Ribbon Communications

Third Quarter 2023 Results

October 25, 2023

Note Regarding Forward-Looking Statements and Non-GAAP Financial Measures

The information in this presentation contains “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which are subject to a number of risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including without limitation statements regarding the Company’s projected financial results for the fourth quarter of 2023 and beyond; the impact of the wars in Israel and Ukraine; customer engagement and momentum; plans and objectives for future operations, including cost reductions; capital structure changes and plans for future product development and manufacturing and the expected benefits therefrom, are forward-looking statements. Without limiting the foregoing, the words “believes”, “estimates”, “expects”, “expectations”, “intends”, “may”, “plans”, “projects” and other similar language, are intended to identify forward-looking statements.

Forward-looking statements are based on the Company’s current expectations and assumptions regarding its business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Actual results may differ materially from those contemplated in these forward-looking statements due to various risks, uncertainties and other important factors, including, among others, the effects of geopolitical instabilities and wars, including in Israel and Ukraine (and the impact of sanctions and trade restrictions imposed as a result thereof); operational disruptions at facilities located in Israel including as a result of military call-ups of the Company’s employees in Israel, closure of the offices there or the temporary or long-term closure of contract manufacturing in the region; the potential impact of litigation; risks related to supply chain disruptions, including as a result of component availability; risks that the Company will not realize the estimated cost savings and/or anticipated benefits from its strategic restructuring efforts; the impact of restructuring and cost-containment activities; unpredictable fluctuations in quarterly revenue and operating results; risks related to the terms of the Company’s credit agreement including compliance with the financial covenants; risks resulting from rising interests rates and inflationary pressures; risks related to cybersecurity and data intrusion; failure to compete successfully against telecommunications equipment and networking companies; failure to grow the Company’s customer base or generate recurring business from existing customers; credit risks; the timing of customer purchasing decisions and the Company’s recognition of revenues; macroeconomic conditions, including inflation; market acceptance of the Company’s products and services; rapid technological and market change; the ability to protect Company intellectual property rights and obtain necessary licenses; the ability to maintain partner, reseller, distribution and vendor support and supply relationships; the potential for defects in the Company’s products; increases in tariffs, trade restrictions or taxes on the Company’s products; and currency fluctuations.

These factors are not intended to be an all-encompassing list of risks and uncertainties that may affect the Company's business and results from operations. Additional information regarding these and other factors can be found in the Company's reports filed with the Securities and Exchange Commission, including, without limitation, its Form 10-K for the year ended December 31, 2022 and its Form 10-Q for the quarter ended June 30, 2023. In providing forward-looking statements, the Company expressly disclaims any obligation to update these statements publicly or otherwise, whether as a result of new information, future events or otherwise, except as required by law.

This presentation also includes certain non-GAAP financial measures in addition to the U.S. GAAP financials. Our management believes that presenting certain non-GAAP financial measures provides meaningful information to investors in understanding our operating results and may enhance investors' ability to analyze financial and business trends including the ability to compare period to period more easily by excluding items that could have a disproportionately negative or positive impact on results in a given financial period. The non-GAAP measures have limitations as analytical tools, and you should not consider them in isolation or as a substitute for the most directly comparable financial measures prepared in accordance with U.S. GAAP. We urge you to review the reconciliation of our non-GAAP financial measures to the most directly comparable GAAP financial measures set forth in the Appendix to this presentation, and not to rely on any single financial measure to evaluate our business.

Please note that as part of the basis of presentation, totals may not sum due to rounding.

Third Quarter 2023 Business Overview

Bruce McClelland, President & CEO

Mick Lopez, Executive Vice President & CFO

Third Quarter and 2023 Business Highlights | Consolidated

Improved Financial Profitability

+21% **Growth in Q3 Adj. EBITDA YoY**

$28M Adjusted EBITDA

33bps Improvement in Gross Margin

7% Reduction in Operating Expenses

-2% **Decline in Q3 Revenue YoY**

Lower US Tier 1 Service Provider

+36% **+13M Growth in YTD Adj. EBITDA**

+2% **Growth in YTD Revenue**

Diversification Strategy Driving Growth

Neptune IP Router in Service at U.S. Tier 1 Service Provider

Growth in Regional U.S. Service Providers

Continued Strong momentum in **U.S. Rural** broadband

APAC Strength

India / Japan – New Wins / Gaining Share

Cloud & Edge Market Expansion

Year to Date **Enterprise Growth**

U.S. Federal Expansion

Third Quarter and 2023 Business Highlights | IP Optical

Path to Profitability

+14% **Growth** in Revenue YTD

YTD IP Routing Growth: +31%

YTD Optical Growth: + 9%

$18M **Improvement** in YTD Adj. EBITDA

+$9M Revenue Growth

+$9M Operating Expense Reductions

+49% YoY Overall **Growth** in U.S.

U.S. Rural: **+ 45%**

+51% YoY **Growth** in India

Key Trends

Multi-Service Edge IP Routing Solution at U.S. Tier 1

Positive Earnings Contribution Expected in Q4

U.S. Rural Growth / India Strength

Strong EMEA Outlook in Q4

New Products (Apollo 9400 Platform / IP Routing Neptune XDR 2000 series)

Customer Momentum

airtel, TATA TELESERVICES LIMITED, VIAERO, ROGERS, SONY, SoftBank Group

Third Quarter and 2023 Business Highlights | Cloud & Edge

Consistent Earnings Performance

-4%

Revenue Change YTD

Lower US Tier 1 Service Provider

+240bps

Gross Margin Improvement YoY

Improved Product and Services Margins

27%

Solid Q3 Adj. EBITDA Margin

Up 100bps YoY

Gross Margin at **68%**

4% Reduction in Operating Expenses YoY

Market Diversification

U.S. Department of Defense:

New Wins in Voice Modernization

Global Service Provider Wins:

APAC / EMEA

Growth Areas

U.S. Federal
U.S. Regional Carriers
Global Service Providers
Enterprise Market Vertical

Customer Diversification

JPMorgan Chase & Co. · zoom · Goldman Sachs · MTN · verizon · Dell · Bank of America · stc

Third Quarter 2023 Financial Highlights

3Q23 Revenue

$203M down 2% YoY
International 58% of Sales
Enterprise 30% of Product Sales

Balance Sheet

$25M Ending Cash
$240M Term Loan Balance
$10M Revolver Loan Balance

Profitability Metrics

$28M Adjusted EBITDA[1]
$0.05 Non-GAAP EPS[1]

Cloud & Edge

Steady Contribution

Continued Strong Margins & EBITDA Contribution

Software 61% of total Cloud and Edge product revenue

Revenue Down 7% YoY

Non U.S. Tier 1 Customers **up 3% YoY**

Continued Profitability

68% Non-GAAP Gross Margin

Enterprise Sales up 44% YTD

Enterprise Shift to **Recurring Revenue Model**

Operating **Expense Reduction**

27% Adjusted EBITDA Margin

IP Optical Networks

Revenue Growth

Up **14% Overall YTD**

IP Routing **up 30% in Q3 YoY**

North America **up 31% in Q3 YoY**

India **up 51% in Q3 YoY**

EMEA **down 22% in Q3 YoY**

Market Momentum

U.S. Rural Broadband Growth

New Product Growth

1.0x YTD **book to revenue** ratio

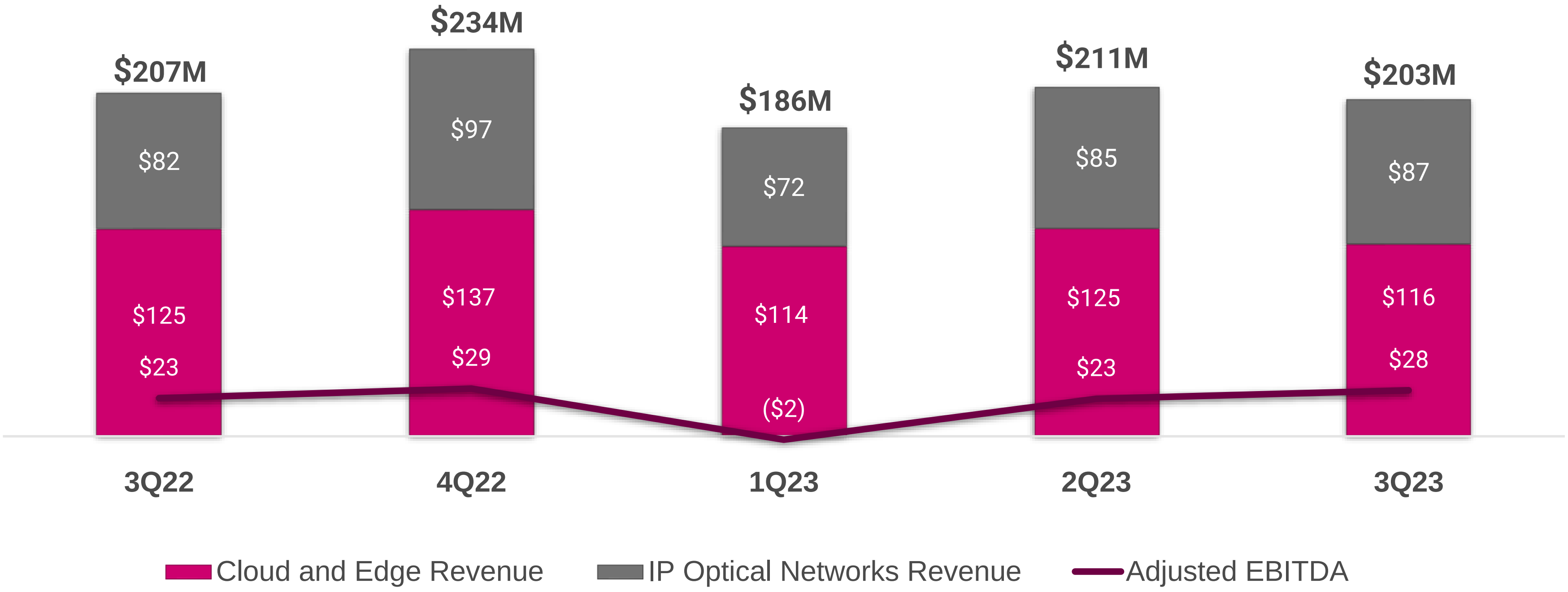
Note:
1. Please see the discussion of non-GAAP financial measures in the appendix.

Third Quarter 2023 GAAP Financial Summary

	3Q22	2Q23	3Q23
Revenue	$207M	$211M	$203M
Gross Margin	50%	48%	51%
OpEx	$108M	$108M	$103M
Income (loss) from operations	($3M)	($7M)	$1M
Other (expense) income, net[1]	($9M)	($9M)	($10M)
Net income (loss)	($18M)	($21M)	($14M)
Diluted EPS	($0.12)	($0.13)	($0.08)

Note:
1. 3Q22 includes a $2M non-cash loss associated with the quarterly mark-to-market of the AVCT investment and an EPS impact of ($0.01)

Total Revenue and Adjusted EBITDA[1]



Note:
1. Please see the discussion of non-GAAP financial measures in the appendix.

Third Quarter 2023 Non-GAAP Financial Summary

	3Q22	2Q23	3Q23
Revenue	$207M	$211M	$203M
Non-GAAP Gross Margin[1]	54%	52%	55%
Non-GAAP OpEx[1]	$94M	$90M	$87M
Non-GAAP Operating Margin[1]	9%	9%	12%
Non-GAAP Adjusted EBITDA[1]	$23M	$23M	$28M
Non-GAAP Diluted EPS[1]	$0.02	$0.04	$0.05

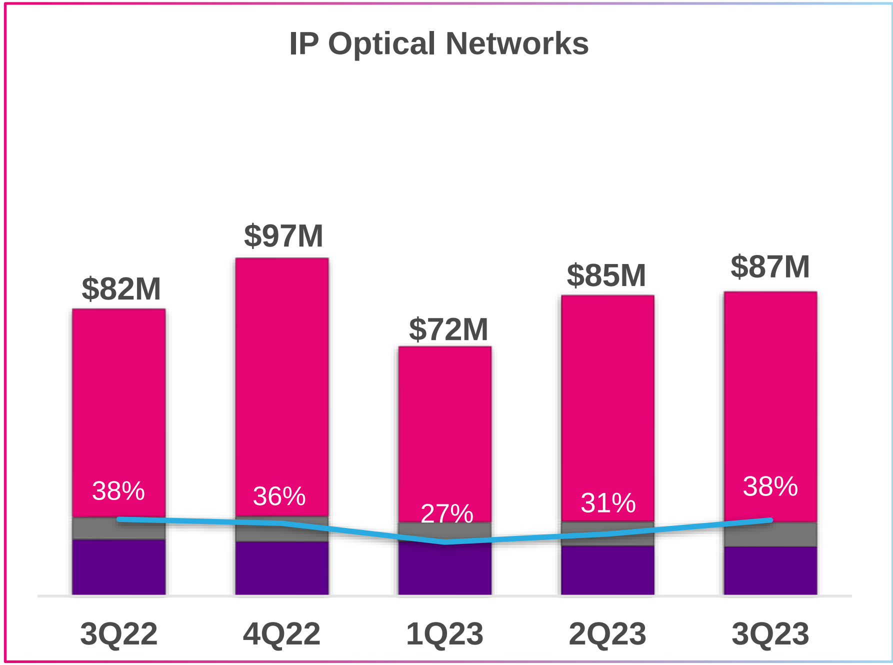
Note:
1. Please see the discussion of non-GAAP financial measures in the appendix.

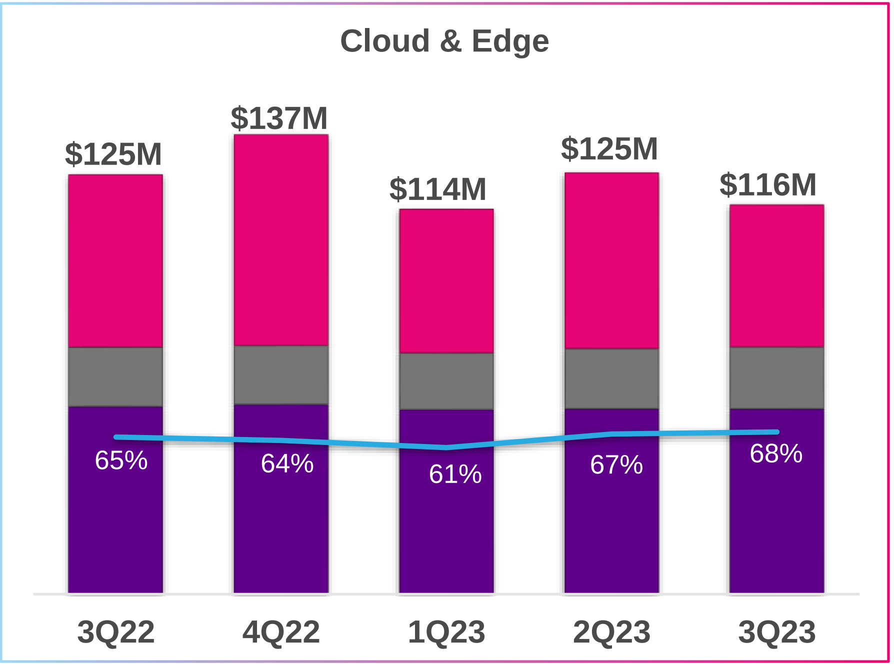
Third Quarter 2023 Non-GAAP Segment Summary

	3Q23 Cloud & Edge	3Q23 IP Optical Networks	3Q23 Consolidated
Revenue *vs Prior Year*	$116M *-7%*	$87M *+6%*	$203M *-2%*
Non-GAAP Gross Margin[1]	68%	38%	55%
Non-GAAP Adjusted EBITDA[1]	$32M	($4M)	$28M
Non-GAAP Adjusted EBITDA Margin[1]	27%	-4%	14%

Note:
1. Please see the discussion of non-GAAP financial measures in the appendix.

Quarterly Performance: Revenue & Non-GAAP Gross Margins





Maintenance Product Professional Services Non-GAAP Gross Margin

Note:
1. Please see the discussion of non-GAAP financial measures in the appendix.

Third Quarter 2023 Key Metrics

Pipeline

Book to Revenue[1]	3Q23	YTD
Total	0.9x	**1.0x**
Cloud & Edge	1.2x	**1.0x**
IP Optical	0.7x	**1.0x**

Revenue Mix

Enterprise 30%[2]
Service Provider 70%[2]

34% Maintenance Revenue[3]

Top 10 Customers Revenue 47%[3]

Domestic 42%[3]
International 58%[3]

Balance Sheet

Senior Term Loan Debt[4] $240M

Outstanding Revolver Loan[4] $10M

Total Debt Including Preferred Stock $305M

Covenant Ratio Metrics[5]
Leverage 3.9x vs 4.5x max.
FCCR 1.4x vs 1.1x min.

Cash Flow

Cash Balance $25M

($12M) Cash from Operations

($5M) Principal Debt Paydown

($3M) Capital Expenditure

Notes:
1. Product and Professional Services (excluding maintenance) Bookings divided by Product and Professional Services Revenue (excluding maintenance).
2. As a percentage of total product revenue.
3. As a percentage of total revenue.
4. Principal balance outstanding.
5. Calculated in accordance with the Amended and Restated Credit Agreement.

Key Trends & Outlook

Multi-Service Edge IP Routing Solutions for Carrier Networks

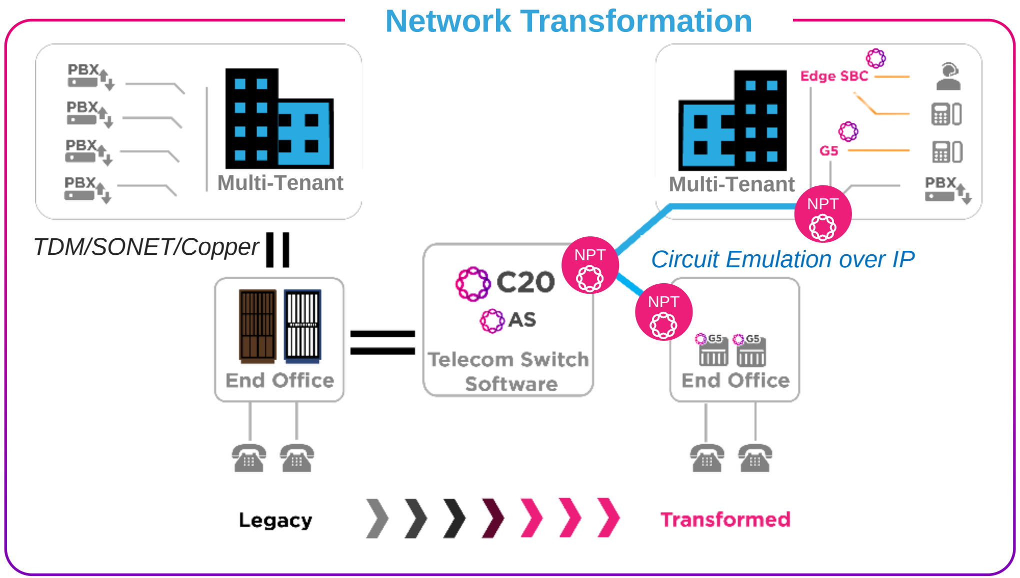
End-to-End Solution for Service Provider TDM Network Transformation

Replace TDM/copper networks with Ribbon IP technology

- Virtual **C20** replaces legacy PSTN switches
- **G5** media gateway to support legacy services
- EdgeMarc 2900 **SBC** for Enterprise Edge
- **Neptune IP Routers** for multi-site connectivity

Major Economic and Sustainability Benefits

- Reduces operational complexity and costs
- Simplifies network design
- Retains existing services & revenue streams
- Seamless to our customers - emulates legacy TDM connectivity via IP
- Major reduction in footprint & power vs legacy infrastructure



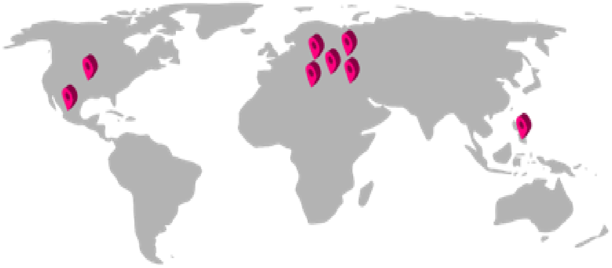
Live commercial service in US Tier One network

Ribbon’s Industry Leading High Density Optical Transport

Ribbon’s Optical Portfolio Meets Global Growing Demands for Bandwidth

Industry-leader for high density and low power applications required by large SPs and ICPs

Apollo 9408 Optical Lab Trials



	Performance Optimized Shipping Q4 ’23	Cost Optimized Shipping Q2 ’24
Application	Max capacity for any distance	Economical 400G
Short haul (100km)	1.2T	400G
Metro (500km)	1.0T	400G
Regional (1000km)	800G	200G
Long Haul (3000km)	400G	N/A
Power	<0.12W/G, up to **50% less than competitor solutions**	<0.10W/G

Fourth Quarter and Full Year 2023 Business Outlook

	3Q23 (Actual)	4Q23 (Outlook)	FY23 (Outlook)
Revenue	$203M	$230M to $240M	$830M to $840M
Non-GAAP Gross Margin[1]	54.8%	54.5% to 55.5%	52.5% to 53.0%
Non-GAAP Adjusted EBITDA[1]	$28M	$40M to $46M	$88M to $94M

Note:
1. Please see non-GAAP reconciliations in the appendix.

Appendix

Ribbon Condensed Statements of Operations

USD Millions except percentages and EPS	1Q22	2Q22	3Q22	4Q22	FY22	1Q23	2Q23	3Q23
GAAP FINANCIAL MEASURES								
Product Revenue	82	113	111	137	443	93	117	109
Service Revenue	91	93	96	97	377	93	93	95
Total Revenue	**173**	**206**	**207**	**234**	**820**	**186**	**211**	**203**
Gross Profit	**78**	**105**	**104**	**114**	**401**	**81**	**101**	**104**
Gross Margin %	*45%*	*51%*	*50%*	*49%*	*49%*	*44%*	*48%*	*51%*
Research and development	53	51	49	51	204	51	48	46
Selling, general and administrative	50	49	48	51	199	49	48	46
Amortization of acquired intangible assets	7	8	8	7	30	7	7	7
Integration and restructuring-related expenses	7	4	2	4	17	9	5	4
Total Operating Expenses	**117**	**112**	**108**	**113**	**449**	**117**	**108**	**103**
Income/(Loss) from Operations	**(39)**	**(7)**	**(3)**	**1**	**(48)**	**(35)**	**(7)**	**1**
Operating Margin %	*-23%*	*-4%*	*-2%*	*1%*	*-6%*	*-19%*	*-3%*	*0%*
Net Income/(Loss)	**(70)**	**(30)**	**(18)**	**20**	**(98)**	**(38)**	**(21)**	**(14)**
Diluted EPS	**($0.47)**	**($0.20)**	**($0.12)**	**$0.12**	**($0.63)**	**($0.23)**	**($0.13)**	**($0.08)**
Shares used to compute GAAP diluted earnings (loss) per share	149	150	159	172	157	169	170	171
Cash Flow from Operating Activities	**15**	**(39)**	**(18)**	**16**	**(26)**	**11**	**(3)**	**(12)**
NON-GAAP FINANCIAL MEASURE								
Adjusted EBITDA	**(9)**	**21**	**23**	**29**	**64**	**(2)**	**23**	**28**

Ribbon Condensed Balance Sheets

USD Millions	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23
ASSETS							
Cash and cash equivalents[1]	95	38	56	67	46	35	25
Accounts receivable, net	221	258	238	267	255	253	242
Inventory	62	65	70	75	76	74	70
Property and equipment, net	48	49	46	45	43	42	42
Intangible assets, net and Goodwill	636	621	611	596	581	566	552
Investment (AVCT)	17	5	-	-	-	-	-
Other Assets	185	196	204	205	191	197	190
Total Assets	**1,264**	**1,231**	**1,225**	**1,256**	**1,192**	**1,167**	**1,122**
LIABILITIES AND EQUITY							
Liabilities	311	318	292	278	333	338	305
Deferred revenue	128	126	112	133	140	134	125
Debt[2]	350	335	331	326	246	241	247
Stockholders' Equity	474	451	489	518	473	454	444
Total Liabilities and Equity	**1,264**	**1,231**	**1,225**	**1,256**	**1,192**	**1,167**	**1,122**

Notes:
1. Includes cash, cash equivalents, and restricted cash.
2. Includes term loan and outstanding revolver. Net of debt issuance costs and associated amortization.

Ribbon Condensed Statements of Cash Flows

USD Millions	1Q22	2Q22	3Q22	4Q22	FY22	1Q23	2Q23	3Q23
Cash from Operations	15	(39)	(18)	16	(26)	11	(3)	(12)
Purchases of property and equipment	(3)	(3)	(7)	(1)	(14)	(2)	(2)	(3)
Proceeds from sale of business	-	-	-	1	1	-	-	-
Borrowings, net	(21)	(16)	(5)	(5)	(47)	(80)	(5)	5
Equity / Preferred Stock placement	-	-	50	-	50	53	-	-
Other	(2)	1	(2)	(1)	(4)	(3)	(2)	(1)
Net Change	**(11)**	**(57)**	**18**	**11**	**(39)**	**(21)**	**(11)**	**(10)**
Cash[1] Beginning of Period	**106**	**95**	**38**	**56**	**106**	**67**	**46**	**35**
Cash[1] End of Period	**95**	**38**	**56**	**67**	**67**	**46**	**35**	**25**

Note:
1. Includes cash, cash equivalents, and restricted cash.

Ribbon Key Revenue Statistics

USD Millions except for percentages	1Q22	2Q22	3Q22	4Q22	FY22	1Q23	2Q23	3Q23
Revenue								
Product	82	113	111	137	443	93	117	109
Service	91	93	96	97	377	93	93	95
Total Revenue	**173**	**206**	**207**	**234**	**820**	**186**	**211**	**203**
% of Total Revenue:								
Revenue Mix								
Product	47%	55%	54%	59%	54%	50%	56%	53%
Services	53%	45%	46%	41%	46%	50%	44%	47%
Revenue by Geography								
Domestic	44%	48%	42%	39%	43%	44%	47%	42%
International	56%	52%	58%	61%	57%	56%	53%	58%
Product Revenue by Channel								
Direct	71%	75%	69%	67%	70%	62%	68%	67%
Indirect	29%	25%	31%	33%	30%	38%	32%	33%
Product Revenue By Market								
Enterprise	27%	20%	30%	35%	28%	29%	32%	30%
Service Providers	73%	80%	70%	65%	72%	71%	68%	70%
10% Total Revenue Customers	Verizon	Verizon	Verizon AT&T	Verizon	Verizon	Verizon	Verizon	Verizon

Discussion of Non-GAAP Financial Measures

The Company's management uses several different financial measures, both GAAP and non-GAAP, in analyzing and assessing the overall performance of its business, making operating decisions, planning and forecasting future periods, and determining payments under compensation programs. The Company considers the use of non-GAAP financial measures helpful in assessing the core performance of its continuing operations and when planning and forecasting future periods. The Company's annual financial plan is prepared on a non-GAAP basis and is approved by its board of directors. In addition, budgeting and forecasting for revenue and expenses are conducted on a non-GAAP basis, and actual results on a non-GAAP basis are assessed against the annual financial plan. The Company defines continuing operations as the ongoing results of its business adjusted for certain expenses and credits, as described below. The Company believes that providing non-GAAP information to investors will allow investors to view the financial results in the way its management views them and helps investors to better understand the Company's core financial and operating performance and evaluate the efficacy of the methodology and information used by its management to evaluate and measure such performance.

While the Company's management uses non-GAAP financial measures as tools to enhance its understanding of certain aspects of the Company's financial performance, its management does not consider these measures to be a substitute for, or superior to, GAAP measures. In addition, the Company's presentations of these measures may not be comparable to similarly titled measures used by other companies. These non-GAAP financial measures should not be considered alternatives for, or in isolation from, the financial information prepared and presented in accordance with GAAP. Investors are cautioned that there are material limitations associated with the use of non-GAAP financial measures. In particular, many of the adjustments to the Company's financial measures reflect the exclusion of items that are recurring and will be reflected in its financial results for the foreseeable future.

Discussion of Non-GAAP Financial Measures (continued)

Stock-Based Compensation

The expense related to stock-based awards is generally not controllable in the short-term and can vary significantly based on the timing, size and nature of awards granted. The Company believes that presenting non-GAAP operating results that exclude stock-based compensation provides investors with visibility and insight into its management's method of analysis and its core operating performance.

Amortization of Acquired Technology (including software licenses); Amortization of Acquired Intangible Assets

Amortization amounts are inconsistent in frequency and amount and are significantly impacted by the timing and size of acquisitions. Amortization of acquired technology is reported separately within Cost of revenue and Amortization of acquired intangible assets is reported separately within Operating expenses. These items are reported collectively as Amortization of acquired intangible assets in the accompanying reconciliations of non-GAAP and GAAP financial measures. The Company believes that excluding non-cash amortization of these intangible assets facilitates the comparison of its financial results to its historical operating results and to other companies in its industry as if the acquired intangible assets had been developed internally rather than acquired.

Litigation Costs

In connection with a certain ongoing contract litigation where Ribbon is defendant (as described in Note 25 to the Company's Consolidated Financial Statements included in its Annual Report on Form 10-K for the year ended December 31, 2022), the Company has incurred litigation costs beginning in the first quarter of 2023. These costs are included as a component of general and administrative expense. The Company believes that such costs are not part of its core business or ongoing operations, are unplanned and generally not within its control. Accordingly, the Company believes that excluding the litigation costs related to this specific legal matter facilitates the comparison of the Company's financial results to its historical operating results and to other companies in its industry.

Discussion of Non-GAAP Financial Measures (continued)

Acquisition-, Disposal- and Integration-Related

The Company considers certain acquisition-, disposal- and integration-related costs to be unrelated to the organic continuing operations of its acquired businesses and the Company. Such costs are generally not relevant to assessing or estimating the long-term performance of the acquired assets. The Company excludes such acquisition-, disposal- and integration-related costs to allow more accurate comparisons of its financial results to its historical operations and the financial results of less acquisitive peer companies and allows management and investors to consider the ongoing operations of the business both with and without such expenses.

Restructuring and Related

The Company has recorded restructuring and related expense to streamline operations and reduce operating costs by closing and consolidating certain facilities and reducing its worldwide workforce. The Company believes that excluding restructuring and related expense facilitates the comparison of its financial results to its historical operating results and to other companies in its industry, as there are no future revenue streams or other benefits associated with these costs.

Decrease in Fair Value of Investments

The Company calculated the fair values of the debentures (the “Debentures”) and the warrants to purchase shares of AVCT common stock (the “AVCT Warrants”) it received as consideration in connection with the Kandy Sale (prior to September 8, 2021) and the 13,700,421 shares of AVCT common stock received upon the conversion of the Debentures and AVCT Warrants (effective September 8, 2021) and at each quarter-end until their disposal on August 29, 2022 when they were used as partial consideration in connection with the Company’s acquisition of perpetual software licenses from AVCT. The Company recorded any adjustments to their fair values in Other (expense) income, net. The Company excluded these gains and losses from the change in fair value of this investment because it believes that such gains or losses were not part of its core business or ongoing operations.

Discussion of Non-GAAP Financial Measures (continued)

Preferred Stock and Warrant Liability Mark-to-Market Adjustment
The Company recorded adjustments to the fair value of its Series A Preferred Stock and warrants in Other (expense) income, net. Both instruments issued in March 2023 are classified as liabilities and marked to market each reporting period. The Company excluded these gains and losses from the change in the fair value of these liabilities because it believes that such gains or losses were not part of its core business or ongoing operations.

Preferred Stock and Warrant Liability Issuance Costs
The Company incurred $3.5 million of investment banking, advisory and legal fees in its March 2023 Private Placement of Series A Preferred Stock and warrants to purchase shares of the Company's common stock, both of which are classified by the Company as liabilities that are marked to market each reporting period. The Company excludes these issuance costs to allow more accurate comparisons of its financial results to its historical operations and the financial results of other companies in its industry, and it allows management and investors to consider the ongoing operations of the business both with and without such expenses.

Tax Effect of Non-GAAP Adjustments
The Non-GAAP income tax provision is presented based on an estimated tax rate applied against forecasted annual non-GAAP income. The Non-GAAP income tax provision assumes no available net operating losses or valuation allowances for the U.S. because of reporting significant cumulative non-GAAP income over the past several years. The Company is reporting its non-GAAP quarterly income taxes by computing an annual rate for the Company and applying that single rate (rather than multiple rates by jurisdiction) to its consolidated quarterly results. The Company expects that this methodology will provide a consistent rate throughout the year and allow investors to better understand the impact of income taxes on its results. Due to the methodology applied to its estimated annual tax rate, the Company's estimated tax rate on non-GAAP income will differ from its GAAP tax rate and from its actual tax liabilities.

Discussion of Non-GAAP Financial Measures (continued)

Adjusted EBITDA

The Company uses Adjusted EBITDA as a supplemental measure to review and assess its performance. The Company calculates Adjusted EBITDA by excluding from income (loss) from operations: depreciation; stock-based compensation; amortization of acquired intangible assets; impairment of goodwill; acquisition-, disposal- and integration-related expense; certain litigation costs; and restructuring and related expense. In general, the Company excludes the expenses that it considers to be non-cash and/or not part of its ongoing operations. The Company may exclude other items in the future that have those characteristics. Adjusted EBITDA is a non-GAAP financial measure that is used by the investing community for comparative and valuation purposes. The Company discloses this metric to support and facilitate dialogue with research analysts and investors. Other companies may calculate Adjusted EBITDA differently than the Company does, limiting its usefulness as a comparative measure.

GAAP to Non-GAAP Reconciliation

$000's	1Q22			2Q22			3Q22			4Q22			FY22		
	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated
Revenue	$ 109,806	$ 63,392	$ 173,198	$ 137,080	$ 68,716	$ 205,796	$ 124,685	$ 82,442	$ 207,127	$ 136,566	$ 97,073	$ 233,639	$ 508,137	$ 311,623	$ 819,760
GAAP Gross profit	$ 62,732	$ 15,323	$ 78,055	$ 88,250	$ 16,300	$ 104,550	$ 76,442	$ 27,876	$ 104,318	$ 82,873	$ 31,140	$ 114,013	$ 310,297	$ 90,639	$ 400,936
GAAP Gross margin (Gross profit/Revenue)	57.1%	24.2%	45.1%	64.4%	23.7%	50.8%	61.3%	33.8%	50.4%	60.7%	32.1%	48.8%	61.1%	29.1%	48.9%
Stock-based compensation	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Amortization of acquired technology	4.7%	4.9%	4.8%	3.4%	4.6%	3.8%	3.7%	3.8%	3.7%	2.9%	3.8%	3.3%	3.6%	4.2%	3.9%
Non-GAAP Gross margin	62.2%	29.4%	50.2%	68.1%	28.6%	54.9%	65.4%	37.9%	54.5%	63.9%	36.2%	52.4%	65.0%	33.6%	53.1%
GAAP Income (loss) from operations	$ (2,347)	$ (36,707)	$ (39,054)	$ 25,953	$ (33,192)	$ (7,239)	$ 16,812	$ (20,108)	$ (3,296)	$ 21,298	$ (20,033)	$ 1,265	$ 61,716	$ (110,040)	$ (48,324)
Depreciation	2,715	1,170	3,885	2,685	1,203	3,888	2,753	1,162	3,915	2,605	1,002	3,607	10,758	4,537	15,295
Amortization of acquired intangible assets	9,528	6,014	15,542	9,118	6,283	15,401	8,995	6,281	15,276	8,090	6,879	14,969	35,731	25,457	61,188
Stock-based compensation	2,665	1,590	4,255	2,646	1,753	4,399	2,992	1,849	4,841	3,214	1,998	5,212	11,517	7,190	18,707
Acquisition-, disposal- and integration-related	44	1,805	1,849	70	1,465	1,535	42	946	988	-	1,914	1,914	156	6,130	6,286
Restructuring and related	3,366	1,448	4,814	2,321	573	2,894	1,287	(18)	1,269	970	886	1,856	7,944	2,889	10,833
Non-GAAP Adjusted EBITDA	$ 15,971	$ (24,680)	$ (8,709)	$ 42,793	$ (21,915)	$ 20,878	$ 32,881	$ (9,888)	$ 22,993	$ 36,177	$ (7,354)	$ 28,823	$ 127,822	$ (63,837)	$ 63,985
Adjusted EBITDA Margin (Adjusted EBITDA/Revenue):															
GAAP Income (loss) from operations	(2.1%)	(57.9%)	(22.5%)	18.9%	(48.3%)	(3.5%)	13.5%	(24.4%)	(1.6%)	15.6%	(20.6%)	0.5%	12.1%	(35.3%)	(5.9%)
Depreciation	2.5%	1.8%	2.2%	2.0%	1.8%	1.9%	2.2%	1.4%	1.9%	1.9%	1.0%	1.5%	2.1%	1.5%	1.9%
Amortization of acquired intangible assets	8.6%	9.6%	8.9%	6.6%	9.1%	7.5%	7.3%	7.7%	7.4%	5.9%	7.0%	6.5%	7.1%	8.1%	7.4%
Stock-based compensation	2.4%	2.5%	2.5%	1.9%	2.6%	2.1%	2.4%	2.2%	2.3%	2.4%	2.1%	2.2%	2.3%	2.3%	2.3%
Acquisition-, disposal- and integration-related	*	2.8%	1.1%	0.1%	2.1%	0.7%	0.0%	1.1%	0.5%	*	2.0%	0.8%	*	2.0%	0.8%
Restructuring and related	3.1%	2.3%	2.8%	1.7%	0.8%	1.4%	1.0%	0.0%	0.6%	0.7%	0.9%	0.8%	1.6%	0.9%	1.3%
Non-GAAP Adjusted EBITDA Margin	14.5%	(38.9%)	(5.0%)	31.2%	(31.9%)	10.1%	26.4%	(12.0%)	11.1%	26.5%	(7.6%)	12.3%	25.2%	(20.5%)	7.8%

* Less than 0.1% impact on non-GAAP Adjusted EBITDA margin

GAAP to Non-GAAP Reconciliation (Continued)

$000's	1Q23			2Q23			3Q23			YTD23		
	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated	Cloud and Edge	IP Optical Networks	Consolidated
Revenue	$ 114,480	$ 71,679	$ 186,159	$ 125,256	$ 85,362	$ 210,618	$ 115,765	$ 87,396	$ 203,161	$ 355,501	$ 244,437	$ 599,938
GAAP Gross profit	$ 66,077	$ 15,325	$ 81,402	$ 79,330	$ 22,140	$ 101,470	$ 74,731	$ 28,772	$ 103,503	$ 220,138	$ 66,237	$ 286,375
GAAP Gross margin (Gross profit/Revenue)	57.7%	21.4%	43.7%	63.3%	25.9%	48.2%	64.6%	32.9%	50.9%	61.9%	27.1%	47.7%
Stock-based compensation	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%
Amortization of acquired technology	3.1%	5.4%	4.0%	2.9%	4.6%	3.5%	2.8%	4.4%	3.6%	3.0%	4.8%	3.7%
Non-GAAP Gross margin	61.1%	27.2%	48.1%	66.5%	30.8%	52.0%	67.8%	37.6%	54.8%	65.2%	32.2%	51.7%
GAAP Income (loss) from operations	$ 839	$ (36,028)	$ (35,189)	$ 19,022	$ (25,644)	$ (6,622)	$ 16,862	$ (16,006)	$ 856	$ 36,723	$ (77,678)	$ (40,955)
Depreciation	2,499	1,011	3,510	2,477	1,072	3,549	2,426	1,118	3,544	7,402	3,201	10,603
Amortization of acquired intangible assets	7,639	7,014	14,653	7,704	6,995	14,699	7,381	6,992	14,373	22,724	21,001	43,725
Stock-based compensation	3,657	2,191	5,848	3,817	2,299	6,116	3,146	1,804	4,950	10,620	6,294	16,914
Litigation costs	129	48	177	83	31	114	349	129	478	561	208	769
Acquisition-, disposal- and integration-related	-	1,642	1,642	-	498	498	-	842	842	-	2,982	2,982
Restructuring and related	5,742	1,195	6,937	1,678	2,629	4,307	1,470	1,210	2,680	8,890	5,034	13,924
Non-GAAP Adjusted EBITDA	$ 20,505	$ (22,927)	$ (2,422)	$ 34,781	$ (12,120)	$ 22,661	$ 31,634	$ (3,911)	$ 27,723	$ 86,920	$ (38,958)	$ 47,962
Adjusted EBITDA Margin (Adjusted EBITDA/Revenue):												
GAAP Income (loss) from operations	0.7%	(50.3%)	(18.9%)	15.2%	(30.0%)	(3.1%)	14.6%	(18.3%)	0.4%	10.3%	(31.8%)	(6.8%)
Depreciation	2.2%	1.4%	1.9%	2.0%	1.3%	1.7%	2.1%	1.3%	1.7%	2.1%	1.3%	1.8%
Amortization of acquired intangible assets	6.7%	9.7%	7.9%	6.2%	8.1%	7.0%	6.3%	7.9%	7.2%	6.4%	8.6%	7.3%
Stock-based compensation	3.2%	3.1%	3.1%	3.0%	2.7%	2.9%	2.7%	2.1%	2.4%	3.0%	2.6%	2.8%
Litigation costs	0.1%	0.1%	0.1%	0.1%	*	0.1%	0.3%	0.1%	0.2%	0.2%	0.1%	0.1%
Acquisition-, disposal- and integration-related	0.0%	2.3%	0.9%	0.0%	0.6%	0.2%	0.0%	1.0%	0.4%	0.0%	1.2%	0.5%
Restructuring and related	5.0%	1.7%	3.7%	1.3%	3.1%	2.0%	1.3%	1.4%	1.3%	2.5%	2.1%	2.3%
Non-GAAP Adjusted EBITDA Margin	17.9%	(32.0%)	(1.3%)	27.8%	(14.2%)	10.8%	27.3%	(4.5%)	13.6%	24.5%	(15.9%)	8.0%

* Less than 0.1% impact on non-GAAP Adjusted EBITDA margin

GAAP to Non-GAAP Reconciliation (Continued)

$000s	1Q22	2Q22	3Q22	4Q22	FY22	1Q23	2Q23	3Q23	YTD23
GAAP Operating expenses	$ 117,109	$ 111,789	$ 107,614	$ 112,748	$ 449,260	$ 116,591	$ 108,092	$ 102,647	$ 327,330
Stock-based compensation	(3,675)	(3,798)	(4,116)	(4,490)	(16,079)	(5,164)	(5,475)	(4,293)	(14,932)
Amortization of acquired intangible assets	(7,275)	(7,513)	(7,508)	(7,350)	(29,646)	(7,264)	(7,260)	(7,216)	(21,740)
Litigation costs	-	-	-	-	-	(177)	(114)	(478)	(769)
Acquisition-, disposal- and integration-related	(1,849)	(1,535)	(988)	(1,914)	(6,286)	(1,642)	(498)	(842)	(2,982)
Restructuring and related	(4,814)	(2,894)	(1,269)	(1,856)	(10,833)	(6,937)	(4,307)	(2,680)	(13,924)
Non-GAAP Operating expenses	$ 99,496	$ 96,049	$ 93,733	$ 97,138	$ 386,416	$ 95,407	$ 90,438	$ 87,138	$ 272,983
Income (loss) from operations as a percentage of revenue ("Operating margin"):									
GAAP Operating margin	(22.5%)	(3.5%)	(1.6%)	0.5%	(5.9%)	(18.9%)	(3.1%)	0.4%	(6.8%)
Stock-based compensation	2.5%	2.1%	2.3%	2.2%	2.3%	3.1%	2.9%	2.4%	2.8%
Amortization of acquired intangible assets	8.9%	7.6%	7.4%	6.5%	7.4%	7.9%	7.0%	7.2%	7.3%
Litigation costs	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.1%
Acquisition-, disposal- and integration-related	1.1%	0.7%	0.5%	0.8%	0.8%	0.9%	0.2%	0.4%	0.5%
Restructuring and related	2.7%	1.4%	0.6%	0.8%	1.3%	3.7%	2.0%	1.3%	2.3%
Non-GAAP Operating margin	(7.3%)	8.3%	9.2%	10.8%	5.9%	(3.2%)	9.1%	11.9%	6.2%

GAAP to Non-GAAP Reconciliation (Continued)

	1Q22	2Q22	3Q22	4Q22	FY22	1Q23	2Q23	3Q23	YTD23
GAAP Diluted earnings (loss) per share	$ (0.47)	$ (0.20)	$ (0.12)	$ 0.12	$ (0.63)	$ (0.23)	$ (0.13)	$ (0.08)	$ (0.43)
Stock-based compensation	0.03	0.03	0.03	0.03	0.12	0.04	0.03	0.03	0.10
Amortization of acquired intangible assets	0.11	0.10	0.09	0.09	0.39	0.08	0.09	0.08	0.26
Acquisition-, disposal- and integration-related	0.01	0.01	0.01	0.01	0.04	0.01	0.01	-	0.02
Restructuring and related	0.03	0.02	0.01	0.01	0.07	0.04	0.02	0.02	0.08
Decrease in fair value of investments	0.18	0.08	0.01	-	0.26	-	-	-	-
Preferred stock liability and warrant mark-to-market adjustment	-	-	-	-	-	-	0.01	-	0.01
Preferred stock liability and warrant issuance costs	-	-	-	-	-	0.02	-	-	0.02
Tax effect of non-GAAP adjustments	0.03	0.02	(0.01)	(0.17)	(0.14)	0.02	0.01	-	0.02
Non-GAAP Diluted earnings (loss) per share	$ (0.08)	$ 0.06	$ 0.02	$ 0.09	$ 0.11	$ (0.02)	$ 0.04	$ 0.05	$ 0.08
Weighted average shares used to compute diluted earnings (loss) per share (000's):									
Shares used to compute **GAAP** diluted earnings (loss) per share	149,167	150,190	158,921	168,163	156,668	168,541	170,103	171,190	169,955
Shares used to compute **non-GAAP** diluted earnings (loss) per share	149,167	154,035	163,463	172,213	161,325	168,541	175,220	176,298	175,986

GAAP to Non-GAAP Reconciliation (Continued)

	Three months ending December 31, 2023 Range		Year ending December 31, 2023 Range	
Revenue ($ millions)	$ 230	$ 240	$ 830	$ 840
Gross margin:				
GAAP outlook	51.5%	52.6%	48.8%	49.3%
Stock-based compensation	0.3%	0.3%	0.3%	0.3%
Amortization of acquired technology	2.7%	2.6%	3.4%	3.4%
Non-GAAP outlook	54.5%	55.5%	52.5%	53.0%
Adjusted EBITDA ($ millions):				
GAAP income (loss) from operations	$ 14.6	$ 20.6	$ (27.2)	$ (21.2)
Depreciation	3.4	3.4	14.0	14.0
Stock-based compensation	6.0	6.0	24.0	24.0
Amortization of acquired intangible assets	13.2	13.2	56.9	56.9
Litigation costs	0.6	0.6	1.3	1.3
Acquisition-, disposal- and integration-related	0.1	0.1	3.0	3.0
Restructuring and related	2.1	2.1	16.0	16.0
Non-GAAP outlook	$ 40.0	$ 46.0	$ 88.0	$ 94.0

Thank You