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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

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FORM 8-K

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CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): December 13, 2018

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**Ciena Corporation**

(Exact Name of Registrant as Specified in Its Charter)

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Delaware

(State or Other Jurisdiction of Incorporation)

001-36250

(Commission File Number)

23-2725311

(IRS Employer Identification No.)

7035 Ridge Road, Hanover, MD

(Address of Principal Executive Offices)

21076

(Zip Code)

(410) 694-5700

(Registrant's Telephone Number, Including Area Code)

Not Applicable

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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## ITEM 2.02 – RESULTS OF OPERATIONS AND FINANCIAL CONDITION

On December 13, 2018, Ciena Corporation ("Ciena") issued a press release announcing its financial results for its fourth fiscal quarter ended October 31, 2018. The text of the press release is furnished as Exhibit 99.1 to this Report. As discussed in this press release, Ciena will be hosting an investor call to discuss its results of operations for its fourth fiscal quarter ended October 31, 2018.

In conjunction with the issuance of this press release, Ciena posted to the quarterly results page of the Investors section of [www.ciena.com](http://www.ciena.com) management's prepared remarks and an accompanying investor presentation. The prepared remarks and related investor presentation are furnished as Exhibits 99.2 and 99.3 to this Report.

The information in Exhibits 99.1, 99.2 and 99.3, as well as Item 2.02 of this Report, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section, and shall not be incorporated by reference into any registration statement pursuant to the Securities Act of 1933, as amended. Investors are encouraged to review the "Investors" page of our website at [www.ciena.com](http://www.ciena.com) because, as with the other disclosure channels that we use, from time to time we may post material information exclusively on that site.

## ITEM 8.01 - OTHER EVENTS

On December 13, 2018, Ciena announced that its Board of Directors has authorized a program to repurchase up to \$500 million of the company's common stock. This program replaces Ciena's previously authorized share repurchase program.

Ciena may purchase shares at management's discretion in the open market, in privately negotiated transactions, in transactions structured through investment banking institutions, or a combination of the foregoing. Ciena may also, from time to time, enter into Rule 10b5-1 plans to facilitate repurchases of its shares under this authorization. The amount and timing of repurchases are subject to a variety of factors including liquidity, cash flow, stock price, and general business and market conditions. The program may be modified, suspended or discontinued at any time.

## ITEM 9.01 – FINANCIAL STATEMENTS AND EXHIBITS

(d) The following exhibits are being filed herewith:

<u>Exhibit Number</u>	<u>Description of Document</u>
Exhibit 99.1	<a href="#"><u>Text of Press Release dated December 13, 2018, issued by Ciena Corporation, reporting its results of operations for its fourth fiscal quarter and fiscal year ended October 31, 2018.</u></a>
Exhibit 99.2	<a href="#"><u>Management's Prepared Remarks for Ciena Corporation's fourth fiscal quarter and fiscal year ended October 31, 2018.</u></a>
Exhibit 99.3	<a href="#"><u>Investor Presentation for Ciena Corporation's fourth fiscal quarter and fiscal year ended October 31, 2018.</u></a>

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

### **Ciena Corporation**

Date: December 13, 2018

By: /S/ David M. Rothenstein  
David M. Rothenstein  
Senior Vice President, General Counsel & Secretary

**Ciena Reports Fiscal Fourth Quarter 2018 and Year-End Financial Results**

***Announces new share repurchase program of up to \$500 million***

**HANOVER, Md. - December 13, 2018** - [Ciena](#)<sup>®</sup> Corporation (NYSE: CIEN), a network strategy and technology company, today announced unaudited financial results for its fiscal fourth quarter and year ended October 31, 2018.

- **Q4 Revenue:** \$899.4 million, increasing 20.8% year over year
- **Q4 Net Income per Share:** \$0.34 GAAP; \$0.53 adjusted (non-GAAP)
- **Share Repurchases:** Repurchased approximately 1.3 million shares of common stock for an aggregate price of \$36.2 million during the quarter

"We achieved outstanding financial results in our fourth quarter and fiscal 2018 due to continued execution of our proven strategy," said Gary B. Smith, president and CEO, Ciena. "The combination of our innovation strength, successful interception of market trends and sustained ability to take share and outperform the market, along with a thriving industry environment, gives us tremendous confidence in both the near and longer term outlook for our business."

For the fiscal fourth quarter 2018, Ciena reported revenue of \$899.4 million as compared to \$744.4 million for the fiscal fourth quarter 2017. For fiscal year 2018, Ciena reported revenue of \$3.09 billion, as compared to \$2.80 billion for fiscal year 2017.

Ciena's GAAP net income for the fiscal fourth quarter 2018 was \$64.0 million or \$0.34 per diluted common share, which compares to a GAAP net income of \$1,160.1 million, or \$7.32 per diluted common share, for the fiscal fourth quarter 2017. For fiscal year 2018, Ciena's GAAP net loss was \$(344.7) million, or \$(2.49) per diluted common share, as compared to a GAAP net income of \$1,262.0 million, or \$7.53 per diluted common share for fiscal year 2017.

Ciena's adjusted (non-GAAP) net income for the fiscal fourth quarter 2018 was \$81.0 million, or \$0.53 per diluted common share, which compares to an adjusted (non-GAAP) net income of \$48.5 million, or \$0.32 per diluted common share, for the fiscal fourth quarter 2017. For fiscal year 2018, Ciena's adjusted (non-GAAP) net income was \$210.6 million, or \$1.39 per diluted common share, as compared to an adjusted (non-GAAP) net income of \$177.7 million, or \$1.14 per diluted common share for fiscal year 2017.

## Fiscal Fourth Quarter 2018 Performance Summary

The tables below (in millions, except percentage data) provide comparisons of certain quarterly results to prior periods, including sequential quarterly and year over year changes. A reconciliation between the GAAP and adjusted (non-GAAP) measures contained in this release is included in Appendix A and B to this release.

	GAAP Results (unaudited)		
	Q4	Q4	Period Change
	FY 2018	FY 2017	Y-T-Y*
Revenue	\$ 899.4	\$ 744.4	20.8%
Gross margin	44.3%	43.7%	0.6%
Operating expense	\$ 302.2	\$ 269.9	12.0%
Operating margin	10.7%	7.5%	3.2%

	Non-GAAP Results (unaudited)		
	Q4	Q4	Period Change
	FY 2018	FY 2017	Y-T-Y*
Revenue	\$ 899.4	\$ 744.4	20.8%
Adj. gross margin	44.7%	44.2%	0.5%
Adj. operating expense	\$ 277.7	\$ 240.9	15.3%
Adj. operating margin	13.9%	11.9%	2.0%

\* Denotes % change, or in the case of margin, absolute change

	Revenue by Segment (unaudited)			
	Q4 FY 2018		Q4 FY 2017	
	Revenue	%	Revenue	%
<b>Networking Platforms</b>				
Converged Packet Optical	\$ 646.4	71.9	\$ 506.4	68.0
Packet Networking	66.5	7.4	92.5	12.5
Total Networking Platforms	712.9	79.3	598.9	80.5
<b>Software and Software-Related Services</b>				
Platform Software and Services	56.6	6.3	35.9	4.8
Blue Planet Automation Software and Services	10.7	1.2	5.9	0.8
Total Software and Software-Related Services	67.3	7.5	41.8	5.6
<b>Global Services</b>				
Maintenance Support and Training	67.4	7.5	56.2	7.5
Installation and Deployment	39.3	4.4	33.5	4.5
Consulting and Network Design	12.5	1.3	14.0	1.9
Total Global Services	119.2	13.2	103.7	13.9
<b>Total</b>	<b>\$ 899.4</b>	<b>100.0</b>	<b>\$ 744.4</b>	<b>100.0</b>

## Additional Performance Metrics for Fiscal Fourth Quarter 2018

	Revenue by Geographic Region (unaudited)			
	Q4 FY 2018		Q4 FY 2017	
	Revenue	%	Revenue	%
North America	\$ 555.3	61.7	\$ 440.5	59.2
Europe, Middle East and Africa	123.1	13.7	110.7	14.9
Caribbean and Latin America	53.0	5.9	43.5	5.8
Asia Pacific	168.0	18.7	149.7	20.1
Total	\$ 899.4	100.0	\$ 744.4	100.0

- Three 10%-plus customers represented a total of 33.1% of revenue
- Cash and investments totaled \$953.4 million
- Cash flow from operations totaled \$68.0 million
- Average days' sales outstanding (DSOs) were 79
- Accounts receivable balance was \$786.5 million
- Inventories totaled \$262.8 million, including:
  - Raw materials: \$67.5 million
  - Work in process: 9.5 million
  - Finished goods: \$188.6 million
  - Deferred cost of sales: \$48.1 million
  - Reserve for excess and obsolescence: \$(50.9) million
- Product inventory turns were 6.4
- Headcount totaled 6,013

### Share Repurchase Program

During fiscal year 2018, Ciena repurchased approximately 4.3 million shares of its common stock at an average price of \$25.86 per share for an aggregate purchase price of \$111.0 million. Highlighting its ongoing commitment to returning capital to shareholders, Ciena today announced that its Board of Directors has authorized a new program to repurchase up to \$500 million of its common stock, replacing the previous targeted repurchase plan.

Ciena may purchase shares at management's discretion in the open market, in privately negotiated transactions, in transactions structured through investment banking institutions, or a combination of the foregoing. Ciena may also, from time to time, enter into Rule 10b5-1 plans to facilitate repurchases of its shares under this authorization. The amount and timing of repurchases are subject to a variety of factors including liquidity, cash flow, stock price, and general business and market conditions. The program may be modified, suspended or discontinued at any time.

### Supplemental Materials and Live Web Broadcast of Unaudited Fiscal Fourth Quarter 2018 Results

Today, Thursday, December 13, 2018, in conjunction with this announcement, Ciena has posted to the Quarterly Results page of the Investor Relations section of its website certain prepared remarks of management and related supporting materials for its unaudited fiscal fourth quarter and fiscal 2018 results.

Ciena's management will also host a discussion today with investors and financial analysts that will include the Company's fiscal first quarter 2019 outlook. The live audio web broadcast beginning at 8:30 a.m. Eastern will be accessible via [www.ciena.com](http://www.ciena.com). An archived replay of the live broadcast will be available shortly following its conclusion on the Investor Relations page of Ciena's website.

## Notes to Investors

**Forward-Looking Statements.** You are encouraged to review the Investors section of our website, where we routinely post press releases, SEC filings, recent news, financial results, supplemental financial information, and other announcements. From time to time we exclusively post material information to this website along with other disclosure channels that we use. This press release contains certain forward-looking statements that involve risks and uncertainties. These statements are based on current expectations, forecasts, assumptions and other information available to the Company as of the date hereof. Forward-looking statements include statements regarding Ciena's expectations, beliefs, intentions or strategies regarding the future and can be identified by forward-looking words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "should," "will," and "would" or similar words. Forward-looking statements in this release include: "The combination of continued execution against our strategy and robust, broad-based customer demand resulted in outstanding fiscal third quarter performance."; "With our diversification, global scale and innovation leadership, we remain confident in our business model and our ability to achieve our three-year financial targets."

Ciena's actual results, performance or events may differ materially from these forward-looking statements made or implied due to a number of risks and uncertainties relating to Ciena's business, including: the effect of broader economic and market conditions on our customers and their business; changes in network spending or network strategy by customers; seasonality and the timing and size of customer orders, including our ability to recognize revenue relating to such sales; the level of competitive pressure we encounter; the product, customer and geographic mix of sales within the period; supply chain disruptions and the level of success relating to efforts to optimize Ciena's operations; changes in foreign currency exchange rates affecting revenue and operating expense; the impact of the Tax Cuts and Jobs Act, changes in estimates of prospective income tax rates and any adjustments to Ciena's provisional estimates whether related to further guidance, analysis or otherwise, and the other risk factors disclosed in Ciena's periodic reports filed with the Securities and Exchange Commission, including its Quarterly Report on Form 10-Q filed with the SEC on September 5, 2018 and its Annual Report on Form 10-K to be filed with the SEC. Ciena assumes no obligation to update any forward-looking information included in this press release.

**Non-GAAP Presentation of Quarterly and Annual Results.** This release includes non-GAAP measures of Ciena's gross profit, operating expense, income from operations, earnings before interest, tax, depreciation and amortization (EBITDA), Adjusted EBITDA, and measures of net income and net income per share. 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 below provide management and investors useful information and meaningful insight to 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. To the extent not previously disclosed in a prior Ciena financial results press release for the relevant period, Appendix A and B to this press release set forth a complete GAAP to non-GAAP reconciliation of the non-GAAP measures contained in this release.

**About Ciena.** Ciena (NYSE: CIEN) is a networking systems, services, and software company. We provide solutions that help our clients create more adaptive networks in response to the constantly changing demands of their users. By delivering best-in-class networking technology through high-touch consultative relationships, we build the world's most sophisticated networks with automation and scale. For updates on Ciena, follow us on Twitter @Ciena, LinkedIn, the Ciena Insights blog, or visit [www.ciena.com](http://www.ciena.com).



**CIENA CORPORATION**  
**CONDENSED UNAUDITED CONSOLIDATED STATEMENTS OF OPERATIONS**  
(in thousands, except per share data)

	Quarter Ended October 31,		Year Ended October 31,	
	2018	2017	2018	2017
<b>Revenue:</b>				
Products	743,867	616,216	2,565,460	2,318,581
Services	155,489	128,233	528,826	483,106
<b>Total revenue</b>	<b>899,356</b>	<b>744,449</b>	<b>3,094,286</b>	<b>2,801,687</b>
<b>Cost of goods sold:</b>				
Products	421,583	352,992	1,507,157	1,308,295
Services	79,698	65,772	272,439	247,606
<b>Total cost of goods sold</b>	<b>501,281</b>	<b>418,764</b>	<b>1,779,596</b>	<b>1,555,901</b>
<b>Gross profit</b>	<b>398,075</b>	<b>325,685</b>	<b>1,314,690</b>	<b>1,245,786</b>
<b>Operating expenses:</b>				
Research and development	134,983	119,108	491,564	475,329
Selling and marketing	112,791	95,877	394,060	356,169
General and administrative	44,539	36,181	160,133	142,604
Amortization of intangible assets	4,654	3,661	15,737	33,029
Acquisition and integration costs	3,778	—	5,111	—
Significant asset impairments and restructuring costs	1,460	15,059	18,139	23,933
<b>Total operating expenses</b>	<b>302,205</b>	<b>269,886</b>	<b>1,084,744</b>	<b>1,031,064</b>
<b>Income from operations</b>	<b>95,870</b>	<b>55,799</b>	<b>229,946</b>	<b>214,722</b>
Interest and other income (loss), net	(13,357)	1,344	(12,029)	913
Interest expense	(14,873)	(13,926)	(55,249)	(55,852)
Loss on extinguishment and modification of debt	(13,887)	(692)	(13,887)	(3,657)
<b>Income before income taxes</b>	<b>53,753</b>	<b>42,525</b>	<b>148,781</b>	<b>156,126</b>
Provision (benefit) for income taxes	(10,224)	(1,117,531)	493,471	(1,105,827)
<b>Net income (loss)</b>	<b>\$ 63,977</b>	<b>\$ 1,160,056</b>	<b>\$ (344,690)</b>	<b>\$ 1,261,953</b>
<b>Net Income (Loss) per Common Share</b>				
Basic net income (loss) per common share	\$ 0.45	\$ 8.11	\$ (2.40)	\$ 8.89
Diluted net income (loss) per potential common share <sup>1</sup>	\$ 0.34	\$ 7.32	\$ (2.49)	\$ 7.53
Weighted average basic common shares outstanding	143,659	143,097	143,738	141,997
Weighted average diluted potential common shares outstanding <sup>2</sup>	157,745	158,791	143,738	169,919

1. The calculation of GAAP diluted net income per common share for the fourth quarter of fiscal 2018 requires a) adding back interest expense of approximately \$0.4 million associated with Ciena's "Original" 3.75% convertible senior notes, which were converted by holders thereof immediately prior to maturity during the fourth quarter of fiscal 2018 and approximately \$2.8 million associated with Ciena's 4.0% convertible senior notes, which were converted at Ciena's election during the fourth quarter of fiscal 2018, and b) reducing net income by \$12.9 million for a non-cash loss due to a mark to market fair value adjustment related to the outstanding conversion feature of Ciena's "New" 3.75% senior convertible notes, which were converted by holders thereof immediately prior to maturity during the fourth quarter of fiscal 2018, in order to derive the numerator for the diluted earnings per common share calculation.

The calculation of GAAP diluted net loss per common share for fiscal 2018 requires an adjustment of \$12.9 million for a non-cash loss due to a mark to market fair value adjustment related to the outstanding conversion feature of Ciena's "New" 3.75% senior convertible notes to the GAAP net loss in order to derive the numerator for the diluted earnings per common share calculation.

The calculation of GAAP diluted net income per common share for the fourth quarter of fiscal 2017 requires adding back interest expense of approximately \$0.4 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$2.3 million associated with Ciena's 4.0% convertible senior notes to the GAAP net income in order to derive the numerator for the diluted earnings per common share calculation.

The calculation of GAAP diluted net income per common share for fiscal 2017 requires adding back interest expense of approximately \$0.9 million associated with Ciena's 0.875% convertible senior notes, approximately \$7.2 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$8.7 million associated with Ciena's 4.0% convertible senior notes to the GAAP net income in order to derive the numerator for the diluted earnings per common share calculation.

2. Weighted average dilutive potential common shares outstanding used in calculating GAAP diluted net income per common share for the fourth quarter of fiscal 2018 includes 2.0 million shares underlying certain stock option and stock unit awards, 0.7 million and 2.5 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, and 8.9 million shares underlying Ciena's 4.0% convertible senior notes.

Weighted average dilutive potential common shares outstanding used in calculating GAAP diluted net income per common share for the fourth quarter of fiscal 2017 includes 1.2 million shares underlying certain stock option and stock unit awards, 1.6 million and 3.7 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, and 9.2 million shares underlying Ciena's 4.0% convertible senior notes.

Weighted average dilutive potential common shares outstanding used in calculating GAAP diluted net income per common share for fiscal 2017 includes 1.4 million shares underlying certain stock option and stock unit awards, 0.4 million and 13.9 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, 3.0 million shares underlying Ciena's 0.875% convertible senior notes, and 9.2 million shares underlying Ciena's 4.0% convertible senior notes.

**CIENA CORPORATION**  
**CONDENSED UNAUDITED CONSOLIDATED BALANCE SHEETS**  
(in thousands, except share data)

	October 31,	
	2018	2017
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 745,423	\$ 640,513
Short-term investments	148,981	279,133
Accounts receivable, net	786,502	622,183
Inventories	262,751	267,143
Prepaid expenses and other	198,945	197,339
Total current assets	2,142,602	2,006,311
Long-term investments	58,970	49,783
Equipment, building, furniture and fixtures, net	292,067	308,465
Goodwill	297,968	267,458
Other intangible assets, net	148,225	100,997
Deferred tax asset, net	745,039	1,155,104
Other long-term assets	71,652	63,593
Total assets	<u>\$ 3,756,523</u>	<u>\$ 3,951,711</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 340,582	\$ 260,098
Accrued liabilities and other short-term obligations	340,075	322,934
Deferred revenue	111,134	102,418
Current portion of long-term debt	7,000	352,293
Debt conversion liability	164,212	—
Total current liabilities	963,003	1,037,743
Long-term deferred revenue	58,323	82,589
Other long-term obligations	119,413	111,349
Long-term debt, net	686,450	583,688
Total liabilities	<u>\$ 1,827,189</u>	<u>\$ 1,815,369</u>
Stockholders' equity:		
Preferred stock — par value \$0.01; 20,000,000 shares authorized; zero shares issued and outstanding	—	—
Common stock — par value \$0.01; 290,000,000 shares authorized; 154,318,531 and 143,043,227 shares issued and outstanding	1,543	1,430
Additional paid-in capital	6,881,223	6,810,182
Accumulated other comprehensive loss	(5,780)	(11,017)
Accumulated deficit	(4,947,652)	(4,664,253)
Total stockholders' equity	1,929,334	2,136,342
Total liabilities and stockholders' equity	<u>\$ 3,756,523</u>	<u>\$ 3,951,711</u>

**CIENA CORPORATION**  
**CONDENSED UNAUDITED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(in thousands)

	Year Ended October 31,	
	2018	2017
<b>Cash flows from operating activities:</b>		
Net income (loss)	\$ (344,690)	\$ 1,261,953
<b>Adjustments to reconcile net income to net cash provided by operating activities:</b>		
Loss on extinguishment of debt	10,039	—
Loss on fair value of debt conversion liability	12,070	—
Depreciation of equipment, furniture and fixtures, and amortization of leasehold improvements	84,214	77,189
Share-based compensation costs	52,972	48,360
Amortization of intangible assets	25,806	45,713
Deferred taxes	463,631	(1,126,732)
Provision for doubtful accounts	2,700	18,221
Provision for inventory excess and obsolescence	30,615	35,459
Provision for warranty	20,992	7,965
Other	21,685	22,417
<b>Changes in assets and liabilities:</b>		
Accounts receivable	(168,357)	(66,123)
Inventories	(27,445)	(91,567)
Prepaid expenses and other	(21,425)	(33,834)
Accounts payable, accruals and other obligations	85,798	33,897
Deferred revenue	(19,344)	1,964
Net cash provided by operating activities	229,261	234,882
<b>Cash flows used in investing activities:</b>		
Payments for equipment, furniture, fixtures and intellectual property	(67,616)	(94,600)
Restricted cash	117	(54)
Purchase of available for sale securities	(286,824)	(299,038)
Proceeds from maturities of available for sale securities	410,109	335,075
Settlement of foreign currency forward contracts, net	9,385	(2,810)
Purchase of cost method investment	(1,767)	—
Acquisition of businesses, net of cash acquired	(82,670)	—
Net cash used in investing activities	(19,266)	(61,427)
<b>Cash flows from financing activities:</b>		
Proceeds from issuance of long-term debt, net	305,125	—
Payment of long-term debt	(292,730)	(233,554)
Payment for make-whole provision upon conversion of long-term debt	(13,453)	—
Payment for modification of term loans	—	(93,625)
Payment of debt issuance costs	(1,936)	(722)
Payment of capital lease obligations	(3,624)	(3,562)
Shares repurchased for tax withholdings on vesting of restricted stock units	(4,757)	—
Repurchases of common stock-repurchase program	(110,981)	—
Proceeds from issuance of common stock	23,127	20,412
Net cash used in financing activities	(99,229)	(311,051)
Effect of exchange rate changes on cash and cash equivalents	(5,856)	494
Net increase (decrease) in cash and cash equivalents	104,910	(137,102)
Cash and cash equivalents at beginning of fiscal year	640,513	777,615
Cash and cash equivalents at end of fiscal year	\$ 745,423	\$ 640,513
<b>Supplemental disclosure of cash flow information</b>		
Cash paid during the fiscal year for interest	\$ 44,750	\$ 47,235
Cash paid during the fiscal year for income taxes, net	\$ 26,900	\$ 22,136
<b>Non-cash investing and financing activities</b>		
Purchase of equipment in accounts payable	\$ 5,118	\$ 6,214
Building subject to capital lease	\$ —	\$ 50,370
Contingent consideration for acquisition of business	\$ 10,900	\$ —
Conversion of 3.75% convertible senior notes, due October 15, 2018 (Original) into 3,038,208 shares of common stock	\$ 61,270	\$ —
Conversion of 4.0% convertible senior notes, due December 15, 2020 into 9,197,943 shares of common stock, net	\$ 214,286	\$ —

**APPENDIX A- Reconciliation of Adjusted (Non- GAAP) Measurements (unaudited)**

	Quarter Ended October 31,		Year Ended October 31,	
	2018	2017	2018	2017
<b>Gross Profit Reconciliation (GAAP/non-GAAP)</b>				
GAAP gross profit	\$ 398,075	\$ 325,685	\$ 1,314,690	\$ 1,245,786
Share-based compensation-products	705	694	2,984	2,672
Share-based compensation-services	651	561	2,616	2,487
Amortization of intangible assets	2,957	2,332	10,069	12,685
Total adjustments related to gross profit	4,313	3,587	15,669	17,844
Adjusted (non-GAAP) gross profit	\$ 402,388	\$ 329,272	\$ 1,330,359	\$ 1,263,630
Adjusted (non-GAAP) gross profit percentage	44.7%	44.2%	43.0%	45.1%
<b>Operating Expense Reconciliation (GAAP/non-GAAP)</b>				
GAAP operating expense	\$ 302,205	\$ 269,886	\$ 1,084,744	\$ 1,031,064
Share-based compensation-research and development	3,385	2,956	13,518	12,957
Share-based compensation-sales and marketing	3,741	3,218	14,246	12,846
Share-based compensation-general and administrative	5,588	4,130	19,709	17,321
Amortization of intangible assets	4,654	3,661	15,737	33,029
Acquisition and integration costs	3,778	—	5,111	—
Significant asset impairments and restructuring costs	1,460	15,059	18,139	23,933
Legal settlements	1,929	—	4,682	—
Total adjustments related to operating expense	\$ 24,535	\$ 29,024	\$ 91,142	\$ 100,086
Adjusted (non-GAAP) operating expense	\$ 277,670	\$ 240,862	\$ 993,602	\$ 930,978
<b>Income from Operations Reconciliation (GAAP/non-GAAP)</b>				
GAAP income from operations	\$ 95,870	\$ 55,799	\$ 229,946	\$ 214,722
Total adjustments related to gross profit	4,313	3,587	15,669	17,844
Total adjustments related to operating expense	24,535	29,024	91,142	100,086
Total adjustments related to income from operations	28,848	32,611	106,811	117,930
Adjusted (non-GAAP) income from operations	\$ 124,718	\$ 88,410	\$ 336,757	\$ 332,652
Adjusted (non-GAAP) operating margin percentage	13.9%	11.9%	10.9%	11.9%

**APPENDIX A- Reconciliation of Adjusted (Non- GAAP) Measurements (unaudited)**

	Quarter Ended October 31,		Year Ended October 31,	
	2018	2017	2018	2017
<b>Net Income (Loss) Reconciliation (GAAP/non-GAAP)</b>				
GAAP net income (loss)	\$ 63,977	\$ 1,160,056	\$ (344,690)	\$ 1,261,953
Exclude GAAP provision (benefit) for income taxes	(10,224)	(1,117,531)	493,471	(1,105,827)
Income before income taxes	53,753	42,525	148,781	156,126
Total adjustments related to income from operations	28,848	32,611	106,811	117,930
Loss on extinguishment and modification of debt	13,887	692	13,887	3,657
Non-cash interest expense	727	525	2,579	2,099
Change in fair value of debt conversion liability	12,070	—	12,070	—
Adjusted income before income taxes	109,285	76,353	284,128	279,812
Non-GAAP tax provision on adjusted income before income taxes	28,272	27,869	73,504	102,131
Adjusted (non-GAAP) net income	\$ 81,013	\$ 48,484	\$ 210,624	\$ 177,681
Weighted average basic common shares outstanding	143,659	143,097	143,738	141,997
Weighted average dilutive potential common shares outstanding <sup>1</sup>	157,745	158,791	158,884	169,919
<b>Net Income (Loss) per Common Share</b>				
GAAP diluted net income (loss) per common share	\$ 0.34	\$ 7.32	\$ (2.49)	\$ 7.53
Adjusted (non-GAAP) diluted net income per common share <sup>2</sup>	\$ 0.53	\$ 0.32	\$ 1.39	\$ 1.14

1. Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2018 includes 2.0 million shares underlying certain stock option and stock unit awards, 0.7 million and 2.5 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, which were converted by holders thereof immediately prior to maturity during the fourth quarter of fiscal 2018, and 8.9 million shares underlying Ciena's 4.0% convertible senior notes, which were converted at Ciena's election during the fourth quarter of fiscal 2018.

Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for fiscal 2018 includes 1.4 million shares underlying certain stock option and stock unit awards, 1.8 million and 2.9 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, and 9.1 million shares underlying Ciena's 4.0% convertible senior notes.

Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2017 includes 1.2 million shares underlying certain stock option and stock unit awards, 1.6 million and 3.7 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, and 9.2 million shares underlying Ciena's 4.0% convertible senior notes.

Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for fiscal 2017 includes 1.4 million shares underlying certain stock option and stock unit awards, 0.4 million and 13.9 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, 3.0 million shares underlying Ciena's 0.875% convertible senior notes and 9.2 million shares underlying Ciena's 4.0% convertible senior notes.

2. The calculation of adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2018 requires adding back interest expense of approximately \$0.4 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$2.3 million associated with Ciena's 4.0% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.

The calculation of adjusted (non-GAAP) diluted net income per common share for fiscal 2018 requires adding back interest expense of approximately \$1.8 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$8.7 million associated with

Ciena's 4.0% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.

The calculation of adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2017 requires adding back interest expense of approximately \$0.4 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$1.9 million associated with Ciena's 4.0% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.

The calculation of adjusted (non-GAAP) diluted net income per common share for fiscal 2017 requires adding back interest expense of approximately \$0.9 million associated with Ciena's 0.875% convertible senior notes, approximately \$7.2 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$7.4 million associated with Ciena's 4.0% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.

#### APPENDIX B- Calculation of EBITDA and Adjusted EBITDA (unaudited)

	Quarter Ended October 31,		Year Ended October 31,	
	2018	2017	2018	2017
<b>Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA)</b>				
Net income (loss) (GAAP)	\$ 63,977	\$ 1,160,056	\$ (344,690)	\$ 1,261,953
Add: Interest expense	14,873	13,926	55,249	55,852
Less: Interest and other income (loss), net	(13,357)	1,344	(12,029)	913
Add: Loss on extinguishment and modification of debt	(13,887)	(692)	(13,887)	(3,657)
Add: Provision (benefit) for income taxes	(10,224)	(1,117,531)	493,471	(1,105,827)
Add: Depreciation of equipment, building, furniture and fixtures, and amortization of leasehold improvements	21,110	21,316	84,214	77,189
Add: Amortization of intangible assets	7,611	5,993	25,806	45,713
<b>EBITDA</b>	<b>124,591</b>	<b>83,108</b>	<b>339,966</b>	<b>337,624</b>
Add: Shared-based compensation cost	14,076	11,517	52,972	48,360
Add: Significant asset impairments and restructuring costs	1,460	15,059	18,139	23,933
Add: Acquisition and integration costs	3,778	—	5,111	—
Add: Legal settlement	1,929	—	4,682	—
<b>Adjusted EBITDA</b>	<b>145,834</b>	<b>109,684</b>	<b>420,870</b>	<b>409,917</b>

\* \* \*

The adjusted (non-GAAP) measures above and their reconciliation to Ciena's GAAP results for the periods presented reflect adjustments relating to the following items:

- *Share-based compensation* - a non-cash expense incurred in accordance with share-based compensation accounting guidance.
- *Amortization of intangible assets* - a non-cash expense arising from the acquisition of intangible assets, principally developed technologies and customer-related intangibles, that Ciena is required to amortize over its expected useful life.
- *Acquisition and integration costs* - consist of financial, legal and accounting advisors' costs and severance and other employment-related costs related to Ciena's acquisition of Packet Design and DonRiver. Ciena does not believe that these costs are reflective of its ongoing operating expense following its completion of these integration activities.
- *Significant asset impairments and restructuring costs* - costs incurred as a result of restructuring activities taken to align resources with perceived market opportunities and in fiscal 2017, a significant asset impairment for a trade receivable for a customer in the Asia Pacific region.

- *Legal settlements* - costs incurred as a result of settlements, during the third quarter of fiscal 2018, of a commercial dispute with a former vendor, and during the fourth quarter of fiscal 2018, of securities class action suit relating the initial public offering of Cyan.
- *Loss on extinguishment and modification of debt* - reflects extinguishment of debt costs related to our conversion of Ciena's 4.0% convertible senior notes and debt modification expenses related to refinancing our then existing term loan, both of which occurred during the fourth quarter of fiscal 2018. For fiscal 2017, this reflects debt modification expenses related to our then existing term loans that were refinanced during the second quarter of fiscal 2017, the exchange offer of Ciena's "Original" 3.75% convertible senior notes and extinguishment of debt losses related to certain private repurchase transactions during fiscal 2017 of Ciena's then outstanding 0.875% convertible senior notes.
- *Non-cash interest expense* - a non-cash debt discount expense amortized as interest expense during the term of Ciena's 4.0% senior convertible notes, which were converted during the fourth quarter of 2018, relating to the required separate accounting of the equity component of these convertible notes.
- *Change in fair value of debt conversion liability* - a non-cash loss reflective of a mark to market fair value adjustment related to the outstanding conversion feature of Ciena's "New" 3.75% senior convertible notes.
- *Non-GAAP tax provision* - consists of current and deferred income tax expense commensurate with the level of adjusted income before income taxes and utilizes a current, blended U.S. and foreign statutory annual tax rate of 25.87% for the fourth fiscal quarter of 2018, and 36.5% for the fourth fiscal quarter of 2017. This rate may be subject to change in the future, including as a result of changes in tax policy or tax strategy.





**MANAGEMENT'S PREPARED REMARKS**

**FOURTH QUARTER AND FISCAL YEAR ENDED**

**OCTOBER 31, 2018**

*Investors should also review the Important Notes to Investors immediately following these prepared remarks.*

## **Opening Remarks**

- Welcome to Ciena's 2018 Fiscal Fourth Quarter and Year End Review.
- This morning's report includes these prepared written remarks, which have been made available in advance of our live conference call with the financial community.
- We have also posted to the Investors section of Ciena.com an accompanying presentation that reflects this discussion as well as certain highlighted items from the quarter and fiscal year.
- Our comments today speak to our financial performance; touch on market dynamics and how we're addressing the opportunity in front of us; and include a discussion of our long-term financial targets.

## **Introduction**

- Today we reported outstanding fiscal fourth quarter results to close out another strong year of performance in 2018.
  - Revenue, gross margin and operating margin for the quarter were particularly strong, demonstrating continued momentum in our business and an increasing preference for Ciena in the market.
- Consistent execution of our strategy and a relentless focus on meeting our customers' needs continues to drive this differentiated performance.
  - We're delivering sustained industry-leading growth - out-pacing the market with double-digit percent revenue growth in fiscal 2018; and reporting multiple quarters of record order flow and backlog - with Q4 being no exception.
  - We're also driving profitability gains, as illustrated by 22% growth in adjusted EPS for the fiscal year.
- This performance puts us in a position of clear market leadership and we are taking share as the competitive landscape continues to rationalize.
  - In fact, in calendar year 2018 we expect to have gained at least 2% of global market share as customers are increasingly looking for financial stability and certainty around the capacity for sustained forward innovation in their strategic partners.
- We believe that we've reached a pivotal point in the growth of our business.
  - The combination of our consistent technology leadership, successful anticipation and interception of market trends, and sustained ability to capture share and outperform the market, along with an industry environment that is working in our favor, provides us with tremendous confidence in both the near and longer-term outlook for our business.

## **Q4'18 Commentary**

- Our fiscal fourth quarter marked a strong end to the year across a number of key financial and operating metrics.

- Total quarterly revenue was \$899 million.
- Adjusted gross margin was 44.7%.
- Adjusted operating expense in the quarter was \$278 million, due to higher variable compensation tied to our strong performance.
- Adjusted earnings per share (EPS) was \$0.53.
- Adjusted operating income was \$124.7 million, or 13.9% adjusted operating margin.
- We again had record orders in the quarter, with bookings significantly greater than revenue, and finished the year with \$1.26 billion in backlog.
- This better-than-expected top line performance in Q4 was a direct result of the continued momentum across our business, including for our 6500 and WaveServer platforms, and in software and services.
  - We are clearly benefitting from our leading market position and strong demand, which we expect to continue into fiscal 2019.
- Also, in anticipation of the adoption of the new revenue recognition accounting standard ASC 606 in FY2019, we've adjusted certain terms and conditions of a number of customer contracts, which resulted in a one-time, approximately \$16 million benefit to revenue and gross margin in the fourth quarter.
  - These actions will not be repeated in future periods.
  - To be clear, absent this dynamic in the fourth quarter our results still would have been above our guidance range.

### **Business Drivers**

- This performance gives us confidence that the fundamental demand drivers for our business remain strong.
  - The cloud continues to be a significant influencer on industry structure, network architectures and customer consumption models.
    - Notably, it is the webscale players who continue to influence networks and markets beyond their own.
      - With strong capex growth plans to address capacity needs, this customer set is driving continued opportunity in DCI and submarine applications.
  - Our outlook for APAC remains very positive. In fact, we're seeing a broadening set of growth drivers in the region, and continued strength in key markets like India, Japan and Australia.
  - In different parts of the world, new initiatives related to fiber densification - like 5G and Fiber Deep - continue to drive new investments from service providers and cable operators alike.
  - And, we're seeing increased interest from service providers for software automation of their networks.

- We've made significant, long-term investments over several years to address customer needs in high-growth markets and applications.
  - As a result, we are benefitting from that strategy and believe we will continue to do so going forward.
- The current industry environment is also working in our favor.
  - Many of the generalists in our space have dueling priorities and investment demands, and some face significant challenges with security concerns, tariffs and supply chain constraints.
  - The smaller players are increasingly faced with an intensifying scale problem and are challenged to invest at the rate required to stay competitive.
  - While these dynamics are not new, they are becoming more significant factors in the market and with our customers, which is creating additional opportunity for us to continue taking share.
- Our performance during fiscal 2018 illustrates the positive effect these drivers and the current market conditions are having on our business, and also proves that our strategy to diversify the business, drive the pace of innovation and leverage our global scale is working.
  - By way of example, our focus on diversifying the business has resulted in more than 40% market share in the webscale DCI market. Direct webscale came in at nearly 18% of total revenue in 2018, more than double that of last year. And, we now have 117 Waveserver customers, 23 of which were new in the fourth quarter alone.
    - This diversification led to a significant increase in our non-telco revenue in 2018 to 35%, up from 29% in fiscal 2017.
  - We also remain out front in terms of innovation.
    - WaveLogic remains the only 400G-capable coherent technology in the industry with a strong roadmap designed to retain our market leadership in this space.
    - We also recently introduced our Adaptive IP capabilities for our Packet Networking portfolio, and we made two strategic acquisitions that help build out our Automation Software and Services portfolio.
  - Finally, our global scale gives us the capability to invest in both R&D and the front end of our business, which will fuel future growth.
- We have an effective strategy to diversify and scale our business while staying ahead of the innovation curve. And we have proven our unique ability to design and carry out this strategy with great success.

#### **Our Approach**

- Executing on that strategy includes pressing down on our technology leadership and investment capacity to force the pace of innovation. And, we are leveraging our ability to partner with customers for the long-term to help solve their business challenges.
- Key to that is the Adaptive Network - our vision of a new target end-state for network operators.

- This vision is transforming the conversations we're having with customers, allowing us to demonstrate the holistic value of our portfolio and enabling our customers to more clearly see how they can evolve their networks.
- Underpinning the Adaptive Network is our core business of programmable infrastructure, rooted in our industry-leading WaveLogic coherent technology.
  - To be clear, our wins in this space are as much about our roadmap and customers' confidence that we will execute as planned as they are about our current technology.
  - We have a hyper-competitive roadmap that extends beyond 400G and delivers multiple form factors. We are committed to maintaining our technology leadership in this space over the long-term - an ability we've proven time and time again.
- Also key to our Adaptive Network vision is how it addresses the shift in IP infrastructure away from the core toward access and aggregation.
  - Our Adaptive IP capabilities, including support for coherent optics and multiple new purpose-built hardware platforms in our Packet Networking portfolio, empower service providers and cable operators to capitalize on 5G, Fiber Deep, Business Services and more.
- Perhaps most critical in delivering the *full* potential of the Adaptive Network is software control and automation capabilities.
  - Our service providers customers must scale their networks while bending down their cost curves.
    - We've invested heavily - organically and inorganically - to build a comprehensive software automation suite and service delivery capability that is specifically designed to meet this need.
  - To continue honing our focus and resources on attacking this adjacent, high-growth market opportunity, Blue Planet will now operate as its own division within Ciena.
    - This formation enhances our ability to support a range of consumption models by allowing the software business to operate independently of our hardware business, where it makes sense.
  - We believe this move will help us achieve our growth objectives and contribute to continued long-term shareholder value.
    - Along with this change, we will further break down the revenue in this operating segment to provide greater clarity into the performance of our intelligent automation business.
    - Specifically, we will provide revenue for our Platform Software and Services, which includes our network management and domain control software, and all related services including software subscription.
    - And we will provide revenue for Blue Planet Automation Software and Services, which includes multi-domain service orchestration (MDSO), Inventory (BPI), Route Optimization and Assurance (ROA), NFV orchestration (NFVO), Analytics, and all related services and support, including software subscription.
    - This change can be seen in today's press release.

## Long-Term Targets

- Last year at this time we shared how we intend to manage the business and what to expect over the next three years through a set of long-term financial targets.
  - Given that we significantly outpaced the overall market in fiscal 2018, we achieved outstanding results against those targets.
    - Annual revenue was up more than 10% from fiscal 2017, which was significantly above our target growth rate of 5% to 7%.
    - Adjusted EPS for the year was \$1.39, which exceeded our target 14-16% annual growth rate.
    - Free cash flow generation for fiscal 2018 was \$162 million, or 48% of adjusted operating income. While this was slightly below our target range, we remain confident in achieving our long-term goal.
    - And, finally, adjusted operating margin for fiscal 2018 was approximately 11%. We generated this on lower-than-expected gross margin, which gives us confidence that 15% adjusted operating margin on an annualized basis is an achievable goal.
  - This overall performance is a direct result of our focus in 2018 on leveraging our leading technology and relationships to win new customer footprint and incumbency and to drive long-term market share gains.
- Following our strong 2018 performance, we believe it is appropriate to provide a new set of three-year targets that better reflect the changes in our business during the year as well as our current estimates of market growth.
  - We will continue to drive the business toward achieving a combination of top line growth and bottom line performance.
  - Gross margin and operating expense remain important financial metrics, but we believe the most important indicators of our performance and progress going forward will be revenue and adjusted EPS growth.
- With that in mind...
  - We believe we will continue to gain footprint and take market share. As a result, we have a new, higher target for annual revenue growth to average approximately 6% to 8% per year over the next three years.
  - With respect to operating margin, through projected revenue growth and disciplined operating expense management, we expect to achieve at least 15% adjusted operating margin for fiscal year 2021.
  - We also intend to remain focused on driving increased profitability. Given our expectations for higher growth and continued operating margin improvement, we have increased our target to grow our adjusted earnings per share at an average of greater than 20% per year over the next three years.
  - Finally, we continue to target annual free cash flow generation to be approximately 60% to 70% of adjusted operating income over each of the next three years.

- Underpinning these projected financial targets are a number of strategic drivers that we described in detail last year and include in our earnings presentation for which we've also set three-year targets.
  - Based on our strong market position and coherent modem roadmap, we continue to target annual revenue growth for our optical systems business of approximately 4% to 6% over the next three years.
  - In terms of our global network services business, or attached services, our transformation initiatives are well underway and we continue to target annual revenue growth of approximately 4% to 6% over the next three years.
  - In our packet networking business, the combination of increasing customer diversification and positive outlook for fiber densification initiatives, we are increasing our expectations for this portfolio to target annual revenue growth of approximately 8-10% over the next three years.
  - Given the changes in our software and services business, we are providing long-term targets that align with how we are organizing this business.
    - Specifically, we are targeting annual revenue growth from Platform Software and Software Related Services of 4-6% over the next three years - consistent with the expected growth rate of our correlated optical systems business.
    - For our Blue Planet Automation Software and Services, we are targeting \$100 million to \$120 million in annual revenue within the next three years.

#### **Balance Sheet & Capital Allocation**

- To wrap up today's prepared remarks, we'll review balance sheet and capital allocation activities.
  - We have settled the 2018 Convertible Notes, with the majority being paid in cash upon conversion.
  - With the recent performance of our stock price, we also exercised our option to convert the 2020 Convertible Notes, settling them with a combination of shares and cash.
    - As a result, we now have no convertible debt on our balance sheet.
  - We refinanced our existing term loan - increasing it to \$700 million, extending the maturity to 2025, and reducing our cost of borrowing.
- In addition, we successfully executed our plans to return capital to shareholders.
  - During fiscal 2018 we repurchased 4.2M shares for an aggregate price of approximately \$111 million.
  - We also changed the method of tax withholding on employee equity awards to use cash instead of selling shares, which further reduces shareholder dilution.
    - This change is another form of share repurchase and we will report it in that manner.
- Given our strong balance sheet and our expectations for cash generation over the next three years, today we announced that our board of directors authorized a new program to repurchase up to \$500M of our common stock.

- This replaces the existing program, but it does not change our capital allocation priorities or previously stated intent to retain minimum liquidity in the \$700 million to \$800 million range.

## Closing Commentary

- As we enter fiscal 2019, we have tremendous confidence in both our near and longer-term outlooks.
- Our business is built for, focused on, and financially capable of intersecting the trends that are driving the market today and into the future.
- Specifically, through our diversification, innovation and scale, we are:
  - Addressing the opportunity presented by webscale transformation as the dominant force in driving changes to the industry's structure
  - Advancing our leadership in optical with a business that is strong and growing stronger
  - Augmenting our IP and packet networking capabilities to attack this market as the outlook for it strengthens
  - Building out our intelligent automation software business as service providers look to tackle service and network complexity in new ways
- Through our continued execution, we expect to be able to invest in our business, grow revenue and drive increased profitability in fiscal 2019 and beyond.
- Thank you for your time today, and we look forward to connecting with you soon.

## IMPORTANT NOTES TO INVESTORS

### Forward-Looking Statements

Information presented in these prepared remarks contains a number of forward-looking statements. These statements are based on current expectations, forecasts, assumptions and other information available to the Company as of the date hereof. Forward-looking statements include Ciena's long-term financial targets, prospective financial results, return of capital plans, business strategies, expectations about its addressable markets, competitive landscape and market share, and outlook for future periods, as well as statements regarding Ciena's expectations, beliefs, intentions or strategies regarding the future. Often, these can be identified by forward-looking words such as "target," "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "should," "will," and "would" or similar words.

Forward-looking statements in these prepared remarks include, but are not limited to:

- "[In] calendar year 2018 we expect to have gained at least 2% of global market share."
- "[We] remain confident in achieving our long-term [free cash flow] goal."
- "[We have] confidence that 15% adjusted operating margin on an annualized basis is an achievable goal."
- "We believe we will continue to gain footprint and take market share. As a result, we have a new, higher target for annual revenue growth to average approximately 6% to 8% per year over the next three years."
- "[We] expect to achieve at least 15% adjusted operating margin for fiscal year 2021."
- "[We] have increased our target to grow our adjusted earnings per share at an average of greater than 20% per year over the next three years."
- "[We] continue to target annual free cash flow generation to be approximately 60% to 70% of adjusted operating income over each of the next three years."
- "[We] continue to target annual revenue growth for our optical systems business of approximately 4% to 6% over the next three years."



- “In terms of our global network services business, or attached services, our transformation initiatives are well underway and we continue to target annual revenue growth of approximately 4% to 6% over the next three years.”
- “In our packet networking business, the combination of increasing customer diversification and positive outlook for fiber densification initiatives, we are increasing our expectations for this portfolio to target annual revenue growth of approximately 8-10% over the next three years.”
- “[We] are targeting annual revenue growth from Platform Software and Software Related Services of 4-6% over the next three years.”
- “For our Blue Planet Automation Software and Services, we are targeting \$100 million to \$120 million in annual revenue within the next three years.”
- “[We intend] to retain minimum liquidity in the \$700 million to \$800 million range. “
- “[We] expect to be able to invest in our business, grow revenue and drive increased profitability in fiscal 2019 and beyond.”

Ciena’s actual results, performance or events may differ materially from these forward-looking statements made or implied due to a number of risks and uncertainties relating to Ciena’s business, including: the effect of broader economic and market conditions on our customers and their business; the loss of a key customer or changes in network spending or network strategy by large communication service providers and Webscale providers; seasonality and the timing and size of customer orders, including our ability to recognize revenue relating to such sales; the level of competitive and pricing pressure we encounter; the product, customer and geographic mix of sales within the period; supply chain disruptions and the level of success relating to efforts to optimize Ciena’s operations; changes in foreign currency exchange rates affecting revenue and operating expense; disruptions in our operations due to acquisition activities; our ability to commercialize and grow our software business; cybersecurity incidents impact our business; changes in government regulations, including related to tax and trade policy; adverse litigation matters and similar claims; and the other risk factors disclosed in Ciena’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on September 5, 2018 and Ciena’s Annual Report on Form 10-K to be filed with the SEC.

All information, statements, and projections in these prepared remarks speak only as of the date of these prepared remarks. Ciena assumes no obligation to update any forward-looking or other information included in these prepared remarks, whether as a result of new information, future events or otherwise.

#### Availability of Important Information

You are encouraged to review the Investors section of our website, where we routinely post press releases, SEC filings, recent news, financial results, supplemental financial information, and other announcements. From time to time we exclusively post material information to this website along with other disclosure channels that we use.

#### 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 these prepared remarks:

<b>Gross Margin (%)</b>	<b>44.3%</b>
<b>Operating Expense</b>	<b>\$302.2 million</b>
<b>Operating Income</b>	<b>\$95.9 million</b>
<b>Operating Margin (%)</b>	<b>10.7%</b>
<b>Net Income</b>	<b>\$64.0 million</b>
<b>Net Income per diluted common share</b>	<b>\$0.34</b>

#### Non-GAAP Measures

These prepared remarks include historical and prospective, non-GAAP measures of Ciena’s gross margin, operating expense, operating profit, net income, and net income per share, as well as measures of net debt and 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 provided herein provide management and investors useful information and meaningful insight to 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 these prepared remarks to Ciena's GAAP results for the relevant period can be found in the Appendix to our Q4 FY2018 investor presentation, posted to the quarterly results page of the Investor Relations section of our website (<http://investor.ciena.com/phoenix.zhtml?c=99134&p=quarterlyEarnings>). Additional information can also be found in our press release filed this morning and in our reports filed with the Securities and Exchange Commission.

With respect to Ciena's forward looking targets or projections in the prepared remarks above, Ciena is not able to provide a quantitative reconciliation of the adjusted (non-GAAP) measures of gross profit and margin, operating expense, operating income and margin, net income, and corresponding per share measures thereof, to the comparable gross profit and margin, operating expense, operating income and margin, net income and per share GAAP measures without unreasonable efforts. Ciena cannot provide meaningful estimates of the non-recurring charges and credits excluded from these non-GAAP measures due to the forward-looking nature of these estimates and their inherent variability and uncertainty. For the same reasons, Ciena is unable to address the probable significance of the unavailable information



# Ciena Corporation

## Investor presentation

Period ended October 31, 2018

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## Forward-looking statements and non-GAAP measures

Information in this presentation and related comments of presenters contain a number of forward-looking statements. These statements are based on current expectations, forecasts, assumptions and other information available to the Company as of the date hereof. Forward-looking statements include Ciena's long-term financial targets, prospective financial results, return of capital plans, business strategies, expectations about its addressable markets and market share, and business outlook for future periods, as well as statements regarding Ciena's expectations, beliefs, intentions or strategies regarding the future. Often, these can be identified by forward-looking words such as "target," "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "should," "will," "plan," "predict," "potential," "project," "continue," and "would" or similar words.

Ciena's actual results, performance or events may differ materially from these forward-looking statements made or implied due to a number of risks and uncertainties relating to Ciena's business, including: the effect of broader economic and market conditions on our customers and their business; our ability to execute our business and growth strategies; changes in network spending or network strategy by our customers; seasonality and the timing and size of customer orders, including our ability to recognize revenue relating to such sales; the level of competitive pressure we encounter; the product, customer and geographic mix of sales within the period; supply chain disruptions and the level of success relating to efforts to optimize Ciena's operations; changes in foreign currency exchange rates affecting revenue and operating expense; the impact of the Tax Cuts and Jobs Act; and the other risk factors disclosed in Ciena's periodic reports filed with the Securities and Exchange Commission (SEC) including Ciena's Quarterly Report on Form 10-Q filed with the SEC on September 5, 2018 and Ciena's Annual Report on Form 10-K to be filed with the SEC.

All information, statements, and projections in this presentation and the related earnings call speak only as of the date of this presentation and related earnings call. Ciena assumes no obligation to update any forward-looking or other information included in this presentation or related earnings calls, whether as a result of new information, future events or otherwise.

In addition, this presentation includes historical, and may include prospective, non-GAAP measures of Ciena's gross margin, operating expense, operating profit, EBITDA, net income, and net income per share. These measures are not intended to be a substitute for financial information presented in accordance with GAAP. A reconciliation of non-GAAP measures used in this presentation to Ciena's GAAP results for the relevant period can be found in the Appendix to this presentation. Additional information can also be found in our press release filed this morning and in our reports on Form 10-Q filed with the Securities and Exchange Commission.



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7	Balance Sheet & Capital Allocation



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# FY 2018 Highlights



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# FY 2018 Key Achievements

1

We are taking market share and outperforming the competition

- Annual revenue growth greater than the market at 10%
- Expect to have gained at least 2% of global market share
- Continued to diversify revenue with strong YoY growth; APAC up 21%, Webscale up 139% and Subsea up 25%

2

Our balance sheet is strong

- Ended the fiscal year with no convertible debt outstanding
- Significant return of capital to shareholders with \$111M used to repurchase shares during the year
- Ratings agency upgrades from Moody's and S&P

3

We are forcing the pace of innovation with the Adaptive Network

- WaveLogic roadmap extends beyond 400G and with multiple form factors
- Adaptive IP capabilities for Packet Networking to address fiber densification (5G & Fiber Deep)
- Blue Planet Automation portfolio strengthened with recent acquisitions of Packet Design for route optimization and DonRiver federated inventory and services

## FY 2018 Financial Highlights

	FY'18	FY'17
Revenue	\$3.09B	\$2.80B
Adjusted Gross Margin*	43.0%	45.1%
Adjusted Operating Expense*	\$994M 32.1% / total revenue	\$931M 33.2% / total revenue
Adjusted Operating Margin*	10.9%	11.9%
Adjusted EPS*	\$1.39	\$1.14

\* A reconciliation of these non-GAAP measures to our GAAP results is included in the press release for the relative period.



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## FY 2018 Operating Metrics

	FY'18	FY'17
Cash and Investments	\$953M	\$1.0B
Cash Flow from Operations	\$229M	\$235M
DSO	92 days	80 days
Inventory Turns	5.7	4.9



# Q4'18 Financials



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## Q4'18 Financial Highlights

Revenue	\$899.4 million
Adjusted Gross Margin*	44.7%
Adjusted Operating Margin*	13.9%
Adjusted EBITDA*	\$145.8 million
Cash Flow from Operations	\$68.0 million
Adjusted EPS*	\$0.53

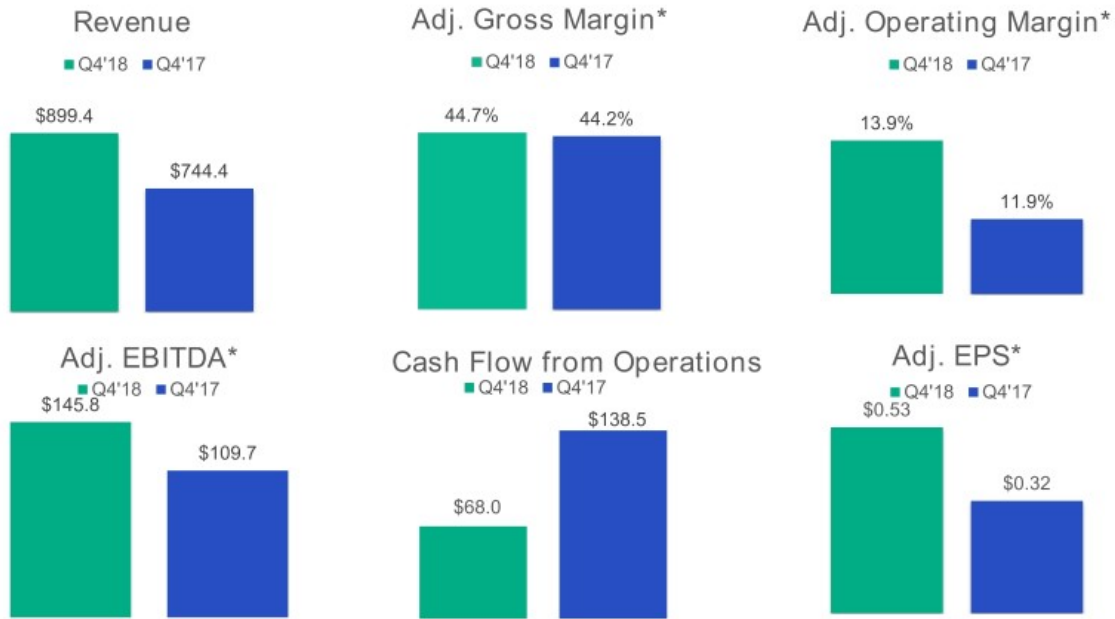
\* A reconciliation of these non-GAAP measures to our GAAP results is included in the appendix to this presentation.



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## Q4'18 Performance Comparisons (year-over-year)



\* A reconciliation of these non-GAAP measures to our GAAP results is included in the appendix to this presentation.

## Q4'18 Balance Sheet and Operating Metrics

Cash and Investments	\$953.4 million
Cash Flow from Operations	\$68.0 million
DSO	79 days
Inventory Turns	6.4



## Revenue by Segment (Amounts in millions)



	Q4 FY 2018		Q4 FY 2017	
	Revenue	%**	Revenue	%**
<b>Networking Platforms</b>				
Converged Packet Optical	\$646.4	71.9	\$506.4	68.0
Packet Networking	66.5	7.4	92.5	12.5
<b>Total Networking Platforms</b>	<b>712.9</b>	<b>79.3</b>	<b>598.9</b>	<b>80.5</b>
<b>Software and Software-Related Services</b>				
Platform Software and Services	56.6	6.3	35.9	4.8
Blue Planet Automation Software and Services	10.7	1.2	5.9	0.8
<b>Total Software and Software-Related Services</b>	<b>67.3</b>	<b>7.5</b>	<b>41.8</b>	<b>5.6</b>
<b>Global Services</b>				
Maintenance Support and Training	67.4	7.5	56.2	7.5
Installation and Deployment	39.3	4.4	33.5	4.5
Consulting and Network Design	12.5	1.3	14.0	1.9
<b>Total Global Services</b>	<b>119.2</b>	<b>13.2</b>	<b>103.7</b>	<b>13.9</b>
<b>Total</b>	<b>\$899.4</b>	<b>100.0%</b>	<b>\$744.4</b>	<b>100.0%</b>

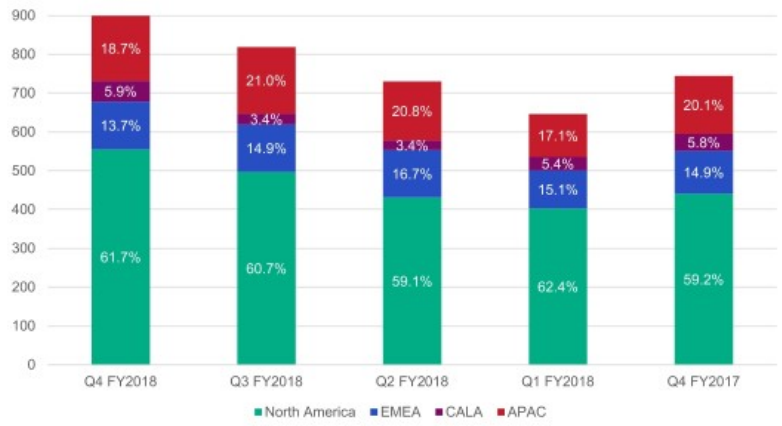
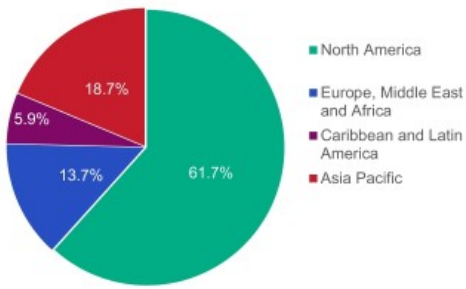
\* A reconciliation of these non-GAAP measures to our GAAP results is included in the appendix to this presentation.  
\*\* Denotes % of total revenue

**ciena**

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# Revenue by Geographic Region

Q4 2018



# Our Pedigree



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## Successful execution of our strategy

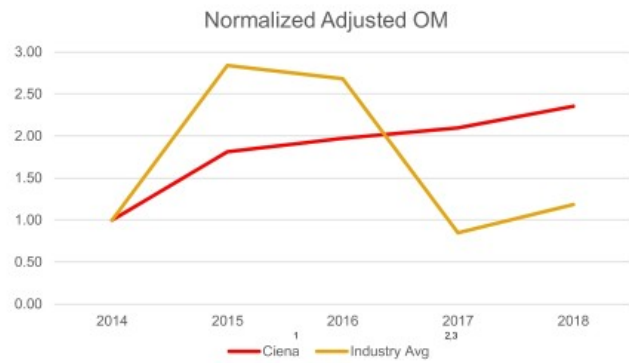
		FY 2018	FY 2015
Diversification	APAC	~20% total revenue   India: \$271M	~10% total revenue   India: ~\$100M
	Webscale*	~35% total revenue	~15% total revenue
	Subsea	Upgrade + New Build market	Upgrade market only
Innovation	Solutions	Purpose built solutions for individual customer types and applications	Limited number of solutions designed to be used by all customers
	Software Automation	Blue Planet + DonRiver and Packet Design	Limited
	IP Capabilities	Introduction of Adaptive IP for Fiber Densification	Limited
Scale	Customers	1,300+	1,000
	R&D Spend**	\$492 million	\$414 million
	Go to Market	80+ Countries	~60 Countries



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\*Direct, indirect, and apportioned subsea revenue  
 \*\*R&D operating expense, GAAP

# Delivering consistent and differentiated financial performance



\*Industry Average: ACIA, ADTN, ADVA, CSCO, INFN<sup>1</sup>, JNPR and NOKIA IP Networks segment

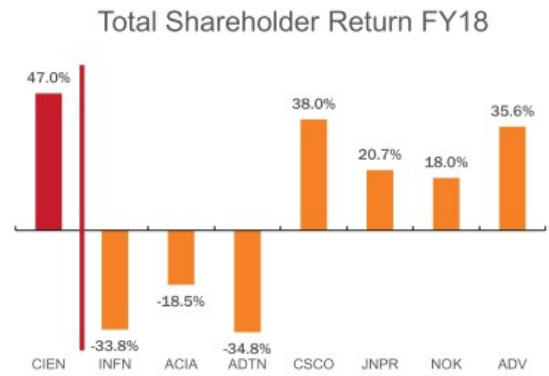
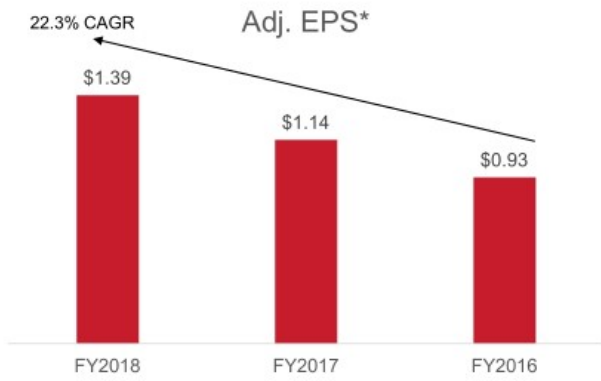
1. 2018 includes mid-point of Q1'19 guidance
2. 2018 includes mid-point of Q4'18 guidance
3. INFN Q4 revenue is based on consensus as of 10/1/18 and excludes Coriant however adjusted OM is based on company forecast and includes Coriant



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# Delivering differentiated profitability and stock outperformance



\*A reconciliation of these non-GAAP measures to our GAAP results is included in the press release for the relative period.



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# Ciena is a market share leader in all target segments



## #1 GLOBALLY

- DATA CENTER INTERCONNECT
- DATA CENTER INTERCONNECT for ICPs
- PURPOSE-BUILT/COMPACT MODULAR DCI

## #1 N. AMERICA

- TOTAL OPTICAL NETWORKING
- PACKET OPTICAL
- NEXT-GEN OPTICAL
- LH WDM
- METRO WDM
- OPTICAL SWITCHING

## #2 GLOBALLY

- TOTAL OPTICAL NETWORKING
- NEXT-GEN OPTICAL
- PACKET OPTICAL
- LH WDM
- METRO WDM

## #1 GLOBALLY

- OPTICAL EQUIPMENT VENDOR LEADERSHIP SP SURVEY
- OPTICAL NETWORK HARDWARE VENDOR SCORECARD
- CARRIER ETHERNET ACCESS DEVICES
- DATA CENTER INTERCONNECT
- PURPOSE-BUILT/COMPACT MODULAR DCI
- SUBMARINE

## #1 N. AMERICA

- TOTAL OPTICAL NETWORKING
- CARRIER ETHERNET ACCESS DEVICES
- LH WDM
- METRO WDM

## #2 GLOBALLY

- TOTAL OPTICAL NETWORKING
- LH WDM
- METRO WDM

## #1 GLOBALLY

- DATA CENTER INTERCONNECT
- DATA CENTER INTERCONNECT for ICPs
- PURPOSE-BUILT/COMPACT MODULAR DCI
- SUBSEA OPTOELECTRONICS
- SUBMARINE SLTE MARKET

## #1 N. AMERICA

- TOTAL OPTICAL NETWORKING
- LH WDM
- METRO WDM

## #2 GLOBALLY

- TOTAL OPTICAL NETWORKING
- LH WDM
- METRO WDM

Optical Networks Report, 3Q18

Optical Networks Report, 3Q18  
DCI Market Tracker, September 2018  
Ethernet Access Devices Tracker, September 2018  
Optical Network Hardware Vendor Scorecard, June 2018  
Optical Equipment Vendor Leadership Global Service Provider Survey December 2017

Optical Networks Report, 3Q18  
Data Center Interconnect Market Share Report, 3Q18



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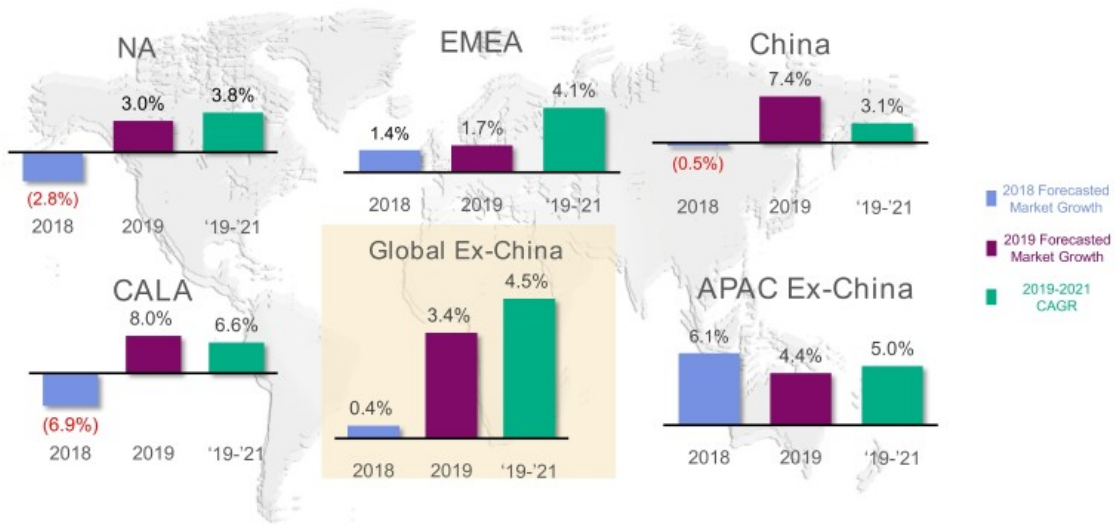


# Market Context



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# Growth forecasts for our target markets vary by geographic region



Source: IHS, Dell'Oro, Signal AI, Ovum, Ciena analysis

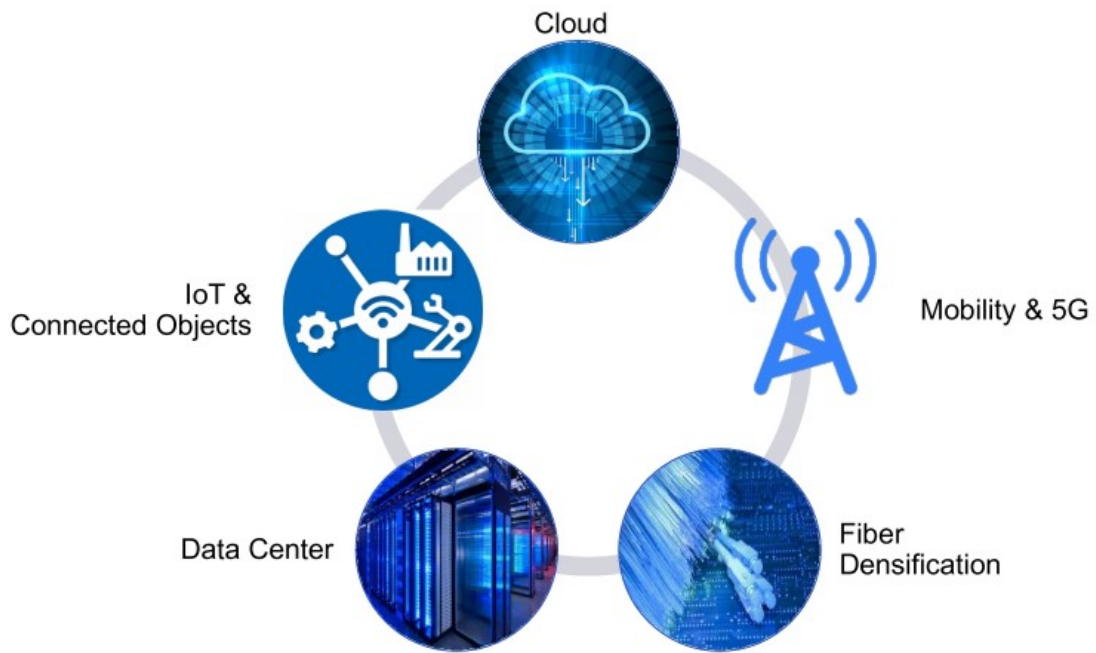


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# Several mega trends are affecting our business

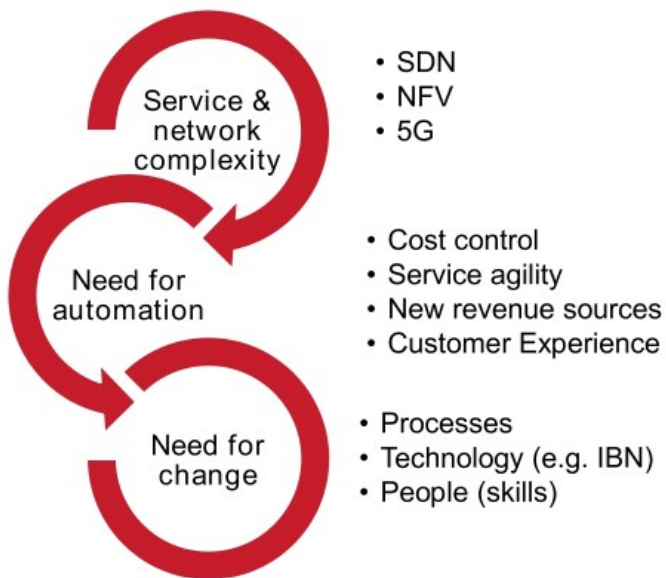
All driven by an increased need for greater bandwidth and adaptive automation



# Software Overview



# Why Automation Matters



60%

of service provider are deploying or plan to deploy Multi-Layer Data/Transport SDN Software\*

52%

of service providers want automation and optimization across IP and optical domains\*

2-5ys

NFV will transform OSS to create a digital operating platform – comprised of network and service orchestration, inventory, and service assurance.\*\*

\*Source: Charting the Path to Network Automation & Disaggregation: Heavy Reading Carrier SDN Survey Analysis, February 2018  
\*\*Source: BSS and OSS are moving to the cloud: Analysys Mason's perspective, July 2017



## Software and Software-related Services Operating Segment

Platform Software and Services	Blue Planet Automation Software and Services
<ul style="list-style-type: none"> <li>• Network management and domain control software</li> <li>• Related services, including software subscription</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-domain service orchestration (MDSO)</li> <li>• Inventory (BPI)</li> <li>• Route Optimization and Assurance (ROA)</li> <li>• NFV orchestration (NFVO)</li> <li>• Analytics</li> <li>• Related services and support, including software subscription</li> </ul>

	Q4 FY 2018		Q4 FY 2017	
	Revenue	%**	Revenue	%**
Software and Software-Related Services				
Platform Software and Services	56.6	6.3	35.9	4.8
Blue Planet Automation Software and Services	10.7	1.2	5.9	0.8
<b>Total Software and Software-Related Services</b>	<b>\$67.3</b>	<b>7.5%</b>	<b>\$41.8</b>	<b>5.6%</b>

# Long-Term Targets



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## New long-term financial targets\*

Execution of our strategy will drive top-line growth, profitability and cash generation

Revenue	Adj. operating margin	Adj. EPS	Free cash flow
Approximately 6% to 8% annual growth over the next three years	15% for fiscal 2020; expect to achieve at least 15% in fiscal 2021	Over 20% annual growth per year over the next three years	Approximately 60-70% of adjusted operating income in each of the next three years

\*Projections or outlook with respect to future operating results are only as of December 13, 2018, the date presented on the related earnings call. Actual results may differ materially from these forward looking statements. Ciena assumes no obligation to update this information, whether as a result of new information, future events or otherwise.

## Ciena performed well against its original three-year targets

Ciena's strategic drivers play a key role in our performance

	Original annual revenue growth targets	FY18 revenue growth
Optical Systems	Approximately 4-6%	13%
Attached Services	Approximately 4-6%	7%
Packet Networking	Approximately 6-8%	(9.5%)
Software and Related Services	Approximately 14-16%	25%



## New long-term financial targets\*

Three-year annual revenue growth targets	
Optical Systems	Approximately 4-6%
Attached Services	Approximately 4-6%
Packet Networking	Approximately 8-10%
Blue Planet	Approximately \$100M-\$120M <sup>1</sup>

\*Projections or outlook with respect to future operating results are only as of December 13, 2018, the date presented on the related earnings call. Actual results may differ materially from these forward looking statements. Ciena assumes no obligation to update this information, whether as a result of new information, future events or otherwise.

<sup>1</sup>Projection indicates annual target for Ciena's Blue Planet Automation software and services business in fiscal 2021



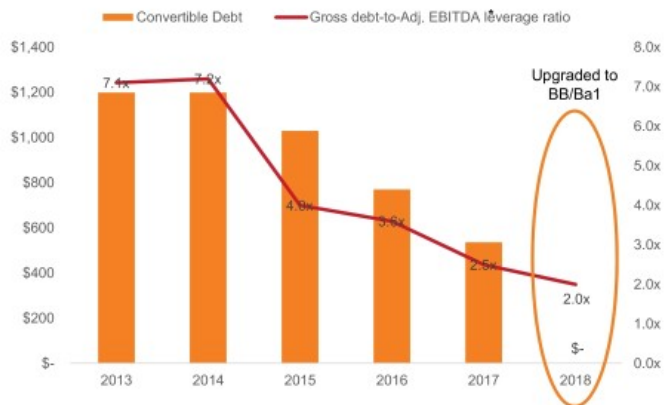
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# Balance Sheet & Capital Allocation

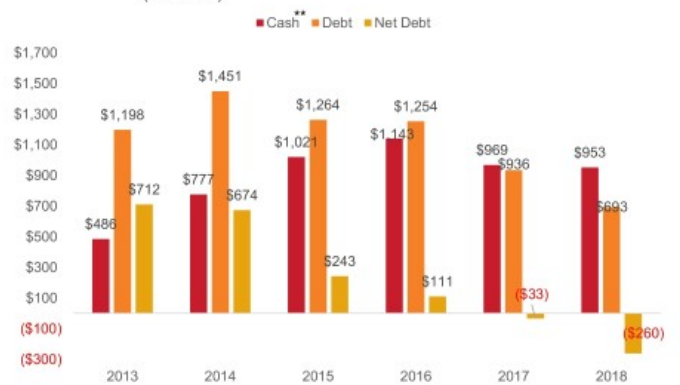
# Strengthening balance sheet

## Leverage Trend



## Net Debt (Cash) Position

(in millions)



\*A reconciliation of these non-GAAP measures to our GAAP results is included in the appendix to this presentation  
 \*\*Cash & cash equivalents



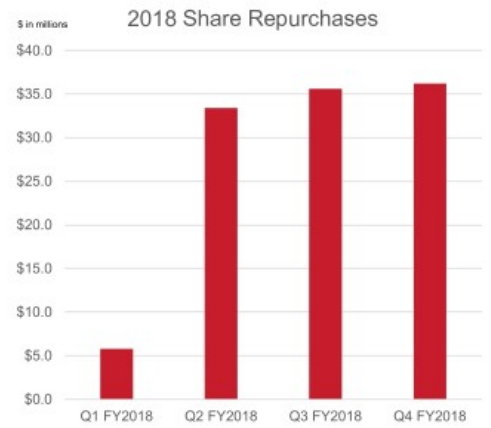


## Continued strengthening balance sheet

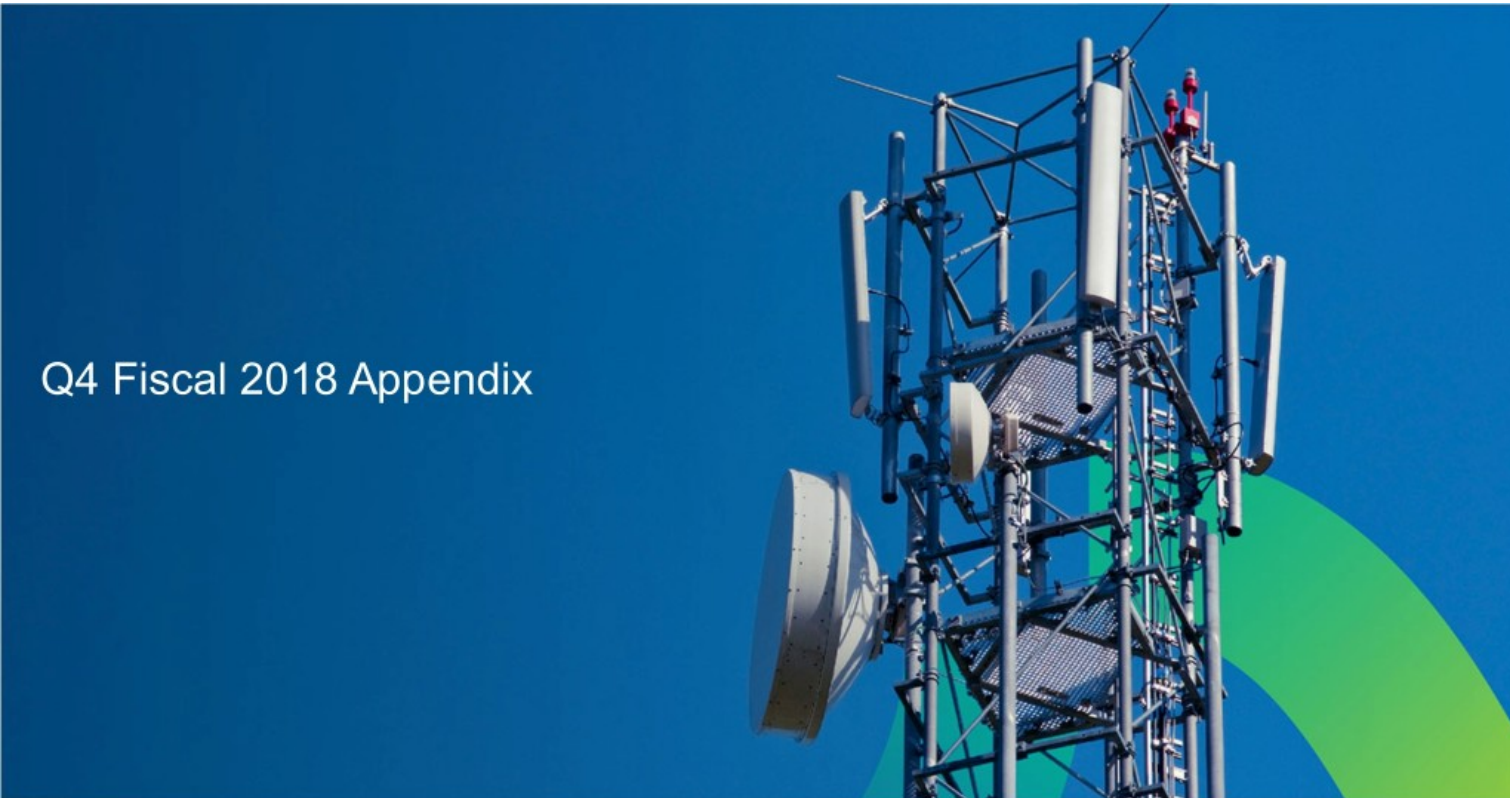
Convertible Debt	Reduced from \$538M to \$0
Net Cash / (Debt)	Net cash of \$260M
Gross Debt-to-EBITDA leverage ratio	Decreased from 2.5x to 2.0x
Ratings agency upgrades	Moody's upgrade from Ba3 to Ba1; S&P upgrade from Positive Outlook to BB

## Capital allocation priorities

Convertible Debt & Dilution	Settled 2018 Notes largely for cash Elected to convert 2020 Notes
Share Repurchase	Board authorized share repurchase program of up to \$500M of Ciena common stock
Business Expansion	Retain a minimum of \$700M to \$800M for organic reinvestment to drive R&D, and for growth through accretive M&A



# Q4 Fiscal 2018 Appendix



## Gross Profit Reconciliation (Amounts in thousands)

	Q4 FY 2018	Q3 FY 2018	Q2 FY 2018	Q1 FY 2018	Q4 FY 2017
GAAP gross profit	\$398,075	\$351,543	\$293,307	\$271,765	\$325,685
Share-based compensation-products	705	783	824	672	694
Share-based compensation-services	651	618	722	625	561
Amortization of intangible assets	2,957	2,534	2,289	2,289	2,332
Total adjustments related to gross profit	4,313	3,935	3,835	3,586	3,587
<b>Adjusted (non-GAAP) gross profit</b>	<b>\$402,388</b>	<b>\$355,478</b>	<b>\$297,142</b>	<b>\$275,351</b>	<b>\$329,272</b>
<b>Adjusted (non-GAAP) gross margin</b>	<b>44.7%</b>	<b>43.4%</b>	<b>40.7%</b>	<b>42.6%</b>	<b>44.2%</b>

## Operating Expense Reconciliation (Amounts in thousands)

	Q4 FY 2018	Q3 FY 2018	Q2 FY 2018	Q1 FY 2018	Q4 FY 2017
GAAP operating expense	\$302,205	\$266,269	\$261,241	\$255,029	\$269,886
Share-based compensation-research and development	3,385	3,082	3,796	3,255	2,956
Share-based compensation-sales and marketing	3,741	3,417	3,760	3,328	3,218
Share-based compensation-general and administrative	5,588	4,538	5,109	4,474	4,130
Significant asset impairments and restructuring costs	1,460	6,359	4,359	5,961	15,059
Amortization of intangible assets	4,654	3,837	3,623	3,623	3,661
Acquisition and integration costs, excluding share-based compensation	3,778	1,333	-	-	-
Legal settlement	1,929	2,753	-	-	-
Total adjustments related to operating expense	\$24,535	\$25,319	\$20,647	\$20,641	\$29,024
<b>Adjusted (non-GAAP) operating expense</b>	<b>\$277,670</b>	<b>\$240,950</b>	<b>\$240,594</b>	<b>\$234,388</b>	<b>\$240,862</b>

## Income from Operations Reconciliation (Amounts in thousands)

	Q4 FY 2018	Q3 FY 2018	Q2 FY 2018	Q1 FY 2018	Q4 FY 2017
GAAP income from operations	\$95,870	\$85,274	\$32,066	\$16,736	\$55,799
Total adjustments related to gross profit	4,313	3,935	3,835	3,586	3,587
Total adjustments related to operating expense	24,535	25,319	20,647	20,641	29,024
Total adjustments related to income from operations	28,848	29,254	24,482	24,227	32,611
<b>Adjusted (non-GAAP) income from operations</b>	<b>\$124,718</b>	<b>\$114,528</b>	<b>\$56,548</b>	<b>\$40,963</b>	<b>\$88,410</b>
<b>Adjusted (non-GAAP) operating margin</b>	<b>13.9%</b>	<b>14.0%</b>	<b>7.7%</b>	<b>6.3%</b>	<b>11.9%</b>



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## Net Income (loss) Reconciliation (Amounts in thousands)

	Q4 FY 2018	Q3 FY 2018	Q2 FY 2018	Q1 FY 2018	Q4 FY 2017
GAAP net income (loss)	\$63,977	\$50,840	\$13,856	(\$473,363)	\$1,160,056
Exclude GAAP provision (benefit) for income taxes	(10,224)	19,280	6,475	477,940	(1,117,531)
Income before income taxes	53,753	70,120	20,331	4,577	42,525
Total adjustments related to income from operations	28,848	29,254	24,482	24,227	32,611
Loss on extinguishment and modification of debt	13,887	-	-	-	692
Non-cash interest expense	727	793	759	749	525
Change in fair value of debt conversion liability	12,070	-	-	-	-
Adjusted income before income taxes	109,285	100,167	45,572	29,553	76,353
Non-GAAP tax provision on adjusted income before income taxes	28,272	25,913	11,789	7,645	27,869
<b>Adjusted (non-GAAP) net income</b>	<b>\$81,013</b>	<b>\$74,254</b>	<b>\$33,783</b>	<b>\$21,908</b>	<b>\$48,484</b>
Weighted average basic common shares outstanding	143,659	143,400	143,975	143,922	143,097
Weighted average dilutive potential common shares outstanding <sup>1</sup>	157,745	159,998	151,011	145,558	158,791

## Net Income (loss) per Common Share

	Q4 FY 2018	Q3 FY 2018	Q2 FY 2018	Q1 FY 2018	Q4 FY 2017
GAAP diluted net income (loss) per common share	\$ 0.34	\$ 0.34	\$ 0.09	\$ (3.29)	\$ 7.32
<b>Adjusted (Non-GAAP) diluted net income per common share<sup>2</sup></b>	<b>\$ 0.53</b>	<b>\$ 0.48</b>	<b>\$ 0.23</b>	<b>\$ 0.15</b>	<b>\$ 0.32</b>



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## Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA) (Amounts in thousands)

Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA)	Q4 FY 2018	Q3 FY 2018	Q2 FY 2018	Q1 FY 2018	Q4 FY 2017
Net income (loss) (GAAP)	\$ 63,977	\$ 50,840	\$ 13,856	\$ (473,363)	\$ 1,160,056
Add: Interest expense	14,873	13,611	13,031	13,734	13,926
Less: Interest and other income (loss), net	(13,357)	(1,543)	1,296	1,575	1,344
Add: Loss on extinguishment and modification of debt	(13,887)	-	-	-	(692)
Add: Provision (benefit) for income taxes	(10,224)	19,280	6,475	477,940	(1,117,531)
Add: Depreciation of equipment, building, furniture and fixtures, and amortization of leasehold improvements	21,110	21,704	20,567	20,833	21,316
Add: Amortization of intangible assets	7,611	6,371	5,912	5,912	5,993
<b>EBITDA</b>	<b>\$ 124,591</b>	<b>\$ 113,349</b>	<b>\$ 58,545</b>	<b>\$ 43,481</b>	<b>\$ 83,108</b>
Add: Shared-based compensation cost	14,076	12,337	14,166	12,393	11,517
Add: Significant asset impairments and restructuring costs	1,460	6,359	4,359	5,961	15,059
Add: Acquisition and integration costs	3,778	1,333	-	-	-
Add: Legal settlement	1,929	2,753	-	-	-
<b>Adjusted EBITDA</b>	<b>\$ 145,834</b>	<b>\$ 136,131</b>	<b>\$ 77,070</b>	<b>\$ 61,835</b>	<b>\$ 109,684</b>

## Reconciliation Endnotes

1. Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2018 includes 2.0 million shares underlying certain stock option and stock unit awards, 0.7 million and 2.5 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, which were converted by holders thereof immediately prior to maturity during the fourth quarter of fiscal 2018, and 8.9 million shares underlying Ciena's 4.0% convertible senior notes, which were converted at Ciena's election during the fourth quarter of fiscal 2018.

Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for the third quarter of fiscal 2018 includes 1.3 million shares underlying certain stock option and stock unit awards, 3.0 million shares underlying each Ciena's "New" and "Original" 3.75% convertible senior notes and 9.2 million shares associated with Ciena's 4.0% convertible senior notes.

Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for the second quarter of fiscal 2018 includes 1.3 million shares underlying certain stock option and stock unit awards and 2.7 million and 3.0 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively.

Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for the first quarter of fiscal 2018 includes 0.9 million shares underlying certain stock option and stock unit awards and 0.7 million shares underlying Ciena's "New" 3.75% convertible senior notes.

Weighted average dilutive potential common shares outstanding used in calculating adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2017 includes 1.2 million shares underlying certain stock option and stock unit awards, 1.6 million and 3.7 million shares underlying Ciena's "New" and "Original" 3.75% convertible senior notes, respectively, and 9.2 million shares underlying Ciena's 4.0% convertible senior notes.

2. The calculation of adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2018 requires adding back interest expense of approximately \$0.4 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$2.3 million associated with Ciena's 4.0% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.

The calculation of adjusted (non-GAAP) diluted net income per common share for the third quarter of fiscal 2018 requires adding back interest expense of approximately \$0.5 million associated with Ciena's "Original" 3.75% convertible senior notes, and approximately \$2.1 million associated with Ciena's 4.0% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.

The calculation of adjusted (non-GAAP) diluted net income per common share for the second quarter of fiscal 2018 requires adding back interest expense of approximately \$0.5 million associated with Ciena's "Original" 3.75% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.

The calculation of adjusted (non-GAAP) diluted net income per common share for the fourth quarter of fiscal 2017 requires adding back interest expense of approximately \$0.4 million associated with Ciena's "Original" 3.75% convertible senior notes and approximately \$1.9 million associated with Ciena's 4.0% convertible senior notes to the adjusted (non-GAAP) net income in order to derive the numerator for the adjusted (non-GAAP) earnings per common share calculation.



Thank You



