

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Form 8-K

Current Report

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): April 21, 2004

KLA-Tencor Corporation
(Exact name of registrant as specified in its charter)

000-09992
(Commission File Number)

Delaware

(State or other jurisdiction of incorporation)

04-2564110

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

160 Rio Robles
San Jose, California
95134
(Address of principal executive offices, with zip code)

(408) 875-3000
(Registrant's telephone number, including area code)

N/A
(Former name or former address, if changed since last report)

Item 7. Financial Statements and Exhibits.

(c) Exhibits.

Exhibit	Description
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99.1	Press Release issued by KLA-Tencor Corporation dated April 21, 2004.

Item 12. Results of Operations and Financial Condition

On April 21, 2004, KLA-Tencor Corporation, (the "Company") issued a press release regarding its financial results for the quarter ended March 31, 2004. A copy of the press release is furnished as Exhibit 99.1 to this Form 8-K.

The information in this Form 8-K and the exhibit attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities under that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, regardless of any general incorporation language in such filing.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

KLA-TENCOR CORPORATION

Date: April 21, 2004

By: /s/ John H. Kispert

John H. Kispert
Executive Vice President

INDEX TO EXHIBITS

Exhibit	Description
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99.1	Press Release issued by KLA-Tencor Corporation dated April 21, 2004.

KLA-Tencor Posts Third Quarter Fiscal Year 2004 Earnings
of \$66 Million on Revenues of \$390 Million

SAN JOSE, Calif.--(BUSINESS WIRE)--April 21, 2004--KLA-Tencor Corporation (Nasdaq:KLAC) today announced operating results for its third quarter of fiscal 2004, ended March 31, 2004. Revenues for the quarter were \$390 million, up 15% from \$339 million in the previous quarter, and up 28% from \$304 million in the third quarter of fiscal 2003. The net income for the quarter was \$66 million or \$0.33 per diluted share, compared with net income of \$45 million or \$0.22 per diluted share in the prior quarter, and \$27 million or \$0.14 per diluted share in the third quarter of fiscal 2003.

"Customer orders for our process control solutions continued to rise as we helped chipmakers lower their manufacturing costs and move to more advanced process technologies," stated Chief Executive Officer Ken Schroeder. "During the quarter KLA-Tencor benefited from all the major capital spending trends, as we partnered with chipmakers to expand both 200-mm and 300-mm capacity, advance existing capacity to next-generation processes, increase the efficiency of already operating production lines and overcome yield and reliability problems in next-generation pilot lines. While working to increase the profitability of our customers by speeding their time-to-market of next generation chips, we also enhanced our own profitability with cost reduction initiatives and improved capacity absorption. As a result of rising revenues and our improved cost-structure, we achieved gross profit margins in excess of 55 percent for the first time since the last quarter of fiscal 2001."

Orders for wafer inspection equipment remained robust, while bookings growth was particularly strong in metrology and reticle inspection. On a geographic basis the U.S. and Korea posted the strongest bookings growth. The U.S. was 32 percent of orders, above its historical average of 25-30 percent; Korea, China and Singapore combined were 27 percent of orders, above their combined historical average of 15 percent; Taiwan was 16 percent, below its historical average of 20 percent; Japan was 14 percent, lower than its historical average of 20 percent, and Europe was 11 percent, lower than its historical average of 15 percent.

Gross margins improved two percent sequentially to 56 percent in the March quarter from 54 percent in the December quarter, primarily driven by cost reduction initiatives along with improvements in capacity absorption.

Cash, cash equivalents and marketable securities increased by \$92 million to \$1.72 billion, while the balance sheet remained free of long-term debt. Accounts receivable increased by \$116 million to \$362 million on strong product shipments. Inventory increased by \$22 million to \$310 million, as the company continues to ramp production to meet customer demand.

Forward Looking Statements

Statements in this press release regarding the company's accounts receivable, orders and capital spending trends may be interpreted as forward-looking statements, and subject to the Safe Harbor provisions created by the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current information and expectations, and involve a number of risks and uncertainties. Actual results may differ materially from those projected or suggested in such statements due to various factors, including but not limited to: delays or cancellations of orders by customers; shipments or acceptances; inability by the company to meet its production and/or product development schedules; the demand for semiconductors; and new and enhanced product offerings by competitors. For other factors that may cause actual results to differ from those projected, please refer to the company's Form 10-K, Forms 10-Q and other filings with the Securities and Exchange Commission. Actual results could differ materially from those anticipated in forward-looking statements in this release as a result of certain factors, including those set forth in the risk factors described in the company's SEC filings.

About KLA-Tencor

KLA-Tencor is the world leader in yield management and process control solutions for semiconductor manufacturing and related industries. Headquartered in San Jose, Calif., with operations around the world, KLA-Tencor ranked #6 on S&P's 2002 index of the top 500 companies in the U.S. KLA-Tencor is traded on the Nasdaq National Market under the symbol KLAC. Additional information about the company is available on the Internet at <http://www.kla-tencor.com>.

	March 31, 2004	June 30, 2003

(In thousands)		
ASSETS		
Cash, short-term investments and marketable securities	\$ 1,720,838	\$ 1,487,883
Accounts receivable, net	362,295	223,535
Inventories	310,328	258,799
Land, property and equipment, net	374,251	382,729
Other assets	553,594	513,651
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Total assets	\$ 3,321,306	\$ 2,866,597
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 67,471	\$ 33,893
Deferred system profit	216,143	177,486
Unearned revenue	51,741	48,203
Other current liabilities	497,818	391,474
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Total current liabilities	833,173	651,056
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Stockholders' equity:		
Common stock and capital in excess of par value	936,968	814,968
Retained earnings	1,544,420	1,396,886
Accumulated other comprehensive income	6,745	3,687
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Total stockholders' equity	2,488,133	2,215,541
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Total liabilities and stockholders' equity	\$ 3,321,306	\$2,866,597
	=====	=====

KLA-Tencor Corporation
CONDENSED CONSOLIDATED UNAUDITED STATEMENTS OF OPERATIONS

	Three months ended March 31,		Nine months ended March 31,	
	2004	2003	2004	2003

(In thousands, except per share data)				
Revenues:				
Product	\$ 312,645	\$ 238,921	\$ 827,614	\$ 819,504
Service	77,127	65,377	218,666	195,232
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Total revenues	389,772	304,298	1,046,280	1,014,736
Costs and operating expenses:				
Costs of goods sold	170,605	156,731	482,515	514,213
Research and development	69,149	61,419	203,531	204,207
Selling, general and administrative	62,265	60,548	184,451	196,078
Non-recurring acquisition, restructuring and other, net	--	--	--	(9,402)
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Total costs and operating expenses	302,019	278,698	870,497	905,096
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Income from operations	87,753	25,600	175,783	109,640
Interest income and other, net	4,909	10,372	20,642	32,244
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Income before income taxes	92,662	35,972	196,425	141,884
Provision for income taxes	26,480	8,633	48,891	34,052
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Net income	\$ 66,182	\$ 27,339	\$ 147,534	\$ 107,832
	=====	=====	=====	=====
Basic earning per share:				
Net income	\$ 0.34	\$ 0.14	\$ 0.76	\$ 0.57
	=====	=====	=====	=====
Diluted earnings per share:				
Net income	\$ 0.33	\$ 0.14	\$ 0.73	\$ 0.56
	=====	=====	=====	=====

Weighted average number
of shares:

Basic	196,159	190,064	194,519	189,511
	=====	=====	=====	=====
Diluted	203,150	194,393	201,952	194,121
	=====	=====	=====	=====

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