AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JUNE 27, 2002 POST-EFFECTIVE AMENDMENT NO. 1 TO REGISTRATION STATEMENT ON FORM S-8 (NO. 333-56304)

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

POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

CIENA CORPORATION (EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE (STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION) 23-2725311 (I.R.S. EMPLOYER IDENTIFICATION NUMBER)

1201 Winterson Road Linthicum, Maryland 21090 (ADDRESS OF PRINCIPAL EXECUTIVE OFFICES)

> 2000 Equity Incentive Plan 2000 Employee Stock Purchase Plan (FULL TITLE OF THE PLAN)

Russell B. Stevenson, Jr. Senior Vice President, General Counsel and Secretary CIENA Corporation 1201 Winterson Road Baltimore, Maryland 21090 (410) 865-8939 (NAME AND ADDRESS OF AGENT FOR SERVICE) (TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

COPIES TO:

Michael J. Silver Amy Bowerman Freed Stephanie D. Marks Hogan & Hartson L.L.P. 111 South Calvert Street Baltimore, MD 21202 (410) 659-2700

RECENT EVENTS: DEREGISTRATION

The Registration Statement of Form S-8 (Registration No. 333-56304) ("Registration Statement") of ONI Systems Corp., a Delaware corporation ("ONI Systems"), pertaining to the registration of 7,985,343 shares of ONI Systems Common Stock, par value \$0.0001 per share, to which this Post Effective Amendment No. 1 relates, was filed with the Securities and Exchange Commission on February 28, 2001.

CIENA Corporation, a Delaware corporation ("CIENA") and ONI Systems entered into an Agreement and Plan of Merger, dated February 17, 2002 (the "Merger Agreement"), pursuant to which, among other things, ONI Systems would be merged with and into CIENA and all outstanding shares of ONI Systems Common Stock, par value \$0.0001 per share, would be converted into the right to receive 0.7104 shares of CIENA Common Stock, \$0.01 par value per share and cash in lieu of any fractional shares (these actions are collectively referred to as the "Merger").

On June 18, 2002, ONI Systems held a special meeting of stockholders at which ONI Systems' stockholders approved and adopted the Merger Agreement and the transactions contemplated thereby and approved the Merger. The Merger became effective following the filing of a Certificate of Merger with the Secretary of State of the State of Delaware on June 21, 2002 (the "Effective Time").

As a result of the Merger, all offerings of ONI Systems Common Stock pursuant to the Registration Statement have been terminated. In accordance with an undertaking made by ONI Systems in the Registration Statement to remove from registration, by means of a post-effective amendment, any shares of ONI Systems Common Stock which remain unsold at the termination of the offering, CIENA, as the successor by merger to ONI Systems, hereby removes from registration all shares of ONI Systems Common Stock registered under the Registration Statement which remain unsold as of the Effective Time. The shares deregistered by this Post-Effective Amendment No. 1 will be registered by a subsequently filed registration statement on Form S-8 by CIENA.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Post-Effective Amendment No. 1 to the Registration Statement on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Linthicum, State of Maryland, on June 27, 2002.

CIENA Corporation

By: /s/ Russell B. Stevenson, Jr.

Russell B. Stevenson, Jr. Senior Vice President, General Counsel and Secretary

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