UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 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 24, 2013

KLA-TENCOR CORPORATION (Exact name of registrant as specified in its charter) 000-09992 04-2564110 Delaware (I.R.S. Employer Identification No.) (State or other jurisdiction of incorporation) (Commission File Number) One Technology Drive, Milpitas, California 95035 (Address of principal executive offices) (Zip Code) Registrant's telephone number, including area code: (408) 875-3000 (Former name or former address, if changed since last report) Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions: Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425) Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12) Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b)) Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.02 Results of Operations and Financial Condition.

On January 24, 2013, KLA-Tencor Corporation issued a press release announcing selected operating results for its second quarter of fiscal year 2013, which ended on December 31, 2012. A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in Item 2.02 of this Current Report on 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.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibit is furnished herewith:

Exhibit No. Description

99.1 Text of press release issued by KLA-Tencor Corporation dated January 24, 2013

SIGNATURES

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

KLA-TENCOR CORPORATION

Date: January 24, 2013 By: /s/ BRIAN M. MARTIN

Name: Brian M. Martin

Title: Executive Vice President and General Counsel

EXHIBIT INDEX

Exhibit No. Description

99.1 Text of press release issued by KLA-Tencor Corporation dated January 24, 2013

FOR IMMEDIATE RELEASE

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KLA-TENCOR REPORTS FISCAL 2013 SECOND QUARTER RESULTS

MILPITAS, Calif., January 24, 2013 - KLA-Tencor Corporation (NASDAQ: KLAC) today announced operating results for its second quarter of fiscal year 2013, which ended on December 31, 2012, and reported GAAP net income of \$107 million and GAAP earnings per diluted share of \$0.63 on revenues of \$673 million.

"In the second quarter, KLA-Tencor delivered revenue and earnings per share at or above the upper end of our range of guidance in the face of a challenging demand environment," said Rick Wallace, president and CEO of KLA-Tencor. "We believe that the accelerated pace of innovation by our customers at the leading edge, and the essential role that process control plays in the success of that innovation, will continue to provide long-term opportunities for KLA-Tencor to advance our market leadership and to deliver superior financial performance."

GAAP Results								
Q2 FY 2013 Q1 FY 2013 Q2 FY 2012								
Revenues	\$673 million	\$721 million	\$642 million					
Net Income	\$107 million	\$135 million	\$111 million					
Earnings per Diluted Share	\$0.63	\$0.80	\$0.66					

Non-GAAP Results								
Q2 FY 2013 Q1 FY 2013 Q2 FY 2012								
Net Income	\$106 million	\$142 million	\$122 million					
Earnings per Diluted Share	\$0.63	\$0.84	\$0.72					

A reconciliation between GAAP operating results and non-GAAP operating results is provided following the financial statements that are part of this release. Non-GAAP results include the impact of stock-based compensation, but exclude the impact of acquisitions, restatement and restructuring related items, and certain discrete tax items.

KLA-Tencor will discuss the results for its fiscal year 2013 second quarter, along with its outlook, on a conference call today beginning at 2:00 p.m. Pacific Standard Time. A webcast of the call will be available at: www.kla-tencor.com

Forward-Looking Statements:

Statements in this press release other than historical facts, such as statements regarding market conditions in the semiconductor equipment industry, anticipated innovation efforts by customers, expected trends and focus areas in customers' capital investment, the importance of process control in the success of future innovation, KLA-Tencor's ability to preserve and extend its market leadership position and KLA-Tencor's future financial performance, 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: the demand for semiconductors; the financial condition of the global capital markets and the general macroeconomic environment; new and enhanced product and technologies by competitors; cancellation of orders by customers; the ability of KLA-Tencor's research and development teams to successfully innovate and develop technologies and products that are responsive to customer demands; KLA-Tencor's ability to successfully manage its costs; market acceptance of the company's existing and newly issued products; and changing customer demands. For other factors that may cause actual results to differ materially from those projected and anticipated in forward-looking statements in this release, please refer to KLA-Tencor's Annual Report on Form 10-K for the year ended June 30, 2012, subsequently filed Quarterly Reports on Form 10-Q and other filings with the Securities and Exchange Commission (including, but not limited to, the risk factors described therein). KLA-Tencor assumes no obligation to, and does not currently intend to, update these forward-looking statements.

About KLA-Tencor:

KLA-Tencor Corporation (NASDAQ: KLAC), a leading provider of process control and yield management solutions, partners with customers around the world to develop state-of-the-art inspection and metrology technologies. These technologies serve the semiconductor, LED and other related nanoelectronics industries. With a portfolio of industry-standard products and a team of world-class engineers and scientists, the company has created superior solutions for its customers for more than 35 years. Headquartered in Milpitas, California, KLA-Tencor has dedicated customer operations and service centers around the world. Additional information may be found at www.kla-tencor.com. (KLAC-F)

Use of Non-GAAP Financial Information:

The non-GAAP and supplemental information provided in this press release is a supplement to, and not a substitute for, KLA-Tencor's financial results presented in accordance with United States GAAP.

To supplement KLA-Tencor's condensed consolidated financial statements presented in accordance with GAAP, the company provides certain non-GAAP financial information, which is adjusted from results based on GAAP to exclude certain costs and expenses, as well as other supplemental information. The non-GAAP and supplemental information is provided to enhance the user's overall understanding of KLA-Tencor's operating performance and its prospects in the future. Specifically, KLA-Tencor believes that the non-GAAP information provides useful measures to both management and investors regarding financial and business trends relating to KLA-Tencor's financial performance by excluding certain costs and expenses that the company believes are not indicative of its core operating results. The non-GAAP information is among the budgeting and planning tools that management uses for future forecasting. However, because there are no standardized or generally accepted definitions for most non-GAAP financial metrics, definitions of non-GAAP financial metrics (for example, determining which costs and expenses to exclude when calculating such a metric) are inherently subject to significant discretion. As a result, non-GAAP financial metrics may be defined very differently from company to company, or even from period to period within the same company, which can potentially limit the usefulness of such information to an investor. The presentation of non-GAAP and supplemental information is not meant to be considered in isolation or as a substitute for results prepared and presented in accordance with United States GAAP.

KLA-Tencor Corporation

Condensed Consolidated Unaudited Balance Sheets

(In thousands)	December 31, 20	012 June 30, 2012
ASSETS		
Cash, cash equivalents and marketable securities	\$ 2,578	3,253 \$ 2,534,444
Accounts receivable, net	606	5,115 701,280
Inventories	662	2,735 650,802
Other current assets	289	9,197 277,517
Land, property and equipment, net	292	2,394 277,686
Goodwill	326	5,779 327,716
Purchased intangibles, net	43	3,514 55,636
Other non-current assets	269	9,776 275,227
Total assets	\$ 5,068	3,763 \$ 5,100,308
LIABILITIES AND STOCKHOLDERS' EQUITY		-
Current liabilities:		
Accounts payable	\$ 103	3,575 \$ 139,183
Deferred system profit	156	5,775 147,218
Unearned revenue	53	3,257 63,095
Other current liabilities	468	3,130 513,411
Total current liabilities	781	1,737 862,907
Non-current liabilities:		
Long-term debt	747	7,104 746,833
Income tax payable	54	4,910 50,839
Unearned revenue	31	,742 34,899
Other non-current liabilities	92	2,134 89,235
Total liabilities	1,707	7,627 1,784,713
Stockholders' equity:		
Common stock and capital in excess of par value	1,123	3,422 1,089,480
Retained earnings	2,252	2,772 2,247,258
Accumulated other comprehensive income (loss)	(15	5,058) (21,143)
Total stockholders' equity	3,361	,136 3,315,595
Total liabilities and stockholders' equity	\$ 5,068	\$ 5,100,308

KLA-Tencor Corporation
Condensed Consolidated Unaudited Statements of Operations

	 Three months en	ember 31,	Six months ended December 31,				
(In thousands, except per share data)	2012		2011		2012		2011
Revenues:							
Product	\$ 523,023	\$	500,659	\$	1,097,101	\$	1,150,915
Service	149,988		141,823		296,619		288,043
Total revenues	 673,011		642,482		1,393,720		1,438,958
Costs and operating expenses:							
Costs of revenues	303,915		272,855		621,140		613,204
Engineering, research and development	121,608		116,363		241,350		224,125
Selling, general and administrative	94,241		93,801		191,426		187,877
Total costs and operating expenses	519,764		483,019		1,053,916		1,025,206
Income from operations	153,247		159,463		339,804		413,752
Interest income and other, net	(8,373)		(12,556)		(18,388)		(19,583)
Income before income taxes	 144,874		146,907		321,416		394,169
Provision for income taxes	38,244		36,110		79,419		91,377
Net income	\$ 106,630	\$	110,797	\$	241,997	\$	302,792
Net income per share:							
Basic	\$ 0.64	\$	0.67	\$	1.45	\$	1.82
Diluted	\$ 0.63	\$	0.66	\$	1.43	\$	1.78
Cash dividends declared per share	\$ 0.40	\$	0.35	\$	0.80	\$	0.70
Weighted average number of shares:							
Basic	166,268		166,343		166,632		166,513
Diluted	169,076		169,103		169,702		169,650

KLA-Tencor Corporation Condensed Consolidated Unaudited Statements of Cash Flows

Three months ende
December 31,

		December 31,				
(In thousands)		2012		2011		
Cash flows from operating activities:						
Net income	\$	106,630	\$	110,797		
Adjustments to reconcile net income to net cash provided by operating activities:						
Depreciation and amortization		21,925		23,267		
Asset impairment charges		_		1,378		
Net gain on sale of assets		(1,160)		_		
Non-cash stock-based compensation expense		14,958		19,646		
Excess tax benefit from equity awards		(6,067)		_		
Net loss (gain) on sale of marketable securities and other investments		(1,048)		106		
Changes in assets and liabilities:						
Increase in accounts receivable, net		(77,272)		(83,819)		
Decrease (increase) in inventories		28,822		(33,142)		
Decrease (increase) in other assets		(19,062)		31,658		
Increase (decrease) in accounts payable		(12,314)		14,580		
Increase in deferred system profit		14,849		54,596		
Increase in other liabilities		7,182		48,165		
Net cash provided by operating activities		77,443		187,232		
Cash flows from investing activities:						
Capital expenditures, net		(17,091)		(14,918)		
Proceeds from sale of assets		1,838		2,228		
Purchase of available-for-sale securities		(341,496)		(287,987)		
Proceeds from sale and maturity of available-for-sale securities		453,096		287,236		
Purchase of trading securities		(8,744)		(16,852)		
Proceeds from sale of trading securities		10,116		18,353		
Net cash provided by (used in) investing activities		97,719		(11,940)		
Cash flows from financing activities:						
Issuance of common stock		23,607		39,396		
Tax withholding payments related to vested and released restricted stock units		(9,471)		(11,544)		
Common stock repurchases		(68,283)		(63,580)		
Payment of dividends to stockholders		(66,522)		(58,101)		
Excess tax benefit from equity awards		6,067		_		
Net cash used in financing activities		(114,602)		(93,829)		
Effect of exchange rate changes on cash and cash equivalents		(3,189)		(2,424)		
Net increase in cash and cash equivalents		57,371		79,039		
Cash and cash equivalents at beginning of period		709,942		745,947		
Cash and cash equivalents at end of period	\$	767,313	\$	824,986		
Supplemental cash flow disclosures:	-					
Income taxes paid, net	\$	48,295	\$	(29,746)		
Interest paid	\$	26,682	\$	26,904		
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KLA-Tencor Corporation Condensed Consolidated Unaudited Supplemental Information (In thousands, except per share data)

Reconciliation of GAAP Net Income to Non-GAAP Net Income

		Three months ended						Six months ended			
	Dece	December 31, 2012		tember 30, 2012	December 31, 2011		December 31, 2012		December 31, 2011		
GAAP net income	\$	106,630	\$	135,367	\$	110,797	\$	241,997	\$	302,792	
Adjustments to reconcile GAAP net income to non- GAAP net income											
Acquisition related charges	a	4,242		6,886		7,406		11,128		15,034	
Restructuring, severance and other related charges	b	_		3,134		1,476		3,134		4,032	
Restatement related charges	c	_		_		_		_		135	
Income tax effect of non-GAAP adjustments	d	(1,392)		(2,979)		(2,886)		(4,371)		(6,949)	
Discrete tax items	e	(3,514)		_		5,079		(3,514)		5,079	
Non-GAAP net income	\$	105,966	\$	142,408	\$	121,872	\$	248,374	\$	320,123	
GAAP net income per diluted share	\$	0.63	\$	0.80	\$	0.66	\$	1.43	\$	1.78	
Non-GAAP net income per diluted share	\$	0.63	\$	0.84	\$	0.72	\$	1.46	\$	1.89	
Shares used in diluted shares calculation		169,076		169,824		169,103		169,702		169,650	

Pre-tax impact of items included in Consolidated Statements of Operations

	Acquisition related charges		eturing, severance er related charges	Res	statement related charges	Total pre-tax GAAP to non-GAAP adjustment	
Three months ended December 31, 2012							
Costs of revenues	\$ 1,921	\$	_	\$	_	\$	1,921
Engineering, research and development	835		_		_		835
Selling, general and administrative	 1,486		_		_		1,486
Total in three months ended December 31, 2012	\$ 4,242	\$	_	\$	_	\$	4,242
Three months ended September 30, 2012							
Costs of revenues	\$ 4,560	\$	_	\$	_	\$	4,560
Engineering, research and development	836		_		_		836
Selling, general and administrative	1,490		3,134		_		4,624
Total in three months ended September 30, 2012	\$ 6,886	\$	3,134	\$	_	\$	10,020
Three months ended December 31, 2011							
Costs of revenues	\$ 5,018	\$	243	\$	_	\$	5,261
Engineering, research and development	898		241		_		1,139
Selling, general and administrative	1,490		992		_		2,482
Total in three months ended December 31, 2011	\$ 7,406	\$	1,476	\$	_	\$	8,882

To supplement our condensed consolidated financial statements presented in accordance with GAAP, we provide certain non-GAAP financial information, which is adjusted from results based on GAAP to exclude certain costs and expenses, as well as other supplemental information. The non-GAAP and supplemental information is provided to enhance the user's overall understanding of our operating performance and our prospects in the future. Specifically, we believe that the non-GAAP information provides useful measures to both management and investors regarding financial and business trends relating to our financial performance by excluding certain costs and expenses that we believe are not indicative of our core operating results. The non-GAAP information is among the budgeting and planning tools that management uses for future forecasting. However, because there are no standardized or generally accepted definitions for most non-GAAP financial metrics, definitions of non-GAAP financial metrics (for example, determining which costs and expenses to exclude when calculating such a metric) are inherently subject to significant discretion. As a result, non-GAAP financial metrics may be defined very differently from company to company, or even from period to period within the same company, which can potentially limit the usefulness of such information to an investor. The presentation of non-GAAP and supplemental information is not meant to be considered in isolation or as a substitute for results prepared and presented in accordance with United States GAAP.

- a. Acquisition related charges include amortization of intangible assets associated with acquisitions. Management believes that the expense associated with the amortization of acquisition related intangible assets is appropriate to be excluded because a significant portion of the purchase price for acquisitions may be allocated to intangible assets that have short lives, and exclusion of the amortization expense allows comparisons of operating results that are consistent over time for both KLA-Tencor's newly acquired and long-held businesses. Management believes excluding these items helps investors compare our operating performance with our results in prior periods as well as with the performance of other companies.
- b. Restructuring, severance and other related charges include costs associated with the company's decision in the first quarter of fiscal year 2013 to exit from the solar inspection business, as well as those associated with reductions in force. Management believes that it is appropriate to exclude these items as they are not indicative of ongoing operating results and therefore limit comparability. Management believes excluding these items helps investors compare our operating performance with our results in prior periods as well as with the performance of other companies.
- c. Restatement related charges include legal and other expenses related to the investigation regarding the company's historical stock option granting process and related stockholder litigation and other matters. KLA-Tencor has paid or reimbursed legal expenses incurred by a number of its current and former directors, officers and employees in connection with the investigation of the company's historical stock option practices and the related litigation and government inquiries. Management believes that it is appropriate to exclude these items as they are not indicative of ongoing operating results and therefore limit comparability. Management believes excluding these items helps investors compare our operating performance with our results in prior periods as well as with the performance of other companies.
- d. Income tax effect of non-GAAP adjustments includes the income tax effects of the excluded items noted above. Management believes that it is appropriate to exclude the tax effects of the items noted above in order to present a more meaningful measure of non-GAAP net income.
- e. Discrete tax items include the tax impact of shortfalls in excess of cumulative windfall tax benefits recorded as provision for income taxes during the period. Windfall tax benefits arise when a company's tax deduction for employee stock activity exceeds book compensation for the same activity and are generally recorded as increases to capital in excess of par value. Shortfalls arise when the tax deduction is less than book compensation and are recorded as decreases to capital in excess of par value to the extent that cumulative windfalls exceed cumulative shortfalls. Shortfalls in excess of cumulative windfalls are recorded as provision for income taxes. When there are shortfalls recorded as provision for income taxes during an earlier quarter, windfalls arising in subsequent quarters within the same fiscal year are recorded as a reduction to income taxes to the extent of the shortfalls recorded. Management believes that it is appropriate to exclude these or other adjustments to the cumulative windfall tax benefit that are not indicative of ongoing operating results and limit comparability. Management believes excluding these items helps investors compare our operating performance with our results in prior periods as well as with the performance of other companies.