
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): 06/27/2008

KLA-TENCOR CORPORATION

(Exact name of registrant as specified in its charter)

Commission File Number: 000-09992

Delaware
(State or other jurisdiction of
incorporation)

04-2564110
(IRS Employer
Identification No.)

One Technology Drive, Milpitas, California 95035
(Address of principal executive offices, including zip code)

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

N/A
(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))
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Item 8.01. Other Events

On June 30, 2007, KLA-Tencor Corporation issued a news release announcing that its Board of Directors, on June 27, 2008, authorized the repurchase of 15 million of the company's outstanding shares. Subject to market conditions, the repurchase of these 15 million shares is expected to be completed within 15 months. The 15 million share repurchase authorization is in addition to previous authorizations.

A copy of the news release is attached hereto as Exhibit 99.1.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits

The following exhibit is filed herewith:

Exhibit No.	Description
99.1	Text of news release issued by KLA-Tencor Corporation dated June 30, 2008

Signature(s)

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: June 30, 2008

By: /s/ Brian M. Martin

Brian M. Martin
Senior Vice President and General Counsel

Exhibit Index

<u>Exhibit No.</u>	<u>Description</u>
EX-99.1	Text of news release issued by KLA-Tencor Corporation dated June 30, 2008

FOR IMMEDIATE RELEASE

Company Contacts:

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KLA-TENCOR CORPORATION Board of Directors authorizes an additional 15 million share repurchase

San Jose, Calif., June 30, 2008-KLA-Tencor Corporation (NASDAQ: KLAC) today announced that its Board of Directors authorized the repurchase of 15 million of the company's outstanding shares. Subject to market conditions, the repurchase of these 15 million shares is expected to be completed within 15 months. This 15 million share repurchase authorization is in addition to previous authorizations.

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, California, the Company has sales and service offices around the world. An S&P 500 company, KLA-Tencor is traded on the NASDAQ Global Select Market under the symbol KLAC. Additional information about the Company is available at <http://www.kla-tencor.com>.