholly owned subsidiary of EMCORE Corporation, announced the opening of a new manufacturing facility in Langfang, China. Our new company, Langfang EMCORE Optoelectronics Co. Ltd., is located approximately 20 miles southeast of Beijing and currently occupies a space of 44,000 square feet with a Class-10,000 clean room for optoelectronic device packaging. Another 40,000 square feet is available for future expansion. We have begun the transfer of our most cost sensitive optoelectronic devices to this facility. This facility, along with a strategic alignment with our existing contract-manufacturing partners, should enable us to improve our cost structure and gross margins across product lines. We expect to develop and provide improved service to our global customers by having a local presence in Asia. As we continue to consolidate our manufacturing operations, we will incur additional costs to transfer product lines to our China facility, including costs of qualification testing with our customers, which could have a material adverse impact on our operating results and financial condition.

Our China-based activities are subject to greater political, legal and economic risks than those faced by our other operations. In particular, the political, legal and economic climate in China (both at national and regional levels) is extremely fluid and unpredictable. Our ability to operate in China may be adversely affected by changes in Chinese laws and regulations, such as those relating to taxation, import and export tariffs, environmental regulations, land use rights, intellectual property and other matters, which laws and regulations remain highly underdeveloped and subject to change, with little or no prior notice, for political or other reasons. Moreover, the enforceability of applicable existing Chinese laws and regulations is uncertain. In addition, we may not obtain the requisite legal permits to continue to operate in China and costs or operational limitations may be imposed in connection with obtaining and complying with such permits. Our business could be materially harmed by any changes in the political, legal or economic climate in China or the inability to enforce applicable Chinese laws and regulations.

As a result of a government order to ration power for industrial use, operations in our China facility may be subject to possible interruptions or shutdowns, adversely affecting our ability to complete manufacturing commitments on a timely basis. If we are required to make significant investments in generating capacity to sustain uninterrupted operations at our facility, we may not realize the reductions in costs anticipated from our expansion in China. In addition, future outbreaks of avian influenza, or other communicable diseases, could result in quarantines or closures of our facility, thereby disrupting our operations and expansion in China.

We intend to export the majority of the products manufactured at our facilities in China. Accordingly, upon application to and approval by the relevant governmental authorities, we will not be subject to certain Chinese taxes and are exempt from customs duty assessment on imported components or materials when the finished products are exported from China. We are, however, required to pay income taxes in China, subject to certain tax relief. As the Chinese trade regulations are in a state of flux, we may become subject to other forms of taxation and duty assessments in China or may be required to pay for export license fees in the future. In the event that we become subject to any increased taxes or new forms of taxation imposed by authorities in China, our results of operations could be materially and adversely affected.

We will lose sales if we are unable to obtain government authorization to export our products.

Exports of our products are subject to export controls imposed by the U.S. Government and administered by the U.S. Departments of State and Commerce. In certain instances, these regulations may require pre-shipment authorization from the administering department. For products subject to the Export Administration Regulations ("EAR") administered by the Department of Commerce's Bureau of Industry and Security, the requirement for a license is dependent on the type and end use of the product, the final destination and the identity of the end user. Virtually all exports of products subject to the International Traffic in Arms Regulations ("ITAR") regulations administered by the Department of State's Directorate of Defense Trade Controls require a license. Most of our fiber optics products and our terrestrial solar power products are subject to EAR; however, certain fiber optics products and all of our commercially available solar cell satellite power products are currently subject to ITAR.

Given the current global political climate, obtaining export licenses can be difficult and time-consuming. Failure to obtain export licenses for product shipments could significantly reduce our revenue and could materially adversely affect our business, financial condition and results of operations. Compliance with U.S. Government regulations may also subject us to additional fees and costs. The absence of comparable restrictions on competitors in those countries may adversely affect our competitive position.

Protecting our trade secrets and obtaining patent protection is critical to our ability to effectively compete.

Our success and competitive position depend on protecting our trade secrets and other intellectual property. Our strategy is to rely on trade secrets and patents to protect our manufacturing and sales processes and products. Reliance on trade secrets is only an effective business practice if trade secrets remain undisclosed and a proprietary product or process is not reverse engineered or independently developed. We take measures to protect our trade secrets, including executing non-disclosure agreements with our employees, 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 adversely affect our business, financial condition and results of operations.

Our failure to obtain or maintain the right to use certain intellectual property may materially adversely affect our business, financial condition and results of operations.

The compound semiconductor, optoelectronics and fiber optic communications industries are characterized by frequent litigation regarding patent and other intellectual property rights. From time to time we have received, and may receive in the future; notice of claims of infringement of other parties' proprietary rights and licensing offers to commercialize third party patent rights. 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, which could significantly impair our business and results of operations;
- any patent owned or licensed by us will not be invalidated, circumvented or challenged; or
- we will not be required to obtain licenses, the expense of which may adversely affect our results of operations and profitability.

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

Protection of the intellectual property owned or licensed to us may require us to initiate litigation, which can be an extremely expensive, protracted procedure with an uncertain outcome. The availability of financial resources may limit the Company's ability to commence or defend such litigation.

Failure to comply with environmental and safety regulations, resulting in improper handling of hazardous raw materials used in our manufacturing processes, could result in costly remediation fees, penalties or damages.

We are subject to laws and regulations and must obtain certain permits and licenses relating to the use of hazardous materials. Our production activities involve the use of certain hazardous raw materials, including, but not limited to, ammonia, gallium, phosphate and arsine. If our control systems are unsuccessful in preventing a release of these materials into the environment or other adverse environmental conditions or human exposures occur, we could experience interruptions in our operations and incur substantial remediation and other costs or liabilities. In addition, certain foreign laws and regulations place restrictions on the concentration of certain hazardous materials, including, but not limited to, lead, mercury and cadmium, in our products. Failure to comply with such laws and regulations could subject us to future liabilities or result in the limitation or suspension of the sale or production of our products. These regulations include the European Union's ("EU") Restrictions on Hazardous Substances, Directive on Waste Electrical and Electronic Equipment and the directive on End of Life for Vehicles. Failure to comply with environmental and health and safety laws and regulations may limit our ability to export products to the EU and could materially adversely affect our business, financial condition and results of operations. In addition, during the past year the Department of Homeland Security has commenced a program to evaluate the security of certain chemicals which may be of interest to terrorists, including chemicals utilized by the Company. This evaluation may lead to regulations or restrictions affecting the Company's ability to utilize these chemicals or the costs of doing so.

Our recent acquisitions have placed, and will continue to place, a significant strain on our management, personnel, systems, and resources.

Our recent acquisitions have placed, and will continue to place, a significant strain on our management, personnel, systems, and resources. To successfully manage our growth and handle the responsibilities of being a public company, we believe we must effectively:

- hire, train, integrate and manage additional qualified engineers for research and development activities, sales and marketing personnel, and financial and information technology personnel;
- retain key management and augment our management team, particularly if we lose key members;
- continue to enhance our customer resource management and manufacturing management systems;
- implement and improve additional and existing administrative, financial and operations systems, procedures and controls, including the need to update and integrate our financial internal control systems;
- expand and upgrade our technological capabilities; and
- manage multiple relationships with our customers, suppliers and other third parties.

We may encounter difficulties in effectively managing the budgeting, forecasting and other process control issues presented by the acquisitions. If we are unable to manage our growth effectively, we may not be able to take advantage of market opportunities, develop new products, satisfy customer requirements, execute our business plan or respond to competitive pressures.

A failure to attract and retain managerial, technical and other key personnel could reduce our revenue and our operational effectiveness.

Our future success depends, in part, on our ability to attract and retain certain key personnel, including scientific, operational, financial, and managerial personnel. In addition, our technical personnel represent a significant asset and serve as the source of our technological and product innovations. The competition for attracting and retaining key employees (especially scientists, technical personnel, financial personnel and senior managers and executives) is intense. Because of this competition for skilled employees, we may be unable to retain our existing personnel or attract additional qualified employees in the future. If we are unable to retain our skilled employees and attract additional qualified employees to the extent necessary to keep up with our business demands and changes, our business, financial condition and results of operations may be materially adversely affected. The risks involved in recruiting and

retaining these key personnel may be increased by our lack of profitability, the volatility of our stock price and the perceived affect of reductions in force and other cost reduction efforts which we have recently implemented.

It may be difficult or costly to obtain director and officer insurance coverage as a result of our historical stock option granting practices.

Although we have recently renewed our directors and officer insurance coverage on what we believe to be favorable terms, it may become more difficult to obtain director and officer insurance coverage in the future. If we are able to obtain this coverage, it could be significantly more expensive than in the past, which would have an adverse effect on our financial results and cash flow. As a result of this and related factors, our directors and officers could face increased risks of personal liability in connection with the performance of their duties. As a result, we may have difficulty attracting and retaining qualified directors and officers, which could adversely affect our business.

We are subject to risks associated with the availability and coverage of insurance.

For certain risks, the Company does not maintain insurance coverage because of cost and/or availability. Because the Company retains some portion of its insurable risks, and in some cases self-insures completely, unforeseen or catastrophic losses in excess of insured limits may have a material adverse effect on the Company's results of operations and financial position.

Our business and operations would be adversely impacted in the event of a failure of our information technology infrastructure.

We rely upon the capacity, reliability and security of our information technology hardware and software infrastructure and our ability to expand and update this infrastructure in response to our changing needs. We are constantly updating our information technology infrastructure. Any failure to manage, expand and update our information technology infrastructure or any failure in the operation of this infrastructure could harm our business.

Despite our implementation of security measures, our systems are vulnerable to damages from computer viruses, natural disasters, unauthorized access and other similar disruptions. Any system failure, accident or security breach could result in disruptions to our operations. To the extent that any disruptions or security breach results in a loss or damage to our data, or inappropriate disclosure of confidential information, it could harm our business. In addition, we may be required to incur significant costs to protect against damage caused by these disruptions or security breaches in the future.

In addition, implementation of new software programs, including the implementation of an enterprise resource planning (“ERP”) program which the Company intends to install during the upcoming year, may have adverse impact on the Company, including interruption of operations, loss of data, budget overruns and the consumption of management time and resources.

If we fail to remediate deficiencies in our current system of internal controls, we may not be able to accurately report our financial results or prevent fraud. As a result, our business could be harmed and current and potential investors could lose confidence in our financial reporting, which could have a negative effect on the trading price of our equity securities.

The Company is subject to the ongoing internal control provisions of Section 404 of the Sarbanes-Oxley Act of 2002. These provisions provide for the identification of material weaknesses in internal control over financial reporting, which is a process to provide reasonable assurance regarding the reliability of financial reporting for external purposes in accordance with U.S. GAAP. If we cannot provide reliable financial reports or prevent fraud, our brand, operating results and the market value of our equity securities could be harmed. We have in the past discovered, and may in the future discover, areas of our internal controls that need improvement. In fiscal 2008 and 2007, the Company identified deficiencies in our internal controls over financial reporting.

We have devoted significant resources to remediate and improve our internal controls. We have also been monitoring the effectiveness of these remediated measures. We cannot be certain that these measures will ensure adequate controls over our financial processes and reporting in the future. We intend to continue implementing and monitoring changes to our processes to improve internal controls over financial reporting. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations.

Inadequate internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our equity securities. Further, the impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our Board of Directors or as executive officers, which could harm our business. The additions of our manufacturing facility in China and acquisitions increase the burden on our systems and infrastructure, and impose additional risk to the ongoing effectiveness of our internal controls, disclosure controls, and procedures.

Certain provisions of New Jersey law and our charter may make a takeover of EMCORE difficult even if such takeover could be beneficial to some of our shareholders.

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

Additional litigation may arise in the future relating to our historical stock option practices and other issues.

Although we have received final court approval of the settlement of the three derivative actions which were filed against certain of our current and former directors and officers relating to historical stock options practices, and the SEC has indicated that it has terminated its investigation of these matters, additional securities-related litigation (including possible litigation involving employees) may still arise. Additional lawsuits, regardless of their underlying merit, could become time consuming and expensive, and if they result in unfavorable outcomes, there could be material adverse effect on our business, financial condition, results of operations and cash flows. We may be required to pay substantial damages or settlement costs in excess of our insurance coverage related to these matters, which would have a further material adverse effect on our financial condition or results of operations.

Acquisitions of other companies or investments in joint ventures with other companies could adversely affect our operating results, dilute our shareholders' equity, or cause us to incur additional debt or assume contingent liabilities.

To increase our business and maintain our competitive position, we may acquire other companies or engage in joint ventures in the future. Acquisitions and joint ventures involve a number of risks that could harm our business and result in the acquired business or joint venture not performing as expected, including:

- insufficient experience with technologies and markets in which the acquired business is involved, which may be necessary to successfully operate and integrate the business;
- problems integrating the acquired operations, personnel, technologies or products with the existing business and products;
- diversion of management time and attention from the core business to the acquired business or joint venture;
- potential failure to retain key technical, management, sales and other personnel of the acquired business or joint venture;
- difficulties in retaining relationships with suppliers and customers of the acquired business, particularly where such customers or suppliers compete with us;
- reliance upon joint ventures which we do not control;
- subsequent impairment of the acquired assets, including intangible assets; and,
- assumption of liabilities including, but not limited to, lawsuits, tax examinations, warranty issues, etc.

We may decide that it is in our best interests to enter into acquisitions or joint ventures that are dilutive to earnings per share or that negatively impact margins as a whole. In addition, acquisitions or joint ventures could require investment of significant financial resources and require us to obtain additional equity financing, which may dilute our shareholders' equity, or require us to incur additional indebtedness.

Changes to financial accounting standards may affect our consolidated results of operations and cause us to change our business practices.

We prepare our financial statements to conform with U.S. GAAP. These accounting principles are subject to interpretation by the American Institute of Certified Public Accountants, the SEC and various bodies formed to interpret and create appropriate accounting policies. A change in those policies can have a significant effect on our consolidated reported results and may affect our reporting of transactions completed before a change is announced. Changes to those rules or the questioning of current practices may adversely affect our reported financial results or the way we conduct our business. For example, in December 2003, the FASB issued Staff Position Interpretation No. 46, "Consolidation of Variable Interest Entities", or FIN 46(R). The accounting method under FIN 46(R) may impact our accounting for future joint ventures or project companies. In the event that we are deemed the primary beneficiary of a Variable Interest Entity (VIE) subject to the accounting of FIN 46(R), we may have to consolidate the assets, liabilities and financial results of the joint venture. This could have an adverse impact on our financial position, gross margin and operating results.

Our announced strategy to split the Company may not be successfully implemented.

On April 4, 2008, the Company announced that its Board of Directors had authorized the Company to proceed with the prospects of splitting the Company into two separate corporations, one consisting of the Fiber Optics reporting segment and one consisting of the Photovoltaics business segment. These studies continue, and certain steps have been undertaken to implement this strategy. There can be no assurance, however, that this strategy will be successfully implemented, or when this implementation will occur. Among the factors which may adversely impact or delay the implementation of this strategy include the following:

- Further study may reveal issues which make such a split inadvisable or uneconomical, or future changes in laws, regulations or accounting

rules may create such issues;

- Key customers or suppliers may not consent to contract assignments or other arrangements necessary to implement this strategy;
- It may not be possible to obtain shareholder consent for the implementation of this strategy;
- Future capital market developments may prevent the Company from obtaining necessary financing for one or both of the resulting corporations; and
- It may not be possible to fully staff the Board of Directors of one or both resulting corporations.

In addition, because the future management of each of the resulting corporations has not been identified, it is not possible to currently predict what the strategy of each of these corporations would be following their separation, or whether such strategy(ies) would be successful.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

In addition to the other information contained or incorporated by reference in this prospectus, you should carefully consider the Risk Factors beginning on page 5 of this prospectus in evaluating whether to purchase our common stock. Some of the statements in this prospectus and the documents incorporated herein by reference constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements are based largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business, relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause the actual results, levels of activity, performance or achievements of our business or our industry to be materially different from those expressed or implied by any forward-looking statements. Such statements include, in particular, projections about our future results included in our Exchange Act reports, statements about our plans, strategies, business prospects, changes and trends in our business and the markets in which we operate as described in this prospectus and the documents incorporated herein by reference. These forward-looking statements may be identified by the use of terms and phrases such as “expects”, “anticipates”, “intends”, “plans”, “believes”, “estimates”, “targets”, “can”, “may”, “could”, “will”, and variations of these terms and similar phrases. The information contained or incorporated by reference in this prospectus includes forward-looking statements concerning:

- our ability to remain competitive and a leader in our industry and the future growth of the company, the industry, and the economy in general;
- our ability to achieve structural and material cost reductions without impacting product development or manufacturing execution;
- expected improvements in our product and technology development programs;
- our ability to successfully develop, introduce, market and qualify new products, including our terrestrial solar products;
- our ability to identify and acquire suitable acquisition targets and difficulties in integrating recent or future acquisitions into our operations;
- other risks and uncertainties described in our filings with the SEC such as: cancellations, rescheduling, or delays in product shipments; manufacturing capacity constraints; lengthy sales and qualification cycles; difficulties in the production process; changes in semiconductor industry growth; increased competition; delays in developing and commercializing new products; and other factors.

Neither management nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. All forward-looking statements in this prospectus are made as of the date hereof, based on information available to us as of the date hereof, and we caution you not to rely on these statements without also considering the risks and uncertainties associated with these statements and our business that are addressed in this prospectus. Certain of the information included in this prospectus may supersede or supplement forward-looking statements in our Exchange Act reports incorporated herein by reference. We assume no obligation to update any forward-looking statement.

USE OF PROCEEDS

We will not receive any proceeds from the sale of shares of common stock by the selling stockholders in this offering, although upon any exercise of warrants by payment of cash, we will receive the exercise price of the warrants, which will be used for general corporate purposes. We cannot guarantee that the selling stockholders will exercise any warrants.

CERTAIN U.S. FEDERAL TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following is a discussion of the material U.S. federal income tax considerations generally applicable to the purchase, ownership and disposition of our common stock by non-U.S. holders. This discussion assumes that our common stock is held as a capital asset. This discussion does not cover all aspects of U.S. federal income taxation that may be relevant to the purchase, ownership or disposition of our common stock by prospective investors in light of their particular circumstances. In particular, this discussion does not address all of the tax considerations that may be relevant to certain types of investors subject to special treatment under U.S. federal income tax laws, such as:

- dealers in securities or currencies;
- financial institutions;
- regulated investment companies;
- real estate investment trusts;
- tax-exempt entities;
- insurance companies;
- cooperatives;
- persons holding common stock as part of a hedging, integrated, conversion or constructive sale transaction or a straddle;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- U.S. expatriates; or
- partnerships or entities or arrangements treated as a partnership or other pass-through entity for U.S. federal tax purposes (or investors therein).

Furthermore, this discussion is based upon the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), the Treasury regulations promulgated thereunder and administrative and judicial interpretations thereof, all as of the date hereof. Such authorities may be repealed, revoked, modified or subject to differing interpretations, possibly on a retroactive basis, so as to result in U.S. federal income tax consequences different from those discussed below. We have not received a ruling from the Internal Revenue Service (the “IRS”) with respect to any of the matters discussed herein. This discussion does not address any state, local or non-U.S. tax considerations.

If you are considering the purchase of our common stock, we urge you to consult your own tax advisors concerning the particular U.S. federal income tax consequences to you of the purchase, ownership and disposition of our common stock, as well as any consequences to you arising under state, local and non-U.S. tax laws.

Consequences to Non-U.S. Holders

The following discussion applies only to non-U.S. holders. A “non-U.S. holder” is a beneficial owner of our common stock (other than a partnership or an entity or arrangement treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes one of the following:

- a citizen or an individual resident of the United States;
- a corporation (or other entity taxable as a corporation) created or organized in or under the laws of the United States or any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if it (i) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (ii) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Special rules may apply to you if you are a “controlled foreign corporation” or a “passive foreign investment company” or are otherwise subject to special treatment under the Code. Any such holders should consult their own tax advisors to determine the U.S. federal income, state, local and non-U.S. tax consequences that may be relevant to them.

Dividends

Although we do not currently intend to pay cash dividends on our common stock in the foreseeable future, dividends paid to you (to the extent paid out of our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes) generally will be subject to U.S. federal withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. Generally, if you wish to claim the benefit of an applicable treaty rate for dividends paid on our common stock, you must provide the withholding agent with a properly executed IRS Form W-8BEN, claiming an exemption from or reduction in withholding under the applicable income tax treaty. If you are eligible for a reduced rate of U.S. federal withholding tax pursuant to an applicable income tax treaty, you may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS.

Dividends that are effectively connected with a trade or business you conduct within the United States (and, if certain tax treaties apply, are attributable to a permanent establishment in the United States), are not subject to the U.S. federal withholding tax but, instead, are subject to regular U.S. federal income tax on a net income basis at applicable graduated rates. Corporate holders may also be subject to “branch profits tax”.

Sale, Exchange or Other Taxable Disposition of Common Stock

You generally will not be subject to U.S. federal income tax with respect to gain recognized on a sale, exchange or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with your conduct of a trade or business in the United States (and, if certain tax treaties apply, is attributable to a permanent establishment in the United States);
- you are present in the United States for 183 or more days in the taxable year of the sale, and certain other conditions are met;
- you are subject to provisions applicable to certain United States expatriates; or
- we are or have been a United States real property holding corporation (“USRPHC”) for U.S. federal income tax purposes at any time during the shorter of the five-year period preceding such disposition and your holding period in the common stock, and (i) you beneficially own, or have owned, more than 5% of the total fair market value of our common stock at any time during the five-year period preceding such disposition or (ii) our common stock has ceased to be traded on an established securities market prior to the beginning of the calendar year in which the sale or disposition occurs, and certain other conditions are met.

If a partnership or other entity or arrangement treated as a partnership for U.S. federal income tax purposes holds our common stock, the U.S. federal income tax treatment of a partner in such partnership will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our common stock, we urge you to consult your own tax advisors.

U.S. Federal Estate Tax

Shares of our common stock held by an individual non-U.S. holder at the time of his or her death will be included in such non-U.S. holder’s gross estate for U.S. federal estate tax purposes, unless an applicable estate tax treaty provides otherwise. Consequently, shareholders who are non-U.S. holders may be subject to U.S. federal estate tax on all or a portion of the value of the common stock owned at the time of their death.

Information Reporting and Backup Withholding

You may be subject to information reporting and backup withholding with respect to any dividends on, and the proceeds from dispositions of, our common stock paid to you unless you comply with certain reporting procedures (usually satisfied by providing an IRS Form W-8BEN) or otherwise establish an exemption. Additional rules relating to information reporting requirements and backup withholding with respect to the payment of proceeds from the disposition of shares of our common stock will apply as follows:

- If the proceeds are paid to or through the U.S. office of a broker (U.S. or foreign), they generally will be subject to backup withholding and information reporting, unless you certify that you are not a U.S. person under penalties of perjury (usually on an IRS Form W-8BEN) or

otherwise establish an exemption;

- If the proceeds are paid to or through a non-U.S. office of a broker that is not a U.S. person and is not a foreign person with certain specified U.S. connections (a “U.S. Related Person”), they will not be subject to backup withholding or information reporting; or
- If the proceeds are paid to or through a non-U.S. office of a broker that is a U.S. person or a U.S. Related Person, they generally will be subject to information reporting (but not backup withholding), unless you certify that you are not a U.S. person under penalties of perjury (usually on an IRS Form W-8BEN) or otherwise establish an exemption.

In addition, the amount of any dividends paid to you and the amount of tax, if any, withheld from such payment generally must be reported annually to you and the IRS. The IRS may make such information available under the provisions of an applicable income tax treaty to the tax authorities in the country in which you reside.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your U.S. federal income tax liability provided the required information is timely furnished by you to the IRS. non-U.S. holders should consult their own tax advisors regarding the filing of a U.S. tax return for claiming a refund of such backup withholding.

PRINCIPAL AND SELLING STOCKHOLDERS

Selling Stockholders

The shares of common stock being offered by the selling stockholders are those previously issued to the selling stockholders and those issuable to the selling stockholders upon the exercise of the warrants. We are registering the shares of common stock in order to permit the selling stockholders to offer the shares for resale from time to time. Except for the ownership of the shares of common stock and the warrants, the selling stockholders have not had any material relationship with us within the past three years.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of common stock held by each of the selling stockholders, as provided to us by representatives of the selling stockholders as of February 29, 2008. The second column lists the number of shares of common stock beneficially owned by each selling stockholder, based on its ownership of the shares of common stock and the warrants as of February 29, 2008, assuming exercise of the warrants held by the selling stockholders on that date, without regard to any limitations on exercise.

The third column lists the shares of common stock being offered by this prospectus by the selling stockholders. In accordance with the terms of the registration rights agreement with the holders of the shares of common stock and the warrants, this prospectus generally covers the resale of the aggregate number of shares of common stock equal to the number of shares of common stock issued and the shares of common stock issuable upon exercise of the related warrants, determined as if the outstanding warrants were exercised, as applicable, in full, in each case, as of the trading day immediately preceding the date this registration statement was initially filed with the SEC. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus and that any other shares of our common stock beneficially owned by these selling stockholders will continue to be beneficially owned. Under the terms of the warrants, a selling stockholder may not exercise the warrants, to the extent such exercise would cause such selling stockholder, together with its affiliates, to beneficially own a number of shares of common stock which would exceed 4.99% of our then outstanding shares of common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon exercise of the warrants which have not been exercised. The number of shares in each of the second and third columns does not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution”.

Name of Selling Stockholder	Number of Shares Owned Prior to Offering	Maximum Number of Shares to be Sold Pursuant to this Prospectus	Number of Shares Owned After Offering
Polar Securities Inc. (1)	987,001	987,001	-
The Quercus Trust (2)	6,266,727	883,600	5,383,127
Marathon Global Equity Master Fund, Ltd. (3)	705,000	705,000	-
UBS O'Connor LLC F/B/O: O'Connor Pipes Corporate Strategies Master Limited (4)	394,800	394,800	-
UBS O'Connor LLC F/B/O: O'Connor Global Convertible Arbitrage Master Limited (5)	247,408	247,408	-
UBS O'Connor LLC F/B/O: O'Connor Global Convertible Arbitrage II Master Limited (6)	15,792	15,792	-
The Tocqueville Fund (7)	599,250	599,250	-
Highbridge International LLC (8)	640,430	587,500	52,930
Ardsley Partners Fund II, L.P.(9)	502,238	148,638	353,600
Ardsley Partners Institutional Fund, L.P.(10)	324,115	96,115	228,000
Ardsley Partners Renewable Energy Fund, L.P. (11)	215,753	80,253	135,500
Ardsley Offshore Fund, Ltd. (12)	350,988	103,988	247,000
Ardsley Renewable Energy Offshore Fund, Ltd. (13)	368,318	136,418	231,900
Marion Lynton (14)	12,660	3,760	8,900
HFR HE (15)	50,930	18,330	32,600
Hudson Bay Fund LP (16)	392,920	392,920	-
Hudson Bay Overseas Fund, Ltd. (17)	641,080	641,080	-
Portside Growth and Opportunity Fund (18)	564,000	564,000	-
Empire Capital Partners, LTD (19)	728,978	169,905	559,073
Empire Capital Partners, LP (20)	773,768	182,595	591,173
Capital Ventures International (21)	352,500	352,500	-
Iroquois Master Fund Ltd. (22)	352,500	352,500	-
Kingdon Associates (23)	938,204	85,305	852,899
M. Kingdon Offshore Ltd. (24)	2,809,321	255,386	2,553,935
Kingdon Family Partnership, L.P. (25)	129,975	11,809	118,166
Investcorp Interlachen Multi-Strategy Master Fund Limited (26)	235,000	235,000	-
CD Investment Partners, Ltd. (27)	188,000	188,000	-
Lagunitas Partners LP (28)	164,650	113,975	50,675
Gruber & McBaine International (29)	22,200	8,225	13,975
Jon D & Linda W Gruber Trust (30)	79,775	65,800	13,975
Cara Castle Partners (31)	103,400	103,400	-
MMCAP International Inc SPC (32)	176,250	176,250	-
Cranshire Capital, L.P. (33)	141,000	141,000	-
Enable Growth Partners LP (34)	117,500	117,500	-
Crestview Capital Master, LLC (35)	117,500	117,500	-
RHP Master Fund, Ltd. (36)	117,500	117,500	-

(1) Includes warrants exercisable for 147,001 shares of common stock at an exercise price of \$15.06. Bill Peckford has voting and investment control over the securities held by Polar Securities Inc.

(2) Includes warrants exercisable for 131,600 shares of common stock at an exercise price of \$15.06. David Gelbaum & Monica Chavez Gelbaum, Co-Trustees of The Quercus Trust, have voting and investment control over the securities owned by The Quercus Trust.

(3) Includes warrants exercisable for 105,000 shares of common stock at an exercise price of \$15.06. Marathon Asset Management, LLC (“Marathon”) is Investment Advisor to Marathon Global Equity Master Fund, Ltd. (“MGEMF”). Marathon exercises investment discretion over any securities held by MGEMF.

(4) Includes warrants exercisable for 58,800 shares of common stock at an exercise price of \$15.06. This selling stockholder is a fund which cedes investment control to UBS O’Connor LLC (the “Investment Manager”). The Investment Manager makes all the investment/voting decisions. UBS O’Connor LLC is a wholly owned subsidiary of UBS AG which is listed and traded on the New York Stock Exchange.

(5) Includes warrants exercisable for 36,848 shares of common stock at an exercise price of \$15.06. This selling stockholder is a fund which cedes investment control to UBS O’Connor LLC (the “Investment Manager”). The Investment Manager makes all the investment/voting decisions. UBS O’Connor LLC is a wholly owned subsidiary of UBS AG which is listed and traded on the New York Stock Exchange.

(6) Includes warrants exercisable for 2,352 shares of common stock at an exercise price of \$15.06. This selling stockholder is a fund which cedes investment control to UBS O’Connor LLC (the “Investment Manager”). The Investment Manager makes all the investment/voting decisions. UBS O’Connor LLC is a wholly owned subsidiary of UBS AG which is listed and traded on the New York Stock Exchange.

(7) Includes warrants exercisable for 89,250 shares of common stock at an exercise price of \$15.06. Tocqueville Asset Management L.P. is the investment advisor to The Tocqueville Fund.

(8) Includes warrants exercisable for 87,500 shares of common stock at an exercise price of \$15.06. Highbridge Capital Management, LLC is the trading manager of Highbridge International LLC and has voting control and investment discretion over the securities held by Highbridge International LLC. Glenn Dubin and Henry Swieca control Highbridge Capital Management, LLC and have voting control and investment discretion over the securities held by Highbridge International LLC. Each of Highbridge Capital Management, LLC, Glenn Dubin and Henry Swieca disclaims beneficial ownership of the securities held by Highbridge International LLC.

(9) Includes warrants exercisable for 22,138 shares of common stock at an exercise price of \$15.06. Philip J. Hempleman has voting and investment control over the securities held by Ardsley Partners Fund II, L.P.

(10) Includes warrants exercisable for 14,315 shares of common stock at an exercise price of \$15.06. Philip J. Hempleman has voting and investment control over the securities held by Ardsley Partners Institutional Fund, L.P.

(11) Includes warrants exercisable for 11,953 shares of common stock at an exercise price of \$15.06. Philip J. Hempleman has voting and investment control over the securities held by Ardsley Partners Renewable Energy Fund, L.P.

(12) Includes warrants exercisable for 15,488 shares of common stock at an exercise price of \$15.06. Philip J. Hempleman has voting and investment control over the securities held by Ardsley Offshore Fund, Ltd.

(13) Includes warrants exercisable for 20,318 shares of common stock at an exercise price of \$15.06. Philip J. Hempleman has voting and investment control over the securities held by Ardsley Renewable Energy Offshore Fund, Ltd.

(14) Includes warrants exercisable for 560 shares of common stock at an exercise price of \$15.06. Philip J. Hempleman has voting and investment control over the securities held by Marion Lynton.

(15) Includes warrants exercisable for 2,730 shares of common stock at an exercise price of \$15.06. Philip J. Hempleman has voting and investment control over the securities held by HFR HE.

(16) Includes warrants exercisable for 58,520 shares of common stock at an exercise price of \$15.06. Sander Gerber, Yoav Roth and John Doscas share voting and investment power over these securities. Each of Sander Gerber, Yoav Roth and John Doscas disclaim beneficial ownership over the securities held by Hudson Bay Fund LP. The selling stockholder acquired the securities offered for its own account in the ordinary course of business, and at the time it acquired the securities, it had no agreements, plans or understandings, directly or indirectly to distribute the securities.

(17) Includes warrants exercisable for 95,480 shares of common stock at an exercise price of \$15.06. Sander Gerber, Yoav Roth and John Doscas share voting and investment power over these securities. Each of Sander Gerber, Yoav Roth and John Doscas disclaim beneficial ownership over the securities held by Hudson Bay Overseas Fund LTD. The selling stockholder acquired the securities offered for its own account in the ordinary course of business, and at the time it acquired the securities, it had no agreements, plans or understandings, directly or indirectly to distribute the securities.

(18) Includes warrants exercisable for 84,000 shares of common stock at an exercise price of \$15.06. Ramius LLC (“Ramius”) is the investment adviser of Portside Growth and Opportunity Fund (“Portside”) and consequently has voting control and investment discretion over securities held by Portside. Ramius disclaims beneficial ownership of these securities. C4S & Co., L.L.C. (“C4S”) is the managing member of Ramius and may be considered the beneficial owner of any securities deemed to be beneficially owned by Ramius. C4S disclaims beneficial ownership of these securities. Peter A. Cohen, Morgan B. Stark, Thomas W. Strauss and Jeffrey M. Solomon are the sole managing members of C4S and may be considered beneficial owners of any securities deemed to be beneficially owned by C4S. Messrs. Cohen, Stark, Strauss and Solomon disclaim beneficial ownership of these securities.

(19) Includes warrants exercisable for 25,305 shares of common stock at an exercise price of \$15.06. Peter J. Richards and Scott A. Fine, Managing Members of Empire Capital Management, LLC (investment manager to Empire Capital Partners, LTD), exercise voting and investment control over securities held by Empire Campital Partners, LTD.

(20) Includes warrants exercisable for 27,195 shares of common stock at an exercise price of \$15.06. Peter J. Richards and Scott A. Fine, Managing Members of Empire Capital Management, LLC (investment manager to Empire Capital Partners, LP), exercise voting and investment control over securities held by Empire Campital Partners, LP.

(21) Includes warrants exercisable for 52,500 shares of common stock at an exercise price of \$15.06. Heights Capital Management, Inc., the authorized agent of Capital Ventures International (“CVI”), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares.

(22) Includes warrants exercisable for 52,500 shares of common stock at an exercise price of \$15.06. Joshua Silverman has voting and investment control over the shares held by Iroquois Master Fund Ltd. Mr. Silverman disclaims beneficial ownership of these shares.

(23) Includes warrants exercisable for 12,705 shares of common stock at an exercise price of \$15.06. Mark Kingdon, as Managing Member of Kingdon Capital Management, LLC (investment manager to Kingdon Associates), exercises voting and investment control over securities held by Kingdon Associates.

(24) Includes warrants exercisable for 38,036 shares of common stock at an exercise price of \$15.06. Mark Kingdon, as Managing Member of Kingdon Capital Management, LLC (investment manager to M. Kingdon Offshore Ltd.), exercises voting and investment control over securities held by M. Kingdon Offshore Ltd.

(25) Includes warrants exercisable for 1,759 shares of common stock at an exercise price of \$15.06. Mark Kingdon, as Managing Member of Kingdon Capital Management, LLC (investment manager to Kingdon Family Partnership, L.P.), exercises voting and investment control over securities held by Kingdon Family Partnership, L.P.

(26) Includes warrants exercisable for 35,000 shares of common stock at an exercise price of \$15.06. Interlachen Capital Group LP is the trading manager of Investcorp Interlachen Multi-Strategy Master Fund Limited and has voting and investment discretion over securities held by Investcorp Interlachen Multi-Strategy Master Fund Limited. Andrew Fraley, in his role as Chief Investment Officer of Interlachen Capital Group LP, has voting control and investment

discretion over securities held by Investcorp Interlachen Multi-Strategy Master Fund Limited. Andrew Fraley disclaims beneficial ownership of the securities held by Investcorp Interlachen Multi-Strategy Mater Fund Limited.

(27) Includes warrants exercisable for 28,000 shares of common stock at an exercise price of \$15.06. Carpe Diem Capital Management LLC (“Carpe Diem Capital”), as investment manager for CD Investment Partners, Ltd. (“CDIP”), ZPII, L.P. (“ZP II”), as the manager and sole member of Carpe Diem Capital, C3 Management Inc. (“C3”), as the general partner of ZP II, and John D. Ziegelman, as the Chairman of the Board, President and Treasurer and the beneficial owner of 100% of the outstanding shares of common stock of C3, each may be deemed to have beneficial ownership of the shares owned by CDIP which are being registered hereunder.

(28) Includes warrants exercisable for 16,975 shares of common stock at an exercise price of \$15.06. Gruber & McBaine Capital Management is the general partner of Lagunitas Partners LP. The natural persons with voting and investment control for this stockholder are Jon D. Gruber and J. Patterson McBaine.

(29) Includes warrants exercisable for 1,225 shares of common stock at an exercise price of \$15.06. Gruber & McBaine Capital Management is the general partner of Gruber & McBaine International. The natural persons with voting and investment control for this stockholder are Jon D. Gruber and J. Patterson McBaine.

(30) Includes warrants exercisable for 9,800 shares of common stock at an exercise price of \$15.06. Jon D. Gruber has voting and investment control over the securities held by the Jon D & Linda W Gruber Trust.

(31) Includes warrants exercisable for 15,400 shares of common stock at an exercise price of \$15.06. Damien Quinn holds voting and investment control over the securities held by Cara Castle Partners.

(32) Includes warrants exercisable for 26,250 shares of common stock at an exercise price of \$15.06. The natural person with voting and investment control for this stockholder is Matthew MacIsaac.

(33) Includes warrants exercisable for 21,000 shares of common stock at an exercise price of \$15.06. Mitchell P. Kopin, President of Downsview Capital, Inc., the General Partner of Cranshire Capital, L.P., has sole voting and investment control over the shares.

(34) Includes warrants exercisable for 17,500 shares of common stock at an exercise price of \$15.06. Mitch Levine holds voting and investment control over the securities held by Enable Growth Partners LP.

(35) Includes warrants exercisable for 17,500 shares of common stock at an exercise price of \$15.06. Crestview Capital Partners, LLC (“Crestview Partners”) is the sole manager of Crestview, and as such has the power to direct the vote and to direct the disposition of investments owned by Crestview and thus may also be deemed to beneficially own the securities owned by Crestview. Stewart Flink, Robert Hoyt and Daniel Warsh are the managers of Crestview Partners, and as such may be deemed to share the power to vote and to dispose of investments beneficially owned by Crestview Partners, including the Company’s common stock. As a result, each of Messrs. Flink, Hoyt and Warsh may also be deemed to beneficially own the above-described shares of the Company’s common stock held by Crestview and Crestview Partners; however each disclaims beneficial ownership of such shares.

(36) Includes warrants exercisable for 17,500 shares of common stock at an exercise price of \$15.06. RHP Master Fund, Ltd. is a party to an investment management agreement with Rock Hill Investment Management, L.P., a limited partnership of which the general partner is RHP General Partner, LLC. Pursuant to such agreement, Rock Hill Investment Management directs the voting and disposition of shares owned by RHP Master Fund. Messrs. Wayne Bloch and Peter Lockhart own all of the interests in RHP General Partner. The aforementioned entities and individuals disclaim beneficial ownership of the Company’s securities owned by the RHP Master Fund.

Principal Stockholders

The following table sets forth certain information, as of September 30, 2008, with respect to the beneficial ownership of our common stock by:

- each person or group that we know to be the beneficial owner of more than 5% of the outstanding shares of any class of our voting securities;
- each of our executive officers and directors; and
- our executive officers and directors as a group.

As of February 17, 2009, a total of 78,337,504 shares of common stock were outstanding. In the following table, (a) shares under “Outstanding shares” include shares subject to options that were vested as of September 30, 2008 or will vest within 60 days of September 30, 2008 and (b) unless otherwise noted, each person identified possesses, to our knowledge, sole voting and investment power with respect to the shares listed, subject to community property laws where applicable. Shares not outstanding but deemed beneficially owned by virtue of the right of a person to acquire those shares are treated as outstanding only for purposes of determining the number and percent of shares of common stock owned by such person or group. Unless otherwise indicated, the address of each of the beneficial owners is c/o EMCORE Corporation, 10420 Research Road, SE, Albuquerque, New Mexico 87123.

<u>Name</u>	<u>Shares Beneficially Owned</u>	<u>Percent of Common Stock</u>
Robert Bogomolny	86,972	*
John Gillen	29,242	*
Adam Gushard (1)	212,141	*
Hong Q. Hou, Ph.D. (2)	496,250	*
John Iannelli, Ph.D. (3)	113,893	*
Keith J. Kosco, Esq.(4)	24,500	*
John M. Markovich	-	*
Reuben F. Richards, Jr. (5)	1,012,054	1.3%
Thomas J. Russell (6)	5,276,815	6.7%
Charles Scott (7)	42,409	*
All directors and executive officers as a group (10 persons) (8)	7,294,276	9.2%
AMVESCAP PLC (11)	4,000,005	5.1%
Brookside Capital Partners Fund, LP (10)	5,002,777	6.4%
Invesco Ltd.(9)	4,817,145	6.2%
Kopp Investment Advisors, LLC (12)	4,101,349	5.2%
The Quercus Trust (13)	3,800,183	4.9%
Wachovia Corporation (14)	5,158,132	6.6%

* Less than 1.0%

(1) Includes options to purchase 184,098 shares and 9,395 shares held in a 401(k) Plan.

(2) Includes options to purchase 378,125 shares.

(3) Includes options to purchase 102,631 shares and 4,683 shares held in a 401(k) Plan.

(4) Includes options to purchase 24,500 shares.

(5) Includes options to purchase 322,500 shares and 175,000 shares held by spouse.

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

(7) Includes 30,409 shares owned by Kircal, Ltd.

(8) Includes options to purchase 1,011,854 shares beneficially owned by Reuben F. Richards, Jr., Executive Chairman; Hong Hou, Chief Executive Officer; John M. Markovich, Chief Financial Officer; Adam Gushard, Former Interim Chief Financial Officer; John Iannelli, Chief Technology Officer; and Keith J. Kosco, Chief Legal Officer.

(9) This information is based solely on information contained in a Schedule 13G/A filed with the SEC on February 14, 2008, by Invesco Ltd. (“Invesco”). The address of Alexandra Global is Citco Building, Wickams Cay, P.O. Box 662, Road Town, Tortola, British Virgin Islands. The address of Alexandra Management and Filimonov is 767 Third Avenue, 39th Floor, New York, New York 10017.

(10) This information is based solely on information contained in a Schedule 13G filed with the SEC on July 21, 2008, by Brookside Capital Partners Fund, L.P. (the “Brookside Fund”). Brookside Capital Investors, L.P., a Delaware limited partnership (“Brookside Investors”) is the sole general partner of the Brookside Fund. Brookside Capital Management, LLC, a Delaware limited liability company (“Brookside Management”), is the sole general partner of Brookside Investors. Mr. Domenic J. Ferrante is the sole managing member of Brookside Management. The Brookside Fund beneficially owned 5,002,777 shares of Common Stock. The Brookside Fund acts by and through its general partner, Brookside Investors. Brookside Investors acts by and through its general partner, Brookside Management. Mr. Domenic J. Ferrante is the managing member of Brookside Management and thus is the controlling person of Brookside Management. No person other than the respective owner referred to herein of the Common Stock is known to have the right to receive or the power to direct the receipt of dividends from or the proceeds from the sale of such Common Stock. The address of the Brookside Fund, Brookside Investors, Brookside Management and Mr. Ferrante is 111 Huntington Avenue, Boston, Massachusetts 02199.

(11) This information is based solely on information contained in a Schedule 13G filed with the SEC on February 14, 2007, by AMVESCAP PLC, a U.K. entity, on behalf of itself and PowerShares Capital Management LLC, a U.S. entity (“PowerShares”). The shares reported for AMVESCAP PLC represent the total shares held by AMVESCAP PLC through PowerShares. The address of AMVESCAP PLC is 30 Finsbury Square, London EC2A 1AG, England. The address of AMVESCAP PLC is 30 Finsbury Square, London EC2A 1AG, England.

(12) This information is based solely on information contained in a Schedule 13D filed with the SEC on April 4, 2008, by Kopp Investment Advisors, LLC (“KIA”), a wholly-owned subsidiary of Kopp Holding Company, LLC (“KHC”), which is controlled by Mr. LeRoy C. Kopp (“Kopp”) (collectively,

the “Kopp Parties”). KIA reports beneficially owning a total of 4,101,349 shares including having sole voting power over 4,101,349 shares and shared dispositive power over 2,242,774 shares. Kopp reports beneficially owning a total of 4,242,774 shares, including having sole dispositive power over 2,000,000 shares. The address of the Kopp Parties is 7701 France Avenue South, Suite 500, Edina, Minnesota 55435. The address of Kopp Investment Advisors, LLC is 7701 France Avenue South, Suite 500, Edina, Minnesota 55435.

- (13) This information is based solely on information contained in a Schedule 13D filed with the SEC on August 20, 2008, by The Quercus Trust, David Gelbaum and Monica Chavez Gelbaum. The Quercus Trust reports beneficially owning a total of 3,800,183 shares and sharing voting and dispositive power with respect to such shares. David Gelbaum, Trustee, The Quercus Trust, reports beneficially owning a total of 3,800,183 shares and sharing voting and dispositive power with respect to such shares. Monica Chavez Gelbaum, Trustee, The Quercus Trust, reports beneficially owning a total of 3,800,183 shares and sharing voting and dispositive power with respect to such shares. The address of David Gelbaum, an individual, as co-trustee of the Quercus Trust and Monica Chavez Gelbaum, an individual, as co-trustee of the Quercus Trust is 2309 Santiago Drive, Newport Beach, California 92660.
- (14) This information is based solely on information contained in a Schedule 13G filed with the SEC on January 14, 2008, by Wachovia Corporation. Wachovia Corporation reports beneficially owning a total of 5,158,132 shares including having sole voting power over 139,917 shares and sole dispositive power over 2,878,097 shares. Wachovia Corporation is a parent holding company and the relevant subsidiaries are Wachovia Securities, LLC (IA) and Wachovia Bank, N.A. (B.K.). Wachovia Securities, LLC is an investment advisor for clients; the securities reported by this subsidiary are beneficially owned by such clients. Wachovia Bank, N.A. (B.K.) holds the securities reported in a fiduciary capacity for its respective customers. The address of Wachovia Corporation is One Wachovia Center, Charlotte, North Carolina 28288.
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PLAN OF DISTRIBUTION

We are registering the shares of common stock previously issued and the shares of common stock issuable upon exercise of the warrants to permit the resale of these shares of common stock by the holders of the common stock from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. However, upon any exercise of the warrants by payment of cash, we will receive the exercise price of the warrants. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholders may sell all or a portion of the shares of common stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions,

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether such options are listed on an options exchange or otherwise;
- involving ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- involving block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- involving purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- involving an exchange distribution in accordance with the rules of the applicable exchange;
- involving privately negotiated transactions;
- involving short sales;
- involving sales pursuant to Rule 144;
- in connection with which broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- involving a combination of any such methods of sale; and
- involving any other method permitted pursuant to applicable law.

If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The selling stockholders may pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933, as amended, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement or amendment, if required, will be distributed which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling stockholders and any discounts, commissions or concessions allowed or reallocated or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling stockholders and any other person participating in such distribution will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling stockholders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, estimated to be \$0.3 million in total, including, without limitation, Securities and Exchange Commission filing fees and expenses of compliance with state securities or “Blue Sky” laws; provided, however, that a selling stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling stockholders against liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreements, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholder specifically for use in this prospectus, in accordance with the related registration rights agreement, or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

DESCRIPTION OF COMMON STOCK TO BE REGISTERED

The following is a description of our common stock. It does not purport to be complete and is subject to, and qualified in its entirety by, the provisions of our Restated Certificate of Incorporation and By-Laws, forms of which have previously been filed and are incorporated by reference into this prospectus, and by the applicable provisions of New Jersey law.

General Matters

Our authorized capital stock consists of 200,000,000 shares of common stock and 5,882,352 shares of preferred stock, no par value. On February 17, 2009, immediately prior to this offering, we had 78,337,504 shares of common stock issued and outstanding and no shares of preferred stock issued and outstanding.

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. 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 outstanding or which the Company may designate and issue in the future.

Preferred Stock

The Board of Directors has the authority, without action by the stockholders, to designate and issue preferred stock in one or more series and to designate the rights, preferences and privileges of each series, which may be greater than the rights of the common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of the common stock until the Board of Directors determines the specific rights of the holders of this preferred stock. However, the effects might include, among other things:

- restricting dividends on the common stock;
- diluting the voting power of the common stock;
- impairing the liquidation rights of the common stock; or
- delaying or preventing a change in control of the company without further action by the stockholders.

No shares of preferred stock are outstanding, and we have no present plans to issue any shares of preferred stock.

Stock Options, Warrants and Other Obligations to Issue Capital Stock

As of December 31, 2008, we had outstanding warrants to purchase an aggregate of 1,400,003 shares of our common stock. In addition, we had 8,439,065 shares of our common stock issuable upon the exercise of stock options outstanding with a weighted average exercise price of \$6.54 per share and 766,716 shares of our common stock reserved for future grants under our 2000 Stock Option Plan.

In the private placement, we sold 8,000,000 shares of our common stock, at a price of \$12.50 per share, and, for no additional consideration, warrants to purchase up to 1,400,003 shares of common stock, at an exercise price of \$15.06 per share. The warrants were issued in connection with the private placement to the selling stockholders that closed on February 20, 2008. The warrants are immediately exercisable and remain exercisable until February 15, 2013.

The warrants may be exercised in whole or in part. If a holder desires to exercise its warrants, it must deliver an exercise notice to us at our principal office that specifies the number of shares of common stock to be purchased upon exercise. Unless the holder has elected a cashless exercise of the warrant, the notice must also be accompanied by payment of an amount equal to the per share exercise price multiplied by the number of shares for which the warrant is being exercised. Pursuant to the terms of the warrants, the holder will not have the right to exercise any portion of the warrants to the extent that after giving effect to such exercise, the holder (together with the holder's affiliates), would beneficially own in excess of 4.99% (the "maximum percentage") of the number of shares of our common stock outstanding immediately after giving effect to such exercise. By written notice to the Company, the Holder may from time to time increase or decrease the maximum percentage to any other percentage not in excess of 9.99% specified in such notice; provided that (i) any such increase will not be effective until the sixty-first (61st) day after such notice is delivered to the Company, and (ii) any such increase or decrease will apply only to the holder delivering such notice and not to any other holder of warrants.

The exercise price of the warrants may be adjusted upon certain events, including stock dividends, stock splits, recapitalizations and similar adjustments to the number of shares of our common stock outstanding and dividends paid in cash, in shares of our common stock or securities convertible into our common stock or in kind.

Registration Rights

Under a registration rights agreement that we entered into on February 15, 2008, we granted the selling stockholders registration rights with respect to the common stock. We are obligated under the registration rights agreement to use our commercially reasonable best efforts to cause the registration statement of which this prospectus is a part to be declared effective by May 20, 2008, or, in the event the registration statement is reviewed by the SEC, by June 19, 2008. We are also obligated under the registration rights agreement to keep this registration statement effective for a period ending on the earlier of (i) the date on which all shares of common stock registered pursuant to this registration statement have been sold and (ii) the first date as of which all shares of common stock registered pursuant to this registration statement may be sold without restriction pursuant to Rule 144 (or any successor thereto) promulgated under the Securities Act of 1933.

We will be obligated under the registration rights agreement to pay liquidated damages to the selling stockholders if any of the following default events occurs:

- on or prior to thirty (30) days following the date the private placement transaction closed, a registration statement has not been filed with the SEC (a “filing failure”);
- we fail to use our commercially reasonable best efforts to cause such registration statement to be declared effective by the SEC on or prior to (1) ninety (90) days after the closing date of the private placement transaction if there is no review of the registration statement by the SEC or (2) one hundred twenty (120) days after the closing date of the transaction if there is a review of the registration statement by the SEC (an “effectiveness failure”); or
- on any day after the effective date of the registration statement sales of all the common stock required to be included on such registration statement cannot be made (other than as permitted during a grace period as set forth in the registration rights agreement) pursuant to such registration statement, including because of a failure to keep such registration statement effective, to disclose such information as is necessary for sales to be made pursuant to such registration statement or to register sufficient a sufficient amount of common stock (a “maintenance failure”); or
- after the date six months following the closing of the private placement, we fail to file any required reports under Section 12 or 15(d) of the 1934 Act such that we are not in compliance with Rule 144(c)(1) or a result of which the purchasers in the private placement are unable to sell their registrable securities without restriction under Rule 144 (or any successor thereto) (a “current public information default”).

In these events, the registration rights agreement requires us to pay as liquidated damages for such failure to each holder of securities that are registrable securities under the registration rights agreement an amount equal to 1.0% of the aggregate purchase price of such registrable securities included in the registration statement of which this prospectus is a part on each of the following dates:

- the day that a filing failure occurs and on every thirtieth day (pro rated for shorter periods) thereafter until such filing failure is cured;
- the day that an effectiveness failure occurs and on every thirtieth day (pro rated for shorter periods) thereafter until such effectiveness failure is cured;
- the initial day of a maintenance failure and on every thirtieth day (pro rated for shorter periods) thereafter until such maintenance failure is cured; and
- the day that a current public information default occurs and on every thirtieth day (pro rated for shorter periods) thereafter until such current public information default is cured.

This description of the registration rights agreement is intended to be a summary of the terms of the agreement that are material to a purchaser of our common stock. It does not purport to be complete and is subject to, and qualified in its entirety by reference to, all of the registration rights provisions of the agreement.

Antitakeover Effects of Provisions of our Articles of Incorporation and Bylaws

Our Board of Directors is divided into three classes. As a result of this provision, at least two annual meetings of shareholders may be required for shareholders to change a majority of the Board of Directors. Our by-laws provide that the Board of Directors shall consist of not less than six nor more than twelve members, with the exact number to be determined by the vote of not less than 66 2/3 % of the Board of Directors from time to time. 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. Unless otherwise required by law, vacancies on the Board of Directors, including vacancies resulting from an increase in the number of directors or the removal of directors, may only be filled by an affirmative vote of 66 2/3% of the directors then in office. The classification of directors, the ability of the Board of Directors to increase the number of directors, the inability of the shareholders to remove directors without cause or fill vacancies on the Board of Directors and the inability of holders of less than 80% of our capital stock to remove directors even with cause will make it more difficult to change the Board of Directors, and will promote the continuity of existing management.

These and other provisions also may have the effect of deterring, preventing or delaying changes in control or management. These provisions are intended to enhance the likelihood of continued stability in the composition of the Board of Directors and in the policies furnished by the Board of Directors and to discourage types of transactions that may involve an actual or threatened change of control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts. These provisions also may have the effect of preventing changes in our management.

New Jersey Shareholders Protection Act

The New Jersey Shareholders Protection Act, NJSA 14A:10A-1 et seq., which we refer to as New Jersey Act, prohibits certain New Jersey corporations, such as us following this offering, from entering into certain “business combinations” with an “interested shareholder” (any person who is the beneficial owner of 10% or more of such corporation’s outstanding voting securities) for five years after such person became an interested shareholder, unless

the business combination or the interested shareholder’s acquisition of stock was approved by the corporation’s Board of Directors prior to such interested shareholder’s stock acquisition date. After the five-year waiting period has elapsed, a business combination between such corporation and an interested shareholder will be prohibited unless the business combination is approved by the holders of at least two-thirds of the voting stock not beneficially owned by the interested shareholder, or unless the business combination satisfies the New Jersey Act’s fair price provision intended to provide that all shareholders (other than the interested shareholders) receive a fair price for their shares.

The New Jersey Act defines “business combination” to include the following transactions between a corporation or a subsidiary and an interested shareholder or such interested shareholder’s affiliates: (1) the merger or consolidation of the corporation with the interested shareholder or any corporation that after the merger or consolidation would be an affiliate or associate of the interested shareholder; (2) any sale, lease, exchange, mortgage, pledge, transfer or other disposition to or with the interested shareholder, which has an aggregate market value equal to 10% or more of the aggregate market value of all of the assets or of the outstanding stock, or 10% or more of the income of the corporation or its subsidiaries; (3) the issuance or transfer to the interested shareholder of any stock of the corporation having an aggregate market value equal to or greater than 5% of the corporation’s outstanding stock; (4) the adoption of a plan or proposal for the liquidation or dissolution of the corporation proposed by the interested shareholder; (5) any reclassification of securities proposed by the interested shareholder that has the effect, directly or indirectly, of increasing any class or series of stock that is owned by the interested shareholder; and (6) the receipt by the interested shareholder of any loans or other financial assistance from the corporation.

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.

Transfer Agent and Registrar

The Transfer Agent and Registrar for our common stock is American Stock Transfer & Trust Company, New York, New York.

Listing

Our shares of common stock are quoted on The NASDAQ Global Market under the symbol “EMKR”.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon by Jenner & Block LLP and, with respect to matters governed by New Jersey law, by Dillon, Bitar & Luther, L.L.C.

EXPERTS

The consolidated financial statements incorporated in this Prospectus by reference from the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2008, and the effectiveness of EMCORE Corporation's internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports which are incorporated herein by reference (which reports (1) express an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph relating to the Company's ability to continue as a going concern and (2) express an unqualified opinion on the effectiveness of internal control over financial reporting). Such financial statements have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly, and current reports and other information with the Securities and Exchange Commission. You may read and copy any document that we file at the Public Reference Room of the SEC located at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site at www.sec.gov that contains reports, proxy and information statements and other information regarding registrants that file electronically, including EMCORE. We are not incorporating the contents of the SEC website into this prospectus. Certain of our filings may also be found on our website, www.emcore.com, under the heading "Investor". The information contained in or connected to our website is not part of this prospectus.

We have filed with the SEC a registration statement on Form S-1 (together with all amendments and exhibits, the "registration statement") under the Securities Act of 1933, as amended with respect to the offering of common stock. This prospectus, which constitutes part of the registration statement, does not contain all of the information set forth in the registration statement. Certain parts of the registration statement are omitted from the prospectus in accordance with the rules and regulations of the SEC.

Our common stock is listed on The NASDAQ Global Market and similar information can be inspected and copied at the offices of the National Association of Securities Dealers, Inc., 1735 K Street, N.W., Washington, D.C. 20006.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference in this prospectus the information in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in this prospectus updates (and, to the extent of any conflict, supersedes) information incorporated by reference that we have filed with the SEC prior to the date of this prospectus. **You should read all of the information incorporated by reference because it is an important part of this prospectus.**

We incorporate by reference the documents listed below and any future filings made with the SEC by us under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until we sell all of the securities (other than filings or portions of filings that are furnished under applicable SEC rules rather than filed):

- Annual Report on Form 10-K for the fiscal year ended September 30, 2008, filed with the SEC on December 30, 2008, and as amended by Form 10-K/A, filed with the SEC on January 28, 2009.

- Quarterly Report on Form 10-Q for the quarter ended December 31, 2008, filed with the SEC on February 17, 2009.

- Current Reports on Form 8-K, filed with the SEC on October 3, 2008, November 3, 2008, December 11, 2008, and February 10, 2009.

We hereby undertake to provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request of any such person, a copy of any and all of the reports or documents that have been incorporated by reference in this prospectus, other than exhibits to such documents unless such exhibits have been specifically incorporated by reference thereto. Requests for such copies should be directed to our Investor Relations department, at the following address:

EMCORE Corporation
10420 Research Road, SE
Albuquerque, New Mexico 87123

EMCORE CORPORATION

9,400,003 Shares
Common Stock

, 2009

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the estimated costs and expenses of the sale and distribution of the securities being registered, all of which are being borne by the Registrant.

SEC registration fee	\$ 2,335
Printing and engraving fees	10,000
Legal fees and expenses	175,000
Accounting fees and expenses	133,000
Total	<u>\$ 320,335</u>

Item 14. Indemnification of Directors and Officers

The Company's Restated Certificate of Incorporation and By-Laws include provisions (i) to reduce the personal liability of the Company's directors for monetary damage resulting from breaches of their fiduciary duty, and (ii) to permit the Company to indemnify its directors and officers to the fullest extent permitted by New Jersey law. The Company has obtained directors' and officers' liability insurance that insures such persons against the costs of defense, settlement, or payment of a judgment under certain circumstances.

Subject to certain limitations, we are obligated to indemnify our current and former directors, officers and employees in connection with the investigation of our historical stock option granting practices, related government investigation and shareholder litigation. These obligations arise under the terms of our certificate of incorporation, our bylaws, applicable contracts, and New Jersey law. The obligation to indemnify generally means that we are required to pay or reimburse the individuals' reasonable legal expenses and possibly damages and other liabilities incurred in connection with these matters. We are currently paying or reimbursing legal expenses being incurred in connection with these matters by a number of our current and former directors, officers and employees. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a director and officer liability insurance policies that limits its exposure and enables it to recover a portion of any future amounts paid.

Item 15. Recent Sales of Unregistered Securities

1. On November 10, 2005, EMCORE entered into an exchange agreement with Alexandra Global Master Fund Ltd. to exchange \$14,425,000 aggregate principal amount of EMCORE's outstanding convertible subordinated notes due May 15, 2006 for \$16,580,460 aggregate principal amount of newly issued convertible senior subordinated notes due May 15, 2011. The notes were converted into shares of our common stock on January 29, 2008 in connection with the transaction on this date described below.

2. On November 8, 2005, EMCORE entered into an asset purchase agreement with Phasebridge, Inc., a privately held company located in Pasadena, California. In connection with the asset purchase, based on a 10-trading day weighted average price, EMCORE issued 128,205 shares of EMCORE common stock, no par value, that were valued in the transaction at \$0.7 million. The offer and sale was made pursuant to Rule 506 of Regulation D under the Securities Act of 1933, as amended (Securities Act), and without registration under the Securities Act, in reliance on the exemption provided thereby. EMCORE relied upon the representations, warranties, and agreements of Phasebridge, including its agreement with respect to restrictions on resale, in support of the satisfaction of the conditions of such exemption.

3. On December 18, 2005, EMCORE entered into an asset purchase agreement with Force, Inc., a privately held company located in Christiansburg, Virginia. In connection with the asset purchase, EMCORE issued 240,000 shares of EMCORE common stock, no par value, with a market value of \$1.6 million at the measurement date and \$0.5 million in cash. The offer and sale was made pursuant to Rule 506 of Regulation D under the Securities Act, and without registration under the Securities Act, in reliance on the exemption provided thereby. EMCORE relied upon the representations, warranties, and agreements of Force, including its agreement with respect to restrictions on resale, in support of the satisfaction of the conditions of such exemption.

4. On January 12, 2006, EMCORE entered into an Agreement and Plan of Merger with K2 Optronics, Inc., a privately held company located in Sunnyvale, California (K2) and EMCORE Optoelectronics Acquisition Corporation, a wholly owned subsidiary of EMCORE. In connection with the merger, EMCORE issued 548,688 shares of EMCORE common stock, no par value, to K2's shareholders.

5. On January 29, 2008, EMCORE, in privately negotiated transactions, entered into separate agreements with holders of approximately 97.5%, or approximately \$83.3 million aggregate principal amount, of its outstanding 5.50% convertible senior subordinated notes due 2011 (the "Notes") pursuant to which this small number of holders converted their Notes into the Company's common stock. In connection with the conversion of the Notes, the Company issued 11,884,937 shares of its common stock, based on a conversion price of \$7.01, in accordance with the terms of the Notes. The issuance of the Company's common stock upon conversion of the Notes is made in reliance on the exemption from the registration requirements provided under Section 3(a) (9) of the Securities Act of 1933. To incentivize the holders to convert their Notes, the Company made cash payments to such holders equal to 4% of the principal amount of the Notes converted, or \$3.3 million, plus accrued interest of approximately \$1.0 million on the Notes converted. Subsequently, the remaining \$2.2 million in outstanding Notes were converted for 302,019 shares at \$7.01, in accordance with the terms of the Notes for a total of 12,186,656 shares.

6. On February 20, 2008, we completed a private placement to accredited investors of 8,000,000 shares of our common stock, no par value, and warrants to purchase an additional 1,400,003 shares of our common stock. The purchase price was \$12.50 per share, priced at the 20 day volume-weighted average

price. The warrants grant the holder the right to purchase one share of our common stock at a price of \$15.06 per share. The warrants are immediately exercisable and remain exercisable for a period of 5 years from the closing date.

7. On February 22, 2008, EMCORE completed its acquisition of the telecom-related assets of Intel Corporation's Optical Platform Division. The telecom assets acquired include intellectual property, assets and technology comprised of tunable lasers, tunable transponders, 300-pin transponders, and integrated tunable laser assemblies. The purchase price was \$75 million in cash and \$10 million in the Company's common stock, priced at a volume-weighted average price of \$13.84 per share. Under the terms of the Agreement, the purchase price of \$85 million could be adjusted based on an inventory true-up, plus specifically assumed liabilities.

8. On April 20, 2008, EMCORE completed the acquisition of the enterprise and storage assets of Intel's Optical Platform Division. The assets acquired include inventory, fixed assets, intellectual property, and technology relating to optical transceivers for enterprise and storage customers, as well as optical cable interconnects for high-performance computing clusters. As consideration for the purchase of assets, the Company issued 3.7 million restricted shares of the Company's common stock to Intel. These shares were valued at \$26.1 million. In addition, the Company may be required to make an additional payment to Intel based on the Company's stock price twelve months after the closing of the transaction. In the event that the Company is required to make an additional payment, it has the option to make that payment in cash, common stock or both (but not to exceed the equivalent value of 1.3 million shares).

9. In July 2008, EMCORE issued 145,843 shares of the Company's common stock to Opticomm Corporation as an additional earn-out payment. This transaction was valued at approximately \$0.7 million. In April 2007, EMCORE acquired privately-held Opticomm Corporation and agreed to an additional earn-out payment based on Opticomm's 2007 revenue.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits.

- | | |
|-------|---|
| 2.1 | Merger Agreement, dated January 12, 2006, by and among K2 Optronics, Inc., EMCORE Corporation, and EMCORE Optoelectronics Acquisition Corp. (incorporated by reference to Exhibit 2.1 to Registrant's Current Report on Form 8-K filed on January 19, 2006). |
| 2.2 | Asset Purchase Agreement between IQE RF, LLC, IQE plc, and EMCORE Corporation, dated July 19, 2006. (incorporated by reference to Exhibit 2.1 to Registrant's Current Report on Form 8-K filed on July 24, 2006). |
| 2.3 | Membership Interest Purchase Agreement, dated as of August 31, 2006, by and between General Electric Company, acting through the GE Lighting operations of its Consumer and Industrial division, and EMCORE Corporation (incorporated by reference to Exhibit 2.1 to Registrant's Current Report on Form 8-K filed on September 7, 2006). |
| 2.4 | Stock Purchase Agreement, dated as of April 13, 2007, by and among Registrant, Opticomm Corporation and the persons named on Exhibit 1 thereto (incorporated by reference to Exhibit 2.1 to Registrant's Current Report on Form 8-K filed April 19, 2007). |
| 2.5* | Loan and Security Agreement dated as of September 29, 2008, between Bank of America, N.A. and Registrant. |
| 2.6 | Asset Purchase Agreement, dated December 17, 2007, between EMCORE Corporation and Intel Corporation (incorporated by reference to Exhibit 2.1 to the Registrant's Form 10-Q filed on February 11, 2008) |
| 2.7 | Asset Purchase Agreement, dated April 9, 2008, between EMCORE Corporation and Intel Corporation (incorporated by reference to Exhibit 2.1 to the Registrant's Form 10-Q filed on May 12, 2008) |
| 2.8 | Securities Purchase Agreement, dated February 15, 2008, between EMCORE Corporation and each investor identified on the signature pages thereto (Filed as part of the Company's Current Report on Form 8-K, Commission file no. 000-22175, dated February 20, 2008, and incorporated herein by reference) |
| 3.1 | Restated Certificate of Incorporation, dated April 4, 2008 (incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on April 4, 2008). |
| 3.2 | Amended By-Laws, as amended through August 7, 2008 (incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on August 13, 2008). |
| 4.1 | Registration Rights Agreement, dated February 15, 2008, between EMCORE Corporation and the investors identified on the signature pages thereto (Filed as part of the Company's Current Report on Form 8-K, Commission file no. 000-22175, dated February 20, 2008, and incorporated herein by reference) |
| 4.2 | Form of Warrant, dated February 15, 2008 (Filed as part of the Company's Current Report on Form 8-K, Commission file no. 000-22175, dated February 20, 2008, and incorporated herein by reference) |
| 4.3 | Specimen certificate for shares of common stock (incorporated by reference to Exhibit 4.1 to Amendment No. 3 to the Registration Statement on Form S-1 (File No. 333-18565) filed with the Commission on February 24, 1997). |
| 5.1** | Opinion of Jenner & Block LLP |
| 5.2** | Opinion of Dillon, Bitar & Luther, L.L.C. |
| 10.1† | 1995 Incentive and Non-Statutory Stock Option Plan (incorporated by reference to Exhibit 10.1 to the Amendment No. 1 to the Registration Statement on Form S-1 filed on February 6, 1997). |
| 10.2† | 1996 Amendment to Option Plan (incorporated by reference to Exhibit 10.2 to Amendment No. 1 to the Registration Statement on Form S-1 filed on February 6, 1997). |
| 10.3† | MicroOptical Devices 1996 Stock Option Plan (incorporated by reference to Exhibit 99.1 to the Registration Statement on Form S-8 filed on February 6, 1998). |
| 10.4† | 2000 Stock Option Plan, as amended and restated on March 31, 2008 (incorporated by reference to the attached Exhibit to the Company's Definitive Proxy Statement filed on March 4, 2008). |
| 10.5† | 2000 Employee Stock Purchase Plan, as amended and restated on February 13, 2006 (incorporated by reference to Exhibit 10.2 to Registrant's Current Report on Form 8-K filed on February 17, 2006). |
| 10.6† | Directors' Stock Award Plan (incorporated herein by reference to Exhibit 99.1 to Registrant's Original Registration Statement of Form S-8 filed on November 5, 1997), as amended by the Registration Statement on Form S-8 filed on August 10, 2004. |
| 10.7 | Memorandum of Understanding, dated as of September 26, 2007 between Lewis Edelman and Registrant regarding shareholder derivative litigation (incorporated by reference to Exhibit 10.10 to Registrant's Annual Report on Form 10-K for the fiscal year ended September 20, 2006). |
| 10.8† | Fiscal 2008 Executive Bonus Plan (incorporated by reference to Exhibit 10.1 the Registrant's Form 10-Q filed on May 12, 2008). |

10.9†	Executive Severance Policy (incorporated by reference to Exhibit 10.2 to Registrant's Current Report on Form 8-K filed on April 19, 2007).
10.10†	Outside Directors Cash Compensation Plan, as amended and restated on February 13, 2006 (incorporated by reference to Exhibit 10.3 to Registrant's Current Report on Form 8-K filed on February 17, 2006).
10.11	Exchange Agreement, dated as of November 10, 2005, by and between Alexandra Global Master Fund Ltd. and Registrant (incorporated by reference to Exhibit 10.15 to Registrant's Annual Report on Form 10-K for the fiscal year ended September 30, 2005).
10.12	Consent to Amendment and Waiver, dated as of April 9, 2007, by and among EMCORE Corporation and certain holders of the 2004 Notes party thereto (incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K filed on April 10, 2007).
10.13	Consent to Amendment and Waiver, dated as of April 9, 2007, by and between EMCORE Corporation and the holder of the 2005 Notes (incorporated by reference to Exhibit 10.2 to Registrant's Current Report on Form 8-K filed on April 10, 2007).
10.14	Investment Agreement between WorldWater and Power Corp. and Registrant, dated November 29, 2006 (incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K filed on December 5, 2006).
10.15	Registration Rights Agreement between WorldWater and Power Corp. and Registrant, dated November 29, 2006 (incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K filed on December 5, 2006).
10.16	Letter Agreement between WorldWater and Power Corp. and Registrant, dated November 29, 2006 (incorporated by reference to Exhibit 10.3 to Registrant's Current Report on Form 8-K filed on December 5, 2006). Confidential Treatment has been requested by the Company with respect to portions of this document. Such portions are indicated by "*****".
10.17†	Dr. Hong Hou Offer Letter dated December 14, 2006 (incorporated by reference to Exhibit 10.1 to Registrant's Current Report filed on December 20, 2006).
10.18	Stipulation of Compromise and Settlement, dated as of November 28, 2007 executed by the Company and the other defendants and the plaintiffs in the Federal Court Action and the State Court Actions (incorporated by reference to Exhibit 10.19 to the Registrant's Form 10-K filed of December 31, 2007).
10.19†	2008 Director's Stock Award Plan (incorporated by reference to Exhibit 10.1 to Registrant's Form 10-Q filed on February 11, 2008).
10.20†*	Mr. John M. Markovich Offer Letter dated August 7, 2008.
14.1	Code of Ethics for Financial Professionals (incorporated by reference to Exhibit 14.1 to Registrant's Annual Report on Form 10-K for the fiscal year ended September 30, 2003).
21.1**	Subsidiaries of the Registrant.
23.1**	Consent of Deloitte & Touche LLP.
23.2**	Consent of Jenner & Block LLP (contained in Exhibit 5.1)
23.3**	Consent of Dillon, Bitar & Luther, L.L.C. (contained in Exhibit 5.2)

* Filed with the Form 10-K filed on December 30, 2008

** Filed herewith

† Management contract or compensatory plan

Item 17. 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:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this 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 this 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 effective registration statement; and

(iii) 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.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the 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 liability under the Securities Act to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b) as part of a registration statement relating to an offering shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness.

Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 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 Act and will be governed by the final adjudication of such issue.

(6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(7) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant, EMCORE Corporation, has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Albuquerque, State of New Mexico, on the 25th day of February, 2009.

EMCORE CORPORATION

Date: February 25, 2009

By:

/s/ Reuben F. Richards, Jr.
Reuben F. Richards, Jr.
Executive Chairman & Chairman of the Board
(Principal Executive Officer)

Date: February 25, 2009

By:

/s/ Hong Q. Hou
Hong Q. Hou, Ph.D.
Chief Executive Officer
(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1933, this registration statement has been signed by the following persons on behalf of the registrant in the capacities indicated, on February 25, 2009.

Signature	Title
<div>/s/ Reuben F. Richards, Jr. Reuben F. Richards, Jr.</div>	Executive Chairman and Chairman of the Board (Principal Executive Officer)
<div>/s/ Hong Q. Hou Hong Q. Hou, Ph.D.</div>	Chief Executive Officer and Director (Principal Executive Officer)
<div>/s/ John M. Markovich John M. Markovich</div>	Chief Financial Officer (Principal Financial and Accounting Officer)
<div>* Thomas J. Russell, Ph.D.</div>	Director
<div>* Charles T. Scott</div>	Director
<div>* John Gillen</div>	Director
<div>* Robert Bogomolny</div>	Director
* By: /s/ Reuben F. Richards Reuben F. Richards, Jr. Attorney in Fact	

SUBSIDIARIES OF REGISTRANT*

Corona Optical Systems, Inc., a Delaware corporation

K2 Optronics, Inc., a Delaware corporation

EMCORE IRB Company, Inc., a New Mexico corporation

EMCORE Hong Kong, Limited, a Hong Kong corporation

Langfang EMCORE Optoelectronics Company, Limited, a Chinese corporation

Opticomm Corporation, a Delaware corporation

EMCORE Solar Power, Inc., a Delaware corporation

EMCORE Netherlands B.V.

EMCORE Spain S.L.

EMCORE IRB Company, LLC, a New Mexico limited liability company

**As of February 25, 2009*

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Post-Effective Amendment No. 1 to Registration Statement No. 333-149860 on Form S-3 to Form S-1 of our reports dated December 30, 2008, relating to the consolidated financial statements of EMCORE Corporation and subsidiaries (which report expresses an unqualified opinion and includes an explanatory paragraph relating to EMCORE Corporation's ability to continue as a going concern) and the effectiveness of EMCORE Corporation and subsidiaries' internal control over financial reporting appearing in the Annual Report on Form 10-K of EMCORE Corporation for the year ended September 30, 2008 and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ DELOITTE & TOUCHE LLP

Dallas, Texas

February 25, 2009

February 17, 2009

Jenner & Block LLP
919 Third Avenue
37th Floor
New York, NY 10022
Tel 212-891-1600
www.jenner.com

Chicago
New York
Washington, DC

EMCORE Corporation
10420 Research Road, SE
Albuquerque, NM 87123

Ladies and Gentlemen:

We are acting as special counsel to EMCORE Corporation, a New Jersey corporation (the “Company”), in connection with the Post-Effective Amendment No. 1 on Form S-3 to the Registration Statement on Form S-1 (Registration No. 333-149860) (the “Registration Statement”) filed by the Company with the Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended (the “Securities Act”) relating to the sale by those selling stockholders of the Company named in the Registration Statement, of an aggregate of up to 9,400,003 shares of common stock of the Company, no par value per share, of which 8,000,000 shares (the “Shares”) of the Company’s common stock were issued on February 20, 2008 pursuant to a private placement to a group of accredited institutional investors and 1,400,003 shares of the Company’s common stock (the “Warrant Shares”) may be issued pursuant to Warrants (the “Warrants”) issued in connection with such transaction.

In connection with this opinion, we have examined and relied upon the Registration Statement and related prospectus, the Company’s Restated Certificate of Incorporation, as amended, its Bylaws, as amended, and the originals and copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

Based upon and subject to the qualifications, assumptions and limitations set forth in this letter, we are of the opinion that the Shares have been legally issued and are fully paid and nonassessable, and the Warrant Shares, when issued upon the exercise of the Warrants in accordance with the terms of the Warrants, will be legally issued, fully paid and nonassessable.

We express no opinion as to matters governed by the laws of the State of New Jersey, which we understand are addressed in an opinion issued in connection with the Registration Statement.

Our advice on every legal issue addressed in this letter is based exclusively on the federal law of the United States, and represents our opinion as to how that issue would be resolved were it to be considered by the highest court in the jurisdiction which enacted such law. The manner in which any particular issue would be treated in any actual court case would depend in part on facts and circumstances particular to the case and would also depend on how the court involved chose to exercise the wide discretionary authority generally available to it. This letter is not intended to guarantee the outcome of any legal dispute which may arise in the future. We advise you that issues addressed by this letter may be governed in whole or in part by other laws, but we express no opinion as to whether any relevant difference exists between the laws upon which our opinions are based and any other laws which may actually govern.

This opinion is furnished to you in connection with the filing of the Registration Statement, and is not to be used, circulated, quoted or otherwise relied upon for any other purposes. This opinion is limited to the specific issues addressed herein, and no opinion may be inferred or implied beyond that expressly stated herein. We assume no obligation to revise or supplement this opinion should the present laws identified above be changed by legislative action, judicial decision or otherwise.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. We also consent to the reference to our firm under the heading “Legal Matters” in the Registration Statement. In giving this consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Sincerely,

/s/ Jenner & Block LLP

Jenner & Block LLP

February 17, 2009

Emcore Corporation
10420 Research Road, S.E.
Albuquerque, NM 87123

Re: Emcore Corporation, Inc.
Registration Statement on Form S-1

Ladies and Gentlemen:

We are providing this opinion letter in our capacity as special counsel to Emcore Corporation, Inc., a New Jersey corporation (the "Company"), in connection with the filing by the Company of a registration statement on Form S-1 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"), with the United States Securities and Exchange Commission (the "Commission"). The Registration Statement relates to the resale by shareholders of the Company of up to an aggregate of 9,400,003 shares of common stock of the Company, without par value (the "Shares"), consisting of 8,000,000 Shares sold (the "Issued Shares"), and 1,400,003 Shares issuable upon exercise of warrants sold (the "Warrant Shares"), by the Company in a private placement that closed on February 20, 2008.

You have requested that we render the opinion set forth in this letter and we are furnishing this opinion in accordance with the requirements of Part II, Item 16 of Form S-1 and Item 601(b)(5)(i) of Regulation S-K promulgated by the Commission under the Securities Act.

In connection with the foregoing registration, we have examined originals, or copies certified or otherwise identified to our satisfaction of, (i) the Registration Statement as filed with the Commission, (ii) the Company's Restated Certificate of Incorporation, as amended and restated to date (the "Certificate of Incorporation"), (iv) the Company's By-Laws, as amended and/or restated to date (the "By-Laws"), (v) certain resolutions of the Board of Directors of the Company relating to the Shares and the registration thereof, and (vi) such other documents as we have deemed necessary or appropriate for purposes of rendering the opinion set forth herein.

In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such latter documents. As to any facts material to the opinion expressed herein that were not independently established or verified, we have relied upon statements and representations of officers and other representatives of the Company and others.

Based upon and subject to the foregoing, we are of the opinion that (i) the Issued Shares have been duly authorized and validly issued, and are fully paid and nonassessable, and (ii) the Warrant Shares have been duly authorized and, when sold and duly issued in accordance with the terms of the applicable warrant agreements, including receipt of the consideration to be paid therefor (if any), the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion with the Commission as Exhibit 5. In giving this consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

This opinion is limited to the specific issues addressed herein, and no opinion may be inferred or implied beyond that expressly stated herein. We assume no obligation to revise or supplement this opinion should the present laws of the State of New Jersey be changed by legislative action, judicial decision or otherwise.

Very truly yours,

/s/ Dillon, Bitar & Luther, L.L.C.

DILLON, BITAR & LUTHER, L.L.C.
