Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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.)

Ciena Corporation 7035 Ridge Road Hanover, Maryland 21076 (410) 694-5700

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

> Ciena Corporation 2017 Omnibus Incentive Plan (Full title of the Plan)

David M. Rothenstein Senior Vice President, General Counsel and Secretary Ciena Corporation 7035 Ridge Road Hanover, Maryland 21076 (410) 694-5700

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Act. (Check one):

Large accelerated filer \square

Accelerated filer o

Non-accelerated filer o

Smaller reporting company o

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share	Proposed maximum aggregate offering price (2)	Amount of registration fee
Common Stock, \$0.01 par value per share 16,117,801		\$23.63	\$380,783,055.41	\$44,132.76

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of common stock which become issuable under the Plan by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of our outstanding shares of common stock.
- (2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) and (h) under the Securities Act. The proposed maximum aggregate offering price is based upon the average of the high and low sale prices of the Ciena common stock as reported on the New York Stock Exchange on March 24, 2017.

EXPLANATORY NOTE AND STATEMENT PURSUANT TO RULE 429

This Registration Statement on Form S-8 of Ciena Corporation ("Ciena" or the "Registrant") is being filed to register 8,900,000 shares of Ciena's common stock, par value \$0.01 per share (the "Common Stock") authorized for issuance pursuant to awards under the Ciena Corporation 2017 Omnibus Incentive Plan (the "2017 Plan"), as well as 1,546,244 shares of Common Stock that remain available for issuance under the Ciena Corporation 2008 Omnibus Incentive Plan (the "2008 Plan"), which will be made available for issuance under the 2017 Plan upon the effectiveness of the 2017 Plan on March 23, 2017 (the "Effective Date"). In addition, the number of shares available under the 2017 Plan will be increased from time to time by: (i) the number of shares subject to outstanding awards granted under our "prior equity compensation plans" that are forfeited, expire or are canceled without delivery of Common Stock following the Effective Date, and (ii) the number of shares subject to awards assumed or substituted in connection with the acquisition of another company. Ciena's "prior equity compensation plans" include the 2008 Plan, the Cyan, Inc. 2013 Equity Incentive Plan, the Cyan, Inc. 2006 Stock Plan, the Ciena Corporation 2000 Equity Incentive Compensation Plan, and the World Wide Packets, Inc. 2000 Stock Incentive Plan. Upon the effectiveness of the 2017 Plan, Ciena will not make any further awards under its prior equity compensation plans. Accordingly, Ciena is also registering in this Form S-8 an additional 5,671,557 shares of Common Stock underlying equity awards issued under Ciena's prior equity compensation plans that were outstanding as of the Effective Date. This amount represents the maximum number of additional shares that may be added to the 2017 Plan pursuant to subclause (i) above should these awards be forfeited, canceled or expire subsequent to the Effective Date without delivery of Common Stock.

PART I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information specified in Part I will be sent or given to employees as specified by Rule 428(b)(1) of the Securities Act of 1933, as amended ("Securities Act"). In accordance with the instructions to Part I of Form S-8, such documents will not be filed with the Securities and Exchange Commission (the "Commission"). These documents and the documents incorporated by reference pursuant to Item 3 of Part II of this registration statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The Registrant hereby incorporates by reference into this registration statement the following documents filed by it with the Commission:

- (a) The Registrant's Form 10-K for the fiscal year ended October 31, 2016 filed with the Commission on December 21, 2016, and the Registrant's Form 10-Q for the fiscal quarter ended January 31, 2017 filed with the Commission on March 8, 2017;
- (b) The Registrant's Current Reports on Form 8-K filed with the Commission on January 24, 2017, January 27, 2017, February 1, 2017, March 1, 2017, March 27, 2017 and March 29, 2017; and
- (c) The description of the Registrant's Common Stock contained in the Registrant's Registration Statement on Form 8-A filed with the Commission on December 20, 2013, including all amendments and reports filed under Section 13(a) or 15(d) of the Exchange Act for purposes of updating the description of Common Stock.

In addition, all documents and reports filed by the Registrant subsequent to the date hereof pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), prior to the filing of a post-effective amendment to this registration statement which indicates that all securities offered have been sold or which deregisters all securities remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be part hereof from the date of filing of such documents or reports. We are not, however, incorporating by reference any documents, or portions of documents, whether specifically listed above or arising in the future, which are not deemed "filed" with the Commission. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequent filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Delaware General Corporation Law. Section 145(a) of the General Corporation Law of the State of Delaware (the "DGCL") provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the person's conduct was unlawful.

Section 145(b) of the DGCL states that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which the person shall have been adjudged to be liable to the corporation unless and only to the extent that the Delaware Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for such expenses as the Delaware Court of Chancery or such other court shall deem proper.

Section 145(c) of the DGCL provides that to the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections (a) and (b) of Section 145, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

Section 145(d) of the DGCL states that any indemnification under subsections (a) and (b) of Section 145 (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because the person has met the applicable standard of conduct set forth in subsections (a) and (b) of Section 145. Such determination shall be made with respect to a person who is a director or officer at the time of such determination (1) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, (2) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (4) by the stockholders.

Section 145(f) of the DGCL states that the indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of Section 145 shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office.

Section 145(g) of the DGCL provides that a corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise,

against any liability asserted against such person and incurred by such person in any such capacity or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under the provisions of Section 145.

Section 145(j) of the DGCL states that the indemnification and advancement of expenses provided by, or granted pursuant to, Section 145 shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

Section 102(b)(7) of the DGCL provides that a corporation may eliminate or limit the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that such provision shall not eliminate or limit the liability of a director (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for willful or negligent conduct in paying dividends or repurchasing stock out of other than lawfully available funds, or (4) for any transaction from which the director derived an improper personal benefit. No such provision shall eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision becomes effective.

Certificate of Incorporation and Bylaws. Article EIGHT of the Certificate of Incorporation provides that no director shall be personally liable for breach of fiduciary duty as a director, provided, however that such clause shall not apply to any liability of a director (1) for any breach of the director's duty of loyalty to Ciena or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) liability under Section 174 of the DGCL, or (4) for any transaction from which the director derived an improper personal benefit. In addition, our Bylaws provide that we shall indemnify the persons entitled to be indemnified to the fullest extent permitted by the DGCL.

Indemnification Agreements. Ciena has entered into indemnification agreements with each of its directors and executive officers pursuant to which Ciena has agreed to indemnify such persons as permitted by the DGCL.

Insurance, Ciena has obtained directors and officers liability insurance against certain liabilities, including liabilities under the Securities Act.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit Number

<u>Nulliber</u>	<u>Description</u>
4.1(1)	Specimen Stock Certificate
5.1	Opinion of David M. Rothenstein, Senior Vice President, General Counsel and Secretary of Ciena Corporation (filed herewith)
10.1(2)	2017 Omnibus Incentive Plan
	Consent of David M. Rothenstein, Senior Vice President, General Counsel and Secretary of Ciena Corporation.
23.1	(contained in Exhibit 5.1)
23.2	Consent of PricewaterhouseCoopers LLP (filed herewith)
24.1	Power of Attorney (included with signature page)

- (1) Incorporated by reference from the Registrant's Annual Report on Form 10-K (File No. 001-36250) filed on December 27, 2007.
- (2) Incorporated by reference from the Registrant's Current Report on Form 8-K (File No. 001-36250) filed on March 29, 2017.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

Description

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the mos
recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the
registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered
would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the
form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent
change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, *however*, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act that are incorporated by reference in the registration statement.

- That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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 Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Hanover, State of Maryland, on this 29th day of March, 2017.

CIENA CORPORATION

By: /s/ Gary B. Smith

Gary B. Smith

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gary B. Smith and David M. Rothenstein, and each of them, his or her true and lawful attorney-in-fact and agents, with full power of substitution and resubstitution, from such person and in each person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, any Registration Statement relating to this Registration Statement under Rule 462 and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done.

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 dates indicated.

Signature	<u>Title</u>	<u>Date</u>
/S/ Patrick H. Nettles, Ph.D. Patrick H. Nettles, Ph.D.	Executive Chairman of the Board of Directors	March 29, 2017
/S/ Gary B. Smith Gary B. Smith	President, Chief Executive Officer and Director (Principal Executive Officer)	March 29, 2017
/S/ James E. Moylan, Jr. James E. Moylan, Jr.	Senior Vice President, Finance and Chief Financial Officer (Principal Financial Officer)	March 29, 2017
/S/ Andrew C. Petrik Andrew C. Petrik	Vice President and Controller (Principal Accounting Officer)	March 29, 2017
/S/ Harvey B. Cash Harvey B. Cash	Director	March 29, 2017
/S/ Bruce L. Claflin Bruce L. Claflin	Director	March 29, 2017
/S/ Lawton W. Fitt Lawton W. Fitt	Director	March 29, 2017
/S/ Patrick T. Gallagher Patrick T. Gallagher	Director	March 29, 2017
/S/ T. Michael Nevens T. Michael Nevens	Director	March 29, 2017
/S/ Judith M. O'Brien Judith M. O'Brien	Director	March 29, 2017
/S/ Michael J. Rowny Michael J. Rowny	Director	March 29, 2017

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7035 Ridge Road Hanover, Maryland 21076 www.ciena.com David M. Rothenstein Senior Vice President & General Counsel Phone: (410) 694-5700

March 29, 2017

Board of Directors Ciena Corporation 7035 Ridge Road Hanover, Maryland 21076

Ladies and Gentlemen:

This opinion letter is furnished to you to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K, 17 C.F.R. § 229.601(b)(5), in connection with the registration statement on Form S-8 (the "Registration Statement") of Ciena Corporation (the "Company") filed with the Securities and Exchange Commission, relating to the registration of up to 16,117,801 shares of the Company's common stock, par value \$0.01 per share (the "Shares"), issuable under the Ciena Corporation 2017 Omnibus Incentive Plan (the "Plan"). For purposes of this opinion letter, I have examined such records, documents and proceedings as I have deemed relevant and necessary as a basis for the opinion expressed herein.

This opinion letter is based as to matters of law solely on the Delaware General Corporation Law, as amended. I express no opinion herein as to any other laws, statutes, ordinances, rules, or regulations.

Based upon, subject to and limited by the foregoing, I am of the opinion that when issued and delivered against payment therefore in accordance with the terms of the Plan and the Registration Statement, the Shares will be validly issued, fully paid, and nonassessable.

This opinion letter has been prepared for your use in connection with the Registration Statement. I hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement. In giving this consent, I do not thereby admit that I am an "expert" within the meaning of the Securities Act of 1933, as amended.

Very truly yours,

/S/ David M. Rothenstein
David M. Rothenstein
Senior Vice President, General Counsel and Secretary

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 of our report dated December 21, 2016 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Ciena Corporation's Annual Report on Form 10-K for the year ended October 31, 2016.

Pricewaterhouse Coopers LLP

By: <u>/s/ Pricewaterhouse Coopers LLP</u>

Baltimore, Maryland March 29, 2017