



PROXY STATEMENT

2019 Annual Meeting of Stockholders



Patrick H. Nettles, Ph.D.
Executive Chairman of
the Board of Directors

Message from our Board of Directors

Dear Fellow Stockholders:

Ciena's strong business and financial performance in 2018 reflects the consistent execution of our strategy and the ability to leverage our competitive strengths – diversification, innovation leadership and global scale. The result is that we are a global market leader, with #1 or #2 share in every segment in which we participate. We have a diverse portfolio across systems, components, software and services. We sell into a broad set of geographies and customers, with a focus on meeting demand in higher-growth market applications. We are forcing the pace of innovation with our significant R&D investment capacity and Adaptive Network vision for next-generation networks. And, we are delivering sustained industry-leading revenue growth, gaining market share, improving our profitability and strengthening our balance sheet.

Our management and our Board believe strongly that good corporate governance and high ethical standards are essential to Ciena's success. In 2018, we took several meaningful steps to improve our existing strong governance practices, including:

- As part of our ongoing commitment to Board refreshment and diversity, we appointed a new director, Joanne B. Olsen. In accordance with our bylaws, Ms. Olsen will stand for election at the Annual Meeting.
- We substantially increased our minimum stock ownership requirements for executive officers and directors and added a holding requirement until the relevant minimum ownership level is achieved.
- We issued our first public Corporate Social Responsibility (CSR) Report.
- We refreshed our Principles of Corporate Governance and revised the charters for each of our standing Board Committees.

As we look to the future, we are very pleased with the maturity and strength of Ciena's business and believe we have a strong platform for continued success. This confidence allowed us to provide a new set of three-year financial targets for how we intend to manage the business going forward. It also allowed us to continue our commitment to returning capital to our stockholders, by replacing our previous share repurchase program with a new program to repurchase up to \$500 million of our shares over the next few years.

I encourage you to read more about our Board of Directors, Ciena's corporate governance practices and our executive compensation in the attached proxy statement. Thank you for your continued support of Ciena and your participation in this year's Annual Meeting.

On behalf of the Board of Directors,

Patrick H. Nettles, Ph.D.



Ciena Corporation
7035 Ridge Road
Hanover, Maryland 21076

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

Date: March 28, 2019	Record Date: February 1, 2019
Time: 3:00 p.m. Eastern Time	Attendance: www.virtualshareholdermeeting.com/ciena2019

To the Stockholders of Ciena Corporation:

The 2019 Annual Meeting of Stockholders of Ciena Corporation will be held on March 28, 2019 at 3:00 p.m. Eastern Time. Our Annual Meeting will be a virtual meeting held over the Internet. You will be able to attend the Annual Meeting, vote your shares electronically and submit your questions during the live webcast of the meeting by visiting www.virtualshareholdermeeting.com/ciena2019 and entering your 16-digit control number included in the notice containing instructions on how to access Annual Meeting materials, your proxy card, or the voting instructions that accompanied your proxy materials.

Items of Business

1. Elect two members of the Board of Directors from the nominees named in the attached proxy statement to serve as Class I directors for three-year terms ending in 2022, or until their respective successors are elected and qualified, and elect one director, previously elected by the Board of Directors to fill a newly created vacancy in Class II, to serve the remainder of her term as a Class II director ending in 2020, or until her respective successor is elected and qualified;
2. Ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending October 31, 2019;
3. Conduct an advisory vote on our named executive officer compensation, as described in these proxy materials;
4. Consider and act upon such other business as may properly come before the Annual Meeting or any adjournment or postponement thereof.

These matters are more fully described in the proxy statement accompanying this notice.

You are entitled to notice of, and are eligible to vote at, this year's Annual Meeting if you were a stockholder of record as of the close of business on February 1, 2019.

In accordance with Securities and Exchange Commission rules, we are furnishing these proxy materials and our Annual Report to Stockholders for fiscal 2018 via the Internet. On February 12, 2019, we mailed to stockholders as of the record date a notice with instructions on how to access our Annual Meeting materials and vote via the Internet, or by mail or telephone.

We believe that your vote, and the vote of every Ciena stockholder, is important. Whether or not you plan to participate in the Annual Meeting, we encourage you to review the accompanying proxy statement for information relating to each of the proposals and to cast your vote promptly.

By Order of the Board of Directors,

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

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PROXY STATEMENT SUMMARY

This summary highlights information that is contained elsewhere in this proxy statement. It does not include all information necessary to make a voting decision and you should read this proxy statement in its entirety before casting your vote.

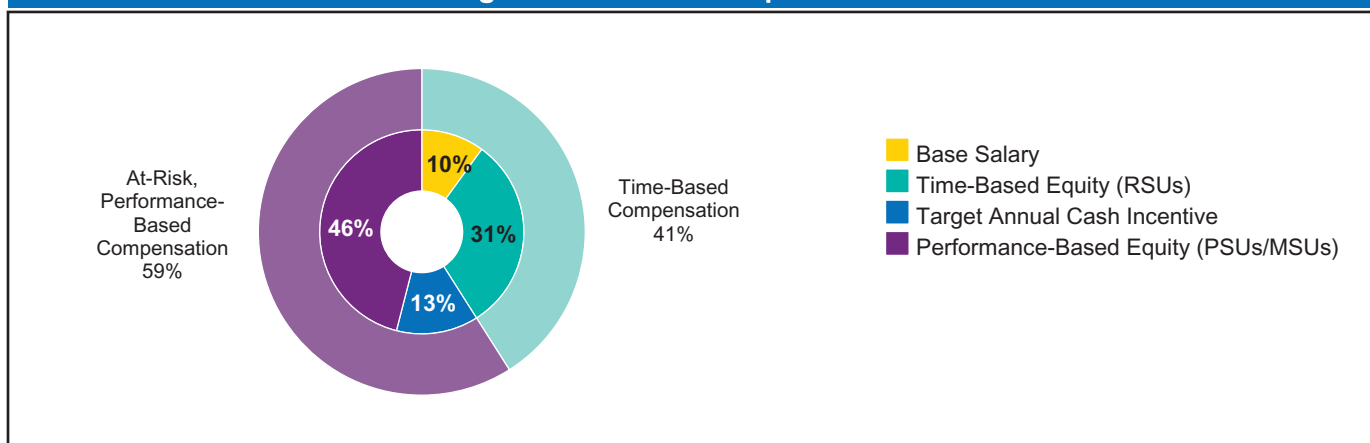
VOTING OVERVIEW

Proposals	Board Vote Recommendation	Page
1. Elect two Class I Director nominees and one Class II Director nominee	FOR each nominee	4
2. Ratify appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for fiscal 2019	FOR	23
3. Advisory vote on named executive officer compensation (“Say-on-Pay”)	FOR	62

FISCAL 2018 COMPENSATION HIGHLIGHTS

Base Salaries	<p>Did not increase the base salary of the CEO</p> <p>Increased the base salary of two NEOs in connection with their appointment to executive leadership team and assumption of larger organizational roles</p>	Target Cash Incentives	<p>Did not increase the target cash incentive opportunities for the CEO or the other NEOs</p>
Equity Award Values	<p>Increased the values of annual equity awards for the CEO and the other NEOs in order to better align with the market values for their positions and due to the addition of new members to the executive leadership team</p>	Equity Award Structure	<p>Continued to structure the equity awards so that 60% of the target award value for the CEO, and 50% of the target award value for the other NEOs, was allocated to at-risk, performance-based equity</p> <p>Introduced market stock units as a component of performance-based equity, based on a relative TSR goal measured over a three-year performance period</p>

CEO FY 2018 Target Total Direct Compensation Mix



Stockholder Outreach

We believe that strong corporate governance practices should include regular outreach and conversations with our stockholders, with whom we regularly discuss our business, financial performance and industry dynamics. During fiscal 2018, we engaged with a number of stockholders to obtain feedback on their perception and understanding of our business, markets and industry. These engagements have helped to shape our long-term targets and communications to stockholders around the key elements of our long-term strategy and financial targets. We also engage in regular communications with our stockholders with respect to corporate governance practices and have used their feedback to make meaningful changes in recent years.

Fiscal 2018 Governance Changes

CATEGORY	WHAT WE'VE DONE
Board Composition	<ul style="list-style-type: none"> ❖ Appointed a new independent director ❖ Three of nine directors are female
Return of Capital to Stockholders	<ul style="list-style-type: none"> ❖ Repurchased 4.3 million shares for \$111 million pursuant to previous share repurchase program ❖ Authorized new \$500 million share repurchase program ❖ Mitigated dilution by electing to cash settle 2018 convertible notes at maturity and exercising an early conversion option on 2020 convertible notes ❖ Changed tax withholding method for employee stock awards to repurchase and retire shares and reduce dilution
Stock Ownership Guidelines	<ul style="list-style-type: none"> ❖ Substantially increased the minimum ownership requirements, including 5x base salary for CEO and 5x cash retainer for non-employee directors ❖ Added a holding requirement until the relevant minimum ownership level is achieved
Policies and Charters	<ul style="list-style-type: none"> ❖ Updated Principles of Corporate Governance ❖ Issued first Corporate Social Responsibility (CSR) Report ❖ Updated Charters of standing Board committees

Existing Strong Governance Structure

- | | |
|--|---|
| <ul style="list-style-type: none"> ❖ Seven of nine directors are independent ❖ Standing committees comprised solely of independent directors ❖ Lead Independent Director ❖ Separate Chairman and CEO roles ❖ Code of Ethics for Directors | <ul style="list-style-type: none"> ❖ Annual Board and committee self-assessments ❖ Proxy access bylaw ❖ Majority voting in uncontested director elections ❖ Limits on annual director compensation ❖ Independent directors meet without management present |
|--|---|

Business Highlights

- ❖ Established and communicated new three-year financial targets
- ❖ Grew annual revenue from non-service provider customers to 35%, from the Asia Pacific region by 21%, and from Webscale/Data Center Interconnect (DCI) and submarine verticals by 140% and 25%, respectively
- ❖ Acquired and integrated two companies, Packet Design and DonRiver, into our software automation business
- ❖ Added 55 new customers for our industry-leading WaveLogic Ai coherent chipset
- ❖ Significantly improved the balance sheet by eliminating all convertible debt and refinancing our existing term loan
- ❖ Returned capital to stockholders by repurchasing 4.3 million shares for \$111 million

Financial Performance

10%

Achieved **over 10%** annual revenue growth

22%

Generated adjusted earnings per share representing **22%** annual growth

32%

Reduced adjusted operating expense as a percentage of revenue to **32.1%**

19%

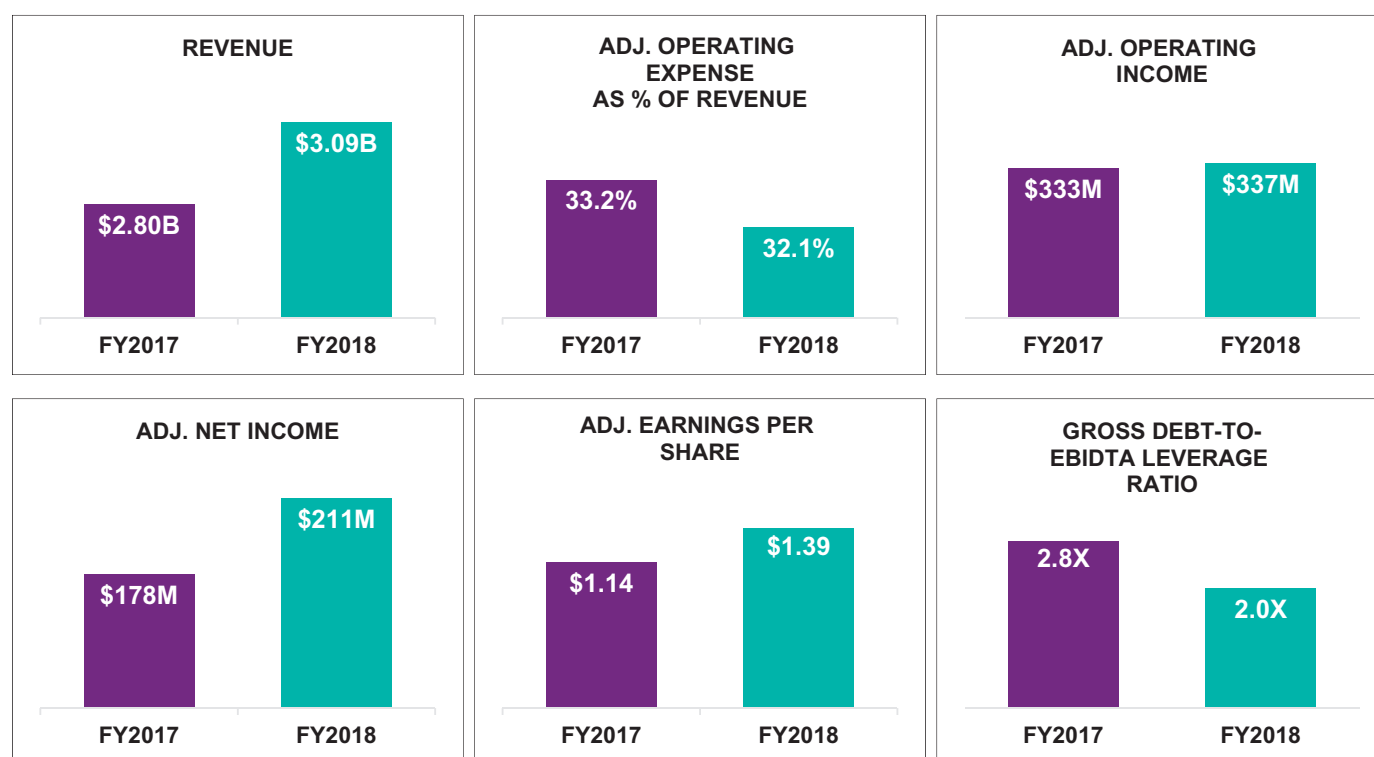
Increased adjusted net income by **19%** year-over-year, to **\$211M**

2.0x

Reduced gross debt-to-EBIDTA leverage ratio to **2.0x**

47%

Generated total stockholder return of **47%**



Contained above, and elsewhere in this proxy statement, are certain non-GAAP measures of Ciena's financial performance for fiscal 2017 and 2018. These measures, along with their corresponding GAAP measures and reconciliations thereto, have been previously disclosed in exhibits to Ciena's Current Report on Form 8-K filed with the SEC on December 13, 2018. Also see "Non-GAAP Measures" below for more information about these measures and how they are used.

PROPOSAL NO. 1

Election of Class I and Class II Directors

Overview

Our Board of Directors currently consists of nine directors divided into three classes. Each class of our Board of Directors serves a staggered three-year term. At the Annual Meeting, two directors will be elected to fill positions in Class I, whose term expires at the Annual Meeting. Lawton W. Fitt and Patrick H. Nettles, Ph.D., each of whom is a current Class I director, are the nominees for election at the Annual Meeting. The nomination of these directors to stand for election at the Annual Meeting has been recommended by the Governance and Nominations Committee and has been approved by the Board of Directors. Each of the nominees for Class I, if elected, will serve for a three-year term expiring at the 2022 Annual Meeting, or until his or her successor is elected and qualified, or until such director's earlier death, resignation or removal from the Board.

Effective October 16, 2018, the Board of Directors increased the size of the Board from eight to nine directors and appointed Joanne B. Olsen to fill the newly created vacancy in Class II of the Board. The term of office for Class II directors continues until the 2020 Annual Meeting, or until their successors are duly elected and qualified. Our bylaws, however, limit the term of office of any director elected by the Board of Directors to fill a vacancy to a term that lasts until the first annual meeting following election. Ms. Olsen is therefore a nominee for election at the Annual Meeting. Our bylaws also provide that any director so elected will serve the remainder of the term of the class to which such director was elected. Accordingly, if elected by stockholders at the Annual Meeting, Ms. Olsen will serve the remainder of her term as a Class II director until the 2020 Annual Meeting, or until her successor is elected and qualified, or until her earlier death, resignation or removal from the Board.

Michael J. Rowny, who is a current Class I director, has not been nominated and is not standing for re-election as a director and accordingly the size of the Board of Directors will be reduced from nine directors to eight directors following the Annual Meeting. This decision was made in consultation with Mr. Rowny and was not due to any performance issues or any disagreement relating to Ciena's operations, policies, or practices. We would like to thank Mr. Rowny for his many years of service on the Board and his many important contributions to Ciena. The Board intends to continue its ongoing review of its composition and approach to refreshment over time and expects to add a new independent director in 2019.

Director Qualifications

The Governance and Nominations Committee reviews candidates for service on the Board and recommends nominees for election to fill vacancies on the Board of Directors, including nomination for re-election of directors whose terms are due to expire. In discharging this responsibility, the Governance and Nominations Committee endeavors to identify, recruit and nominate candidates who possess a combination of wisdom, sound judgment, excellent business skills, maturity and high integrity. In particular, the Governance and Nominations Committee seeks individuals with a record of accomplishment and senior leadership experience in their chosen fields who display the independence of mind and strength of character to be committed to representing the long-term interests of our stockholders.

The Governance and Nominations Committee also seeks to ensure that the Board of Directors is composed of individuals of diverse backgrounds, including with respect to gender, who have a variety of complementary experience, skills and relationships relevant to Ciena's business and industry. This diversity of background and experience includes ensuring that the Board includes individuals with experience or skills sufficient to meet the requirements of the various rules and regulations of The New York Stock Exchange and the Securities and Exchange Commission (the "SEC"), such as the requirements to have a majority of independent directors and an audit committee financial expert. The Governance and Nominations Committee Charter requires the Committee to develop and use criteria for maintaining a balanced board of directors representing a diversity of characteristics and to recommend criteria, establish procedures for, and conduct an annual review of the Board and the diversity and other characteristics of individual directors and report to the Board on the results of the review.

In nominating candidates to fill vacancies created by the expiration of the term of a director, the Governance and Nominations Committee determines whether the incumbent director is willing to stand for re-election. If so, the Governance and Nominations Committee evaluates his or her performance to determine suitability for continued service, taking into consideration, among other things, each director's contributions to the Board, the value of the continuity of his or her service, and the individual's familiarity with Ciena's business, operations and markets.

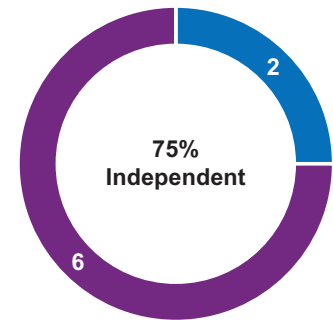
BOARD COMPOSITION AND DIVERSITY

Skills and Experience

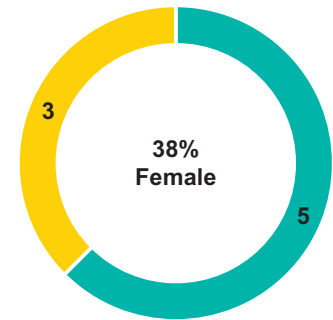


Independence and Gender Diversity

Independence



Gender Diversity




The above charts reflect information for all nominees and continuing directors. Each of the nominees has consented to serve if elected. However, if any of the persons nominated by the Board of Directors fails to stand for election, or declines to accept election, or is otherwise unavailable for election prior to our Annual Meeting, proxies solicited by our Board of Directors will be voted by the proxy holders for the election of any other person or persons as the Board of Directors may recommend, or our Board of Directors, at its option, may reduce the number of directors that constitute the entire Board of Directors.

Information Regarding Nominees and Continuing Directors

Information for each person nominated for election as a director at the Annual Meeting, including age, term of office and business experience, including directorships during the past five years, as well as for each director continuing service on our Board, is set forth below. In addition, for each person, we have included information regarding the business or other experience, qualifications, attributes or skills that factored into the determination by the Governance and Nominations Committee and by our Board of Directors that each such person should serve as a director on our Board.

DIRECTOR NOMINEES

Class I Director Nominees with Terms Expiring in 2022

Lawton W. Fitt	
	<p>Professional Highlights</p> <p>Ms. Fitt has served as Chairperson of The Progressive Corporation since May 2018. From October 2002 to March 2005, Ms. Fitt served as Director of the Royal Academy of Arts in London. From 1979 to October 2002, Ms. Fitt was an investment banker with Goldman Sachs & Co., where she was a partner from 1994 to October 2002.</p>
<p>Director Since November 2000</p> <ul style="list-style-type: none">Audit Committee (Chair) <p>Age 65</p>	<p>Skills and Qualifications</p> <ul style="list-style-type: none">Substantial investment banking experience and expertise in structuring and negotiating acquisition and financing transactionsUnderstanding of the capital marketsBrings a strong financial background to her service as Chair of the Audit Committee <p>Other Current Board Experience</p> <ul style="list-style-type: none">Significant experience in the areas of raising capital, financial oversight and enterprise risk analysisExecutive management experienceService as a director and member of the audit committee of other companies <p>Previous Board Experience</p> <ul style="list-style-type: none">The Carlyle Group LPMicro Focus International PLCThe Progressive Corporation, ChairpersonARM Holdings PLCThomson Reuters Corporation

Patrick H. Nettles, Ph.D.



Director Since April 1994

- Executive Chairman

Age 75

Professional Highlights

Dr. Nettles has served as Executive Chairman of the Board of Directors since May 2001. From October 2000 to May 2001, Dr. Nettles was Chairman of the Board of Directors and Chief Executive Officer of Ciena, and he was President and Chief Executive Officer from April 1994 to October 2000.

Skills and Qualifications

- Founder and former Chief Executive Officer of Ciena
- Significant institutional and industry knowledge
- Provides key insight and advice in the Board's consideration and oversight of corporate strategy and management development
- Executive management experience with Ciena, along with operational management experience and technical expertise, provide the Board a unique perspective and enable him to make significant contributions to the Board

- Experience as a public company director

Other Current Board Experience

- Trustee for the California Institute of Technology
- Trustee for the Georgia Tech Foundation, Inc.
- The Progressive Corporation

Previous Board Experience

- Axcelis Technologies, Inc., Independent Chairman of the board
- Apptrigger, Inc.
- Optiwind Corp.

Class II Director Nominee with Term Expiring in 2020

Joanne B. Olsen



Director Since October 2018

- Compensation Committee
- Governance and Nominations Committee

Age 60

Professional Highlights

Ms. Olsen previously served as Executive Vice President of Global Cloud Services and Support at Oracle from November 2016 until her retirement in August 2017. In that role, she drove Oracle's cloud transformation services and support strategy, partnering with leaders across all business units. Ms. Olsen previously served as Senior Vice President and leader of Oracle's applications sales, alliances, and consulting organizations in North America from 2012 through November 2016, and from 2010 through 2012 served in various general management positions at Oracle. Ms. Olsen began her career with IBM, where, between 1979 and 2010, she held a variety of executive management positions across sales, global financing and hardware.

Skills and Qualifications

- Significant industry experience and knowledge of cloud infrastructure applications
- Senior leadership experience with large, multinational technology companies
- International business experience and insight into doing business in key international markets
- Executive management experience across a range of sales, services and alliances
- Experience as a public company director

Other Current Board Experience

- Teradata Corporation

CONTINUING DIRECTORS

Class II Directors with Terms Expiring in 2020

Judith M. O'Brien



Director Since July 2000

- Compensation Committee (Chair)
- Governance and Nominations Committee

Age 68

Professional Highlights

Since February 2018, Ms. O'Brien has served as a partner and co-head of the Emerging Practice Group at the law firm King & Spalding LLP and from November 2012 through February 2018 served as a partner and head of the Emerging Company Practice Group. Ms. O'Brien served as Executive Vice President and General Counsel of Obopay, Inc., from November 2006 through December 2010. From February 2001 until October 2006, Ms. O'Brien served as a Managing Director at Incubic Venture Fund. From August 1980 until February 2001, Ms. O'Brien was a lawyer with Wilson Sonsini Goodrich & Rosati, where, from February 1984 to February 2001, she was a partner specializing in corporate finance, mergers and acquisitions, and general corporate matters.

Skills and Qualifications

- Experience working in a private law firm focused on technology companies
- Service as a venture capital professional and as in-house general counsel

- Important perspective with respect to the overall technology sector and in identifying and assessing legal and regulatory risks
- Expertise in assessing and structuring strategic transactions, including capital raising opportunities, intellectual property matters, acquisitions, joint ventures and strategic alliances
- Brings extensive knowledge and experience in the areas of executive compensation and corporate governance to her service as Chair of the Compensation Committee and her membership on the Governance and Nominations Committee

Other Current Board Experience

- MagicCube, Inc
- Teatro Labs, Inc.

Previous Board Experience

- Adaptec, Inc.
- Inform, Inc.

Gary B. Smith



Director Since October 2000

Age 58

Professional Highlights

Mr. Smith joined Ciena in 1997 and has served as President and Chief Executive Officer since May 2001. Prior to his current role, his positions with Ciena included Chief Operating Officer and Senior Vice President, Worldwide Sales. Mr. Smith previously served as Vice President of Sales and Marketing for INTELSAT and Cray Communications, Inc.

Mr. Smith is a member of the President's National Security Telecommunications Advisory Committee, the Global Information Infrastructure Commission and the Center for Corporate Innovation (CCI).

Skills and Qualifications

- As Chief Executive Officer of Ciena, brings leadership skills, industry experience and comprehensive knowledge of Ciena's business, financial position, and operations to Board deliberations

- Has led Ciena for over seventeen years, including through a transformative acquisition and complex integration
- Unique perspective on the strategic and operational challenges and opportunities faced by Ciena
- Almost 30 years of experience in the telecommunications industry, during which time he has lived and worked on four continents
- Global industry sales and marketing experience that provide the Board an important perspective into Ciena's markets and business and selling strategies

Other Current Board Experience

- CommVault Systems, Inc.

Previous Board Experience

- Avaya, Inc.

Class III Directors with Terms Expiring in 2021

Bruce L. Claflin



Director Since August 2006

- Audit Committee
- Compensation Committee

Age 67

Professional Highlights

Mr. Claflin served as President and Chief Executive Officer of 3Com Corporation from January 2001 until his retirement in February 2006. Mr. Claflin joined 3Com as President and Chief Operating Officer in August 1998. Prior to 3Com, Mr. Claflin served as Senior Vice President and General Manager, Sales and Marketing, for Digital Equipment Corporation. Mr. Claflin also worked for 22 years at IBM, where he held various sales, marketing and management positions, including general manager of IBM PC Company's worldwide research and development, product and brand management, as well as president of IBM PC Company Americas.

Skills and Qualifications

- Prior service as a Chief Executive Officer of a technology company in an adjacent industry provides the Board with a high level of expertise and experience in the operations of a global, high technology company
- Provides strategic insights

- Previous management and oversight experience relating to sales, marketing, research and development, supply chain management and manufacturing
- Experience in international business transactions, risk management, executive compensation and a business-oriented approach to resolving operational challenges
- Service as a fellow on the National Association of Corporate Directors and as a director of a public technology company

Other Current Board Experience

- IDEXX Laboratories, Inc., Chair of the Nominating and Governance Committee

Previous Board Experience

- Advanced Micro Devices (AMD)

T. Michael Nevens



Director Since February 2014

- Audit Committee

Age 69

Professional Highlights

Since 2006, Mr. Nevens has served as senior adviser to Permira Advisers, LLC, an international private equity fund. He has served as Chairman of NetApp, Inc. since 2009. From 1980 to 2002, Mr. Nevens held various leadership positions at McKinsey & Co., most recently as a director (senior partner) and as managing partner of the firm's Global Technology Practice. He also served on the board of the McKinsey Global Institute. Mr. Nevens has been an adjunct professor of Corporate Governance and Strategy at the Mendoza College of Business at the University of Notre Dame.

Skills and Qualifications

- Substantial experience with and exposure to a wide variety of companies and their corporate strategies, both as a private equity

adviser and management consultant, provides the Board with expertise in the areas of strategic and long-term business planning and competitive strategy

- Provides the Board with insight on corporate governance changes affecting public companies
- Experience as a director of other global, high technology companies

Other Current Board Experience

- NetApp, Inc., Chairman

Previous Board Experience

- Altera Corporation

Patrick T. Gallagher



Director Since May 2009

- Lead Independent Director
- Compensation Committee
- Governance and Nominations Committee (Chair)

Age 64

Professional Highlights

Mr. Gallagher currently serves as Chairman of Harmonic Inc. From March 2008 until April 2012, Mr. Gallagher was Chairman of Ubiquisys Ltd. From January 2008 until February 2009, Mr. Gallagher was Chairman of Macro 4 plc, and from May 2006 until March 2008, served as Vice Chairman of Golden Telecom Inc. From 2003 until 2006, Mr. Gallagher was Executive Vice Chairman and served as Chief Executive Officer of FLAG Telecom Group and, prior to that role, held various senior management positions at British Telecom.

Skills and Qualifications

- Extensive international business experience provides the Board with expertise and an important perspective regarding international transactions and markets
- Experience as a senior executive of major European telecommunications service providers offers the Board insight into carrier customer perspectives as well as industry opportunities, marketing and sales strategies and operational challenges outside of the United States

- Industry knowledge and prior management expertise provide the Board with significant industry knowledge and expertise in submarine and wireless network applications and strategic growth market opportunities for Ciena
- Experience as a public company director in both the U.S. and Europe provide strong background as lead independent director and Chair of the Governance and Nominations Committee

Other Current Board Experience

- Intercloud SAS, Chairman
- Harmonic, Inc., Chairman

Previous Board Experience

- Sollers JSC

Proposal No. 1 — Recommendation of the Board of Directors

The Board of Directors recommends that you vote
“**FOR**”
the election of the two Class I nominees and the Class II nominee listed above

CORPORATE GOVERNANCE AND THE BOARD OF DIRECTORS

Ciena has adopted a number of policies and practices that highlight our commitment to sound corporate governance principles. Ciena also maintains a corporate governance page on its website that includes additional related information, as well as our bylaws, codes of conduct, principles of corporate governance, and the charters for each of the standing committees of the Board of Directors. This information can be found on the “Corporate Governance” page of the “Investors” section of our website at www.ciena.com.

Independent Directors

In accordance with the current listing standards of The New York Stock Exchange, the Board of Directors, on an annual basis, affirmatively determines the independence of each director or nominee for election as a director. The Board of Directors has determined that, with the exception of Dr. Nettles and Mr. Smith, both of whom are employees and executive officers of Ciena, all of its members during fiscal 2018 are or during their tenure were “independent directors,” using the definition of that term in the listed company manual of The New York Stock Exchange. Also, as more fully described below, all members of the Board’s standing Audit, Compensation and Governance and Nominations Committees are independent directors, and all members of the Board’s standing Audit and Compensation Committees are independent directors in accordance with the additional listing standards applicable to those committees.

Communicating with the Board of Directors

The Board of Directors has adopted a procedure for receiving and addressing communications from all interested parties, including Ciena’s stockholders. Interested parties may send written communications to the entire Board of Directors (or any committee thereof), Ciena’s Lead Independent Director, or all of the independent directors serving on the Board, by addressing communications to:

Ciena Corporation
7035 Ridge Road
Hanover, Maryland 21076
Attention: Corporate Secretary

Please address any communication by e-mail to ir@ciena.com with “Attention: Corporate Secretary” in the subject line.

Our General Counsel serves as Corporate Secretary and determines, in his discretion, whether the nature of the communication is such that it should be brought to the attention of the Board of Directors or a committee thereof, the Lead Independent Director, or all of the independent directors. As a general matter, the Corporate Secretary does not forward spam, junk mail, mass mailings, job inquiries, surveys, business solicitations or advertisements, or offensive or inappropriate material.

Principles of Corporate Governance, Bylaws and Other Governance Documents

The Board of Directors has adopted Principles of Corporate Governance and other corporate governance policies that supplement certain provisions of our bylaws and relate to the composition, structure, interaction and operation of the Board of Directors. Some of our key governance policies and practices are summarized below.

❖ **Proxy Access**

Our bylaws include a “proxy access” provision by which eligible stockholders may nominate director candidates for inclusion in our proxy statement and proxy card. Proxy access may be used by a stockholder or group of up to 20 stockholders who own at least 3% of our outstanding common stock continuously for a minimum of three years to nominate up to the greater of 20% of the Board of Directors or two directors, subject to certain limitations. The Board of Directors believes this provision reflects a balanced approach to proxy access that provides a meaningful proxy access right, mitigates the risk of abuse, and protects the interests of all of our stockholders. The full text of our proxy access bylaw can be found as an exhibit to the Current Report on Form 8-K filed by Ciena with the SEC on January 27, 2017.

❖ **Stock Ownership Requirements**

To align the interests of Ciena's executive officers and members of the Board of Directors with those of our stockholders, and to promote our commitment to sound corporate governance, we maintain stock ownership guidelines for our executive officers and non-employee directors. During fiscal 2018, we amended these guidelines to substantially increase our minimum ownership requirements. The amended guidelines require such persons to hold shares of Ciena common stock of a value equal to a multiple of their annual base salary or annual cash retainer, as applicable, as follows:

Position	Stock Ownership Requirement
CEO	5x base salary
Executive Chairman	5x base salary
Executive Officers	2x base salary
Non-Employee Directors	5x cash retainer

We also added a requirement that our executive officers and non-employee directors hold 50% of all shares of Ciena common stock acquired from Ciena equity awards (net of any shares withheld for taxes or payment of exercise price), until they achieve the applicable minimum ownership level.

Each executive officer and non-employee director is subject to these guidelines, provided he or she has five years to attain the requisite stock ownership from the date such individual first becomes subject to the guidelines. Shares that count toward satisfaction of the stock ownership guidelines include: (i) shares owned outright by such person or his or her immediate family members residing in the same household; (ii) shares held in trust for the benefit of such person or his or her family; (iii) shares held through our Deferred Compensation Plan; and (iv) shares purchased on the open market. Unexercised stock options, whether or not vested, unvested restricted stock units, and unearned and unvested performance stock units or market stock units, do not count toward the satisfaction of the guidelines. The guidelines may be waived, at the Compensation Committee's discretion, if compliance would create hardship or prevent compliance with a court order.

❖ **Majority Vote Standard in Director Elections**

Ciena's bylaws and Principles of Corporate Governance provide that, in the case of an uncontested election, each director be elected by the vote of a majority of the votes cast by holders of shares present in person or represented by proxy at the Annual Meeting. For this purpose, "a majority of the votes cast" means that the number of votes cast "FOR" a director's election exceeds the number of votes cast "AGAINST" that director's election. In the case of a contested election (*i.e.*, an election in which the number of candidates exceeds the number of directors to be elected), however, directors will be elected by plurality vote.

As a condition of nomination, each director is required to submit to Ciena an irrevocable resignation that becomes effective if the nominee does not receive majority vote (in an uncontested election) and the Board of Directors accepts the resignation. If the director fails to receive the requisite votes, the Governance and Nominations Committee will promptly consider the resignation and recommend to the Board whether to accept or reject it, or whether other action should be taken. No later than 90 days following the date of the certification of the election results, the Board of Directors will disclose its decision by press release and a Form 8-K filed with the SEC. The Board of Directors will provide a full explanation of the process by which the decision was reached and, if applicable, the rationale for rejecting the resignation. If a resignation is accepted by the Board, the Governance and Nominations Committee will recommend to the Board whether to fill the vacancy or to reduce the size of the Board of Directors.

Any director whose resignation is being considered is not permitted to participate in the recommendation of the Governance and Nominations Committee or the decision of the Board as to his or her resignation. If the resignations of a majority of the members of the Governance and Nominations Committee were to become effective as a result of the voting, the remaining independent directors will appoint a special committee among themselves for the purpose of considering the resignations and recommending whether to accept or reject them.

❖ **Selection of Board Members; Vacancies**

For any director elected by the Board of Directors to fill a vacancy, Ciena's bylaws limit the term of office of such person to the period from election until the first annual meeting following election, at which time such person is required to stand for election by the stockholders to serve the remainder of the term of the class to which such person was elected.

❖ **Service on Other Boards of Directors**

The Board of Directors believes that directors should not serve on the boards of more than four other public companies in addition to our Board of Directors, and that the CEO should not serve on more than two other boards of public

companies in addition to our Board of Directors. In the event that a director wishes to join the board of directors of another public company in excess of this limit, our Board, in its sole discretion, will determine whether service on the additional board of directors is likely to interfere with the performance of the director's duties to Ciena, taking into account a number of factors. In addition, time constraints and demands of potential director nominees are reviewed and factored into the decisions of the Governance and Nominations Committee and the Board.

❖ ***Change in Principal Occupation of Director or Change Affecting Independence***

In some cases when a director changes his or her principal occupation, the change may affect his or her ability to continue to serve on the Board of Directors. As a result, when a director substantially changes his or her principal occupation, including by retirement, or there is a change in circumstances that causes an independent director to no longer be considered independent under New York Stock Exchange rules, that director is required to tender his or her resignation to the Board of Directors. In considering the notice of resignation, the Governance and Nominations Committee will weigh such factors as it deems relevant and recommend to the Board of Directors whether the resignation should be accepted, and the Board will act promptly on the matter, with any acceptance of such resignation to be promptly publicly disclosed.

❖ ***Term Limits and Mandatory Retirement Age***

The Board of Directors does not believe it should establish a maximum length of service or a mandatory retirement age for directors. The Board believes that the skill set and perspectives of its members should remain sufficiently current and broad in dealing with current and changing business dynamics, and therefore seeks to maintain a balance of directors with varying lengths of service and ages. While the Board recognizes that term limits and/or a mandatory retirement age could assist in this regard, they may have the unintended consequence of forcing the Board and the Company to lose the contribution of directors who over time have developed increased judgment, knowledge and valuable insight into the Company and its operations. The Board also believes that there are other, more effective means to address board refreshment, including through a robust annual self-assessment process.

❖ ***Prohibition Against Pledging Ciena Securities and Hedging Transactions***

In accordance with Ciena's Insider Trading Policy, our executive officers and members of the Board of Directors are prohibited from pledging Ciena securities and engaging in hedging transactions with respect to Ciena securities. Ciena specifically prohibits our executive officers and non-employee directors from holding Ciena securities in any margin account for investment purposes or otherwise using Ciena securities as collateral for a loan. Such persons are also prohibited from purchasing certain instruments (including prepaid variable forward contracts, equity swaps and collars) and engaging in short sales of Ciena stock and other similar transactions that could be used to hedge or offset any decrease in the value of Ciena securities.

❖ ***Committee Responsibilities***

The Board of Directors has three standing committees: the Audit Committee, the Compensation Committee and the Governance and Nominations Committee. Each committee meets regularly and has a written charter that can be found on the "Corporate Governance" page of the "Investors" section of our website at www.ciena.com. At each regularly scheduled Board meeting, the Chair or a member of each committee reports on any significant matters addressed by the committee.

❖ ***Executive Sessions***

Our independent directors on the Board of Directors and the standing committees thereof meet regularly in executive session without employee-directors or other executive officers present. The Lead Independent Director, or the Chair of such committee, presides at these meetings.

❖ ***Outside Advisors***

The Board of Directors and each of its standing committees may retain outside advisors and consultants at its discretion and at Ciena's expense. Management's consent to retain outside advisors is not required.

❖ ***Annual Assessment of Board Effectiveness***

To ensure that our Board of Directors and its committees are performing effectively and in the best interests of Ciena and its stockholders, the Board performs an annual assessment, overseen by the Governance and Nominations Committee, of itself, its committees and its members. This assessment typically consists of the Chair of the Governance and Nominations Committee conducting a one on one interview with each director and presenting the results of those discussions to the full Board of Directors.

Copies of our Principles of Corporate Governance and bylaws can be found on the “Corporate Governance” page of the “Investors” section of our website at www.ciena.com.

Social and Environmental Responsibility

We have adopted a number of practices and policies that highlight Ciena’s commitment to social and environmental responsibility and that seek to promote sustainability in the operation of our business. These practices are designed to position Ciena as a supplier of choice to our customers, an employer of choice to our existing and prospective employees, and a neighbor of choice in our communities around the globe. We are committed to the ethical and environmentally responsible operation of our business and have undertaken a number of initiatives to reduce our environmental impact and to ensure a healthy and safe workplace. We have achieved and hold a number of industry-recognized global certifications related to our systems addressing environmental standards and health and safety standards. We enforce a number of related policies in our workplace, and we expect our suppliers and business partners to adhere to these requirements and to promote these values. Among other things, we work with an independent sustainability partner to conduct maturity assessments of key suppliers representing a significant portion of our supplier expenditures, and we use the findings from these assessments as the basis of identifying areas of future opportunity or development with respect to our practices and those of our supply chain.

We maintain the following applicable policies:

❖ **Corporate Social Responsibility Policy**

We maintain a Corporate Social Responsibility Policy that seeks to promote the operation of our business in an ethical and socially responsible way and that reflects our commitment to the corporate social responsibility principles laid out in the Responsible Business Alliance Code of Conduct and the United Nations Global Compact. In fiscal 2018, we issued our first Corporate Social Responsibility (CSR) Report, which is published on our website at www.ciena.com.

❖ **Environmental, Health and Safety Policy**

We maintain an Environmental, Health and Safety Policy that seeks to promote the operation of our business in a manner that is environmentally responsible and protective of the health and safety of both our employees and the public.

Copies of these policies and related information can be found on the “Social Responsibility” page of the “About” section of our website at www.ciena.com.

Codes of Ethics

Code of Business Conduct and Ethics

We maintain a Code of Business Conduct and Ethics that sets standards of conduct for all of Ciena’s directors, officers and employees. The Code of Business Conduct and Ethics reflects Ciena’s policy of dealing with all persons, including our customers, employees, investors, and suppliers, with honesty and integrity. All new employees are required to complete training on our Code of Business Conduct and Ethics, and we conduct recurring employee affirmations with respect to our Code of Business Conduct and Ethics and periodic training and communication related to specific topics contained therein.

Code of Ethics for Directors

We maintain a Code of Ethics for Directors, which supplements the obligations of directors under the Code of Business Conduct and Ethics and sets additional standards of conduct for our directors. The Code of Ethics for Directors outlines responsibilities of our directors with respect to their fiduciary duties, conflicts of interest, treatment of confidential Ciena information, communications and other compliance matters.

Code of Ethics for Senior Financial Officers

In accordance with the Sarbanes-Oxley Act of 2002, we maintain a Code of Ethics for Senior Financial Officers that is specifically applicable to Ciena’s Chief Executive Officer, Chief Financial Officer and Controller. Its purpose is to deter wrongdoing and to promote honest and ethical conduct, and compliance with the law, particularly as it relates to the maintenance of Ciena’s financial records and the preparation of financial statements filed with the SEC.

Each of these documents can be found on the “Corporate Governance” page of the “Investors” section of our website at www.ciena.com. Copies of these documents may also be obtained without charge by writing to: Ciena Corporation, 7035 Ridge Road, Hanover, Maryland 21076, Attention: Corporate Secretary.

Board Leadership Structure

Lead Independent Director

Mr. Gallagher serves as Ciena's Lead Independent Director. The Lead Independent Director is responsible for coordinating the activities of the other independent directors and has the authority to preside at all meetings of the Board of Directors at which the Executive Chairman is not present, including executive sessions of the independent directors. The Lead Independent Director serves as principal liaison on Board-wide issues between the independent directors and the Executive Chairman, approves meeting schedules and agendas and monitors the quality of information sent to the Board. The Lead Independent Director may also recommend the retention of outside advisors and consultants who report directly to the Board of Directors. If requested by stockholders and as appropriate, the Lead Independent Director will also be available, as the Board's liaison, for consultation and direct communication. The Lead Independent Director also assists the Governance and Nominations Committee in guiding both the Board's annual self-assessment and the CEO succession planning process.

Separation of Chairman and CEO Roles

Although the Board of Directors does not have a formal policy on separation of the roles of Chief Executive Officer and Chairman, Ciena has kept these positions separate since 2001. Separating the Executive Chairman and Chief Executive Officer roles allows us efficiently to develop and implement corporate strategy that is consistent with the Board's oversight role, while facilitating strong day-to-day executive leadership. Mr. Smith currently serves as Chief Executive Officer and Dr. Nettles, who served as Chief Executive Officer until Mr. Smith assumed that role in 2001, serves as Executive Chairman.

The Board believes that its leadership structure is appropriate for Ciena. Through the role of the Lead Independent Director, the independence of the Board's committees, and the regular use of executive sessions of the independent directors, the Board is able to maintain independent oversight of our business strategies, annual operating plan and other corporate activities. These features, together with the role and responsibilities of the Lead Independent Director described above, ensure a full and free discussion of issues that are important to Ciena and its stockholders. At the same time, the Board is able to take advantage of the unique blend of leadership, experience and knowledge of our industry and business that Dr. Nettles brings to the role of Executive Chairman.

Board Oversight of Risk

The Board of Directors believes that risk management is an important part of establishing, updating and executing Ciena's business strategy. The Board, as a whole and at the committee level, has oversight responsibility relating to risks that could affect the corporate strategy, business objectives, compliance, operations and the financial condition and performance of the company. The Board focuses its oversight on the most significant risks facing Ciena and on its processes to identify, prioritize, assess, manage and mitigate those risks.

Among other things, the Board annually reviews and considers Ciena's long-term strategic plan, its annual financial and operating plan, and its enterprise risk management program. The Board and its committees also receive regular reports from members of senior management on areas of material risk to the company, including strategic, operational, financial, legal and regulatory risks. While the Board has an oversight role, management is principally tasked with direct responsibility for management and assessment of risks and the implementation of processes and controls to mitigate their effects on the company.

The Board's leadership structure, with a Lead Independent Director, separate Executive Chairman and CEO, independent Board committees with strong Chairs, the active participation of committees in the oversight of risk, and open communication with management, supports the risk oversight function of the Board.

Each standing committee of the Board has the following risk oversight responsibilities and provides regular reports to the Board on at least a quarterly basis:

Audit Committee	<p>Oversee management of financial risks associated with:</p> <ul style="list-style-type: none">❖ accounting matters❖ liquidity and credit risks❖ corporate tax positions❖ insurance coverage❖ cash investment strategy❖ financial results <p>Oversee financial and business process systems</p> <p>Oversee management of risks relating to the performance of the company's internal audit function and its independent registered public accounting firm</p> <p>Oversee whistleblower complaints and internal investigations</p> <p>Oversee the company's systems of internal controls and disclosure controls and procedures</p> <p>Oversee IT risk management and cybersecurity matters</p>
Compensation Committee	<p>Oversee management of risks associated with:</p> <ul style="list-style-type: none">❖ executive compensation❖ overall compensation and benefit strategies❖ compensation and benefit plans and arrangements❖ compensation practices and policies❖ Board of Directors' compensation
Governance and Nominations Committee	<p>Oversee management of risks associated with:</p> <ul style="list-style-type: none">❖ corporate governance practices❖ compliance and ethics program❖ director independence❖ Board composition❖ Board performance❖ annual assessment of Board effectiveness <p>Review and assess allocation of responsibility for risk oversight among the Board and its standing committees</p>

Composition and Meetings of the Board of Directors and its Committees

The table below details the composition of Ciena’s standing Board committees as of the end of fiscal 2018 and the number of Board and committee meetings held during fiscal 2018. Mr. Smith and Dr. Nettles do not serve on standing committees of the Board of Directors.

Class	Name	Principal Occupation	Independent	Committee Memberships			Other Current Public Boards
				AC	CC	GNC	
I (2019)	Lawton W. Fitt	Chairperson, The Progressive Corporation	Yes	Chair			3
I (2019)	Patrick H. Nettles, Ph.D.	Executive Chairman, Ciena Corporation	No				1
I (2019)	Michael J. Rowny	Chairman, Rowny Capital	Yes	❖			0
II (2020)	Judith M. O'Brien	Partner, King & Spalding LLP	Yes		Chair	❖	0
II (2020)	Joanne B. Olsen	Former EVP Global Cloud Services & Support, Oracle	Yes		❖	❖	1
II (2020)	Gary B. Smith	CEO, Ciena Corporation	No				1
III (2021)	Bruce L. Claflin	Former CEO, 3Com Corporation	Yes		❖	❖	1
III (2021)	Patrick T. Gallagher	Chairman, Harmonic, Inc.	Yes		❖	Chair	2
III (2021)	T. Michael Nevens	Senior Advisor, Permira Advisors, LLC	Yes	❖			1
Fiscal 2018 Meetings			Board: 7	9	8	7	

Each of our directors attended at least 75% in the aggregate of the total number of meetings of the Board of Directors and the committees on which he or she served during fiscal 2018. Ciena encourages, but does not require, members of the Board of Directors to attend the Annual Meeting, and eight of Ciena’s then ten directors participated in the virtual Annual Meeting last year.

Audit Committee

The Audit Committee falls within the definition of “audit committee” under Section 3(a)(58)(A) of the Securities Exchange Act of 1934 (the “Exchange Act”). The Board of Directors has determined that each member of the Audit Committee meets both the independence criteria established by the SEC under Rule 10A-3 under the Exchange Act and qualifies under the independence standards of The New York Stock Exchange. The Board of Directors has determined that each member of the Audit Committee is financially literate, as interpreted by the Board in its business judgment. The Board has also determined that each of Ms. Fitt and Mr. Rowny is an “audit committee financial expert” as defined in Item 407(d)(5) of Regulation S-K of the Exchange Act and an “independent director” as independence for audit committee members is defined in The New York Stock Exchange listing standards.

Among its responsibilities, the Audit Committee appoints and establishes the compensation for Ciena’s independent registered public accounting firm, approves in advance all engagements with Ciena’s independent registered public accounting firm to perform audit and non-audit services, reviews and approves the procedures used by Ciena to prepare its periodic reports, reviews and approves Ciena’s critical accounting policies, discusses audit plans and reviews results of the audit engagement with Ciena’s independent registered public accounting firm, obtains and reviews a report of Ciena’s independent registered public accounting firm describing certain matters required by the listing standards of The New York Stock Exchange, reviews the independence of Ciena’s independent registered public accounting firm, oversees Ciena’s internal audit function and Ciena’s accounting processes, including the adequacy of its internal controls over financial reporting and, where it determines to do so, makes recommendations to the Board of Directors with respect to rotation of the lead partner or the independent registered public accounting firm. Ciena’s independent registered public accounting firm and internal audit department report directly to the Audit Committee. The Audit Committee also reviews and considers any related person transactions in accordance with our Policy on Related Person Transactions and applicable rules of The New York Stock Exchange.

The Audit Committee is also responsible for a variety of other functions, including oversight of Ciena’s financial and business process systems, including completion of the upgrade of Ciena’s corporate enterprise resource planning platform, and oversight of IT security matters.

Governance and Nominations Committee

The Governance and Nominations Committee reviews, develops and makes recommendations regarding various matters related to the Board of Directors, including its size, composition, standing committees and practices. The Governance and Nominations Committee also reviews and implements corporate governance policies, practices and procedures. The Governance

and Nominations Committee conducts an annual review of the performance and effectiveness of the Board of Directors, its standing committees, and its individual members. The Governance and Nominations Committee is also responsible for making recommendations to the Board of Directors regarding the composition and independence of its non-employee members. The members of the Governance and Nominations Committee are all independent directors under applicable rules of The New York Stock Exchange.

The Governance and Nominations Committee may also consider recommendations for nomination from other sources and interested parties, including Ciena's officers, directors and stockholders. In considering these recommendations, the Governance and Nominations Committee applies the same standards described in "Director Qualifications" above, and considers the current size and composition of the Board, and the needs of the Board and its committees. When appropriate, the Governance and Nominations Committee may retain executive recruitment firms to assist in identifying suitable candidates. Stockholders who wish to recommend potential nominees may address their recommendations in writing to Ciena Corporation, 7035 Ridge Road, Hanover, Maryland 21076, Attention: Corporate Secretary. For a description of the process by which stockholders may nominate directors in accordance with our bylaws, please see "Stockholder Proposals for 2020 Annual Meeting" below.

Compensation Committee

The Compensation Committee has responsibility, authority and oversight relating to the development of Ciena's overall compensation strategy and compensation programs. The Compensation Committee establishes our compensation philosophy and policies, and it oversees compensation plans for our executive officers and non-executive employees. Beginning with our fiscal 2018 director compensation program, the Committee also has oversight responsibility for the compensation program for Ciena's non-employee directors. The Compensation Committee seeks to ensure that our compensation policies and practices promote stockholder interests and support our compensation objectives and philosophy. Ciena's compensation program for our executive officers focuses on addressing the following principal objectives:

- attract and retain talented executives by offering competitive compensation packages;
- motivate our executive officers to achieve strategic and tactical objectives, including the profitable growth of Ciena's business;
- align executive compensation with stockholder interests;
- reward our executive officers for individual, functional and corporate performance; and
- promote a pay-for-performance culture.

In making compensation decisions, the Compensation Committee also seeks to promote teamwork among and high morale within our executive team.

The Compensation Committee determines the compensation of our executive officers. As part of this determination, the Committee annually evaluates the performance of our CEO and our Executive Chairman and considers evaluations by or recommendations from our CEO regarding our other executive officers. The Committee also receives information and advice from its compensation consultant, as described below. The Committee reviews and has final authority to approve and make decisions with respect to the compensation of our executive officers. Our executive officers, including our CEO, do not participate in the determination of their own compensation, and with the exception of our CEO, do not play any role in determining or recommending the amount of executive officer compensation. For detailed information regarding the Compensation Committee, its determination of the form and amount of compensation paid to our executive officers, including the "Named Executive Officers," and Mr. Smith's role in such determinations, see "Compensation Discussion and Analysis" below.

The members of the Compensation Committee qualify as "non-employee directors" within the meaning of Rule 16b-3 under the Exchange Act and are independent directors under The New York Stock Exchange listing standards for purposes of compensation committee service. The Compensation Committee's charter permits the Committee to delegate authority to our CEO to make equity awards in connection with new hires and promotions and other discretionary awards. The Board of Directors has delegated limited authority to Mr. Smith to make equity awards to employees who are not part of the executive leadership team, within certain parameters and guidelines related to the size, terms and conditions of such awards. The Compensation Committee regularly reviews quarterly and year-to-date grant activity pursuant to this delegated authority.

Compensation Consultant

To assist in carrying out its responsibilities, the Compensation Committee is authorized to retain the services of independent advisors. For purposes of advice and consultation with respect to the compensation of our executive officers during fiscal 2018, the Committee engaged Compensia, Inc., a national compensation consulting firm. Prior to engaging Compensia, the Committee considered and assessed Compensia's independence. To ensure Compensia's continued independence and to avoid any actual or apparent conflict of interest, the Committee does not permit Compensia to be engaged to perform any services for Ciena

beyond those services provided to the Committee. The Committee has sole authority to retain or terminate Compensia as its executive compensation consultant and to approve its fees and other terms of engagement. The Committee regularly, but not less than annually, considers the independence of its compensation consultant and determines whether any related conflicts of interest require disclosure.

In establishing executive compensation for fiscal 2018, the Compensation Committee relied upon Compensia to:

- assist in the selection of a group of peer companies;
- provide information on compensation paid by such peer companies to their executive officers;
- analyze compensation survey data to supplement publicly available information on compensation paid by peer companies;
- advise on alternative structures or forms of compensation and allocation considerations;
- advise on appropriate levels of compensation for the Named Executive Officers (“NEOs”) and the other members of the executive team; and
- prepare “tally sheets” showing, for each executive officer, all elements of compensation received in previous fiscal years, equity grant detail, the projected value of vested and unvested equity awards outstanding, and a comparative analysis of compensation relative to the peer group.

In addition to its advisory work regarding executive compensation during fiscal 2018, Compensia was engaged by the Compensation Committee to provide assistance in evaluating the compensation of the non-employee directors as set forth below, to participate in and provide assistance with respect to the Committee’s annual compensation risk assessment, to review Ciena’s methodology for calculating its initial CEO pay ratio measure, and to review the “Compensation Discussion and Analysis” included in this proxy statement.

Compensation Committee Interlocks and Insider Participation

Messrs. Clafin and Gallagher and Ms. O’Brien and Olsen, who comprised the Compensation Committee as of the end of fiscal 2018, are independent directors and were not, at any time during fiscal 2018, or at any other time, officers or employees of Ciena. During fiscal 2018, no member of the Compensation Committee was an executive officer of another entity on whose compensation committee or board of directors an executive officer of Ciena served.

DIRECTOR COMPENSATION

Our director compensation program is designed both to attract and to fairly compensate highly qualified, non-employee directors to represent our stockholders on the Board of Directors and to act in the stockholders' best interests. The director compensation program for fiscal 2018 was recommended by the Compensation Committee and approved by our Board of Directors. Our executive officers do not play any role in determining or recommending the amount of non-employee director compensation, except that Mr. Smith and Dr. Nettles vote on the recommendations of the Compensation Committee in their capacities as members of the Board of Directors.

Our Board of Directors includes two Ciena executive officers: Dr. Nettles, who serves as our Executive Chairman of the Board, and Mr. Smith, who serves as our Chief Executive Officer. Dr. Nettles does not receive cash compensation for his service as a director, and Mr. Smith does not receive any compensation for his service as a director. Information regarding equity compensation to Dr. Nettles during fiscal 2018 can be found in the tabular disclosure below. Information regarding the determination of Mr. Smith's compensation can be found in the "Compensation Discussion and Analysis" and "Executive Compensation Tables" below.

Fiscal 2018 Board Compensation

For the purpose of determining non-employee director compensation for fiscal 2018, the Compensation Committee engaged Compensia to assist in evaluating the competitiveness of our director compensation program. The Compensation Committee considered an overview of the corporate governance environment as well as recent trends and developments relating to director compensation. The Compensation Committee also specifically considered the amounts payable under and the various components of our director compensation program, as well as the aggregate director compensation cost, in comparison to the boards of directors of the same group of peer companies that the Compensation Committee used in determining executive compensation. After considering those factors and based on the recommendation of the Compensation Committee, the Board of Directors did not make any changes to director compensation for fiscal 2018.

Cash Compensation

Our cash compensation program for non-employee directors for fiscal 2018 was as follows:

Cash Compensation	Amount
Annual Retainer — Non-Employee Director	\$ 60,000
Additional Annual Retainer — Lead Independent Director	\$ 20,000
Additional Annual Retainer — Audit Committee	\$ 35,000 (Chair) \$ 15,000 (other members)
Additional Annual Retainer — Compensation Committee	\$ 25,000 (Chair) \$ 10,000 (other members)
Additional Annual Retainer — Governance and Nominations Committee	\$ 15,000 (Chair) \$ 6,000 (other members)

Under this program, our non-employee directors are not entitled to receive meeting attendance fees unless the Board, or any standing Board committee, is required to hold an unusually high number of meetings. In the event that the Board or a standing Board committee holds more than ten meetings in a fiscal year, each non-employee director (as applicable) will be entitled to receive an additional \$1,500 per meeting for the Chair, or an additional \$1,000 per meeting for other members. In the event that the Board, or a standing Board committee, creates a special committee or subcommittee that holds more than three meetings in a fiscal year, each non-employee director serving on that committee or subcommittee will be entitled to receive an additional \$1,000 per meeting. Directors are also reimbursed for reasonable out-of-pocket expenses incurred in connection with attendance at Board and committee meetings.

The retainer fees set forth above are paid in quarterly installments. Meeting attendance fees, when applicable, are generally paid promptly following the end of the fiscal year.

Equity Compensation

Our equity compensation program for non-employee directors and Dr. Nettles for fiscal 2018 was as follows:

Equity Compensation	Target Delivered Value (\$)
Initial RSU Award — Upon Director Election or Appointment	\$ 200,000
Annual RSU Award — Non-Employee Directors and Executive Chairman	\$ 200,000

In order to control for possible volatility in our stock price on any one particular trading day, the actual number of shares underlying restricted stock unit (“RSU”) awards granted to directors is determined based on the average closing price of Ciena’s common stock over the 30-day period immediately prior to the date of grant. Initial equity awards are made in connection with initial election or appointment to the Board of Directors, with the target delivered value prorated for the fiscal year based on the date of election or appointment. Initial equity awards vest on or about the one-year anniversary of the grant date. Annual equity awards are made on the date of each Annual Meeting of Stockholders and vest on or about the one-year anniversary of the grant date. Vesting of the RSU awards is subject to acceleration upon the director’s death, disability, retirement, or upon or in connection with a change in control of Ciena. Delivery of the shares upon vesting is subject to any applicable instruction provided by the director under the Deferred Compensation Plan described below.

Director Compensation Limits

Our 2017 Omnibus Incentive Plan (“2017 Plan”) imposes a \$500,000 limit on the compensation that can be awarded to a non-employee director in any given fiscal year, including the sum of (i) cash compensation and (ii) the grant date fair value of equity compensation under the 2017 Plan. This limitation, however, would not apply to the extent a non-employee director has been or becomes an employee of Ciena during such fiscal year. In addition, the Board retains discretion to provide further exceptions for one or more individual non-employee directors in extraordinary circumstances, such as service on a special transaction or litigation committee of the Board, provided that the director that is the subject of such exception may not participate in any decision with respect thereto.

Director Compensation Table

The following table and the accompanying footnotes describe the “total compensation” earned by our non-employee directors and Dr. Nettles during fiscal 2018:

Director Compensation Table

Name	Fees Earned or Paid in Cash \$(1)	Stock Awards \$(2)	All Other Compensation \$(3)	Total (\$)
Patrick H. Nettles, Ph.D.	—	\$ 190,879	\$ 163,448	\$ 354,327
Harvey B. Cash (4)	\$ 23,501	\$ 190,879	—	\$ 214,380
Bruce L. Clafin	\$ 85,000	\$ 190,879	—	\$ 275,879
William D. Fathers (5)	\$ 38,000	\$ 190,879	—	\$ 228,879
Lawton W. Fitt	\$ 95,000	\$ 190,879	—	\$ 285,879
Patrick T. Gallagher	\$ 105,500	\$ 190,879	—	\$ 296,379
T. Michael Nevens	\$ 75,000	\$ 190,879	—	\$ 265,879
Judith M. O'Brien	\$ 91,000	\$ 190,879	—	\$ 281,879
Joanne B. Olsen	\$ 19,000	\$ 97,521	—	\$ 116,521
Michael J. Rowny	\$ 75,000	\$ 190,879	—	\$ 265,879

- (1) Reflects the aggregate dollar amount of all cash compensation earned for service as a director, including the retainers and meeting attendance fees described in “Cash Compensation” above.
- (2) The amounts set forth in the “Stock Awards” column represent the aggregate grant date fair value of RSU awards granted during fiscal 2018, computed in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 718. The aggregate grant date fair value is calculated using the closing price of Ciena common stock on the grant date as if all of the shares underlying these awards were vested and delivered on the grant date. For each director other than Ms. Olsen, the aggregate grant date fair value in the above table was calculated using the closing price of Ciena common stock on April 3, 2018, the grant date for each such director’s annual award. Each of these awards was

granted under the 2017 Omnibus Incentive Plan (“2017 Plan”) and vests on the one-year anniversary of the grant date. For Ms. Olsen, the aggregate grant date fair value in the above table was calculated using the closing price of Ciena common stock on November 1, 2018, the grant date for her initial equity award. This award was granted under the 2017 Plan and vests on December 20, 2019. The aggregate grant date fair values will likely vary from the actual amount ultimately realized by any director based on a number of factors, including the number of shares that ultimately vest, the effect of any deferral elections, the timing of any sale of shares, and the market price of Ciena common stock at the time of disposition.

- (3) Non-employee directors do not receive any perquisites or other personal benefits or property as part of their compensation. Dr. Nettles does not receive cash compensation for his service as a director; the amount reported as “All Other Compensation” for Dr. Nettles reflects (a) his annual base salary for service as an executive officer of Ciena during fiscal 2018 and (b) Section 401(k) plan matching contributions paid by Ciena and available to all full-time U.S. employees on the same terms.
- (4) Mr. Cash passed away on April 10, 2018.
- (5) Mr. Fathers resigned from the Board of Directors on June 11, 2018.

Outstanding Equity Awards for Directors at Fiscal Year-End

The following table sets forth, on an aggregate basis, information related to the outstanding unvested RSU awards held by each of the non-employee directors and Dr. Nettles as of the end of fiscal 2018. We have not granted stock options to our non-employee directors since fiscal 2006.

Outstanding Equity Awards at Fiscal Year-End

Name	Stock Awards
	Aggregate Number of Unvested Shares or Units (#)
Patrick H. Nettles, Ph.D.	10,775
Harvey B. Cash (1)	—
Bruce L. Claflin	10,775
William D. Fathers (2)	—
Lawton W. Fitt	10,775
Patrick T. Gallagher	10,775
T. Michael Nevens	10,775
Judith M. O’Brien	10,775
Joanne B. Olsen	3,091
Michael J. Rowny	10,775

- (1) Mr. Cash passed away on April 10, 2018.
- (2) Mr. Fathers resigned from the Board of Directors on June 11, 2018.

Deferral of Director Compensation

We maintain the Ciena Corporation Deferred Compensation Plan, which allows our U.S.-based directors (as well as certain U.S.-based senior management employees) to defer elements of their annual compensation. Directors may defer up to 100% of their annual cash retainer and annual equity compensation.

Generally, deferral elections may only be made for awards to be granted in a subsequent calendar year. Directors can elect the amount deferred, the deferral period, and the form of distribution of their compensation. If a director elects to defer any portion of an RSU award, upon the vesting of that award, we credit a stock account with the amount deferred. All such accounts are distributed in shares of Ciena common stock. Distributions may be made in a lump sum or installments, as designated by the participating director, subject to early distribution of vested awards in a lump sum in the event of the participant’s death or termination of service, a change in control of Ciena or termination of the plan.

PROPOSAL NO. 2

Ratification of Appointment of Independent Registered Public Accounting Firm

The Audit Committee of the Board of Directors has appointed PricewaterhouseCoopers LLP (“PwC”) as our independent registered public accounting firm to audit Ciena’s consolidated financial statements for the fiscal year ending October 31, 2019, and is asking stockholders to ratify this appointment at the Annual Meeting.

PwC has audited our consolidated financial statements annually since Ciena’s incorporation in 1992. A representative of PwC is expected to attend this year’s Annual Meeting. He or she will have the opportunity to make a statement, if desired, and will be available to respond to appropriate questions. In making its recommendation to the Board of Directors to select PwC as Ciena’s independent registered public accounting firm for fiscal 2019, the Audit Committee considered whether the non-audit services provided by PwC are compatible with maintaining the independence of PwC, and determined that retention of PwC is in the best interests of Ciena and its stockholders. Information regarding fees billed by PwC for our 2017 and 2018 fiscal years is set forth under “Relationship with Independent Registered Public Accounting Firm” below.

Our bylaws do not require that stockholders ratify the appointment of our independent registered public accounting firm. We are seeking ratification because we believe it is a matter of good corporate governance. In the event that stockholders fail to ratify the appointment, the Audit Committee will reconsider whether to retain PwC, but may ultimately determine to retain PwC as our independent registered public accounting firm. Even if the appointment is ratified, the Audit Committee, in its sole discretion, may direct the appointment of a different independent registered public accounting firm at any time during the year if it determines that it is advisable to do so.

Proposal No. 2 — Recommendation of the Board of Directors

The Board of Directors recommends that you vote
“**FOR**”
the ratification of the appointment of PwC as our independent registered public accounting firm for fiscal 2019

RELATIONSHIP WITH INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The following table shows the fees that PwC billed to Ciena for professional services rendered for fiscal years 2017 and 2018.

Fee Category	Fiscal 2017	Fiscal 2018
Audit Fees	\$ 3,696,825	\$ 3,905,000
Audit-Related Fees	—	627,425
Tax Fees	14,540	108,560
All Other Fees	—	—
Total Fees	\$ 3,711,365	\$ 4,640,985

Audit Fees. This category of the table above includes fees for the integrated audit of our annual financial statements, review of financial statements included in our quarterly reports on Form 10-Q, and services that are normally provided by PwC in connection with statutory and regulatory filings or engagements. The preparation of Ciena's audited financial statements includes compliance with Section 404 of the Sarbanes-Oxley Act of 2002 and the preparation by PwC of a report expressing its opinion regarding the effectiveness of our internal control over financial reporting. Audit fees reflect PwC's integrated audits of financial statements for Ciena Corporation.

Audit-Related Fees. This category of the table above includes fees for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and are not included above under "Audit Fees." The audit-related fees in fiscal 2018 reflect fees related to our acquisition of DonRiver Holdings, LLC on October 1, 2018 and our compliance with the new Accounting Standards Codification 606 - Revenue from Contracts with Customers.

Tax Fees. This category of the table above includes fees for tax compliance, tax advice, and tax planning. Fees for fiscal 2018 include fees related to our compliance with the U.S. Tax Cuts and Job Act.

All Other Fees. This category of the table above includes fees for services provided by PwC that are not included in the other fee categories reported above. There were no other fees in fiscal 2017 or fiscal 2018.

Pre-Approval of Services

The Audit Committee pre-approves all services provided by our independent registered public accounting firm, including audit services (such as statutory audit engagements as required under local law of foreign jurisdictions) and non-audit services. For audit services with respect to Ciena Corporation, each year our independent registered public accounting firm provides the Audit Committee with an engagement letter outlining the scope of the audit services proposed to be performed during the year, which must be accepted by the Audit Committee before the audit commences. Our independent registered public accounting firm also submits an audit services fee proposal, which must be approved by the Audit Committee before the audit commences.

Each year, management also submits to the Audit Committee certain non-audit services for which it recommends the independent registered public accounting firm be engaged to provide, and an estimate of the fees to be paid for each. Management and the independent registered public accounting firm must each confirm to the Audit Committee that the performance of the non-audit services on the list would not compromise the independence of our registered public accounting firm and would be permissible under applicable legal requirements. The Audit Committee must approve both the list of non-audit services and the budget for each such service before commencement of the work. Our management and our independent registered public accounting firm report to the Audit Committee at each of its regular meetings as to the non-audit services actually provided by the independent registered public accounting firm and the approximate fees incurred by Ciena for those services.

To ensure prompt handling of unexpected matters, the Audit Committee has authorized its Chair to amend or modify the list of approved permissible non-audit services and fees. If the Chair exercises this delegation of authority, she reports the action taken to the Audit Committee at its next regular meeting.

In compliance with the Audit Committee's internal policy and auditor independence rules of the SEC, all audit and permissible non-audit services provided by PwC to Ciena for the fiscal years 2017 and 2018 were pre-approved by the Audit Committee.

AUDIT COMMITTEE REPORT

The information contained in this report shall not be deemed to be “soliciting material” or “filed” or incorporated by reference in future filings with the SEC, or subject to the liabilities of Section 18 of the Exchange Act, except to the extent that Ciena specifically incorporates it by reference into a document filed under the Securities Act of 1933 or the Exchange Act.

The Audit Committee is composed entirely of non-management directors. The members of the Audit Committee meet the independence and financial literacy requirements of the NYSE and additional, heightened independence criteria applicable to members of the Audit Committee under SEC and NYSE rules. The Audit Committee assists the Board in fulfilling its oversight responsibilities, including by assessing and monitoring the quality and integrity of Ciena’s accounting systems and practices, financial information and financial reporting practices, potential financial, legal and regulatory exposures, systems of internal controls, internal audit function and the independent audit process. Ciena’s management is responsible for Ciena’s financial statements, and its independent registered public accounting firm is responsible for planning and conducting an audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Audit Committee operates under a written charter that describes the scope of its responsibilities, and which is available on the “Corporate Governance” page of the “Investors” section at www.ciena.com.

During fiscal 2018, the Audit Committee discussed with PricewaterhouseCoopers LLP (“PwC”), Ciena’s independent registered public accounting firm, the overall scope and plans for the audit. The Audit Committee met regularly with PwC, with and, at times, without management present, to discuss the results of PwC’s examinations, evaluations of Ciena’s internal controls over financial reporting and the overall quality of Ciena’s financial reporting practices. The Audit Committee also met with Ciena’s management during fiscal 2018 to consider Ciena’s internal controls over financial reporting and Ciena’s disclosure controls and procedures.

In this context, the Audit Committee hereby reports as follows:

1. The Audit Committee has reviewed and discussed Ciena’s audited financial statements for fiscal 2018 with management and with PwC.
2. The Audit Committee has discussed with PwC the matters required to be discussed under the rules adopted by the Public Company Accounting Oversight Board (“PCAOB”).
3. The Audit Committee has received from PwC the written disclosures and the letter required by applicable requirements of the PCAOB regarding PwC’s communications with the Audit Committee concerning independence, and has discussed with PwC its independence.
4. Based on its review and discussions described in this report, the Audit Committee recommended to the Board of Directors that the audited financial statements for fiscal 2018 be included in Ciena’s Annual Report on Form 10-K for fiscal 2018, for filing with the SEC.

Submitted by the members of the Audit Committee:

Lawton W. Fitt (Chair)
Bruce L. Claflin
T. Michael Nevens
Michael J. Rowny

OWNERSHIP OF SECURITIES

The following table sets forth, as of February 1, 2019, the beneficial ownership of Ciena's common stock for the following persons:

- each stockholder (including any group as such term is used in Section 13(d)(3) of the Exchange Act) known by us to beneficially own more than 5% of our common stock;
- our Chief Executive Officer and each other Named Executive Officer (as that term is defined in the "Executive Compensation Tables" below);
- each of our directors and director nominees; and
- all of our directors and executive officers as a group.

Certain information in the table concerning beneficial owners other than our directors and executive officers is based on information contained in filings made by such beneficial owners with the SEC.

Under SEC rules, beneficial ownership of a class of capital stock includes any shares of such class as to which a person, directly or indirectly, has or shares voting power or investment power and also any shares as to which a person has the right to acquire such voting or investment power within 60 days through the exercise or conversion of any stock option, stock award, or other similar right. If two or more persons share voting power or investment power with respect to specific securities, each such person is deemed to be the beneficial owner of such securities. In computing the percentage ownership of any person, the amount of shares outstanding is deemed to include the amount of shares beneficially owned by such person (and only such person) by reason of such acquisition rights. As a result, the percentage of outstanding shares held by any person in the table below does not necessarily reflect the person's actual voting power. As of February 1, 2019, there were 156,336,210 shares of Ciena common stock outstanding.

Name of Beneficial Owner	Number of Shares Owned (1)	Right to Acquire (2)	Beneficial Ownership Total (3)	Percent of Outstanding Shares (%)
More than 5% Stockholders				
BlackRock, Inc. (4)	17,899,503	-	17,899,503	11.45%
The Vanguard Group, Inc. (5)	12,173,982	-	12,173,982	7.79%
Directors & Named Executive Officers				
Patrick H. Nettles, Ph.D. (6)	406,590	9,649	416,239	*
Gary B. Smith	249,872	24,592	274,464	*
James E. Moylan, Jr.	270,301	16,653	286,954	*
Rick L. Hamilton	5,752	5,465	11,217	*
Scott A. McFeely	24,420	5,189	29,609	*
David M. Rothenstein	214,832	5,863	220,695	*
Bruce L. Clafin	61,608	14,454	76,062	*
Lawton W. Fitt	3,928	84,720	88,648	*
Patrick T. Gallagher	43,030	3,149	46,179	*
T. Michael Nevens	31,616	3,149	34,765	*
Judith M. O'Brien (6)	10,527	60,812	71,339	*
Joanne B. Olsen	-	-	-	*
Michael J. Rowny	3,571	84,720	88,291	*
All executive officers and directors (17 persons)	1,538,048	335,691	1,873,739	1.20%

* Represents less than 1% of outstanding shares.

(1) Excludes shares that may be acquired through the exercise of stock options, the vesting of restricted stock units or other convertible equity incentive awards.

- (2) Except as otherwise set forth in the footnotes below, for our executive officers, represents shares of common stock that can be acquired upon the vesting of restricted stock units within 60 days of the date of this table. For our executive officers and directors, amounts reported also include shares underlying vested restricted stock units deferred pursuant to our Deferred Compensation Plan.
- (3) Except as indicated in the footnotes to this table or as set forth in the SEC reports identified below, we believe the persons named in this table, based on information they have furnished to us or the SEC, have sole voting and investment power with respect to all shares of common stock reported as beneficially owned by them, subject to community property laws where applicable.
- (4) Stockholder's address is 55 East 52nd Street, New York, NY 10055. Ownership information is based solely on a Schedule 13G/A filed by stockholder with the SEC on January 30, 2019 and reflects beneficial ownership by stockholder in its capacity as a parent holding company and with respect to certain of its subsidiaries. Stockholder has sole voting power with respect to 17,366,963 shares and sole dispositive power with respect to 17,899,503 shares.
- (5) Stockholder's address is 100 Vanguard Blvd, Malvern, PA 19355. Ownership information is based solely on a Schedule 13G/A filed by stockholder with the SEC on February 9, 2018 and reflects beneficial ownership by stockholder in its capacity as investment advisor and with respect to certain of its subsidiaries. Stockholder has sole voting power with respect to 275,052 shares, shared voting power with respect to 26,300 shares, sole dispositive power with respect to 11,884,030 shares and shared dispositive power with respect to 289,952 shares.
- (6) Voting and investment power is shared with spouse.

RISK ASSESSMENT OF COMPENSATION PRACTICES

During fiscal 2018, at the request and direction of the Compensation Committee, management conducted an assessment of the risks associated with Ciena's compensation policies and practices.

ELEMENTS OF ASSESSMENT

- ❖ review of plans, policies and procedures relating to the components of our various compensation programs
- ❖ review of incentive-based cash and equity compensation features
- ❖ identification of any regional or functional distinctions in our compensation programs
- ❖ identification of compensation design features that could potentially encourage excessive or imprudent risk taking, and identification of business risks that these features could potentially encourage
- ❖ consideration of the presence or absence of appropriate controls, oversight or other factors that mitigate potential risks
- ❖ consideration of risks related to our compensation policies and practices and the potential for such risks to result in a material adverse effect on Ciena as a whole

Although the Compensation Committee considered all elements of our compensation programs, it paid particular attention in fiscal 2018 to any additions, modifications or revisions to such programs during the current and preceding fiscal years, and how these changes affected the strengths, weaknesses or controls related to such programs. Year-over-year changes included the introduction of market stock unit (MSU) awards as a component of long-term incentive compensation for the executive officers, as well as design changes to Ciena's Cash Incentive Bonus Plan and Sales Incentive Compensation Plan. The Compensation Committee also focused its assessment on performance-based incentive compensation programs involving variable payouts and compensation programs impacting our executive team. In substantially all cases, compensation programs were found to be centrally designed and administered and, excluding sales incentive compensation, substantially identical across function and geography. And, the objectives used to determine incentive compensation were found to be based primarily on Ciena's reported financial results and other performance-based corporate performance goals used to manage the business or derived from Ciena's annual operating plan approved by the Board of Directors.

In addition, the assessment identified significant controls and other mitigating factors that serve to offset elements of Ciena's compensation policies and practices that may introduce risk.

CONTROLS AND MITIGATING FACTORS

- ❖ oversight of major incentive compensation programs and decision-making by the Compensation Committee, which, in most cases, retains the ability to adjust elements of incentive compensation in its discretion
- ❖ robust internal controls over financial reporting and compensation practices regularly reviewed and/or tested by internal auditors and subject to testing as part of the annual independent integrated audit by our external auditors
- ❖ appropriate segregation of duties
- ❖ Audit Committee oversight and review of financial results and non-GAAP adjustments used in certain components of incentive compensation
- ❖ presence of and training relating to corporate standards of business conduct and ethics
- ❖ substantial alignment of compensation and benefits for executive and non-executive salaried employees
- ❖ stock ownership guidelines that were amended during fiscal 2018 to substantially increase minimum ownership requirements and which are designed to ensure alignment of interests with stockholders
- ❖ a recoupment or "clawback" feature for incentive compensation awarded under Ciena's 2017 Plan that, in addition to being applicable to those executive officers covered by the requirements of the Sarbanes-Oxley Act of 2002, is applicable to any award recipient who knowingly, or through gross negligence, engages in or fails to prevent misconduct resulting in material non-compliance with financial reporting requirements under the securities laws

Based on the assessment and factors described above, the Compensation Committee determined that the risks associated with Ciena's compensation policies and practices are not reasonably likely to result in a material adverse effect on Ciena.

COMPENSATION DISCUSSION AND ANALYSIS

The following “Compensation Discussion and Analysis” describes our executive compensation program and the compensation-related decisions for fiscal 2018 made by the Compensation Committee of the Board of Directors (the “Committee”) for the Named Executive Officers (the “NEOs”) who are set forth below:



Gary B. Smith

President and Chief Executive Officer (CEO)

Mr. Smith joined Ciena in 1997 and has served as CEO since May 2001.



James E. Moylan, Jr.

Senior Vice President and Chief Financial Officer (CFO)

Mr. Moylan joined Ciena as CFO in December 2007.



Rick L. Hamilton

Senior Vice President, Blue Planet Software

Mr. Hamilton joined Ciena in 2016 and has served in his current role since February 2017.



Scott A. McFeely

Senior Vice President, Global Products and Services

Mr. McFeely joined Ciena in 2010 and has served in his current role since November 2015.



David M. Rothenstein

Senior Vice President, General Counsel and Secretary

Mr. Rothenstein joined Ciena in 2001 and has served as General Counsel since November 2008.

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Executive Summary

Contained below and elsewhere in this proxy statement are certain non-GAAP measures of Ciena's financial performance for fiscal 2017 and 2018. These measures, along with their corresponding GAAP measures and reconciliations thereto, have been previously disclosed in exhibits to Ciena's Current Report on Form 8-K furnished with the SEC on December 7, 2017 and December 13, 2018. Also see "Non-GAAP Measures" below for more information on the use of these measures.

Fiscal 2018 Executive Compensation

- ❖ 77% of CEO target total direct compensation was in the form of equity awards and 59% was performance-based
- ❖ CEO did not receive an increase to either base salary or target bonus opportunity
- ❖ Increased the values of annual equity awards to CEO and other NEOs in order to better align with the market values for their positions and due to the addition of new members to executive leadership team
- ❖ Introduced market stock units ("MSUs") as a component of performance-based equity, based on a relative TSR goal measured over a three-year performance period
- ❖ Based on outstanding performance against fiscal 2018 objectives, NEOs received bonuses at 125% of target and earned performance stock units ("PSUs") at 119% of target

Strong Pay Practices

- ❖ Core governance principles and practices are employed to align executive compensation with stockholder interests
- ❖ Annual cash incentive bonuses are based on combination of corporate financial and operating objectives
- ❖ Equity awards make up a significant portion of overall executive compensation, incorporate meaningful performance-based elements and are tied to different performance objectives than annual cash incentive bonuses

Fiscal 2018 Company Performance

- ❖ Increased annual revenue over 10% year-over-year, from \$2.8 to \$3.1 billion, and gained over 2% global market share
- ❖ Generated \$1.39 adjusted earnings per share, representing 22% year-over-year growth
- ❖ Achieved strong year-over-year revenue growth from non-service provider customers, the Asia Pacific region, and the Webscale/DCI and submarine market verticals
- ❖ Acquired and successfully integrated two companies into our Blue Planet software automation business
- ❖ Significantly improved the balance sheet, eliminating all convertible debt, refinancing our existing term loan, and ending the year in a positive cash position
- ❖ Returned capital to stockholders by repurchasing 4.3 million shares for \$111 million under stock repurchase program
- ❖ Generated total stockholder return ("TSR") of 47%

Why you should vote FOR our "Say-on-Pay" Proposal

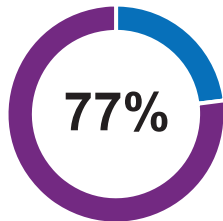
- ❖ At our 2018 Annual Meeting of Stockholders, 98% of stockholder votes cast were in favor of our executive compensation program
- ❖ Key elements of our executive compensation program remain essentially unchanged
- ❖ Our overall fiscal 2018 executive compensation was reasonable and appropriate in light of Ciena's business and financial performance
- ❖ See Proposal No. 3 for additional information on our annual advisory "Say-on-Pay" vote

Overview

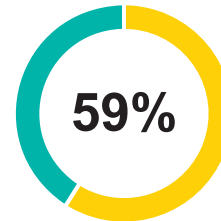
Fiscal 2018 Executive Compensation

Highlights of our executive compensation program for fiscal 2018 include:

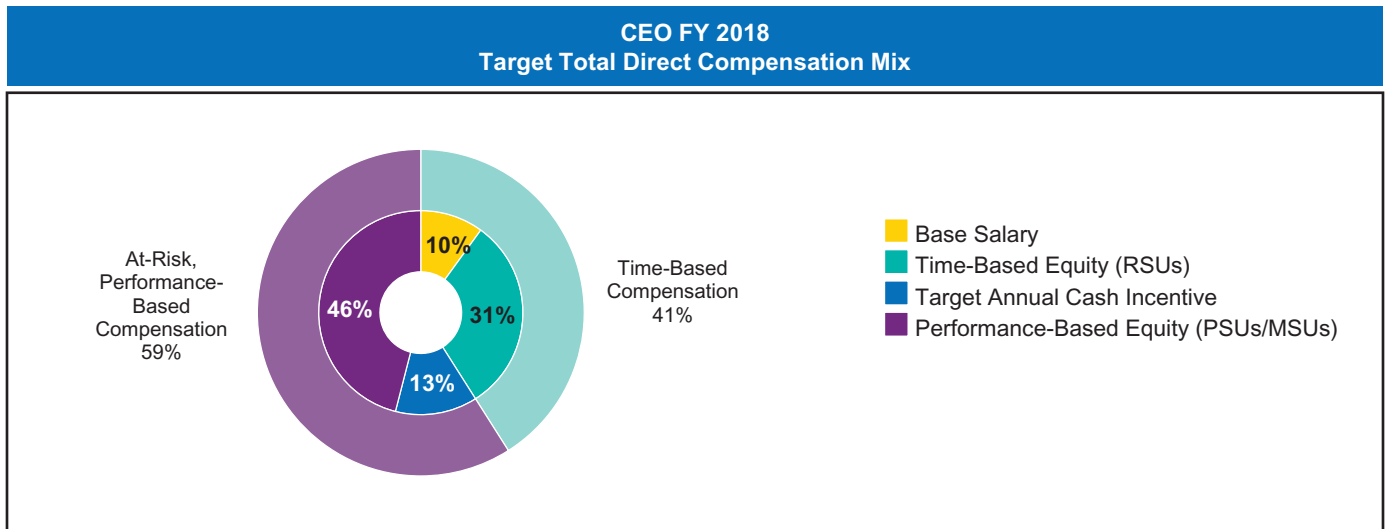
Base Salaries	<p>Did not increase the base salary of the CEO</p> <p>Increased the base salary of two NEOs in connection with their appointment to executive leadership team and assumption of larger organizational roles</p>	Target Cash Incentives	<p>Did not increase the target cash incentive opportunities for the CEO or the other NEOs</p>
Equity Award Values	<p>Increased the values of annual equity awards for the CEO and the other NEOs in order to better align with the market values for their positions and due to the addition of new members to the executive leadership team</p>	Equity Award Structure	<p>Continued to structure equity awards so that 60% of the target award value for the CEO, and 50% of the target award value for the other NEOs, was allocated to at-risk, performance-based equity</p> <p>Introduced MSUs as a component of performance-based equity, based on a relative TSR goal measured over a three-year performance period</p>



of our CEO's target total direct compensation was in the form of equity awards



of our CEO's target total direct compensation was completely "at-risk" based on our performance against measurable objectives



A detailed discussion relating to each element of executive compensation and the decisions summarized above is included in "Elements of Compensation" below.

The following discussion provides additional detail and analysis regarding the Committee's specific decisions relating to compensation of our NEOs for fiscal 2018, including the background, considerations and other factors that influenced such decisions.

Executive Compensation Best Practices

The Committee's fiscal 2018 compensation decision-making reflects the following core governance principles and practices that we employ to align executive compensation with stockholder interests. Also listed below are certain compensation practices that we do not employ because we believe they would not serve our stockholders' long-term interests.

WHAT WE DO	WHAT WE DON'T DO
<input checked="" type="checkbox"/> Ensure independence in establishing our executive compensation program	<input checked="" type="checkbox"/> Offer income tax gross-ups
<input checked="" type="checkbox"/> Align pay with performance	<input checked="" type="checkbox"/> Permit "single trigger" change in control benefits
<input checked="" type="checkbox"/> Align compensation with stockholder interests	<input checked="" type="checkbox"/> Provide excise tax gross-ups
<input checked="" type="checkbox"/> Maintain stock ownership requirements	<input checked="" type="checkbox"/> Allow for hedging or pledging of company securities
<input checked="" type="checkbox"/> Use rigorous performance goals	
<input checked="" type="checkbox"/> Maintain a compensation recovery ("clawback") policy	
<input checked="" type="checkbox"/> Assess risks relating to our executive compensation program	
<input checked="" type="checkbox"/> Provide only a limited set of executive perquisites	

Participants, Comparative Framework and Qualitative Factors

Participants in Compensation-Setting Process

Compensation Committee. The Committee oversees Ciena's compensation programs and has final authority to approve and make decisions with respect to the compensation of Ciena's executive officers. For a discussion regarding the Committee's compensation philosophy and the principal objectives of our compensation programs, see "Corporate Governance and the Board of Directors – Composition and Meetings of the Board of Directors and its Committees – Compensation Committee" above.

Independent Compensation Consultant. In its annual review and determination of executive compensation, the Committee is assisted by Compensia, Inc., a national compensation consulting firm. Compensia is engaged by the Committee and, in order to maintain its independence, does not perform additional consulting or other services for Ciena or its management. The Committee assesses the independence of its compensation advisor on an annual basis. For a discussion regarding Compensia, the scope of its engagement by the Committee and its involvement in our compensation-setting process, see "Corporate Governance and the Board of Directors – Composition and Meetings of the Board of Directors and its Committees – Compensation Committee" above.

Chief Executive Officer. Our executive officers, including our CEO, do not participate in the determination of their own compensation. Our CEO works with the Chair of the Compensation Committee to develop proposed compensation packages for our other executive officers, including the other NEOs. Based on his review and assessment of each executive officer's overall performance, success in executing against corporate and functional goals, criticality of function, experience, expertise, retention concerns, existing equity holdings, and compensation relative to other executive officers, as well as the Market Data (as defined below), our CEO provides recommendations to the Committee with respect to the base salary, target bonus percentage, and annual equity award for each executive officer. Because our CEO works most closely with and supervises our executive team, the Committee believes that his input provides critical insight in evaluating their performance. Our CEO also provides the Committee with additional information regarding the effect of market or competitive forces, changes in strategy or priorities upon an individual's performance, and any other specific challenges faced or overcome by each person or the function that they lead during the prior fiscal year.

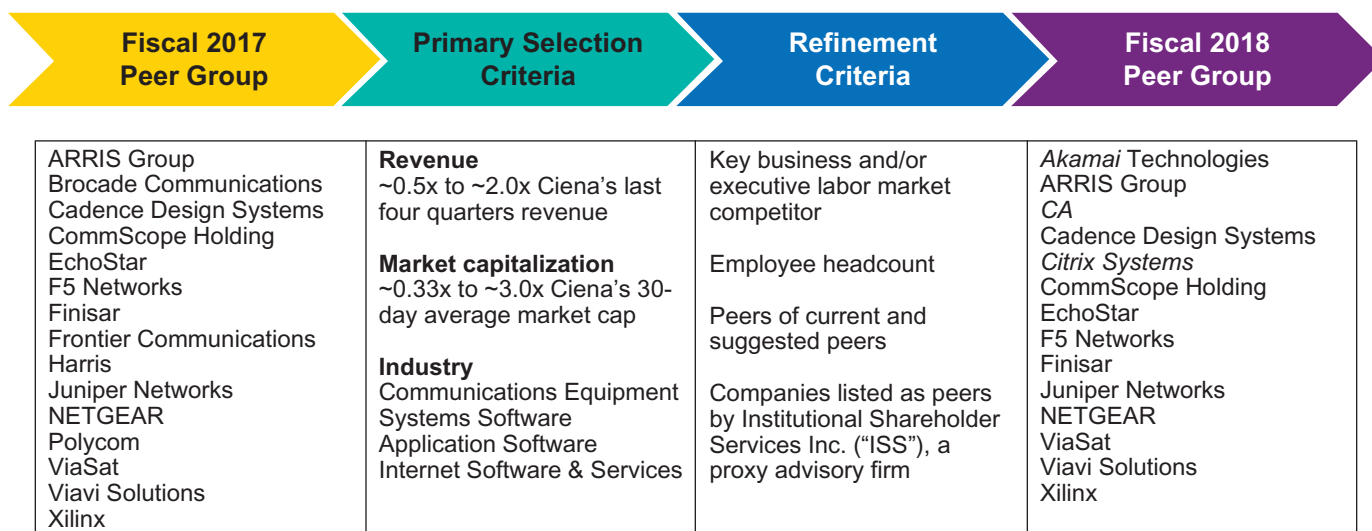
Comparative Framework

Peer Group. To assist in the selection of a group of peer companies against which to compare existing and proposed executive compensation levels for fiscal 2018, at the request of the Committee, Compensia screened all U.S.-based publicly traded companies in the technology industry using several quantitative and qualitative criteria, including those listed below. In light of Ciena's strategy for and increased investment in network automation software, the Committee requested that Compensia expand the industry range of potential companies beyond communications equipment to include systems software, application software and internet software and services. Among the various criteria, the Committee considered revenue as the criterion with the highest relevance in selecting peer companies.

Following Compensia's analysis, the Committee:

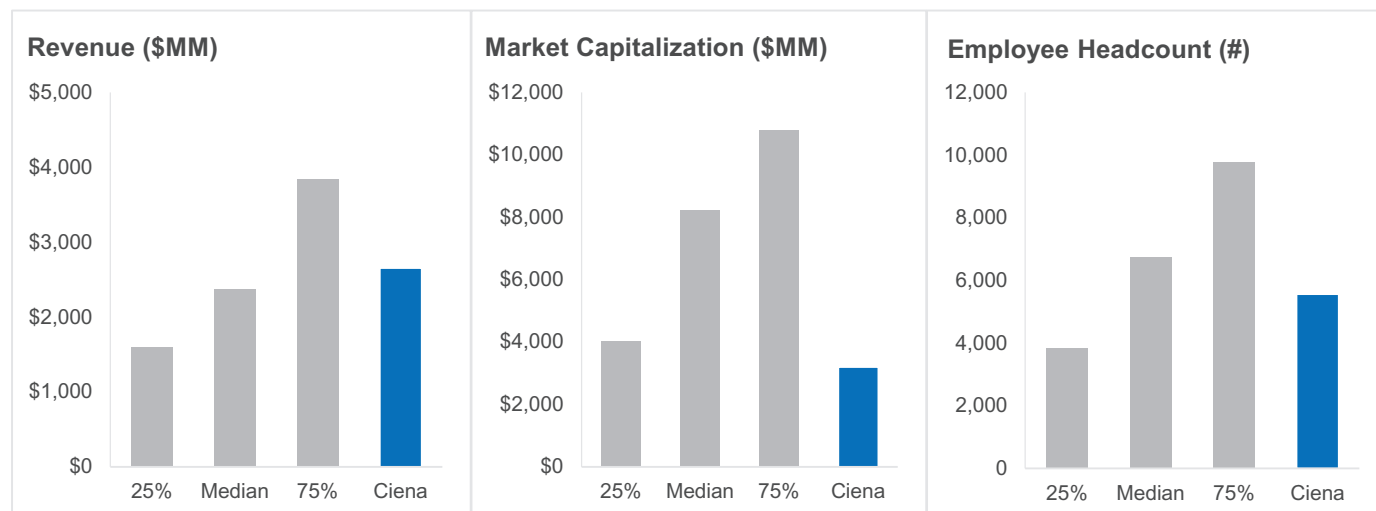
- ❖ Removed four companies from the existing peer group: *Brocade Communications* because of its then-pending acquisition by Broadcom; *Frontier Communications* because its revenue and headcount now exceeded the desired ranges; *Harris* because its revenue, market capitalization and headcount now exceeded the desired ranges; and *Polycom* because of its acquisition by Siris Capital Group.
- ❖ Added three new companies – *Akamai Technologies, CA* and *Citrix Systems* – because each was within one of the expanded range of comparable companies intended to include the software industry categories and met several of the applicable criteria.

Based on this analysis and the selection process set forth below, the Committee determined that the following peer group constituted an appropriate comparative reference for determining executive compensation in fiscal 2018 (the "Peer Group"):



The following charts illustrate a comparison of Ciena to the Peer Group based on the assessment criteria of revenue, market capitalization and employee headcount, measured as of the date of the Committee's assessment in May 2017, with the revenue comparison based on revenue over the four fiscal quarters preceding the assessment.

Peer Group Comparison



The Committee noted that Ciena was slightly above the median of the Peer Group for the revenue criterion, significantly below the median of the Peer Group for the market capitalization criterion, and slightly below the median of the Peer Group for the headcount criterion. The Committee believed that this represented a reasonable and appropriate balance among the key quantitative criteria, particularly given its view that revenue has the highest relevance in selecting peer companies for purposes of comparing compensation.

Market Data. As a comparative framework in establishing executive compensation for our NEOs, Compensia uses compensation data from public filings, compensation surveys such as the Radford High Technology Executive Compensation Survey and the IPAS Global High Technology Survey, and other published market data relating to comparable executive positions in the Peer Group (collectively, the “Market Data”). In considering the Market Data, the Committee recognizes that executive officers in different companies can play different roles, with different responsibilities and scopes of work, even though they may hold similar titles or nominal positions. Moreover, qualitative factors that influence compensation, such as each executive officer’s performance during the period under consideration or their perceived importance to their respective companies’ business, strategy and objectives are not easily discernible from the Market Data. Accordingly, the Market Data is just one of a number of factors used by the Committee in determining executive compensation and it serves as a frame of reference for compensation.

Qualitative Factors

In any given year, and for any particular NEO, the Committee may consider a range of subjective or qualitative factors in setting his or her compensation, including:

- ❖ the role the executive plays and the importance of such individual to Ciena’s business strategy and objectives;
- ❖ differences in each executive’s tenure and experience;
- ❖ the responsibilities and particular nature of the functions performed or managed by the executive;
- ❖ our CEO’s recommendations and his assessment of the executive’s performance;
- ❖ the risk that such individual would leave Ciena if not appropriately compensated and motivated; and
- ❖ the likely cost and difficulty that would be encountered in recruiting a replacement.

The Committee’s consideration of any particular factor may range from inapplicable to significant, depending upon the individual and period under consideration. The Committee does not assign relative weights or rankings to such factors. Rather, the Committee relies upon its members’ knowledge and judgment in assessing the various qualitative and quantitative inputs it receives as to each individual and makes compensation decisions accordingly.

In determining fiscal 2018 executive compensation, and in addition to the assessment of the Market Data and other specific factors described in the below discussion of the individual elements of compensation, the Committee broadly considered the following qualitative factors in making its compensation decisions for each NEO. Given their tenure, track record and experience, the Committee considered the NEOs to be highly desirable executives and thus potential candidates for recruitment by other companies.

❖ Gary B. Smith

- Has successfully served as our CEO for over 17 years
- One of the longest-tenured CEOs in the telecommunications industry
- Continued to demonstrate outstanding strategic leadership of and direction for Ciena, including strong leadership of our executive team and our company
- Ensured that Ciena delivered another year of outstanding performance in fiscal 2018
- Continued to expand and diversify our customer base, particularly in the Asia Pacific region and with Webscale and international Tier 1 service provider customers
- Enhanced Ciena’s broader articulation of corporate strategy, including the publication of longer-term financial targets

❖ James E. Moylan, Jr.

- Maintained excellent relationships and communications with the financial community and our stockholders
- Provided effective management and leadership over the finance and accounting, global business operations, information technology, internal audit, investor relations, tax and treasury organizations, including new leadership and approaches within information technology and treasury
- Supervised the implementation of our first stock repurchase program
- Led significant improvements to our balance sheet and capital structure, including settling our 2018 convertible notes, exercising an early conversion option on 2020 convertible notes and refinancing our existing term loan
- Ensured preparation for successful adoption of ASC 606, the new revenue recognition accounting standard

❖ **Rick L. Hamilton**

- Successfully transitioned to leading our Blue Planet Automation Software and Services business
- Aligned the Blue Planet portfolio strategy with Ciena's Adaptive Network vision, leveraging a closed loop automation system
- Identified the acquisitions of Packet Design and DonRiver and supervised the integration of their solutions and services offerings into an integrated portfolio
- Developed and implemented a targeted go-to-market strategy focused on top strategic customers
- Focused on building a best-in-class IT professional services business

❖ **Scott A. McFeely**

- Exhibited strong leadership of the Global Products & Services division, which encompasses the global engineering, supply chain, product line management and quality organizations
- Assumed responsibility for our global attached services business and supervised a series of related transformation initiatives to increase efficiencies, reduce costs and improve customer satisfaction
- Oversaw industry-leading technology innovation from the engineering organization
- Ensured that the product lifecycle management and supply chain organizations continued to drive meaningful product design and transformation cost reductions
- Successfully focused on developing features and growing sales orders for our packet networking portfolio

❖ **David M. Rothenstein**

- Demonstrated strong performance as General Counsel and Secretary, including with respect to leading engagement with our Board of Directors
- Managed the structuring, negotiation and integration of the Packet Design and DonRiver acquisitions
- Made several significant enhancements and improvements to our global compliance and ethics program
- Led an analysis of our real estate portfolio in the context of workforce planning, workspace evolution and site utilization
- Continued to serve as the Chair of our Disclosure Committee and our Corporate Compliance Committee, and as executive sponsor of our enterprise risk management (ERM) and corporate social responsibility (CSR) programs

Internal Equity. The Committee seeks to promote strong teamwork and high morale within our executive team. While the Committee does not use any quantitative formula or multiple for comparing or establishing compensation among the executive officers, it is mindful of internal pay equity considerations, and assesses the relationship of the compensation of each executive officer to other members of the executive team. The Committee also considers each fiscal year, on a relative basis, the aggregate portion of equity awards, in terms of economic value and allocation of shares, made to the executive team, in comparison to other eligible employees.

Say on Pay Vote

We provide stockholders with the opportunity to cast an annual advisory vote on the compensation of our named executive officers. From time to time, we seek input from our stockholders relating to executive compensation matters and expect to continue to consider input from stockholders, as well as the outcome of our annual say-on-pay votes when making future executive compensation decisions. See "Proposal No. 3" below for this year's "say-on-pay" proposal. Last year, approximately 98% of the stockholder votes cast on this proposal were voted in favor of the proposal. The Committee believes that this substantial majority of votes cast affirms stockholders' support for our approach to executive compensation and, as a result, did not set or change fiscal 2018 executive compensation as a direct result of last year's stockholder vote.

Elements and Mix of Compensation

Principal Elements of Compensation

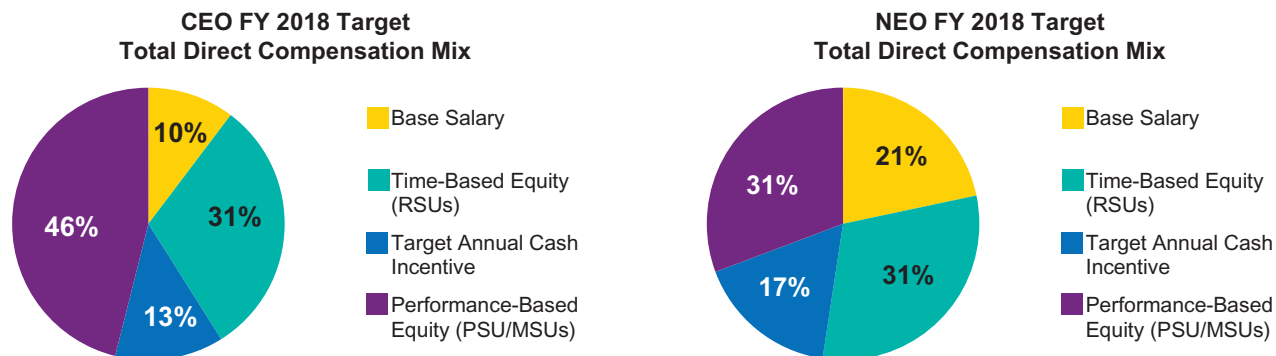
The principal elements of compensation of our executive officers, including our NEOs, include:

Element	Type	Form	Key Characteristics	Purpose
Base Salary	Fixed	Cash	Annual adjustments based on individual performance, relative to market pay level and internal pay equity	Attracts, retains and rewards NEOs by providing a competitive fixed amount of compensation for service that reflects skill, responsibility and experience
Annual Cash Incentive	At-Risk	Cash	Variable cash compensation, based on pre-established financial, strategic and operational goals and individual performance	Focuses NEOs on achievement of our short-term financial and operational goals Aligns interests of NEOs with stockholders by promoting strong annual operating income growth and achievement of other key corporate objectives
Long-Term Equity Incentive	At-Risk	Restricted Stock Units	RSU equity awards based on continued service vest in quarterly increments over a four-year period	Retains NEOs through multi-year vesting of equity awards Motivates and rewards NEOs for the achievement of long-term corporate performance Aligns NEO and stockholder interests
		Performance Stock Units	PSU equity awards based on pre-determined financial, strategic and/or operational goals have a one-year performance period and vest in equal increments over two years	
		Market Stock Units	MSU equity awards based on TSR relative to a comparison index over a three-year period, and vest in full at end of period	

We also provide severance and change in control related benefits for our NEOs, and other benefits such as a 401(k) plan, health and wellness benefits including an annual physical examination, and financial planning and tax preparation services. In addition, our NEOs participate in the Deferred Compensation Plan available to other senior management employees and standard employee benefit plans and programs available to our other employees.

Pay Mix

In determining the mix of compensation among these elements, the Committee does not assign specific ratios or other relative measures that dictate the total compensation mix to be awarded or targeted to the executive team, or the portion that is either at-risk or otherwise subject to performance. Nevertheless, as illustrated by the charts below, the Committee continued to structure executive compensation in fiscal 2018 so that a significant portion of the target total direct compensation of our CEO and the other NEOs was “at-risk”, or performance-based, with the actual value realized subject to the achievement of short-term or long-term corporate and financial performance goals. Approximately 60% of our CEO’s target total direct compensation for fiscal 2018 was structured as “at-risk” performance-based compensation. By linking a significant portion of our executives’ compensation to performance, the Committee emphasized incentive-based variable pay, which is consistent with our pay-for-performance philosophy and creates a strong alignment with long-term stockholder value.



* Target Total Direct Compensation reflects annual base salary, annual cash incentive opportunity and grant date fair value of fiscal 2018 equity awards.

Cash Compensation

Base Salary

In determining base salaries for fiscal 2018, the Committee considered that the Market Data showed that the base salaries for Messrs. Smith, Moylan and Rothenstein were at or slightly above the market median of equivalent positions at the time. With respect to Messrs. Hamilton and McFeely, the Committee recognized that neither had received an increase in base salary in connection with their respective appointments to the executive leadership team and assumption of larger organizational roles during fiscal 2017. Accordingly, for fiscal 2018 the Committee determined not to increase the base salaries of Messrs. Smith, Moylan and Rothenstein, and to increase the base salaries of Messrs. Hamilton and McFeely, as set forth below.

Annual Base Salary

Name	Annual Base Salary (\$)		
	Fiscal 2017	Fiscal 2018	Percentage Increase
Gary B. Smith	\$ 900,000	\$ 900,000	0%
James E. Moylan, Jr.	\$ 525,000	\$ 525,000	0%
Rick L. Hamilton	\$ 420,000	\$ 440,000	5%
Scott A. McFeely	\$ 400,000	\$ 440,000	10%
David M. Rothenstein	\$ 450,000	\$ 450,000	0%

The above salary increases were made effective as of Ciena’s second quarter of fiscal 2018, in order to coincide with the timing of Ciena’s broad-based merit increase for non-executive employees.

Annual Cash Incentive Opportunity

The annual incentive cash opportunity for our employees, including the NEOs, is expressed as a percentage of base salary. Because of this correlation, the Committee typically looks at base salary and annual cash incentive compensation in combination, and considers the effect modifications to either such element have on the “target total cash compensation” for each individual.

The Committee considers potential incentive payments to each NEO at the “target” level (as reflected in “Annual Cash Incentive Bonus Plan” below), together with base salary, in determining the “target total cash compensation” payable to each executive.

The Committee considered that the Market Data showed that, if paid at the target level, the overall target total cash compensation for each of the NEOs except Mr. McFeely was at or above the median of equivalent positions in the market. The Committee also noted that, as a result of its decision to increase the base salary of Mr. McFeely, his overall target total cash compensation would be aligned with the market median. Accordingly, the Committee agreed that the target cash incentive opportunities for the NEOs expressed as a percentage of base salary remained reasonable and appropriate and decided not to increase them for fiscal 2018, as set forth below.

Annual Cash Incentive Opportunity

Name	Target Cash Incentive Compensation (as a percentage of base salary)		
	Fiscal 2017	Fiscal 2018	Percentage Increase
Gary B. Smith	125%	125%	0%
James E. Moylan, Jr.	85%	85%	0%
Rick L. Hamilton	75%	75%	0%
Scott A. McFeely	75%	75%	0%
David M. Rothenstein	75%	75%	0%

Target Total Cash Compensation

The Committee’s decisions with respect to annual base salaries and annual cash incentive bonus opportunities for fiscal 2018 resulted in target total cash compensation for the NEOs as set forth below.

Target Total Cash Compensation

Name	Target Total Cash Compensation (\$)		
	Fiscal 2017	Fiscal 2018	Percentage Increase
Gary B. Smith	\$ 2,025,000	\$ 2,025,000	0%
James E. Moylan, Jr.	\$ 971,250	\$ 971,250	0%
Rick L. Hamilton	\$ 735,000	\$ 770,000	5%
Scott A. McFeely	\$ 700,000	\$ 770,000	10%
David M. Rothenstein	\$ 787,500	\$ 787,500	0%

The amounts in the table above represent target total cash compensation for fiscal 2017 and fiscal 2018. For amounts actually earned or received by our NEOs during fiscal 2018, see “Summary Compensation Table” in the “Executive Compensation Tables” below.

Annual Cash Incentive Bonus Plan

Full-time employees, excluding our employees who receive sales commissions, generally are eligible to participate in our annual cash incentive bonus plan, which pays out a bonus upon the achievement of performance objectives established by the Committee. This plan is the mechanism for delivering the annual cash incentive opportunity discussed above. The bonus plan, which is more fully described in the “Grants of Plan-Based Awards” section of the “Executive Compensation Tables,” provides the Committee with the flexibility to establish corporate, departmental or individual performance objectives upon which bonus payments are contingent.

The bonus plan is structured to focus and incent our executive officers on the achievement of a defined set of short-term financial and corporate performance objectives. The payout percentage under the bonus plan is determined by multiplying the level of achievement of the financial objective, which in recent years has been our aggregate adjusted operating income target for the fiscal year, by a multiplier based on the level of achievement of the defined corporate objectives.

$$\boxed{\text{Financial Objective}} \times \boxed{\text{Corporate Objectives Multiplier}} = \boxed{\text{Bonus Payout Percentage}}$$

Fiscal 2018 Structure. To determine the bonus percentage payout for fiscal 2018, the Committee used Ciena's annual adjusted operating income target set forth in our fiscal 2018 operating plan for purposes of the financial objective and a combination of eight corporate objectives that correlate with our annual operating plan or three-year strategic plan for purposes of the corporate objectives multiplier. The Committee elected to use the same objectives for all eligible employees, including our NEOs, in order to align the interests of our employee base and to promote teamwork and morale.

In considering the fiscal 2018 bonus plan, the Committee recognized that the then existing structure had been initially designed several years earlier, and at a time when Ciena was approaching break-even profitability. It noted a shift in a number of bonus-related dynamics associated with an increase in Ciena's profitability since that time. Among these, the Committee considered that the range of actual performance against the financial objective has narrowed and that previous concerns about the potential for a disproportionate impact of a bonus payment on Ciena's profitability had abated. In addition, the Committee considered its and management's concerns about the lack of a realistic opportunity for a meaningful upside payout despite strong performance against a range of corporate goals and the adequacy of bonus plan funding to attract and retain the company's employees. Accordingly, the Committee made several changes to the fiscal 2018 bonus plan from the structure used in previous years:

Financial Objective	Corporate Objectives
<ul style="list-style-type: none"> ❖ Raised the minimum performance threshold to 70% (from 50% in fiscal 2017) ❖ Capped the payout at 130% performance (from 150% in fiscal 2017) ❖ Increased the payout slope for performance above target to 2-to-1 (from 1.5-to-1 in fiscal 2017) while retaining a 1-to-1 payout slope for performance at or below target 	<ul style="list-style-type: none"> ❖ Reduced the number of objectives to eight (from 10 in fiscal 2017) ❖ Raised the minimum performance threshold to 50% (from 30% in fiscal 2017) ❖ Added a multiplier above 1.0x for the highest levels of achievement, but conditioned its application on achievement of at least 80% of the financial objective

These changes were intended to address more realistic ranges of possible actual performance against the financial and corporate objectives, increase the minimum thresholds required in order to earn a bonus payment, and provide an appropriate level of upside potential for outstanding performance against the objectives. As a result of these changes, the maximum amount that could be paid under the bonus plan was 192% of the target bonus. Overall, the fiscal 2018 bonus plan was designed to balance and align the interests of our employees and stockholders, while incentivizing the company's workforce to drive toward improved profitability and stockholder return.

Financial Objective		Corporate Objectives Multiplier	
Performance Against Target (%)	Total Target Bonus Earned (%)	Objectives Achieved (#)	Multiplier
< 70%	0%	< 4	0.0x
70%	70%	4	0.8x
80%	80%	5	0.9x
90%	90%	6	1.0x
100%	100%	7	1.1x *
110%	120%	8	1.2x *
120%	140%		
≥ 130%	160%		

* Only applies if achieve >80% of Financial Objective; otherwise reverts to 1.0x

Bonus payments are interpolated for performance results falling between the designated levels set forth above. For illustrative purposes only and by way of example, if Ciena had achieved 80% of the adjusted operating income target and seven of its eight corporate objectives, the applicable annual cash incentive award would have been 88% (80% x 1.1) of the target bonus opportunity.

Financial Objective. As noted above, the Committee has used annual adjusted operating income as the financial objective for the past several years and continues to believe that this performance-based measure provides the most comprehensive and effective indicator of Ciena's operating performance. The Committee recognized that the adjusted operating income measure is one of the most important and frequently reviewed metrics used by our CEO and executive team in managing Ciena's business. In calculating adjusted operating income, the Committee gives effect to certain adjustments to our GAAP results generally consistent with those reported in our quarterly earnings releases, as well as the cost of the annual incentive bonus plan and any sales incentive compensation paid to our global field organization in excess of that budgeted in our annual operating plan. The adjusted operating income target for fiscal 2018 was \$416.0 million in the aggregate, after taking into account such adjustments.

Corporate Performance Goals. The fiscal 2018 corporate performance goals were aligned with Ciena's execution imperatives for the fiscal year, as follows:

EXECUTION IMPERATIVES	OPTICAL LEADERSHIP	1. Deliver at least two of three defined product releases or feature content
	PACKET NETWORKING GROWTH	2. Generate \$160M in orders for Packet Networking products from customers other than AT&T
	BLUE PLANET AUTOMATION SOFTWARE	3. Generate \$34M in orders for Blue Planet Automation Software and Services solutions portfolio, including orders from four of top 13 defined customers of \$10M in aggregate
	ONE CONTROL / MCP SOFTWARE MIGRATION	4. Ensure that MCP domain controller software is in production in the networks of 25 defined customers
	WEBSCALE CUSTOMER EXPANSION	5. Generate \$260M in revenue directly from Webscale customers
	SUBMARINE MARKET EXPANSION	6. Generate \$215M in orders from submarine business
	SERVICES TRANSFORMATION	7. Achieve \$34M in cost reductions across the Attached Services portfolio 8. Maintain and improve customer experience by attaining defined levels of deployment project completion on-time and customer satisfaction with technical support cases

Attainment of Fiscal 2018 Cash Incentive Bonus. Ciena generated adjusted operating income of \$424.9 million in fiscal 2018 after giving effect to the adjustments described above. Based on the payout-for-performance structure described above, this resulted in a total bonus earned at 104% of target before application of the corporate objectives multiplier. Ciena also successfully achieved each of the eight corporate performance goals for fiscal 2018, which resulted in application of a 1.2x multiplier. As a result, the NEOs earned and were awarded a bonus equal to 125% of the annual target bonus opportunity (104% x 1.2), which resulted in cash incentive bonus payments as set forth below.

Attainment of Fiscal 2018 Cash Incentive Bonus

Name	Fiscal 2018 Cash Incentive Bonus
Gary B. Smith	\$ 1,406,250
James E. Moylan, Jr.	\$ 557,813
Rick L. Hamilton	\$ 412,500
Scott A. McFeely	\$ 412,500
David M. Rothenstein	\$ 421,875

Equity Compensation

Factors and Process in Determining Fiscal 2018 Equity Awards

In determining equity compensation for fiscal 2018, the Committee considered that the Market Data showed that, as a percentile of the market, the overall average equity value for the executive officers decreased substantially year-over-year – from the 60th percentile of the market the previous year to the 40th percentile of the market at the time of the Committee’s assessment. Compensia’s analysis indicated that this decrease was due primarily to two factors. First, the annual equity values awarded to executive officers in the market had increased substantially year-over-year, with an overall average 44% increase in value from the previous year, as compared to the smaller increases in equity values provided to Ciena’s executive officers. Second, three individuals had been promoted into the executive leadership team during fiscal 2017, including Messrs. Hamilton and McFeely, and consequently the equity values provided to them in their previous roles within Ciena were significantly lower than the equivalent market values for their new roles.

The Committee recognized that, for the first time in three years, the overall average equity value for the executive officers was *below* its target range of between the 50th and 75th market percentiles for the value delivered to similar executives based on the Market Data. Ciena primarily competes with and hires executives from companies that are substantially larger in all relevant comparison metrics, and therefore are not appropriate to include in the Peer Group. This dynamic requires the Committee to develop a peer group of industry-related companies with whom the Company does not directly compete but who represent an aggregate financial profile that places Ciena at or about the market median, with revenue as the most relevant criterion. As a result, in order to better reflect market dynamics and Ciena’s resulting challenge in attracting and retaining top executives, the Committee believes that it is appropriate to establish equity values for the executive officers using a target range at or significantly above median for the values delivered to similar executives.

Based on Compensia’s analysis, as well as Ciena’s strong business and financial performance and the factors for each individual executive described in “Qualitative Factors” above, our CEO prepared recommendations for target equity values for each of the NEOs (other than himself) for the Committee’s consideration. The Committee made its own similar evaluation for our CEO, based upon its assessment of his responsibilities, performance, experience and value to Ciena, as well as consideration of the below additional factors.

In determining fiscal 2018 equity compensation, and in addition to the qualitative factors described above, the Committee considered, among other things, the following:

- ❖ our CEO’s assessment of the overall responsibilities, performance, experience, expertise and value to Ciena of each individual, as well as the criticality of each position and any concerns with respect to retaining the individual;
- ❖ the existing, unvested equity holdings of each individual and assumptions relating to future values;
- ❖ the potential impact of awards at the target equity values on key compensation governance metrics, including current and three-year average burn rate, equity overhang levels, and equity grant expense as a percentage of market capitalization;
- ❖ the specific number of shares resulting from the proposed target equity values using a range of possible grant date Ciena stock prices; and
- ❖ the number of shares remaining available for issuance under the 2017 Plan.

Equity Award Values

As described above, based on the Market Data, the prior year’s equity values of our executives were below (and, in some cases, significantly below) the Committee’s target range for the value delivered to similar executives. In particular, the Committee noted that Mr. Smith’s equity value approximated only the 35th percentile of the equity values awarded to chief executive officers in the Peer Group in 2017. The Committee agreed that, after taking steps to align executive equity compensation with the Peer Group and with Ciena’s strong business and financial performance in recent years, it was important to ensure that equity compensation for our executives kept pace with the market and that of similarly situated executives in the Peer Group. Accordingly, the Committee established values for the fiscal 2018 equity awards to the NEOs that represented year-over-year increases in grant date value, with variance by individual executive based on market benchmarking for the applicable position. Specifically:

- ❖ The grant date value of Mr. Smith’s fiscal 2018 equity award represented a 21% year-over-year increase. Given the continued overall market increase in CEO equity values, however, this award only positioned Mr. Smith’s equity value slightly above the market median and at the lower end of the Committee’s target range;

- ❖ The grant date values of the fiscal 2018 equity awards granted to Messrs. Moylan and Rothenstein represented year-over-year increases of 5% and 17%, respectively; and
- ❖ Given that Messrs. Hamilton and McFeely had been promoted to the executive leadership team during fiscal 2017, the comparison of their year-over-year increases in equity values was not relevant and was not considered by the Committee.

Overall, the Committee believed that the values of the executive awards granted to Mr. Smith and the other NEOs were reasonable and appropriate under the circumstances.

Based on the trailing 30-day average of Ciena's closing stock price prior to the grant date, the individual equity values established by the Committee were calculated into a target number of shares of Ciena's common stock underlying each equity award as set forth below.

Fiscal 2018 Annual Equity Awards

Name	Total Shares Underlying Award (#)	Grant Date Fair Value (\$)
Gary B. Smith	310,855	\$ 6,797,777
James E. Moylan, Jr.	71,736	\$ 1,565,279
Rick L. Hamilton	57,390	\$ 1,252,250
Scott A. McFeely	57,390	\$ 1,252,250
David M. Rothenstein	57,390	\$ 1,252,250

Equity Award Allocation and Structure

The Committee decided to modify the allocation and structure of equity awards for the NEOs in fiscal 2018, with the goal of improving the alignment between the compensation of our executives and Ciena's longer-term business and financial performance relative to the applicable market. In recent years, the equity awards for our executives have been allocated between RSUs and PSUs. For fiscal 2018, however, in addition to the continued use of RSUs and PSUs, the equity awards for the executive officers included a long-term relative performance goal in the form of market stock units (MSUs). The MSUs were based on Ciena's total stockholder return (TSR) over a period of three fiscal years as compared to the total return of a stock index comprised of companies in our sector. The following table illustrates the key elements of each of the three equity vehicles.

Equity Vehicle	Weighting (CEO)	Weighting (Other NEOs)	Metric(s)	Performance Period	Vesting
Restricted Stock Units	40%	50%	None	N/A	Quarterly (1/16 th) over four years
Performance Stock Units	36%	30%	Sales Orders and Free Cash Flow	One Year (Fiscal 2018)	50% after first year and 50% after second year
Market Stock Units (NEW)	24%	20%	Relative TSR	Three Years (Fiscal 2018 – 2020)	100% after third year

The following table indicates the specific number of shares underlying the RSU awards and the PSU and MSU awards at target level based on achievement of the goals described below.

Allocation of Fiscal 2018 Annual Equity Awards

Name	RSUs (#)	Target PSUs (#)	Target MSUs (#)
Gary B. Smith	124,342	111,908	74,605
James E. Moylan, Jr.	35,868	21,521	14,347
Rick L. Hamilton	28,695	17,217	11,478
Scott A. McFeely	28,695	17,217	11,478
David M. Rothenstein	28,695	17,217	11,478

RSUs. The Committee continued to use a standard four-year vesting period for the RSUs – one-sixteenth of the grant amount vesting each calendar quarter over a four-year period – in order to promote long-term alignment with stockholders and longer-term decision making that provides an effective balance to the shorter-term incentive measures used in setting cash incentive bonus awards.

PSUs. The Committee structured the PSUs with a fiscal 2018 performance period. In selecting a one-year period, the Committee sought to achieve a balance between the desire to incorporate a specific performance-based component in the long-term incentive compensation for the executive officers with an acknowledgment of the difficulties inherent in establishing long-term performance goals in an uncertain macroeconomic environment and a volatile sector of the telecommunications industry. After carefully considering the implications of using a one-year performance period instead of a longer period for its long-term incentive compensation, the Committee ultimately determined that any issues related to a shorter period were outweighed by the desire to avoid any unintended consequences of motivating the wrong behavior or limiting Ciena's flexibility as a result of outdated or inapplicable long-term goals in future years. In recognition of the one-year performance period, the Committee incorporated an additional retention element to the performance equity compensation, whereby any PSU shares that were earned during the fiscal 2018 performance period would be subject to a staggered vesting and delivery schedule in two equal installments over the 12 months following the fiscal 2018 performance period, subject to the individual executive's continued service with Ciena. In establishing this performance equity structure, the Committee was significantly influenced by the fact that it had been using a similar structure for the past several years and that the structure successfully achieved the Committee's desired objectives for company performance, long-term incentive compensation for our executives and executive retention. The Committee also considered this structure to be reasonable and appropriate in light of the introduction of longer-term MSUs as part of the overall equity allocation for the executives in fiscal 2018.

In establishing goals for the PSUs, the Committee sought to align the interests of the executive officers with Ciena's stockholders by focusing their efforts on ensuring the longer-term growth of our business while achieving cash generation in the near-term. The Committee also sought to avoid any overlap between the goals for the annual cash incentive bonus plan and the long-term equity compensation for the executive officers. Accordingly, the PSUs were based on two goals for fiscal 2018: an aggregate sales orders target of \$3.1 billion and a free cash flow target of \$225 million. Each of these goals was derived directly from the targets set forth in our fiscal 2018 operating plan, which was reviewed and approved by the Board of Directors. The PSUs were allocated equally between the two goals, and the Committee considered the prospects for attainment and non-attainment of the PSU performance goals to be equally likely.

Any portion of the PSUs not earned by the end of the performance period would be forfeited. The PSUs were designed such that 100% of the shares underlying the award would be earned upon the achievement of 100% of both the sales orders target and the free cash flow target. Consistent with our pay-for-performance philosophy, and to closely align the interests of the executive officers with our stockholders and to further incentivize them to overachieve against our fiscal 2018 operating plan, the Committee incorporated upside earning potential to the PSUs for extraordinary performance and downside risk for under-performance against each of the two goals. Specifically, the Committee established the following minimum performance thresholds and maximum number of additional PSUs that could be earned for achievement against the sales orders and free cash flow targets, as set forth below:

Fiscal 2018 PSU Performance Goals

	Aggregate Sales Orders (1/2 of Total PSUs)		Free Cash Flow (1/2 of Total PSUs)	
	Aggregate Sales Orders (\$B)	Target PSUs Earned (%)	Free Cash Flow (\$M)	Target PSUs Earned (%)
	< \$ 2.79	0%	< \$ 150	0%
“Threshold”	\$ 2.79	50%	\$ 150	25%
“Target”	\$ 3.10	100%	\$ 225	100%
“Maximum”	\$ 3.41	200%	≥ \$ 275	200%

The percentages of target PSUs earned are interpolated on a straight-line basis for results falling between the designated levels set forth above. Based on the above table, the maximum amount of PSUs that could be earned was 200% of the target number of shares underlying the PSU award.

MSUs. As noted above, for the first time the Committee incorporated a relative performance goal as part of the annual equity awards for the executive officers. The MSUs are based on Ciena’s TSR – i.e., its stock price appreciation – as compared to the total reported return (the “Return”) of the S&P North American Technology-Multimedia Networking Index (the “S&P Networking Index”) over a three-year measurement period covering Ciena’s fiscal 2018 through fiscal 2020 (the “Measurement Period”). The Committee selected the S&P Networking Index as the appropriate comparison index both because it is directly relevant to our business, consisting of several companies in our sector and including Ciena as a constituent, and because its overall performance has been closely correlated to that of Ciena in recent years. For purposes of determining the TSR for Ciena and the Return for the S&P Networking Index, and in order to mitigate the potential impact of stock price volatility, the beginning and ending values for each measure will be determined on an average basis over a period of 90 calendar days prior to both the beginning and the end of the Measurement Period. For the same reasons as with the PSUs, the Committee incorporated upside earning potential to the MSUs for outperformance against the S&P Networking Index and downside risk for underperformance against the S&P Networking Index. Specifically, the applicable percentage of the target number of MSUs earned will be determined based on the absolute percentage point difference between Ciena’s TSR as compared to the Return for the S&P Networking Index during the Measurement Period, as set forth below:

Fiscal 2018 MSU Performance Goal

Fiscal 2018-2020 Relative TSR (absolute percentage point difference)	Target MSUs Earned (%)
(50)%	0%
(40)%	20%
(30)%	40%
(20)%	60%
(10)%	80%
Equal	100%
10%	120%
20%	140%
30%	160%
40%	180%
≥ 50%	200%

The percentage of target MSUs earned is interpolated on a straight-line basis for results falling between the designated levels set forth above. The maximum amount of MSUs that can be earned is 200% of the target number of shares underlying the MSU award. However, if Ciena’s TSR during the Measurement Period is negative (as a result of a decline in our stock price during such period), then the maximum number of shares that can be earned is 100% of the target number of shares underlying the MSU award. To the extent earned, the MSUs will vest in full in December 2020 following the end of the Measurement Period, subject to the individual executive’s continued service with Ciena through the vesting date. Any portion of the MSUs not earned at the end of the Measurement Period will be forfeited.

Overall, the Committee believed that nearer-term goals focused on top-line revenue growth and bottom-line cash generation (via the PSU goals of sales orders and free cash flow), complemented by a longer-term goal focused on relative TSR, is an effective combination that will closely align the interests of the executive officers with those of shareholders and thereby enhance stockholder value.

Attainment of Fiscal 2018 PSUs

Ciena had an overall strong year of top-line revenue growth in fiscal 2018 but fell short of certain financial targets in its annual operating plan. Ciena generated aggregate sales orders of \$3.5 billion in fiscal 2018, and therefore the maximum 200% of the PSUs allocated to that goal were earned. Ciena generated \$162 million in free cash flow in fiscal 2018, and therefore 37% of the PSUs allocated to that goal were earned. Based on the equal weighting of the two goals, approximately 119% of the total PSUs were earned as set forth below.

Fiscal 2018 PSU Awards Earned

Name	PSUs Earned (#)
Gary B. Smith	132,611
James E. Moylan, Jr.	25,501
Rick L. Hamilton	20,401
Scott A. McFeely	20,401
David M. Rothenstein	20,401

One-half of the PSUs earned during fiscal 2018 vested in December 2018, and the remaining one-half of the PSUs earned will vest in December 2019, subject to continued service.

Equity Grant Practices

We apply a consistent approach in our equity award practices by granting annual equity awards to our executive officers and directors at or around the same time each year. Annual equity awards to our NEOs are made by the Committee, and the grant date of these awards is the same day that the Committee meets to approve the awards. The Committee generally meets, approves and grants annual equity awards to the executive officers promptly following Ciena's release of earnings for the fourth quarter and fiscal year. This practice began in fiscal 2007 and continued for annual equity awards in fiscal 2018, with the fourth quarter earnings release on December 7, 2017 and executive and non-executive awards granted on December 12, 2017.

Other Elements of Executive Compensation Program

U.S. Executive Severance Benefit Plan

We maintain a U.S. Executive Severance Benefit Plan as part of our efforts to continue to attract and retain top executive talent. This plan, which is governed by the Employee Retirement Income Security Act of 1974, as amended, provides certain U.S.-based employees, including the NEOs and employees of the rank of vice president or above, with certain severance payments and benefits in the event of an involuntary separation of service by Ciena without "cause." For additional information about the severance payments and benefits payable under this plan, as well as the estimated value of these payments and benefits, see "Payments Upon Involuntary Separation of Service for Other than Cause" below.

"Double Trigger" Change in Control Severance Agreements

Each of the NEOs has a change in control severance agreement with Ciena. We have entered into these agreements upon the initial hiring of senior employees, upon promotion of existing employees to senior executive roles, and when the Compensation Committee determines it to be important for the retention of other key employees. These agreements with our executive officers, including the NEOs, are effective through November 2019, unless earlier terminated. We believe that these severance arrangements are important for retention of key employees and necessary to attract qualified executive officers, who may otherwise be deterred from taking a position with us by the possibility of being dismissed following a change in control, particularly given the level of acquisition activity in our industry.

Except for the conversion of certain performance-based equity into time-based awards, (i) the CEO receives no benefits under this agreement unless his employment is terminated without cause, or by him for good reason, within 90 days prior to or 18 months following the effective date of a change in control transaction, and (ii) the other NEOs receive no benefits under these

agreements unless their employment is terminated without cause, or by the executive for good reason, within 90 days prior to or 12 months following the effective date of a change in control transaction. We believe this so-called “double trigger” structure strikes an appropriate balance between the potential compensation payable to executive officers and the corporate objectives described above. We also believe that were Ciena to engage in discussions or negotiations relating to a corporate transaction that our Board of Directors deems in the interest of stockholders, these agreements would serve as an important tool in ensuring that our executive team remains focused on the consummation of the transaction, without significant distraction or concern relating to personal circumstances such as continued employment. Should any severance payment or benefit be subject to excise tax imposed under federal law, or any related interest or penalties, such severance payments or benefits shall be either (a) paid in full by us, or (b) paid in a lesser amount such that no portion of the payments would be subject to the excise tax, whichever results in receipt by the executive of a greater amount. Under this “best choice” mechanism, Ciena would not pay any excise taxes or make any gross-up or similar reimbursement payments related to excise taxes resulting from any severance payment or benefit.

For additional information about the payments and benefits payable under these agreements, as well as the estimated value of these payments and benefits, see “Potential Payments Upon Termination or Change in Control” below.

Compensation Recovery (“Clawback”) Policy

We maintain a recoupment or “clawback” policy that applies to equity incentive awards under our 2017 Plan, annual cash incentive plan awards, and sales incentive compensation. This policy, which is broader than currently required by applicable law, provides for recoupment of certain benefits in the event that Ciena is required to prepare an accounting restatement due to material noncompliance, as a result of misconduct, with any financial reporting requirement under applicable securities laws. Specifically, those executive officers subject to automatic forfeiture under Section 304 of the Sarbanes-Oxley Act of 2002, and any other recipient of covered incentive compensation who knowingly engaged in such misconduct, was grossly negligent in engaging in the misconduct, knowingly failed to prevent the misconduct or was grossly negligent in failing to prevent the misconduct, is required to reimburse Ciena the amount of any payment in settlement of such award earned or accrued during the 12-month period following the first public issuance or filing with the SEC (whichever first occurred) of the financial document that contained such material noncompliance.

Perquisites Policy

In fiscal 2018, our Compensation Committee reviewed and updated our Perquisites Policy, reaffirming that our NEOs are eligible for the same benefits as salaried employees and receive only limited perquisites, generally consisting of annual physical examinations as well as tax preparation and financial planning services, both of which are made available to other senior employees.

Required Reimbursement for Personal Use of Corporate Memberships or Tickets

We maintain a policy requiring the NEOs to reimburse certain costs associated with any personal use of items such as corporate tickets to sporting or cultural events and personal use of any corporate membership at a golf or similar club. Specifically, any executive officer who makes personal use of such tickets is required to reimburse Ciena for the face value of the tickets used. Any executive who makes personal use of a club in which Ciena has a corporate membership must reimburse Ciena for the cost of any meals, merchandise, greens fees, lessons and other charges associated with his or her use and, in addition, reimburse Ciena for a pro-rata share of the annual membership dues for each day on which he or she makes personal use of the facilities. To date, personal usage has been extremely limited as corporate memberships are maintained predominately in order to use these facilities for business-related functions. The annual dues for each of the three executive officers named individually on club memberships used by Ciena generally range from \$8,000 to \$19,900.

Stock Ownership Guidelines

To align the interests of our executive officers and directors with those of our stockholders, and to promote our commitment to sound corporate governance, the Board has established stock ownership guidelines for the NEOs as set forth in “Principles of Corporate Governance, Bylaws and Other Governance Documents” above. During fiscal 2018 the Committee increased substantially the minimum ownership requirements for our executive officers and directors, and added a holding requirement for such individuals until the relevant minimum ownership is achieved.

Deferred Compensation Plan

We maintain the Ciena Corporation Deferred Compensation Plan, which allows a select group of management employees in the United States (including our NEOs) to defer up to 75% of base salary and up to 100% of other compensation, including cash incentive bonuses, commissions and RSU awards. The plan also allows non-employee directors to defer up to 100% of their annual cash retainer and annual RSU awards. The plan does not provide for any matching or discretionary contributions to participants except for restorative matching payments of foregone matching contributions that a participant would have received under the terms of our 401(k) Plan but for the participant’s deferrals into the plan.

Prohibition Against Pledging and Hedging Transactions

In accordance with our Insider Trading Policy, and as set forth in “Principles of Corporate Governance, Bylaws and Other Governance Documents” above, our executive officers and directors are prohibited from pledging Ciena securities and engaging in hedging transactions with respect to Ciena securities.

COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed the “Compensation Discussion and Analysis” with management, and, based on this review and discussion, has recommended to the Board of Directors that the “Compensation Discussion and Analysis” be included in this proxy statement and incorporated into Ciena’s Annual Report on Form 10-K for fiscal 2018 by reference from this proxy statement.

Submitted by the members of the Compensation Committee:

Judith M. O’Brien (Chair)
Bruce L. Clafin
Patrick T. Gallagher
Joanne B. Olsen

EXECUTIVE COMPENSATION TABLES

The following tabular information, accompanying narrative disclosure and footnoted detail provide compensation-related information for our NEOs as of the end of fiscal 2018. These executive compensation tables include all compensation awarded to or earned by each NEO for the fiscal years indicated below in which they served as an executive officer.

Summary Compensation Table

The Summary Compensation Table below presents compensation earned by our Named Executive Officers for each of the last three fiscal years during which they served as executive officers in accordance with SEC rules.

Summary Compensation Table

Name and Principal Position	Year	Salary \$(1)	Bonus \$(2)	Stock Awards \$(3)	Non-Equity Incentive Plan Compensation \$(4)	All Other Compensation \$(5)	Total (\$)
Gary B. Smith <i>President and CEO</i>	2018	\$ 917,307	—	\$ 6,797,777	\$ 1,406,250	\$ 8,250	\$ 9,129,584
	2017	\$ 900,000	—	\$ 5,592,261	\$ 1,125,000	\$ 17,950	\$ 7,635,211
	2016	\$ 875,576	—	\$ 4,246,938	\$ 1,068,750	\$ 13,350	\$ 6,204,614
James E. Moylan, Jr. <i>SVP and CFO</i>	2018	\$ 535,096	—	\$ 1,565,279	\$ 557,813	\$ 12,597	\$ 2,670,785
	2017	\$ 525,000	—	\$ 1,491,522	\$ 446,250	\$ 12,975	\$ 2,475,747
	2016	\$ 506,826	—	\$ 1,132,749	\$ 423,938	\$ 10,380	\$ 2,073,893
Rick L. Hamilton <i>SVP, Blue Planet Software</i>	2018	\$ 443,462	\$ 300,000	\$ 1,252,250	\$ 412,500	\$ 15,868	\$ 2,424,080
	2017	\$ 420,000	\$ 615,000	\$ 1,087,817	\$ 315,000	\$ 53,830	\$ 2,491,647
Scott A. McFeely <i>SVP, Global Products and Services</i>	2018	\$ 438,462	—	\$ 1,252,250	\$ 412,500	\$ 13,415	\$ 2,116,627
	2017	\$ 394,760	—	\$ 511,230	\$ 300,000	\$ 17,298	\$ 1,223,288
David M. Rothenstein <i>SVP, General Counsel and Secretary</i>	2018	\$ 458,654	—	\$ 1,252,250	\$ 421,875	\$ 8,250	\$ 2,141,029
	2017	\$ 450,000	—	\$ 1,065,102	\$ 337,500	\$ 7,950	\$ 1,860,552
	2016	\$ 438,060	—	\$ 809,217	\$ 299,250	\$ 9,474	\$ 1,556,001

- (1) Ciena has a 52 or 53-week fiscal year, which ends on the Saturday nearest to the last day of October in each year. Ciena's fiscal 2018 consisted of a 53-week period. Ciena's fiscal 2017 and fiscal 2016 consisted of a 52-week period.
- (2) Reflects a retention payment in fiscal 2018 of \$300,000 and two retention payments in fiscal 2017 to Mr. Hamilton of \$615,000 in the aggregate, each of which were part of his non-executive compensation arrangement upon hire.
- (3) The amounts set forth in the "Stock Awards" column represent the aggregate grant date fair value of RSU, PSU and MSU awards granted during the fiscal years noted above, computed in accordance with FASB ASC Topic 718. Aggregate grant date fair values reported above do not reflect sale or forfeiture of shares to fund tax withholding in accordance with the terms of the award agreement and will likely vary from the actual amount ultimately realized by any NEO based on a number of factors, including the number of shares that are earned and ultimately vest, the timing of vesting, the timing of any sale of shares and the market price of Ciena common stock at that time. For RSUs, we calculate grant date fair value by multiplying the number of shares underlying the award by the closing price per share of Ciena common stock on the grant date. For PSUs, we calculate grant date fair value by assuming the satisfaction of any performance-based objectives at the "target" level and multiplying the corresponding number of shares earned based upon such achievement by the closing price per share of Ciena common stock on the grant date. For MSUs, we calculate grant date fair value using a Monte Carlo simulation valuation model with the following assumptions: (i) Ciena's stock price at the end of the performance period calculated using an expected volatility of 34.93%, which is a weighted average of implied volatility and historical volatility; (ii) TSR simulated using historical volatility of 38.24% for Ciena and 17.14% for the S&P Networking Index; (iii) correlation coefficients calculated based on the price data used to calculate historical volatilities; (iv) a risk-free interest rate of 1.94%; and (v) a 0% dividend yield. Assuming the maximum future payout under the PSUs and MSUs however, the aggregate grant date fair value in the "Stock Awards" column above for fiscal 2018 would have been \$10,912,253, \$2,356,527, \$1,885,262, \$1,885,262, and \$1,885,262 for each of Messrs. Smith, Moylan, Hamilton, McFeely and Rothenstein, respectively. See the "Grants of Plan-Based Awards" table below for information relating to RSU, PSU and MSU awards granted during fiscal 2018 under our 2017 Plan.
- (4) Non-Equity Incentive Plan Compensation reflects amounts earned by each Named Executive Officer under Ciena's annual cash incentive bonus plan for fiscal 2018. See the "Grants of Plan-Based Awards" table below for information relating to cash incentive awards granted during fiscal 2018 under our 2017 Plan.

(5) All other compensation includes the following for each Named Executive Officer (as applicable) during fiscal 2018:

- a. For each Named Executive Officer, Section 401(k) plan matching contributions paid by us and generally available to all full-time U.S. employees.
- b. For Mr. Hamilton, costs associated with an annual physical examination based on the amount paid for such service.
- c. For Messrs. Moylan, Hamilton and McFeely, reimbursement of costs associated with financial planning and tax preparation services generally made available to all executive officers, subject to a \$10,000 annual limit per tax year on such services.

Grants of Plan-Based Awards

Non-Equity Incentive Plan Awards. Non-equity incentive plan awards for fiscal 2018, which are identified as “Incentive Cash” in the “Grant of Plan-Based Awards” table below, represent the estimated range of potential payouts possible under our annual cash incentive bonus plan at the time of award. The actual cash incentive bonus earned by the NEOs during fiscal 2018 is set forth in the “Non-Equity Incentive Compensation” column of the “Summary Compensation Table” above. The design of the plan for fiscal 2018, including the use of a combination of our fiscal 2018 adjusted operating income target and eight corporate performance goals to derive the total bonus payout percentage, is set forth in the table below and more fully described in “Compensation Discussion and Analysis” above.

Financial Objective	×	Corporate Objectives Multiplier	=	Bonus Payout Percentage
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Financial Objective	
Performance Against Target (%)	Total Target Bonus Earned (%)
< 70%	0%
70%	70%
80%	80%
90%	90%
100%	100%
110%	120%
120%	140%
≥ 130%	160%

Corporate Objectives Multiplier	
Objectives Achieved (#)	Multiplier
< 4	0.0x
4	0.8x
5	0.9x
6	1.0x
7	1.1x *
8	1.2x *

* Only applies if achieve >80% of Financial Objective; otherwise reverts to 1.0x

Based on the level of achievement of the fiscal 2018 financial objective and corporate objectives, bonuses under the cash incentive bonus plan would have been payable at each of the “threshold,” “target” and “maximum” levels as set forth below, with payments interpolated for results falling between the designated levels:

	Fiscal 2018 Cash Incentive Bonus Plan		
	Financial Objective Achieved	Corporate Objectives Achieved	Target Bonus Payable
“Threshold”	70%	4	56%
“Target”	100%	6	100%
“Maximum”	≥130%	8	192%

The “threshold,” “target” and “maximum” values in the table below are calculated by multiplying each NEO’s base salary for fiscal 2018 by his respective target bonus opportunity (expressed as a percentage of annual base salary) by the applicable target bonus payable factor above. See “Compensation Discussion and Analysis — Annual Cash Incentive Bonus Plan.”

Equity Awards. Equity awards during fiscal 2018 consisted of RSU, PSU and MSU awards. Each such stock award represents a contractual right to receive one share of our common stock. RSU awards granted to the NEOs in fiscal 2018 vest over a four-year term, with one-sixteenth of the grant amount vesting quarterly.

PSU awards granted to the NEOs in fiscal 2018 were structured such that 100% of the shares underlying the award would be earned upon the achievement of 100% of both the sales orders target and the free cash flow target, as more fully described in “Compensation Discussion and Analysis — Equity Award Allocation and Structure — PSUs” above. The PSU awards incorporate upside earning potential to the PSUs for extraordinary performance and downside risk for under-performance against each of the two goals. Specifically, the PSU awards are subject to the following minimum performance thresholds and maximum number of additional PSUs that could be earned for achievement against the sales orders and free cash flow targets, as set forth below:

Fiscal 2018 PSU Performance Goals

	Aggregate Sales Orders (1/2 of Total PSUs)		Free Cash Flow (1/2 of Total PSUs)	
	Aggregate Sales Orders (\$B)	Target PSUs Earned (%)	Free Cash Flow (\$M)	Target PSUs Earned (%)
	< \$ 2.79	0%	< \$ 150	0%
“Threshold”	\$ 2.79	50%	\$ 150	25%
“Target”	\$ 3.10	100%	\$ 225	100%
“Maximum”	\$ 3.41	200%	> \$ 275	200%

MSU awards granted to the NEOs in fiscal 2018 were based on Ciena’s TSR — i.e., its stock price appreciation — as compared to the total reported return (the “Return”) of the S&P Networking Index over a three-year measurement period covering Ciena’s fiscal 2018 through fiscal 2020 (the “Measurement Period”). For purposes of determining the TSR for Ciena and the Return for the S&P Networking Index, the beginning and ending values for each measure will be determined on an average basis over a period of 90 calendar days prior to both the beginning and the end of the Measurement Period. The MSU awards incorporate upside earning potential to the MSUs for outperformance against the S&P Networking Index and downside risk for underperformance against the S&P Networking Index. Specifically, the applicable percentage of the target number of MSUs earned will be determined based on the absolute percentage point difference between Ciena’s TSR as compared to the Return for the S&P Networking Index during the Measurement Period, as set forth below:

Fiscal 2018 MSU Performance Goal

Fiscal 2018-2020 Relative TSR (absolute percentage point difference)	Target MSUs Earned (%)
(50)%	0%
(40)%	20%
(30)%	40%
(20)%	60%
(10)%	80%
Equal	100%
10%	120%
20%	140%
30%	160%
40%	180%
≥50%	200%

The percentage of target MSUs earned is interpolated on a straight-line basis for results falling between the designated levels set forth above. Based on the above table, the maximum amount of MSUs that can be earned is 200% of the target number of shares underlying the MSU award. However, if Ciena’s TSR during the Measurement Period is negative (as a result of a decline in our stock price during such period), then the maximum number of shares that can be earned is 100% of the target number of shares underlying the MSU award. To the extent earned, the MSUs will vest in full in December 2020 following the end of the Measurement Period, subject to the individual executive’s continued service with Ciena through the vesting date. Any portion of the MSUs not earned at the end of the Measurement Period will be forfeited.

The following table sets forth information regarding non-equity incentive awards and equity awards granted to each of the NEOs during fiscal 2018. For information regarding the performance criteria applicable to PSUs and MSUs granted in fiscal 2018, see “Compensation Discussion and Analysis” above. For each equity award made to our NEOs during fiscal 2018, the date that the award was approved by our Compensation Committee was the same as the grant date.

Grants of Plan-Based Awards

Name	Type of Award	Grant Date	Estimated Possible Payouts Under Non-Equity Incentive Plan Awards (1)			Estimated Future Payouts Under Equity Incentive Plan Awards			All Other Stock Awards: Number of Shares of Stock or Stock Units (#)	Full Grant Date Fair Value (2) (\$)
			Threshold (\$)	Target (\$)	Maximum (\$)	Threshold (#)	Target (#)	Maximum (#)		
Gary B. Smith	PSU	12/12/2017				13,989	111,908	223,816		\$ 2,414,975
	RSU	12/12/2017							124,342	\$ 2,683,300
	MSU	12/12/2017				14,921	74,605	149,210		\$ 1,699,502
	Incentive Cash	12/12/2017	\$ 630,000	\$ 1,125,000	\$ 2,160,000					
James E. Moylan, Jr.	PSU	12/12/2017				2,690	21,521	43,042		\$ 464,423
	RSU	12/12/2017							35,868	\$ 774,031
	MSU	12/12/2017				2,869	14,347	28,694		\$ 326,825
	Incentive Cash	12/12/2017	\$ 249,900	\$ 446,250	\$ 856,800					
Rick L. Hamilton	PSU	12/12/2017				2,152	17,217	34,434		\$ 371,543
	RSU	12/12/2017							28,695	\$ 619,238
	MSU	12/12/2017				2,296	11,478	22,956		\$ 261,469
	Incentive Cash	12/12/2017	\$ 184,800	\$ 330,000	\$ 633,600					
Scott A. McFeely	PSU	12/12/2017				2,152	17,217	34,434		\$ 371,543
	RSU	12/12/2017							28,695	\$ 619,238
	MSU	12/12/2017				2,296	11,478	22,956		\$ 261,469
	Incentive Cash	12/12/2017	\$ 184,800	\$ 330,000	\$ 633,600					
David M. Rothenstein	PSU	12/12/2017				2,152	17,217	34,434		\$ 371,543
	RSU	12/12/2017							28,695	\$ 619,238
	MSU	12/12/2017				2,296	11,478	22,956		\$ 261,469
	Incentive Cash	12/12/2017	\$ 189,000	\$ 337,500	\$ 648,000					

- (1) Estimated possible payouts under non-equity incentive plan awards reflect the cash incentive opportunity reported at the “threshold,” “target” and “maximum” levels has been calculated in accordance with the plan design described in “Non-Equity Incentive Plan Awards” above and more fully described in “Compensation Discussion and Analysis — Annual Cash Incentive Bonus Plan.”
- (2) Grant Date Fair Value reported in the table above, computed in accordance with FASB ASC Topic 718, will likely vary from the amount actually realized by any NEO based on a number of factors, including the number of shares that are earned and ultimately vest, the timing of vesting, the timing of any sale of shares, and the market price of Ciena common stock at that time. For RSUs, we calculate grant date fair value by multiplying the number of shares granted by the closing market price per share of Ciena common stock on the grant date. For PSUs, we calculate grant date fair value by assuming the satisfaction of any performance-based objectives at the “target” level and multiplying the corresponding number of shares earned based upon such achievement by the closing market price per share of Ciena common stock on the grant date. For MSUs, we calculate grant date fair value using a Monte Carlo simulation valuation model with the following assumptions: (i) Ciena’s stock price at the end of the performance period calculated using an expected volatility of 34.93%, which is a weighted average of implied volatility and historical volatility; (ii) TSR simulated using historical volatility of 38.24% for Ciena and 17.14% for the S&P Networking Index; (iii) correlation coefficients calculated based on the price data used to calculate historical volatilities; (iv) a risk-free interest rate of 1.94%; and (v) a 0% dividend yield.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth, on an award-by-award basis, information related to unvested stock awards held by each Named Executive Officer as of the end of fiscal 2018. The vesting conditions for each award, including the identification of those awards that are subject to performance-based vesting conditions, are set forth in the footnotes below the table. The market value of equity awards that have not vested is calculated by multiplying the number of shares by \$32.02, the closing market price per share of our common stock on The New York Stock Exchange on the last trading day of fiscal 2018.

Outstanding Equity Awards at Fiscal Year-End

Name	Grant Date	Stock Awards		
		Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)	
Gary B. Smith	12/12/2017	132,611	(1)	\$ 4,246,204
	12/12/2017	101,029	(2)	\$ 3,234,949
	12/12/2017	74,605	(3)	\$ 2,388,852
	12/14/2016	84,984	(4)	\$ 2,721,188
	12/14/2016	53,112	(5)	\$ 1,700,646
	12/15/2015	48,984	(6)	\$ 1,568,468
	12/15/2015	27,435	(7)	\$ 878,469
	12/17/2014	7,490	(8)	\$ 239,830
James E. Moylan, Jr.	12/12/2017	25,501	(1)	\$ 816,542
	12/12/2017	29,143	(2)	\$ 933,159
	12/12/2017	14,347	(3)	\$ 459,391
	12/14/2016	18,886	(4)	\$ 604,730
	12/14/2016	17,708	(5)	\$ 567,010
	12/15/2015	10,887	(6)	\$ 348,602
	12/15/2015	9,148	(7)	\$ 292,919
	12/17/2014	2,620	(8)	\$ 83,892
Rick L. Hamilton	12/12/2017	20,401	(1)	\$ 653,240
	12/12/2017	23,316	(2)	\$ 746,578
	12/12/2017	11,478	(3)	\$ 367,526
	12/14/2016	7,422	(4)	\$ 237,652
	12/14/2016	6,959	(5)	\$ 222,827
	11/07/2016	13,876	(9)	\$ 444,310
Scott A McFeely	12/12/2017	20,401	(1)	\$ 653,240
	12/12/2017	23,316	(2)	\$ 746,578
	12/12/2017	11,478	(3)	\$ 367,526
	12/14/2016	6,474	(4)	\$ 207,297
	12/14/2016	6,071	(5)	\$ 194,393
	12/15/2015	3,264	(6)	\$ 104,513
	12/15/2015	2,743	(7)	\$ 87,831
	11/04/2015	3,274	(10)	\$ 104,833
	12/17/2014	905	(8)	\$ 28,978
David M. Rothenstein	12/12/2017	20,401	(1)	\$ 653,240
	12/12/2017	23,316	(2)	\$ 746,578
	12/12/2017	11,478	(3)	\$ 367,526
	12/14/2016	13,486	(4)	\$ 431,822
	12/14/2016	12,645	(5)	\$ 404,893
	12/15/2015	7,778	(6)	\$ 249,052
	12/15/2015	6,535	(7)	\$ 209,251
	12/17/2014	1,685	(8)	\$ 53,954

- (1) PSU awards granted on December 12, 2017 were subject to achievement of the goals described above in “Grants of Plan-Based Awards” and “Compensation Discussion and Analysis” for the fiscal 2018 performance period. In December 2018, such goals were determined by the Compensation Committee to have been satisfied in part, and approximately 118.5% of the total PSUs were earned. See “Compensation Discussion and Analysis” above. Amounts reported above reflect the actual amount earned with respect to such PSU awards in December 2018. The amounts earned thereunder vest in equal installments on December 20, 2018 and 2019.
- (2) Remaining unvested RSUs granted on December 12, 2017 shall vest as to one-sixteenth of the grant amount on March 20, June 20, September 20 and December 20 of each year through December 20, 2021.
- (3) MSU awards granted on December 12, 2017 are subject to achievement of the goals described above in in “Grants of Plan-Based Awards” and “Compensation Discussion and Analysis” above.
- (4) Remaining amounts earned with respect to PSUs granted on December 14, 2016 vested as to one-half of such amount on December 20, 2018 and shall vest as to the remaining one-half amount on December 20, 2019.
- (5) Remaining unvested RSUs granted on December 14, 2016 shall vest as to one-sixteenth of the grant amount on March 20, June 20, September 20 and December 20 of each year through December 20, 2020.
- (6) Remaining amounts earned with respect to PSUs granted on December 15, 2015 vested on December 20, 2018.
- (7) Remaining unvested RSUs granted on December 15, 2015 shall vest as to one-sixteenth of the grant amount on March 20, June 20, September 20 and December 20, 2019.
- (8) Remaining unvested RSUs granted on December 17, 2014 vested on December 20, 2018.
- (9) Remaining unvested RSUs granted on November 7, 2016 shall vest as to one-sixteenth of the grant amount on March 20, June 20, September 20 and December 20 of each year through December 20, 2020.
- (10) Remaining unvested RSUs granted on November 4, 2015 shall vest as to one-sixteenth of the grant amount on March 20, June 20, September 20 and December 20 of each year through December 20, 2019.

Stock Vested

The following table sets forth on an aggregated basis, as to each NEO, information related to stock awards that vested during fiscal 2018. The value realized upon vesting of stock awards is a pre-tax amount determined by multiplying the aggregate number of shares of stock vested for each NEO during fiscal 2018 by the closing market price per share on the corresponding vesting date for that award. Information as to value realized does not take into account reductions related to withholding and other tax-related items, brokerage commissions or fees, or forfeiture or other disposition of shares to cover these amounts.

Stock Vested

Name	Stock Awards	
	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)
Gary B. Smith	301,365	\$ 6,948,526
James E. Moylan, Jr.	72,363	\$ 1,668,803
Rick L. Hamilton	22,973	\$ 569,086
Scott A. McFeely	24,252	\$ 608,202
David M. Rothenstein	60,413	\$ 1,409,016

Nonqualified Deferred Compensation

The following table shows the executive contributions, earnings and account balances for fiscal 2018 for each NEO participating in the Ciena Corporation Deferred Compensation Plan. This plan allows a select group of senior management employees in the United States (including our NEOs) to defer up to 75% of annual base salary and up to 100% of other compensation, including cash incentive bonuses, commissions and RSU awards. The plan does not provide for any matching or discretionary contributions to participants except for restorative matching payments of foregone matching contributions that a participant would have received under the terms of our 401(k) Plan but for the participant's deferrals into the plan.

Nonqualified Deferred Compensation

Name	Executive Contributions in Fiscal 2018 (\$)	Registrant Contributions in Fiscal 2018 (\$)	Aggregate Earnings in Fiscal 2018 (\$)	Aggregate Withdrawals/Distributions (\$)	Aggregate Balance at October 31, 2018 (\$)
Gary B. Smith	—	—	—	—	—
James E. Moylan, Jr.	\$ 787,260	—	\$ 28,123	—	\$ 1,042,253
Rick L. Hamilton	—	—	—	—	—
Scott A. McFeely	—	—	—	—	—
David M. Rothenstein	\$ 168,750	—	\$ (8,717)	—	\$ 160,033

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

Overview

This section describes and quantifies the estimated compensation payments and benefits that would be paid to our NEOs in each of the following situations:

- upon death or disability;
- upon an involuntary separation of service for other than cause;
- upon a change in control of Ciena; and
- upon a termination of employment following a change in control of Ciena.

We do not maintain employment agreements with our executive officers, including the NEOs. The information below describes those instances in which our NEOs would be entitled to payments following a termination of employment and/or upon a change in control of Ciena. Our NEOs are "at will" employees and, except as otherwise described below, they are only entitled to payment of accrued salary and vacation time, on the same terms as provided to our other employees, upon any resignation, retirement or termination of employment, with or without cause. Except as otherwise noted below, the calculations below do not include any estimated payments for those benefits that we generally make available on the same terms to our full-time, non-executive employees.

The estimated payments below are calculated based on compensation arrangements in effect as of the last day of our fiscal 2018 and assume that the triggering event occurred on such date. The estimated payment amounts are based on a Ciena common stock price of \$32.02, which was the closing market price per share of our common stock on The New York Stock Exchange on the last trading day of our fiscal 2018. Our estimates of potential payments are further based on the additional assumptions specifically set forth in the tables below. Although these calculations are intended to provide reasonable estimates of potential compensation benefits payable, the estimated payment amounts may differ from the actual amount that any individual would receive upon termination or the costs to Ciena associated with continuing certain benefits following termination of employment.

Payments Upon Death or Disability

Stock awards granted under our 2017 Plan and our 2008 Plan provide for the acceleration of vesting of awards following a termination of service resulting from the holder's death or disability. Acceleration of vesting upon death or disability applies to all awards granted under these plans, including awards to both executive and non-executive employees, as well as awards to our

NEOs. In the case of RSUs, acceleration of vesting applies to such number of shares that would otherwise vest in the 12 months following a termination of service resulting from the holder's death or disability. In the case of PSUs and MSUs, acceleration of vesting applies to such number of shares that have been earned, but not yet vested, under the award. In the case of PSUs or MSUs not yet earned or unearned, such awards are considered to have been forfeited and are not subject to any acceleration of vesting upon death or disability under the award agreement.

For purposes of the foregoing, a disability is defined as inability to perform each of the essential duties of the applicable person's position by reason of a medically determinable physical or mental impairment which is potentially permanent in character or which can be expected to last for a continuous period of not less than 12 months. For each NEO, the amount in the table below reflects the value of the NEO's stock awards that are subject to acceleration of vesting upon death or disability multiplied by \$32.02 per share, the closing market price per share of Ciena common stock on The New York Stock Exchange on the last trading day of our fiscal 2018.

Acceleration of Vesting of Stock Awards Upon Termination Due to Death or Disability

Name	Value Realized Upon Acceleration (\$)
Gary B. Smith	\$ 5,459,954
James E. Moylan, Jr.	\$ 1,472,136
Rick L. Hamilton	\$ 645,011
Scott A. McFeely	\$ 717,232
David M. Rothenstein	\$ 1,070,148

Payments Upon Involuntary Separation of Service for Other than Cause

Ciena's U.S. Executive Severance Benefit Plan ("Severance Plan") provides certain U.S.-based employees of Ciena Corporation and its affiliates, including our executive officers and non-executive employees of the rank of vice president or above, with certain severance benefits in the event of an involuntary separation of service by Ciena without "cause" (as such term is defined in the plan and described below). Under the Severance Plan, benefits payable to participants upon an involuntary separation of service without cause consist of the following:

- *Cash Severance Payment.* Our CEO will be entitled to severance equal to two times his annual base salary and annual target incentive bonus, while our other executive officers will be entitled to severance equal to their annual base salary and annual target incentive bonus or commission. Non-executives entitled to severance may receive four weeks of base salary for each year of service, with a minimum of 26 weeks and a maximum of 52 weeks. The base salary and, where applicable, bonus payments above would be determined based on the salary rate and incentive compensation program in effect immediately prior to the date of termination. Bonus amounts are to be paid at the "target" level.
- *Benefits Continuation.* For a period of 18 months in the case of our CEO, 12 months for our Senior Vice Presidents, and the severance period calculated above for non-executive participants, the participant and his or her family will be eligible to continue to participate in our group medical, dental and vision plans. If we cannot continue benefits coverage, we will provide equivalent coverage for the applicable coverage period at our expense.
- *Outplacement Assistance.* For a period of 12 months in the case of our CEO and other executive officers, and six months for all other participants, Ciena will provide executive outplacement assistance, at its expense, through its then-current agency.

As a condition of receiving benefits under the Severance Plan, each participant agrees to deliver a release of claims, comply with certain non-competition and non-solicitation obligations for a 12 month period, and comply with certain continuing obligations with respect to Ciena's confidential and proprietary information and inventions. Failure to comply with these and other conditions set forth in the Severance Plan requires the repayment of severance benefits in full. In addition, severance payments are subject to recoupment in accordance with applicable law and any future "clawback" policy adopted by Ciena. Should any payment of severance benefits be subject to excise tax imposed under federal law, or any related interest or penalties, severance benefits shall be either (a) paid in full by us, or (b) paid in a lesser amount such that no portion of the payments would be subject to the excise tax, whichever results in receipt by the executive of a greater amount. This "best choice" mechanism above does not require Ciena to pay any excise taxes or to make any gross-up payments related to excise taxes resulting from any payment of severance benefits.

Under the Severance Plan, a “separation of service” includes a termination of employment by the participant where Ciena and the participant anticipate that the participant will perform no further services for Ciena, or where the level of services to be performed will permanently decrease to no more than 20% of the average level of services performed over the immediately preceding 36-month period. In addition, under the Severance Plan, “cause” means the occurrence of any one or more of the following:

- the participant’s willful and continued failure substantially to perform his or her duties (other than as a result of disability), provided that in the case of the CEO or a senior vice president of Ciena, such failure shall be determined by the Governance and Nominations Committee following written notice to the participant and an opportunity to be heard;
- any willful act or omission by the participant in connection with his or her responsibilities as an employee constituting dishonesty, fraud or other malfeasance, immoral conduct or gross misconduct;
- any willful material violation by the participant of Ciena’s Code of Business Conduct and Ethics or a Proprietary Information, Inventions and Non-Solicitation Agreement entered into by Ciena and the participant; or
- the participant’s conviction of, or plea of nolo contendere to, a felony or a crime of moral turpitude under the laws of the United States or any state thereof or any other jurisdiction in which Ciena conducts business.

For purposes of the definition of “cause,” no act or failure to act by the participant shall be deemed “willful” unless effected by the participant not in good faith and without a reasonable belief that such act or failure to act was in, or not opposed to, Ciena’s best interests. The Severance Plan provides that the applicable benefits to which a participant is entitled under the Severance Plan will be reduced by amounts paid under other Ciena severance plans, policies, programs or practice.

For each NEO, the amount in the table below reflects the value of the payments assuming an involuntary separation of service for other than cause effective as of the last day of our fiscal 2018.

Payments Upon Involuntary Separation of Service for Other than Cause

Name	Salary and Bonus Payment (\$)	Continuation of Benefits Coverage and Outplacement (\$)	Total (\$)
Gary B. Smith	\$ 4,050,000	\$ 37,901	\$ 4,087,901
James E. Moylan, Jr.	\$ 971,250	\$ 18,128	\$ 989,378
Rick L. Hamilton	\$ 770,000	\$ 24,553	\$ 794,553
Scott A. McFeely	\$ 770,000	\$ 18,631	\$ 788,631
David M. Rothenstein	\$ 787,500	\$ 24,553	\$ 812,053

Payments Upon Change in Control

Each of our executive officers, including the NEOs, is party to a change in control severance agreement. Our change in control severance agreements continue in effect through November 30, 2019 (provided that in the event that Ciena is in active negotiations regarding or has entered into a definitive agreement with respect to a change in control transaction, or has effected such a transaction, the term is subject to an automatic extension until the earlier of negotiations or the agreement being terminated or 12 months following the effective date of the transaction). As described in “Payments Upon Termination of Employment Following Change in Control” below, the change in control severance agreements provide our executive officers with certain severance benefits in the event that such officer’s employment is terminated by us or any successor entity without “cause,” or by the officer for “good reason,” within 90 days prior to or one year (or in the case of our CEO, 18 months) following a “change in control,” as such terms are defined in the agreements. In addition, the agreements provide that upon a “change in control,” any performance-based equity awards, to the extent unvested, will be converted into awards with time-based vesting conditions. Conversion of performance-based stock awards upon a change in control does not require termination of employment. For these converted awards, the unvested portion will be deemed to have commenced time-based vesting on the grant date, with one-sixteenth of the grant amount vesting every three months thereafter. Because conversion of the awards will cause certain unvested stock awards to vest upon a change in control, we have included in the table below calculations with respect to the corresponding value of the vesting of such affected performance-based awards. For purposes of these calculations, we have used the actual share amount earned, in the case of PSU or MSU awards that have been earned, or, alternatively, the “target” number of shares for such PSU or MSU, in the case of awards that have a current performance period or otherwise remain to be earned, as applicable.

The following table shows the estimated value of the conversion of performance-based equity awards, and the resulting acceleration of vesting of these awards, for each NEO assuming that there was a change in control of Ciena on the last day of our fiscal 2018 and that the acquiror assumed or provided substitute awards for our outstanding equity awards (see also the “Acceleration of Vesting of Equity Awards Resulting from Change in Control Where Equity Awards are not Assumed or Replaced by Acquiror” table below). The value of stock awards is determined based on the number of shares subject to acceleration of vesting, multiplied by \$32.02 per share, the closing market price per share of Ciena common stock on The New York Stock Exchange on the last trading day of our fiscal 2018.

Acceleration of Vesting of Equity Awards Upon Change in Control

Name	Conversion of Performance-Based Stock Awards Upon Change in Control		
	Shares Subject to Conversion (#)	Shares Subject to Accelerated Vesting Upon Conversion (#)	Value Realized Upon Acceleration (\$)
Gary B. Smith	320,481	91,841	\$ 2,940,749
James E. Moylan, Jr.	65,641	19,783	\$ 633,452
Rick L. Hamilton	36,117	6,475	\$ 207,330
Scott A. McFeely	37,433	8,304	\$ 265,894
David M. Rothenstein	49,959	14,475	\$ 463,490

Payments Upon Change in Control Where Equity Awards Are Not Assumed or Substituted

Upon a change in control where the acquiror does not assume Ciena’s outstanding unvested awards or replace such awards with substitute awards, our current and legacy equity compensation plans provide for acceleration of vesting or defer the determination regarding acceleration of vesting to the discretion of our Compensation Committee. This mechanism, which is typical in equity plans, is intended to protect the interests of both executive and non-executive employees. Moreover, we consider the likelihood of such treatment of equity awards by an acquiror in a change in control transaction to be remote. In the table below, however, for illustrative purposes, we have calculated the estimated payments assuming the full acceleration of outstanding awards upon a change in control where the acquiror neither assumes outstanding awards nor provides substitute awards.

For purposes of the calculations in the table below, stock awards subject to accelerated vesting have been valued at \$32.02 per share, the closing market price per share of our common stock on The New York Stock Exchange on the last trading day of our fiscal 2018. Calculations in the table below with respect to PSUs and MSUs that have not yet been earned reflect estimated values based upon the “target” level of achievement during the relevant performance period.

Acceleration of Vesting of Equity Awards Upon Change in Control Where Equity Awards are not Assumed or Replaced by Acquiror

Name	Value Realized Upon Stock Award Acceleration (\$)
Gary B. Smith	\$ 16,315,695
James E. Moylan, Jr.	\$ 3,978,805
Rick L. Hamilton	\$ 2,570,181
Scott A. McFeely	\$ 2,393,239
David M. Rothenstein	\$ 3,014,363

Payments Upon Termination of Employment Following Change in Control

Under the change in control severance agreements, our executive officers, including the NEOs, are entitled to certain severance benefits in the event that the officer's employment is terminated by us or any successor entity without "cause," or, by the officer for "good reason," within a 90-day period prior to, or a 12-month period (or in the case of our CEO, eighteen months) following, the effective date of a "change in control" of Ciena. We refer to this double trigger event, which requires both a change in control of Ciena and a subsequent termination of the executive's employment, as a "covered termination."

Payment of any severance benefits pursuant to the change in control severance agreements (to the extent permissible under applicable law) is conditioned upon the officer agreeing to be bound by provisions restricting his or her ability to compete with us, and to solicit our employees or business, for one year after termination (or 18 months for our CEO), as well as the officer's delivery to us of a general release and waiver of claims. In the event of a breach of these provisions, the officer must reimburse all severance benefits paid. The severance benefits described below are to be paid by us or our successor upon a covered termination.

- *Salary and Bonus Payment.* Upon a covered termination, our CEO would be entitled to receive a lump sum payment equal to 2.5 times his annual base salary and annual target incentive bonus. Each other NEO would be entitled to receive a lump sum payment equal to 1.5 times his or her annual base salary and annual target incentive bonus, respectively. The base salary and bonus payments in both instances above would be determined based on the salary rate and incentive compensation program in effect immediately prior to either the date of termination or the effective date of the change in control, whichever is higher. Bonus amounts are to be paid at the "target" level.
- *Continuation of Benefits.* Upon a covered termination, each NEO and his or her family would be eligible to continue to participate in our group medical, dental and vision plans until the earlier of the 18 months from the covered termination or the date of such officer's commencement of alternate employment. If we cannot continue benefits coverage, we are obligated to pay for or provide equivalent coverage at our expense. The agreements continue to require Ciena to maintain director and officer insurance coverage for the NEOs as well as any indemnification agreement we have entered into with them.
- *Acceleration of Vesting of Equity Awards.* Upon a covered termination, all unvested options and stock awards (including RSUs and PSUs, as applicable) held by each NEO would immediately vest and become exercisable.
- *Reduction of Benefits if Risk of Excise Tax Applicability.* Should any payment of severance benefits to our NEOs pursuant to the change in control severance agreements be subject to excise tax imposed under federal law, or any related interest or penalties, the change in control severance agreements provide that the payments would be either (a) paid in full by us, or (b) paid in a lesser amount such that no portion of the payments would be subject to the excise tax, whichever results in receipt of a greater amount by the NEO. This "best choice" mechanism above does not require Ciena to pay any excise taxes, or to make any gross-up payments related to excise taxes, resulting from any payment of severance benefits. Under the change in control severance agreements, responsibility for any excise taxes remains with the employee.

See "Applicable Definitions" below to better understand the meaning of the terms "change in control," "cause" and "good reason" under our change in control severance agreements.

The following table shows the estimated value of the aggregate payments that would be paid to each NEO pursuant to the change in control severance agreements upon a covered termination. Accordingly, the total amount below also includes the value realized upon a change in control and reported in the table above in "Payments Upon Change in Control."

Potential Payments Upon "Covered Termination"

Name	Salary and Bonus Payment (\$)(1)	Continuation of Benefits Coverage (\$)(2)	Value Realized Upon Equity Acceleration (\$)(3)	Total (\$)
Gary B. Smith	\$ 5,062,500	\$ 37,901	\$ 16,315,695	\$ 21,416,096
James E. Moylan, Jr.	\$ 1,456,875	\$ 24,342	\$ 3,978,805	\$ 5,460,022
Rick L. Hamilton	\$ 1,155,000	\$ 33,980	\$ 2,570,181	\$ 3,759,161
Scott A. McFeely	\$ 1,155,000	\$ 25,096	\$ 2,393,239	\$ 3,573,335
David M. Rothenstein	\$ 1,181,250	\$ 33,980	\$ 3,014,363	\$ 4,229,593

- (1) Reflects pre-tax severance payments to each NEO based upon: (a) annual salary in effect as of the end of fiscal 2018, and (b) annual cash incentive compensation payable during fiscal 2018 at the target level.

- (2) Includes aggregate incremental costs for continuation of medical and dental benefits as used for financial statement reporting purposes, assuming we are able to continue such existing coverage and continuation costs are commensurate with costs incurred for such coverage during fiscal 2018 despite the NEO's non-employee status.
- (3) Reflects the conversion of performance-based and market stock unit awards upon change in control and value associated with the resulting acceleration of vesting as described in "Payments Upon Change in Control" above, together with the acceleration of stock awards upon a covered termination. Amounts reported reflect estimates with respect to acceleration of stock awards only. Calculations in the table below with respect to PSUs and MSUs that have not yet been earned reflect estimated values based upon the "target" level of achievement.

Applicable Definitions. For purposes of determining whether a change in control or covered termination has occurred under the change in control severance agreements, the following terms generally have the following meanings:

"Cause" means:

- the officer's willful and continued failure substantially to perform the duties of his position, as determined by the Board of Directors following written notice to the officer;
- any willful act or omission constituting dishonesty, fraud or other malfeasance;
- any willful act or omission constituting immoral conduct or gross misconduct;
- any willful material violation of our Code of Business Conduct and Ethics or Proprietary Information, Inventions and Non-Solicitation Agreement; or
- the officer's conviction of, or plea of nolo contendere to, a felony or crime of moral turpitude under federal or state law or the laws of any other jurisdiction in which Ciena conducts business.

"Good reason" means:

- removal from, or failure to be reappointed or reelected to, the officer's principal position held immediately prior to the change in control;
- material diminution in the officer's position, duties or responsibilities, or the assignment of duties that are inconsistent, in any material respect, with those held immediately prior to the change in control;
- material reduction in base salary, incentive compensation opportunity or participation in other long-term incentive or benefit plans as in effect immediately before the change in control;
- relocation of principal workplace, without the officer's consent, by more than 50 miles; or
- the failure to obtain the assumption of the change in control severance agreement by any successor company;

provided, in each case, that (a) the officer notifies Ciena of the foregoing conditions within 90 days of the initial existence of the condition, (b) Ciena has been given at least 30 days following notice to cure such condition, and (c) the officer actually terminates employment within one year following the initial existence of the condition.

"Change in control" means:

- the direct or indirect sale or exchange by our stockholders of all or substantially all of our outstanding stock, or a merger or consolidation, transaction, in each case, where the stockholders before such transaction do not retain at least a majority voting interest in the acquiring corporation after such transaction;
- the sale, exchange or transfer of all or substantially all of our assets;
- a change in the composition of the Board within a two-year period, as a result of which less than a majority of the directors are incumbent directors (as defined in the agreement);
- our liquidation or dissolution; or
- any other event determined to be a change in control by our Board of Directors.

In each case, the determination of whether a "change in control" has occurred shall be made without regard to whether such events were hostile or against the position of the Board or were approved or concurred with by the Board.

CEO PAY RATIO DISCLOSURE

Overview

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, and Item 402(u) of Regulation S-K, we are providing the following information about the relationship of the annual total compensation of our median employee and the annual total compensation of our CEO.

CEO Pay Ratio	
CEO Annual Total Compensation*	\$ 9,129,584
Median Employee Annual Total Compensation	\$ 102,540
CEO to Median Employee Pay Ratio	89:1

* Represents amount of total compensation from Summary Compensation Table

Methodology

Our CEO pay ratio is an estimate calculated in a manner consistent with SEC rules and based upon our reasonable judgment and assumptions. Our methodology and process is explained below:

- ❖ **Determination of Employee Population.** We began with the total population of all global employees of Ciena as of September 1, 2018, including full-time and part-time employees, interns and temporary workers on our payroll, and our Executive Chairman, but excluding our CEO.
- ❖ **Identification of Median Employee.** We selected the aggregate of (a) annualized base salary as of September 1, 2018, (b) the target cash incentive compensation for employees eligible under our Cash Incentive Bonus Plan or Sales Incentive Compensation Plan, as applicable, and (c) the target delivered value for equity awards granted to employees as part of our annual equity grants in December 2017, as the consistently applied compensation measure to identify our median employee. We estimated total compensation using a method similar to the Summary Compensation Table rules, applying an exchange rate as of September 1, 2018 to convert international currencies into U.S. dollars, and then identified the median employee. We did not make any cost of living adjustments or full time equivalent adjustments. Using this methodology, we determined that the median employee was a full-time employee located in Canada.
- ❖ **Calculation of CEO Pay Ratio.** We calculated our median employee's annual total compensation for 2018 according to the SEC's instructions for preparing the Summary Compensation Table. We applied an exchange rate of 1 CAD to 0.761412 USD as of October 31, 2018, to convert international currencies into U.S. dollars. We then calculated our CEO's annual total compensation using the same approach to determine the pay ratio shown above.

The disclosure presented above is a reasonable estimate. Because the SEC rules for identifying the median employee and calculating the pay ratio allow companies to use different methodologies, exemptions, estimates and assumptions, this disclosure may not be comparable to the pay ratio reported by other companies.

PROPOSAL NO. 3

Annual Advisory “Say-on-Pay” Vote to Approve Our Named Executive Officer Compensation

We are required by Section 14A of the Exchange Act to conduct a non-binding advisory vote of our stockholders to approve the compensation paid to our NEOs as disclosed in this proxy statement. We encourage stockholders to read the “Compensation Discussion and Analysis” and “Executive Compensation Tables” in this proxy statement for a more detailed discussion of our compensation programs and policies, the compensation governance measures undertaken and implemented by our Board of Directors, and the compensation awarded to our NEOs during fiscal 2018.

We actively review and assess our executive compensation program in light of the dynamic industry in which we operate, the evolving marketplace in which we compete for executive talent, and changes in compensation governance best practices. We are focused on compensating our executive officers fairly and in a manner that promotes our compensation philosophy.

COMPENSATION OBJECTIVES

- ❖ Attract and retain talented executives by offering competitive compensation packages
- ❖ Motivate executives to achieve strategic and tactical corporate objectives, including the profitable growth of Ciena’s business
- ❖ Align executive compensation with stockholder interests
- ❖ Reward executives for individual, functional and corporate performance
- ❖ Promote a pay-for-performance culture

Our Board of Directors believes that our executive compensation program has been designed and executed to satisfy these objectives, and that our compensation program is worthy of stockholder support. In considering our executive compensation program for fiscal 2018, we believe it is important to view the Compensation Committee’s decision-making against the backdrop of both our overall corporate governance and our fiscal 2018 business and financial performance.

With respect to corporate governance, we have deliberately structured our core governance principles and practices to align executive compensation with the interests of our stockholders and to avoid certain compensation practices that do not serve our stockholders’ interests. We continue to evaluate and modify these principles and practices as necessary in order to achieve these objectives. In this regard, we believe that stockholders should consider the “Compensation Discussion and Analysis” above, and in particular the “Executive Compensation Best Practices” therein. As the most recent example of this philosophy and approach, in fiscal 2018 we amended our stock ownership guidelines for executive officers and directors to substantially increase the minimum ownership requirements — including a 5x base salary requirement for the CEO and a 5x cash retainer requirement for non-employee directors — and to add a requirement that such individuals hold 50% of all shares acquired from Ciena equity awards (net of any shares withheld for taxes or payment of exercise price) until they achieve the minimum ownership requirement.

With respect to our fiscal 2018 performance, as a result of successful execution against our long-term strategy, we had a very strong year of business and financial results. Fiscal 2018 performance and business highlights are described more fully in our Proxy Statement Summary above.

The Board recommends that stockholders vote in favor of the following resolution:

“RESOLVED, that the stockholders approve, on an advisory basis, the compensation of Ciena’s Named Executive Officers, as disclosed in Ciena’s proxy statement for its 2019 Annual Meeting of Stockholders pursuant to the rules of the Securities and Exchange Commission (including in the Compensation Discussion and Analysis, the compensation tables and related footnotes and narrative disclosures under the heading “Executive Compensation Tables”).”

Although this vote is advisory and is not binding on the Compensation Committee or the Board, the Compensation Committee and the Board value the input and views of our stockholders. The Board and the Compensation Committee will review the results of the vote and take them into consideration when considering future executive compensation policies and decisions.

Proposal No. 3 — Recommendation of the Board of Directors

The Board of Directors recommends that you vote
“FOR”
the advisory approval of our named executive officer compensation

POLICY FOR RELATED PERSON TRANSACTIONS

Ciena did not engage in any related person transactions during fiscal 2018 within the meaning of applicable SEC rules. The Board of Directors has adopted a written Policy for Related Person Transactions. The purpose of the policy is to describe the procedures used to identify, review, approve and disclose, if necessary, any related person transaction or series of transactions in which: (i) Ciena was, is or will be a participant; (ii) the amount involved exceeds \$120,000; and (iii) a related person had, has or will have a direct or indirect material interest.

For purposes of the policy, a related person is one of the following:

- any Ciena director, nominee for director or executive officer (as such terms are used in Section 16 of the Exchange Act and the regulations promulgated thereunder);
- any immediate family member of a Ciena director, nominee for director or executive officer;
- any person (including any “group” as such term is used in Section 13(d) of the Exchange Act) who is known to Ciena as a beneficial owner of more than 5% of its voting common stock (a “significant stockholder”); or
- any immediate family member of a significant stockholder.

Under the policy, all related person transactions above a de minimis threshold are required to be approved or ratified by the Audit Committee, or another committee consisting solely of independent directors. As a general rule, any director who has a direct or indirect material interest in the related person transaction should not participate in the consideration of whether to approve or ratify the transaction. Prior to entering into a related person transaction, the material facts regarding the transaction, including the interest of the related person, must be presented to the Audit Committee for review. The Committee will consider whether the related person transaction is advisable and whether to approve, ratify or reject the transaction or refer it to the full Board of Directors, in its discretion. If the Committee approves a related person transaction, it will report the action to the full Board of Directors, and Ciena will disclose the terms of related person transactions in its filings with the SEC to the extent required.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information as of the end of fiscal 2018 with respect to the shares of Ciena common stock that may be issued under Ciena’s existing equity compensation plans. In accordance with SEC rules, the tabular disclosure in column (A) does not reflect the approximately 4.4 million shares underlying stock unit awards issued and outstanding at the end of fiscal 2018.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (A)	Weighted average exercise price of outstanding options, warrants and rights (B)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in Column (A) (C)
Equity compensation plans approved by stockholders (1)	275,834	\$ 33.52	12,134,290 (2)
Equity compensation plans not approved by stockholders	—	—	
Total	275,834	\$ 33.52	

(1) Consists of awards outstanding under the following equity compensation plans:

- the 2008 Plan;
- the Cyan, Inc. 2006 Stock Plan and Cyan, Inc. 2013 Equity Incentive Plan, assumed by Ciena in connection with an acquisition transaction.

(2) As of October 31, 2018, reflects approximately 7.2 million and 4.9 million shares available for issuance under the 2017 Plan and ESPP, respectively. Pursuant to the terms of the 2017 Plan, if any shares covered by an award under the 2017 Plan or a “prior plan” (as such term is defined in the 2017 Plan) are not purchased or are forfeited, or if an award otherwise terminates without delivery of any common stock, then the number of shares of common stock not purchased or forfeited will again be available for making awards under the 2017 Plan. The ESPP includes an evergreen feature, pursuant to which, on December 31 of each year, the number of shares available for issuance annually increases by up to 571,428 shares, provided that the total number of shares available for issuance at any time under the ESPP may not exceed 8,211,915 million shares.

STOCKHOLDER PROPOSALS FOR 2020 ANNUAL MEETING

Pursuant to Rule 14a-8 under the Exchange Act, some proposals by stockholders may be eligible for inclusion in our proxy statement for the 2019 Annual Meeting. Stockholder proposals submitted must include proof of ownership of Ciena common stock in accordance with Rule 14a-8(b)(2). These submissions must comply with the rules of the SEC for inclusion in our proxy statement and must be received no later than October 15, 2019. Submitting a stockholder proposal does not guarantee that we will include it in our proxy statement.

Under our proxy access bylaw, if a stockholder (or a group of up to 20 stockholders) who has owned at least 3% of our shares for at least three years and has complied with the other requirements set forth in our bylaws wants us to include director nominees (up to the greater of two nominees or 20% of the Board) in our proxy statement for the 2020 Annual Meeting, the nominations must be received in a timely manner, between 120 and 150 days prior to the anniversary of the date our proxy statement was first sent to stockholders in connection with our last annual meeting, which would be no earlier than September 15, 2019 and no later than October 15, 2019. For more information on this proxy access right, please see “Principles of Corporate Governance, Bylaws and Other Governance Documents – Proxy Access” above.

We strongly encourage any stockholder interested in submitting a proposal or nomination to contact our Corporate Secretary in advance of this deadline to discuss the proposal, and stockholders may want to consult knowledgeable counsel with regard to the detailed requirements of applicable securities laws.

If you wish to present a proposal or nomination before our 2020 Annual Meeting, but you do not intend to have your proposal included in our proxy statement, your proposal must be delivered no earlier than November 29, 2019 and no later than December 29, 2019. If the date of our 2020 Annual Meeting of Stockholders is more than 30 calendar days before or more than 70 calendar days after the anniversary date of the 2019 Annual Meeting, your submission must be delivered not earlier than 120 days prior to our 2020 Annual Meeting and not later than the later of the 90th day prior to such Annual Meeting or the 10th day following the public announcement of the date of such meeting.

To submit a proposal or nomination, stockholders should provide written notice to Ciena Corporation, 7035 Ridge Road, Hanover, Maryland 21076, Attention: Corporate Secretary. Stockholders should note that our bylaws clarify the applicability of Ciena’s advance notice provision to all stockholder proposals, whether or not submitted for inclusion in Ciena’s proxy statement. Specifically, Article I, Section 4(A)(3)(c) of the bylaws, governing stockholder submission of a proposal or nomination of a person for election as a director, requires a stockholder to include the following information in the notice provided to Ciena:

- the name and address of such stockholder as it appears on Ciena’s books, and any beneficial owner;
- the class and number of shares that are owned beneficially and of record by the stockholder and any beneficial owner;
- a representation that the stockholder is entitled to vote at the meeting and intends to attend the meeting to present the proposal or director nomination;
- a representation as to whether the stockholder intends to conduct a proxy solicitation;
- a description of any agreement, arrangement or understanding between or among the stockholder, any beneficial owner, any of their affiliates or other persons acting in concert with them, and any nominee or the nominee’s affiliates, with respect to the nomination or proposal; and
- a description of any agreement, arrangement or understanding, including any derivative or short positions, profit interests, options, warrants, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares, entered into as of the notice date by, or on behalf of, the stockholder and any beneficial owner, the effect or intent of which is to mitigate loss, manage risk, benefit from share price changes, or increase or decrease voting power of the stock held by such person.

Additional information is required to be included in the notice provided to Ciena for stockholder proposals made in accordance with our proxy access bylaw provision, including, among other things:

- statements certifying and materials evidencing continuous ownership of stock for at least three years;
- written consent of the stockholder’s nominees;
- certain representations and undertakings with respect to ownership of stock, nominations, and accuracy of information provided; and
- an undertaking to comply with applicable law and assume liability stemming from any violations arising from information provided by the stockholder.

The description above is intended as a summary and is qualified in its entirety by reference to the relevant bylaw provisions regarding the requirements for making stockholder proposals and nominating director candidates. The bylaws are available on the “Corporate Governance” page of the “Investors” section of our website at www.ciena.com.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16 of the Exchange Act requires Ciena’s directors and officers, and persons who own more than 10% of Ciena’s common stock, to file initial reports of ownership and reports of changes in ownership with the SEC and The New York Stock Exchange. Such persons are required by SEC regulations to furnish Ciena with copies of all Section 16(a) forms that they file.

Based solely on Ciena’s review of the copies of such forms furnished to Ciena and written representations from our executive officers and directors, we believe that all Section 16(a) filing requirements of our directors and executive officers were met during fiscal 2018, including requirements with respect to when such filings are required to be made, except for a Form 4 for James Frodsham with respect to a sale of Ciena’s common stock on February 12, 2018, which was filed with the SEC on February 15, 2018.

GENERAL INFORMATION

Our Board of Directors has made these proxy materials available to you via the Internet or, upon your request, has delivered printed versions of these materials to you by mail. We are furnishing this proxy statement in connection with the solicitation by our Board of Directors of proxies to be voted at our 2019 Annual Meeting. The Annual Meeting will be held on March 28, 2019 at 3:00 p.m. Eastern Time, or at any adjournment thereof. As described below, this year's Annual Meeting will be a completely virtual meeting of stockholders to be held over the Internet.

Internet Availability of Proxy Materials

We are making this proxy statement and our Annual Report to Stockholders, including our Annual Report on Form 10-K for the fiscal year ended October 31, 2018, available to our stockholders on the Internet. On February 12, 2019, we mailed our stockholders a Notice of Internet Availability of Proxy Materials containing instructions on how to access our proxy materials, including this proxy statement and our Annual Report to Stockholders for fiscal 2018. The Notice of Internet Availability of Proxy Materials also provides instructions on how to vote over the Internet, by mail or by telephone. If you received a Notice of Internet Availability of Proxy Materials by mail, you will not receive a printed copy of the proxy materials in the mail unless you specifically request these materials. Other stockholders, in accordance with their prior requests, have received e-mail notification of how to access our proxy materials and vote over the Internet, or have been mailed paper copies of our proxy materials and a proxy card or a vote instruction form from their bank or broker.

Internet distribution of proxy materials is designed to expedite receipt by stockholders, lower the cost of our Annual Meeting, and reduce the environmental impact of our Annual Meeting. However, if you received a Notice of Internet Availability of Proxy Materials by mail and would like to receive a printed copy of our proxy materials, please follow the instructions for requesting such materials contained on the Notice of Internet Availability of Proxy Materials. If you have previously elected to receive our proxy materials electronically, you will continue to receive these materials via e-mail unless you elect otherwise.

Attending the Annual Meeting

Ciena will be hosting this year's Annual Meeting live over the Internet at www.virtualshareholdermeeting.com/ciena2019. The Annual Meeting will be a completely virtual meeting to be held over the Internet. A summary of the information you need to attend the Annual Meeting online is provided below:

- All stockholders can attend the Annual Meeting over the Internet at www.virtualshareholdermeeting.com/ciena2019;
- Only stockholders as of the record date may vote or submit questions while attending the Annual Meeting (by using the 16-digit control number provided in your Notice of Internet Availability of Proxy Materials, your proxy card, or the voting instructions that accompanied your proxy materials);
- Instructions on how to attend the Annual Meeting are posted at www.virtualshareholdermeeting.com/ciena2019;
- Stockholders with questions regarding how to attend and participate in the Annual Meeting may call 1-855-449-0991 on the meeting date; and
- A replay of the Annual Meeting will be available online for approximately 12 months following the meeting date.

FREQUENTLY ASKED QUESTIONS

Who may vote at the Annual Meeting?

The Board of Directors has set February 1, 2019 as the record date for the Annual Meeting. If you were the owner of Ciena common stock at the close of business on February 1, 2019, you may vote at the Annual Meeting. You are entitled to one vote for each share of common stock you held on the record date.

A list of stockholders of record entitled to vote at the Annual Meeting will be open to examination by any stockholder, for any purpose germane to the Annual Meeting, during normal business hours for a period of ten days before the Annual Meeting at our corporate offices at 7035 Ridge Road, Hanover, Maryland 21076, and online during the Annual Meeting accessible at www.virtualshareholdermeeting.com/ciena2019.

How many shares must be present to hold the Annual Meeting?

A majority of our shares of common stock outstanding as of the record date must be present at the Annual Meeting in order to hold the meeting and conduct business. This is called a "quorum." On the record date, there were 156,336,210 shares

of Ciena common stock outstanding. Your shares will be counted as present at the Annual Meeting if you either attend our online Annual Meeting or properly submit your proxy prior to the Annual Meeting.

Why was I mailed a notice regarding the Internet availability of proxy materials instead of a full set of printed proxy materials?

Pursuant to the "notice and access" rules adopted by the SEC, we have elected to provide stockholders access to our proxy materials over the Internet. Accordingly, we sent a Notice of Internet Availability of Proxy Materials ("Notice") to all of our stockholders as of the record date. The Notice includes instructions on how to access our proxy materials over the Internet and how to request a printed copy of these materials. In addition, by following the instructions in the Notice, stockholders may request to receive proxy materials in printed form by mail or electronically by email on an ongoing basis.

Choosing to receive your future proxy materials by email will save us the cost of printing and mailing documents to you and will reduce the impact of our annual meetings on the environment. If you choose to receive future proxy materials by email, you will receive an email next year with instructions containing a link to those materials and a link to the proxy voting site. Your election to receive proxy materials by email will remain in effect until you terminate it.

What proposals will be voted on at the Annual Meeting and how does the Board of Directors recommend that I vote?

Proposals	Board Vote Recommendation
1. Elect two Class I Director nominees and one Class II Director nominee	FOR each nominee
2. Ratify appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for fiscal 2019	FOR
3. Advisory vote on named executive officer compensation ("Say-on-Pay")	FOR

How will voting on any business not described in this proxy statement be conducted?

We are not currently aware of any other business to be acted upon at the Annual Meeting. If any other matters are properly submitted for consideration at the Annual Meeting, including any proposal to adjourn the Annual Meeting, the persons named as proxies will vote the shares represented thereby in their discretion. Adjournment of the Annual Meeting may be made for the purpose of, among other things, soliciting

additional proxies. Any adjournment may be made from time to time by approval of the holders of common stock representing a majority of the votes present in person or by proxy at the Annual Meeting, whether or not a quorum exists, without further notice other than by an announcement made at the Annual Meeting.

How many votes are required to approve each proposal?

In the case of an uncontested election, our bylaws require that each director be elected by the vote of a majority of the votes cast with respect to that director's election by holders of shares present in person or represented by proxy at the Annual Meeting. For this purpose, a "majority of the votes cast" means that the number of votes cast "FOR" a director's election exceeds the number of votes cast "AGAINST" that director's election, with abstentions and broker non-votes not counted as a vote cast either "FOR" or "AGAINST." For more information regarding the Board's required procedures and disclosures associated with this majority vote standard, please see "Majority Vote Standard in Director Elections" in the "Corporate Governance and the Board of Directors" section above. In the

case of a contested election (*i.e.*, an election in which the number of candidates exceeds the number of directors to be elected), directors will be elected by plurality vote. For this election, the election of directors at the Annual Meeting is uncontested, meaning that the nominees will be elected by a majority of the votes cast, as described above.

Approval of proposals 2 and 3 each require the affirmative vote of a majority of the total votes cast by holders of shares present in person or represented by proxy at the Annual Meeting and entitled to vote on these proposals, with abstentions and broker non-votes not counted as a vote cast either "FOR" or "AGAINST."

How are votes counted?

With regard to the election of each director nominee in proposal 1 and with regard to proposals 2 and 3, each as set forth in this proxy statement, you may vote "FOR," "AGAINST" or "ABSTAIN." If you abstain from voting on these proposals, your shares will be counted as present for purposes of

establishing a quorum at the Annual Meeting. An abstention will not count as a vote "FOR" or "AGAINST" these proposals at the Annual Meeting and will have no effect on the outcome of the election of our directors in an uncontested election, or on the outcome of the vote on the remaining proposals.

What are broker non-votes and how are they counted at the Annual Meeting?

Broker non-votes occur when brokers do not receive voting instructions from their customers and do not have discretionary voting authority with respect to a proposal. If you hold shares through a broker, bank or other nominee and you do not give instructions as to how to vote, your broker may have discretionary authority to vote your shares on certain routine

items but not on other items. Broker non-votes are counted as present for purposes of determining the presence or absence of a quorum for the transaction of business at the Annual Meeting but will not be counted for purposes of the election of directors and will have no effect on the outcome of the vote on the remaining proposals.

What is the difference between holding shares as a "stockholder of record" and as a beneficial owner of shares held in "street name"?

If your shares are registered directly in your name with our transfer agent, Computershare Trust Company, N.A., you are considered the "stockholder of record" with respect to those shares, and the Notice was sent directly to you.

If your shares are held in an account at a brokerage firm, bank, broker-dealer, or other similar organization, then you are the beneficial owner of shares held in "street name," and the

Notice or separate voting instructions were forwarded to you by that organization. As a beneficial owner, you have the right to direct that organization on how to vote the shares held in your account. You should follow the instructions in the Notice or voting instructions provided to you by that organization in order to vote your shares or direct the organization on how to vote your shares

Why hold a virtual Annual Meeting over the Internet?

We embrace the latest technologies in our business and believe that holding our Annual Meeting virtually over the Internet provides expanded access, improves communication with stockholders, and yields cost savings for Ciena and our stockholders. We ensure that at our virtual Annual Meeting, all attendees are afforded the same rights and opportunities to participate as they would at an in-person meeting. We began holding our Annual Meeting online in 2013. At that time, we considered a number of factors, including the technologies available to us, the cost of our Annual Meeting, and the historical level of stockholder attendance in person, as compared to the use of other communications such as telephone or Internet. We noted at that time that only a very small number of stockholders, generally less than ten each

year, attended our Annual Meeting in person. When we considered implementing a fully virtual Annual Meeting in 2013, we reached out to a number of our stockholders and received extensive support. We continue to receive positive feedback from our stockholders as we adopt best practices and new technologies for our Annual Meeting, proxy statement and related materials. We evaluate annually the method of holding the Annual Meeting, taking into consideration the above factors as well as business and market conditions and the proposed agenda items. We continue to believe that holding our Annual Meeting virtually over the Internet is the right approach for our company, as it enables more of our global base of stockholders to participate in our Annual Meeting.

How do I vote my shares without participating in the online Annual Meeting?

Whether you are a “stockholder of record” or hold your shares in “street name,” you may direct your vote without participating in the online Annual Meeting.

If you are a stockholder of record, you may vote by your shares over the Internet or by telephone by following the instructions on the Notice. If you request printed copies of the proxy materials by mail, you may also vote by signing and submitting your proxy card and returning it by mail. You should sign your name exactly as it appears on the proxy card. If you are signing in a representative capacity (for example, as guardian, executor, trustee, custodian, attorney or officer of a corporation), you should indicate your name and title or capacity.

If you are the beneficial owner of shares held in street name, you may be eligible to vote your shares electronically over the Internet or by telephone by following the instructions on the Notice. If you request printed copies of the proxy materials by mail, you may also vote by signing the voter instruction form provided by your bank or broker and returning it by mail. If you provide specific directions on how to vote by mail, telephone or over the Internet, your shares will be voted by your broker or nominee as you have directed.

The persons named as proxies are executive officers of Ciena. All proxies properly submitted in time to be counted at the Annual Meeting will be voted in accordance with the directions contained therein. If you submit your proxy without directing how your shares are to be voted, your shares will be voted by the proxy holders in accordance with the recommendations of the Board of Directors set forth above.

How do I vote my shares during the online Annual Meeting?

Even if you plan to attend and participate in our online Annual Meeting, we encourage you to vote by telephone or over the Internet, or by returning a proxy card following your request of printed materials. This will ensure that your vote will be counted if you are unable to, or later decide not to, participate in the online Annual Meeting. Whether you are a

stockholder of record or hold your shares in “street name,” you may vote online at the Annual Meeting. You will need to enter your 16-digit control number (included in your Notice, your proxy card or the voting instructions that accompanied your proxy materials) to vote your shares at the Annual Meeting.

What happens if my shares are held in more than one account?

If your shares are held in more than one account, you will receive a Notice or separate voting instructions for each account. To ensure that all of your shares in each account are

voted, you must vote in accordance with the Notice or separate voting instructions that you receive for each account.

May I revoke my proxy and change my vote after I have voted?

You may revoke your proxy and change your vote at any time before the final vote at the Annual Meeting. You may revoke your proxy over the Internet or by phone by following the instructions included in your proxy materials, or by submitting a written notice of revocation to Ciena Corporation, 7035 Ridge Road, Hanover, Maryland 21076, Attention: Corporate Secretary. You may also revoke a previously submitted proxy by voting again on a later date over the Internet, by telephone

or by signing and returning a new proxy card by mail (only your latest proxy submitted prior to the Annual Meeting will be counted), or by attending and voting at the online Annual Meeting. Your attendance at the Annual Meeting will not automatically revoke your proxy unless you enter your 16-digit control number and vote again electronically at the Annual Meeting.

What happens if additional matters are presented at the meeting?

Management knows of no matters to be presented for action at the Annual Meeting other than those mentioned in this proxy statement, and the deadline under our bylaws for stockholder proposals and director nominations has passed. However, if any additional matters properly come before the Annual Meeting, it is intended that the persons named as

proxies will vote on such other matters in accordance with their judgment of the best interests of Ciena. If for any unforeseen reason any of our nominees is not available as a candidate for director, the persons named as proxies will vote for such other candidate or candidates as may be nominated by the Board of Directors.

Will the Annual Meeting be webcast?

Yes. This year’s Annual Meeting will be a completely virtual meeting and will be webcast live at www.virtualshareholdermeeting.com/ciena2019. All stockholders may attend and listen live to the webcast of the Annual Meeting. Stockholders as of the record date of the Annual Meeting may electronically vote their shares and submit

questions while attending the Annual Meeting over the Internet by using the 16-digit control number included in the Notice, proxy card or the voting instructions that accompanied these proxy materials. A replay of the Annual Meeting audio webcast will be available on our website for approximately one year.

Where can I find the voting results of the Annual Meeting?

The preliminary voting results will be announced at the Annual Meeting. The final voting results will be tallied by the inspector of elections and will be subsequently published by us by the filing of a current report on Form 8-K with the SEC shortly following our Annual Meeting. This filing will also be available on our website at www.ciena.com.

Who is soliciting my vote and who will bear the cost of this solicitation?

Our Board of Directors is making this solicitation, and Ciena will bear the entire cost of preparing, assembling, printing, mailing and distributing these proxy materials and soliciting votes. We have engaged Alliance Advisors as our proxy solicitor to help us solicit proxies for a fee of \$14,500, plus reasonable out-of-pocket expense. Copies of solicitation materials may be furnished to brokers, custodians, nominees and other fiduciaries for forwarding to beneficial owners of shares of Ciena common stock, and normal handling charges may be paid for such forwarding service. Officers and other Ciena employees, who will receive no additional compensation for their services, may solicit proxies by mail, e-mail, via the Internet, personal interview or telephone.

ANNUAL REPORT ON FORM 10-K

A copy of Ciena's Annual Report to Stockholders for fiscal 2018, which includes the Annual Report on Form 10-K, has been posted on the Internet along with this proxy statement, each of which is accessible by following the instructions in the Notice of Internet Availability of Proxy Materials. The Annual Report to Stockholders is not incorporated into this proxy statement and is not considered proxy-soliciting material.

Ciena filed its Annual Report on Form 10-K for fiscal 2018 with the SEC on December 21, 2018. Ciena will mail without charge, upon written request, a copy of its Annual Report on Form 10-K for fiscal 2018, excluding exhibits. Please send a written request to Investor Relations, Ciena Corporation, 7035 Ridge Road, Hanover, Maryland, 21076, or access these materials from the "Investors" section of Ciena's website at www.ciena.com.

HOUSEHOLDING OF PROXY MATERIALS

Stockholders residing in the same household who hold their stock through a bank or broker may receive only one set of proxy materials, including the Notice of Internet Availability of Proxy Materials, in accordance with a notice sent earlier by their bank or broker. This practice of sending only one copy of proxy materials, called "householding," saves Ciena money in printing and distribution costs and reduces the environmental impact of our Annual Meeting. This practice will continue unless instructions to the contrary are received by your bank or broker from one or more of the stockholders within the household.

If you hold your shares in "street name" and reside in a household that received only one copy of the proxy materials, you can request to receive a separate copy in the future by following the instructions sent by your bank or broker. If your household receives multiple copies of the proxy materials, you may request that only a single set of materials be sent by following the instructions sent by your bank or broker.

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you receive your proxy materials by mail, we encourage you to elect to receive future copies of our proxy materials by e-mail. To enroll in this program, follow the instructions included on your Notice of Internet Availability of Proxy Materials or in the proxy materials provided by your bank or broker. Enrollment in the online program will remain in effect for as long as your brokerage account is active or until enrollment is canceled. Enrolling to receive proxy materials online will save Ciena the cost of printing and mailing documents and will reduce the environmental impact of our Annual Meeting.

NON-GAAP MEASURES

GAAP Measures at or as of Quarter ended October 31, 2018

The following table includes certain comparable GAAP measures for Non-GAAP measures included in this proxy statement:

Comparable GAAP Measure	
Operating Expense	\$ 302.2 million
Operating Income	\$ 95.9 million
Net Income	\$ 64.0 million
Net Income per diluted common share	\$ 0.34

Non-GAAP Measures

This proxy statement includes non-GAAP measures of one or more of Ciena's operating expense, operating income, net income, and net income per diluted common share, as well as gross debt to EBITDA. These measures are not intended to be a substitute for financial information presented in accordance with GAAP. In evaluating the operating performance of Ciena's business, management excludes certain charges and credits that are required by GAAP. These items share one or more of the following characteristics: they are unusual and Ciena does not expect them to recur in the ordinary course of its business; they do not involve the expenditure of cash; they are unrelated to the ongoing operation of the business in the ordinary course; or their magnitude and timing is largely outside of Ciena's control. Management believes that the non-GAAP measures herein provide management and investors useful information and meaningful insight into the operating performance of the business. The presentation of these non-GAAP financial measures should be considered in addition to Ciena's GAAP results and these measures are not intended to be a substitute for the financial information prepared and presented in accordance with GAAP. Ciena's non-GAAP measures and the related adjustments may differ from non-GAAP measures used by other companies and should only be used to evaluate Ciena's results of operations in conjunction with our corresponding GAAP results. A reconciliation of non-GAAP measures used in this proxy statement to Ciena's GAAP results for the relevant period can be found in the Appendix to our investor presentation for the fourth quarter of fiscal 2018 included as an exhibit to our Current Report on Form 8-K furnished with the SEC on December 13, 2018.