

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

FORM 11-K

(Mark one)

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (FEE REQUIRED)

For the calendar year ended December 31, 2001

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]

For the transition period from _____ to _____

Commission File No.: 0-22175

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

EMCORE Corporation 401(k) Savings Plan

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

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

REQUIRED INFORMATION

EMCORE Corporation 401(k) Savings Plan ("Plan") is subject to the Employee Retirement Income Security Act of 1974 ("ERISA"). Therefore, in lieu of the requirements of Items 1-3 of Form 11-K, the financial statements and schedules of the Plan for the two calendar years ended December 31, 2001 and 2000, which have been prepared in accordance with the financial reporting requirements of ERISA, are attached hereto and incorporated herein by this reference.

SIGNATURES

The Plan. Pursuant to the requirements of the Securities and Exchange Act of 1934, the trustee (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

EMCORE Corporation 401(k) Savings Plan

/s/ Thomas G. Werthan

June 28, 2002

Thomas G. Werthan
Chief Financial Officer, Director and Trustee

Date

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statement Nos. 333-65526, 333-60816, 333-45827, 333-27507, 333-39547, 333-36445 and 333-37306 of EMCORE Corporation on Form S-8 of our report dated June 26, 2002, appearing in this Annual Report on Form 11-K of EMCORE Corporation 401(k) Savings Plan for the year ended December 31, 2001.

Deloitte & Touche LLP

Parsippany, New Jersey
June 28, 2002

Independent Auditors' Report

Financial Statements
Years Ended December 31, 2001 and 2000
Supplemental Schedules
Year Ended December 31, 2001

EMCORE CORPORATION
401(k) SAVINGS PLAN

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INDEPENDENT AUDITORS' REPORT

To the Trustees and Participants of the
EMCORE Corporation 401(k) Savings Plan

We have audited the accompanying statements of net assets available for benefits of the EMCORE Corporation 401(k) Savings Plan (the "Plan") as of December 31, 2001 and 2000, and the related statements of changes in net assets available for benefits for the years then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, such financial statements present fairly, in all material respects, the net assets available for benefits of the Plan at December 31, 2001 and 2000, and the changes in net assets available for benefits for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedules of assets held at end of year and of reportable transactions are presented for the purpose of additional analysis and are not a required part of the basic financial statements but are supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. These schedules are the responsibility of the Plan's management. Such schedules have been subjected to the auditing procedures applied in our audit of the basic 2001 financial statements and, in our opinion, are fairly stated in all material respects when considered in relation to the basic 2001 financial statements taken as a whole.

June 26, 2002

EMCORE CORPORATION
401(k) SAVINGS PLAN

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS
AS OF DECEMBER 31, 2001 AND 2000

ASSETS	2001	2000
	----	----
INVESTMENTS, AT FAIR VALUE		
Money Market:		
Prudential Government Securities Trust	\$ 456,955	\$ 312,803
Prudential Government Securities	6,974	98,690
Mutual Funds:		
AIM Aggressive Growth	958,236	738,344
Alliance Growth Class A	932,775	731,540
Mutual Beacon Class I	335,346	203,775
Oppenheimer Quest Opportunity Value Class A	448,114	336,442
Prudential Active Balanced A	372,239	293,655
Prudential Active Balanced B	-	30,296
Prudential Equity Class A	1,250,377	1,131,556
Prudential Equity Class B	-	114,476
Prudential Government Income Class A	96,408	60,237
Prudential Government Income Class B	-	3,086
Prudential Small Company Class A	892,119	658,336
Prudential Small Company Class B	-	53,052
Prudential Utility Class A	759,551	750,647
Prudential Utility Class B	-	81,818
Putnam Voyager Class A	1,092,494	847,947
Scudder-Dreman High Return Class A	565,641	399,230
EMCORE Corporation Stock Fund	1,896,331	5,087,512
Participants' Loans Fund	166,867	146,595
	-----	-----
Total investments	10,230,427	12,080,037
EMPLOYER'S CONTRIBUTIONS RECEIVABLE	51,335	46,685
	-----	-----
NET ASSETS AVAILABLE FOR BENEFITS	\$10,281,762	\$12,126,722
	=====	=====

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

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EMCORE CORPORATION
401(k) SAVINGS PLAN

STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
YEARS ENDED DECEMBER 31, 2001 AND 2000

<TABLE>
<CAPTION>

	2001	2000
	----	----
<S>	<C>	<C>
ADDITIONS TO ASSETS ATTRIBUTED TO:		
Investment Income:		
Net (depreciation) appreciation in fair value of investments	\$ (4,854,951)	\$ 2,533,583
Dividends and interest income	152,178	749,380
	-----	-----
Net investment (loss) income	(4,702,773)	3,282,963
	-----	-----
Contributions:		
Participant	2,849,591	2,058,888
Employer	684,026	585,742
	-----	-----
Total contributions	3,533,617	2,644,630
	-----	-----
Total (deletions) additions	(1,169,156)	5,927,593
DISTRIBUTIONS TO PARTICIPANTS	(675,804)	(462,277)
	-----	-----
(DECREASE) INCREASE IN NET ASSETS AVAILABLE FOR BENEFITS	(1,844,960)	5,465,316
NET ASSETS AVAILABLE FOR BENEFITS:		
Beginning of year	12,126,722	6,661,406
	-----	-----

End of year	\$ 10,281,762	\$ 12,126,722
	=====	=====

</TABLE>

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

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EMCORE Corporation
401(k) Savings Plan

NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2001 AND 2000

1. DESCRIPTION OF PLAN

The following description of the EMCORE Corporation 401(k) Plan (the "Plan") provides only general information. Participants should refer to the Plan agreement for a more complete description of the Plan's provisions.

General - The Plan is a defined contribution plan established to provide retirement benefits to eligible employees of EMCORE Corporation (the "Company"). The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA).

Participation - Individuals become eligible on the first day of the month immediately following their completion of one month of service provided they are 20 years of age or older. Each participant's account is credited with the participant's contribution and allocations of the Company's matching contribution and Plan earnings.

Contributions - Participants may elect to contribute to the Plan through a salary reduction up to the maximum tax deferral amount allowed pursuant to IRS regulations. Participants may also contribute amounts representing distributions from other qualified defined benefit or contribution plans. The Company contributes 50 percent of the first 6 percent of base compensation that a participant contributes to the Plan, which is calculated on a bi-weekly basis. All employer contributions are in the form of the Company's common stock. The Company may also at its discretion choose to make an additional profit sharing contribution to participants who are credited with more than 500 hours of service during the plan year and are employed by the Company on the last day of the year.

Vesting - Participants are immediately vested in their contributions plus actual earnings thereon. Vesting in the Company's matching and discretionary contributions plus actual earnings thereon is based on years of continuous service. A participant becomes 100 percent vested after five years of credited service, with vesting taking place ratably over such period. A participant becomes 100 percent vested in all employer contributions upon reaching age 60, at death, if permanently and totally disabled, or upon termination of the Plan.

Investment Options - Upon enrollment in the Plan, a participant may direct employee contributions in any percent increments in any of the available investment options. Participants may change their investment options at any time. Only employer contributions are in the form of EMCORE Corporation common stock. For the year ended December 31, 2001, the EMCORE Corporation stock fund depreciated in value by \$3,846,000, the Company contributed \$684,026, current year forfeitures totaled \$81,700, and participants received distributions of \$110,507.

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Description of investment options:

Money Market -

Prudential Government Securities Trust and Prudential Government Securities - Funds are invested in United States Government securities.

Mutual Funds -

AIM Aggressive Growth - Funds are invested in equity securities of small to medium-sized companies.

Alliance Growth - Funds are invested in equity securities issued by companies with favorable earnings and long-term growth prospects.

Mutual Beacon - Funds are invested in common and preferred stocks and corporate debt.

Oppenheimer Quest Opportunity Value - Funds are invested among stocks,

bonds and cash.

Prudential Active Balanced - Funds are invested in a mix of equity securities, fixed-income securities and money market instruments.

Prudential Equity - Funds are invested in common stocks of major and established corporations.

Prudential Government Income - Funds are invested in bonds backed by the United States Government or by government-linked agencies.

Prudential Small Company - Funds are invested in common stocks selected for their potential for high return on equity, increased earnings, increasing or expected dividends and low price/earnings ratios.

Prudential Utility - Funds are invested in equity and debt securities of utility companies, including electric, gas, telephone and cable companies.

Putnam Voyager - Funds are invested primarily in common stocks of mid-size firms.

Scudder-Dreman High Return - Funds are invested in common stocks that pay high dividends relative to the dividend yield of the S&P 500 index.

EMCORE Corporation Stock - Only employer contributions are in the form of EMCORE Corporation common stock.

Payment of Benefits - The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account. On termination of service due to death, disability or retirement, a participant or their beneficiary may elect to receive either a lump-sum amount equal to the value of the participant's vested interest in his or her account or annual installments over a ten-year period. If an employee is terminated prior to age 60 for other reasons, the employee may request distribution of their vested account balance.

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Forfeitures - If a participant's employment terminates for reasons other than retirement before attaining age 60, disability or death, the unvested portion of the individual's account is forfeited. Forfeitures of employer matching contributions shall be used to reduce future employer contributions. Participant forfeitures were approximately \$81,700 and \$79,200 for the years ended December 31, 2001 and 2000, respectively.

Continuity of Plan - Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA. In the event of Plan termination, participants receive 100 percent of the vested interest in his or her account as a lump-sum distribution.

Participant Loans - Participants may borrow from their fund accounts from a minimum of \$1,000 up to a maximum amount equal to the lesser of \$50,000 or 50 percent of their vested account balance. Loan transactions are treated as transfers to (from) the investment fund(s), from (to) the participants' loan fund. Loan terms range from 1-5 years or up to 25 years for the purchase of a primary residence. Loans are collateralized by the balance in the participant's account and bear interest at a rate commensurate with local prevailing rates as determined by the plan administrator. Interest rates in 2001 ranged from 6.0 percent to 10.5 percent. Principal and interest is paid ratably through bi-weekly payroll deductions.

Administrative Fees - All administrative expenses of the Plan are paid by the Company. Fees paid by the Company on behalf of the Plan amounted to approximately \$30,000 and \$21,000 for the years ended December 31, 2001 and 2000, respectively.

2. SUMMARY OF ACCOUNTING POLICIES

Basis of Accounting - The financial statements of the Plan are prepared under the accrual method of accounting.

Use of Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and the reported amount of changes during the reporting period. The preparation of financial statements in conformity with generally accepted accounting principles also requires management to make estimates and assumptions that affect the disclosures of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

Investment Valuation and Income Recognition - The Plan's investments are stated at fair value. Shares in mutual funds are valued based on the quoted market prices of the underlying securities which represent the net asset value of shares held by the Plan. The Company's stock is valued at its quoted market price. Participants' loans are valued at cost which approximates fair value.

The Plan presents in the statement of changes in net assets available for benefits the net (depreciation) appreciation in the fair value of its investments which consists of both realized gains or losses and the unrealized appreciation (depreciation) on those investments.

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Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

Payment of Benefits - Benefits are recorded when paid. There were no outstanding benefits payable to terminated employees as of December 31, 2001 and 2000.

3. INVESTMENTS

The fair values of the individual investments that represent 5% or more of the Plan's assets as of December 31, 2001 and 2000 are as follows:

<TABLE>
<CAPTION>

	2001		2000	
	Number of Shares	Fair Value	Number of Shares	Fair Value
<S>	<C>	<C>	<C>	<C>
Mutual Funds:				
AIM Aggressive Growth	101,401	\$ 958,236	57,819	\$ 738,344
Alliance Growth Class A	30,593	932,775	18,116	731,540
Prudential Equity Class A	88,932	1,250,377	66,601	1,131,556
Prudential Small Company Class A	55,584	892,119	47,809	658,336
Prudential Utility Class A	77,903	759,551	57,876	750,647
Putnam Voyager Class A	63,150	1,092,494	36,393	847,947
Scudder-Dremen High Return Class A	15,325	565,641	-	-
EMCORE Corporation Stock Fund*	140,991	1,896,331	108,245	5,087,512

* Nonparticipant-directed

</TABLE>

During 2001, the Plan's investments (including gains and losses on investments bought and sold, as well as held during the year) depreciated in value by \$4,854,951 as follows:

Mutual Funds	\$ (1,008,551)
EMCORE Corporation Stock Fund	(3,846,400)

	\$ (4,854,951)
	=====

[OBJECT OMITTED]

4. TAX STATUS

The Company adopted a standardized prototype plan which received an Internal Revenue Service opinion letter dated March 11, 1994 that stated that the Plan and related trust are designed in accordance with applicable sections of the Internal Revenue Code. The Plan has since been amended. However, the plan administrator and the Plan's tax counsel believe that the Plan is designed and is currently being operated in compliance with the applicable requirements of the Internal Revenue Code.

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EMCORE CORPORATION
401(k) SAVINGS PLAN

SCHEDULE H, LINE 4I - SCHEDULE OF ASSETS HELD AT END OF YEAR
AS OF DECEMBER 31, 2001

<TABLE>
<CAPTION>

Investment Type	Description of Investment	Units	Current Value
-----------------	---------------------------	-------	---------------

<S>	<C>	<C>	<C>
Money Market:	Prudential Government Securities Trust	456,955	\$ 456,955
	Prudential Government Securities	6,974	6,974
Mutual Funds:	AIM Aggressive Growth	101,401	958,236
	Alliance Growth Class A	30,593	932,775
	Mutual Beacon Class I	25,776	335,346
	Oppenheimer Quest Opportunity Value Class A	14,065	448,114
	Prudential Active Balanced A	32,145	372,239
	Prudential Equity Class A	88,932	1,250,377
	Prudential Government Income Class A	10,724	96,408
	Prudential Small Company Class A	55,584	892,119
	Prudential Utility Class A	77,903	759,551
	Putnam Voyager Class A	63,150	1,092,494
	Scudder-Dreman High Return Class A	15,325	565,641
Common Stock:	EMCORE Corporation Stock Fund (1)	140,991	1,896,331
	Participants' Loans Fund (2)	-	166,867

			\$10,230,427
			=====

</TABLE>

- (1) The cost of the investment in the EMCORE Corporation Stock Fund at December 31, 2001 was \$2,074,801.
- (2) Interest rates range from 6.0 percent to 10.50 percent. Maturity dates range from 2002 through 2006.

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EMCORE CORPORATION 401(k) SAVINGS PLAN

SCHEDULE H, LINE 4J - SCHEDULE OF REPORTABLE TRANSACTIONS
 SERIES OF TRANSACTIONS - BY ISSUE
 FOR THE YEAR ENDED DECEMBER 31, 2001

<TABLE>
 <CAPTION>

Gain	Description of Asset (Include Rate and Maturity in Case of a Loan)	Purchase Price	Sales Price	Expenses Incurred with Transaction	Cost of Asset	Current Value of Asset on Transaction Date	Net (Loss)
-	-----	-----	-----	-----	-----	-----	-----
<S>		<C>	<C>	<C>	<C>	<C>	<C>
EMCORE Corporation Stock Fund		\$524,457	\$ -	\$ -	\$524,457	\$524,457	\$ -
117,992		-	135,627	-	17,635	135,627	

</TABLE>