

As filed with the Securities and Exchange Commission on August 31, 2000

Registration No. 333-30900

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 no.)

1201 WINTERSON ROAD
LINTHICUM, MD 21090

(Address of principal executive offices)

LIGHTERA NETWORKS, INC. 1998 STOCK PLAN,
AS AMENDED

(Full title of the plan)

MICHAEL O. MCCARTHY III
VICE PRESIDENT, GENERAL COUNSEL
AND SECRETARY
CIENA CORPORATION
1201 WINTERSON ROAD
LINTHICUM, MD 21090
(410) 865-8500

(Name, address and telephone number, including area code, of agent for service)

Copy to:
MICHAEL J. SILVER
HOGAN & HARTSON L.L.P.
111 SOUTH CALVERT STREET
BALTIMORE, MD 21202
(410) 659-2700

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee (2)
COMMON STOCK, PAR VALUE \$.01	2,529,161	N/A	N/A	N/A

(1) Registrant previously registered 2,529,161 shares of Common Stock. Pursuant to General Instruction E to Form S-8, Registrant hereby registers an additional 2,529,161 shares to reflect a two-for-one stock split declared on August 15, 2000, payable on September 18, 2000 to stockholders of record on August 28, 2000.

(2) The Registrant previously paid the registration fee in connection with the registration of 2,529,161 shares of Common Stock on April 23, 1999, at the time of filing of the Registrant's Registration Statement on Form S-8 (File No. 333-30900). No additional fee is required to be paid in accordance with Rule 416 of the Securities Act of 1933.

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 to the Registration Statement on Form S-8 of CIENA Corporation (the "Company") filed on April 23, 1999, is being filed pursuant to Rule 416 of the Securities Act of 1933, to reflect a two-for-one stock split declared by the Company on August 15, 2000, payable on September 18, 2000 to stockholders of record on August 28, 2000.

INCORPORATION BY REFERENCE

The contents of the Registrant's Registration Statement on Form S-8 (File No. 333-30900) are incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Act, 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 Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Linthicum, State of Maryland, on August 31, 2000.

CIENA Corporation

By: /s/ Michael O. McCarthy III

Michael O. McCarthy III
Vice President, General Counsel and
Secretary

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the date indicated.

By: /s/ Patrick H. Nettles, Ph.D. *

Patrick H. Nettles, Ph.D.
President and Chief
Executive Officer

/s/ Joseph R. Chinnici *

Joseph R. Chinnici
Sr. Vice President, Chief Financial Officer
Principal Financial Officer

/s/ Andrew C. Petrik *

Andrew C. Petrik
Vice President, Controller and Treasurer
Principal Accounting Officer

/s/ Harvey B. Cash *

Harvey B. Cash
Director

/s/ Stephen P. Bradley *

Stephen P. Bradley
Director

/s/ Gerald H. Taylor *

Gerald H. Taylor
Director

* By: /s/ Michael O. McCarthy III

Michael O. McCarthy III,
pursuant to power of attorney

EXHIBIT INDEX

Exhibit Number -----	Description -----
4.1	Form of Common Stock Certificate (filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-17729) and incorporated herein by reference).
4.2	Rights Agreement dated December 29, 1997 (filed as Exhibit 4.2 to the Registrant's Form 8-K dated December 29, 1997 and incorporated herein by reference).
4.3	Amendment No. 1 to Rights Agreement dated June 2, 1998 (filed as Exhibit 4.3 to the Registrant's Form 8-K dated October 14, 1998 and incorporated herein by reference).
4.4	Amendment No. 2 to Rights Agreement dated September 13, 1998 (filed as Exhibit 99.2 to the Registrant's Form 8-K dated September 14, 1998 and incorporated herein by reference).
4.5	Amendment No. 3 to Rights Agreement dated October 14, 1998 (filed as Exhibit 99.1 to the Registrant's Form 8-K dated October 19, 1998 and incorporated herein by reference).
5.1	Opinion of Hogan & Hartson L.L.P. regarding the legality of the securities being registered (filed as Exhibit 5.1 to the Registrant's Registration Statement on Form S-8 (file No. 333-30900) (the "Initial Form S-8") and incorporated herein by reference).
23.1	Consent of PricewaterhouseCoopers LLP (filed as Exhibit 23.1 to the Registrant's Initial Form S-8 and incorporated herein by reference).
23.2	Consent of Hogan & Hartson L.L.P. (included in their opinion filed as Exhibit 5.1 to the Initial Form S-8 and incorporated herein by reference).
24.1	Power of Attorney (included on signature page to the Initial Form S-8).