

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): January 22, 2004

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

000-09992
(Commission File Number)

Delaware	04-2564110
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(State or other jurisdiction of incorporation)	(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 January 22, 2004.
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Item 12. Results of Operations and Financial Condition

On January 22, 2004, KLA-Tencor Corporation, (the "Company") is issuing a press release and holding a conference call regarding its financial results for the quarter and six months ending December 31, 2003. 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: January 22, 2004

By: /s/ John H. Kispert

John H. Kispert
Executive Vice President
and Chief Financial Officer

INDEX TO EXHIBITS

Exhibit Description
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99.1 Press Release issued by KLA-Tencor Corporation dated January 22, 2004.

KLA-Tencor Posts Earnings of \$45 Million on Revenues of \$339 Million for
Second Quarter of Fiscal 2004

SAN JOSE, Calif.--(BUSINESS WIRE)--Jan. 22, 2004--KLA-Tencor Corporation (Nasdaq:KLAC) today announced operating results for its second quarter of fiscal 2004, ended December 31, 2003. The company reported net income of \$45 million and diluted earnings per share of \$0.22 on revenues of \$339 million -- an increase on both a year-over-year and sequential basis. In comparison, the second quarter of fiscal 2003 resulted in net income of \$29 million and diluted earnings per share of \$0.15 on revenues of \$335 million, while in its first fiscal quarter of fiscal 2004 KLA-Tencor realized net income of \$37 million and diluted earnings per share of \$0.18 on revenues of \$318 million.

According to Chief Executive Officer Ken Schroeder, "Rising chip demand fueled by an improving global economy, coupled with high capacity-utilization rates due to years of industry under-investment, is driving a strong upswing in capacity-related tool orders. Ramping yields of leading-edge processes remains a challenging task and our process control systems are playing a pivotal role in the industry's accelerating capacity expansion efforts. At the same time, we continue to benefit from new technology orders for process control equipment as chipmakers also work to develop even more challenging next-generation processes."

Geographically, Korea, China, Singapore and Japan exhibited the strongest order growth compared to historical averages. The U.S. was 24 percent of orders, below its historical average of 25-30 percent; Taiwan was 18 percent, below its historical average of 20 percent; Korea, China and Singapore combined was 18 percent, higher than their historical average of 15 percent; Japan was 26 percent, higher than its historical average of 20 percent, and Europe was 14 percent, at its historical average of 15 percent.

Gross margins improved three percent sequentially to 54 percent, which helped drive net income higher by 21 percent over the previous quarter. Improvements in capacity absorption and manufacturing efficiencies contributed to the gain in gross margins.

KLA-Tencor increased cash, cash equivalents and marketable securities by \$63 million to \$1.63 billion, while the balance sheet remained free of long-term debt. Higher product shipments led to an increase in accounts receivables of \$37 million to \$246 million. However, strong collections resulted in shipments based Days Sales Outstanding of 59 days. Inventory increased by \$14 million to \$288 million, as the Company expanded production to meet rising customer demand.

The company has scheduled a live webcast of its second quarter fiscal 2004 earnings conference call for Thursday, January 22, 2004, at 2:00 p.m. (PT).

Forward Looking Statements: Statements in this press release regarding the causes of an upswing in capacity-related tool orders, the industry's accelerating capacity expansion efforts, chipmakers developing more challenging next-generation processes, current order backlog, are forward-looking statements, and are 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 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. The company assumes no obligation to update the information in this press release.

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>.

CONDENSED CONSOLIDATED UNAUDITED BALANCE SHEETS

	Dec. 31, 2003	June 30, 2003
(In thousands)	-----	-----
ASSETS		
Cash, short-term investments and marketable securities	\$1,629,030	\$1,487,883
Accounts receivable, net	245,841	223,535
Inventories	288,355	258,799
Land, property and equipment, net	374,692	382,729
Other assets	534,515	513,651
	-----	-----
Total assets	\$3,072,433	\$2,866,597
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 51,722	\$ 33,893
Deferred system profit	155,973	177,486
Unearned revenue	44,572	48,203
Other current liabilities	421,359	391,474
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Total current liabilities	673,626	651,056
	-----	-----
Stockholders' equity:		
Common stock and capital in excess of par value	917,951	814,968
Retained earnings	1,478,238	1,396,886
Accumulated other comprehensive income	2,618	3,687
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Total stockholders' equity	2,398,807	2,215,541
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Total liabilities and stockholders' equity	\$3,072,433	\$2,866,597
	=====	=====

KLA-Tencor Corporation
CONDENSED CONSOLIDATED UNAUDITED STATEMENTS OF OPERATIONS

	Three months ended		Six months ended	
	December 31,		December 31,	
	2003	2002	2003	2002
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(In thousands, except per share data)				
Revenues:				
Product	\$264,824	\$268,075	\$514,969	\$580,583
Service	73,714	66,843	141,539	129,855
	-----	-----	-----	-----
Total revenues	338,538	334,918	656,508	710,438
Costs and operating expenses:				
Costs of goods sold	156,369	171,138	311,910	357,482
Research and development	68,930	71,935	134,382	142,788
Selling, general and administrative	62,177	65,089	122,186	135,530
Non-recurring acquisition, restructuring and other, net	--	--	--	(9,402)
	-----	-----	-----	-----
Total costs and operating expenses	287,476	308,162	568,478	626,398
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Income from operations	51,062	26,756	88,030	84,040
Interest income and other, net	7,332	11,702	15,733	21,872
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Income before income taxes	58,394	38,458	103,763	105,912
Provision for income taxes	13,879	9,230	22,411	25,419
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Net income	\$ 44,515	\$ 29,228	\$ 81,352	\$ 80,493
	=====	=====	=====	=====
Basic earning per share:				
Net income	\$ 0.23	\$ 0.15	\$ 0.42	\$ 0.43

Diluted earnings per share:	=====	=====	=====	=====
Net income	\$ 0.22	\$ 0.15	\$ 0.40	\$ 0.42
	=====	=====	=====	=====
Weighted average number of shares:				
Basic	194,872	189,018	193,751	189,229
	=====	=====	=====	=====
Diluted	202,450	193,519	201,323	193,904
	=====	=====	=====	=====

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