UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended April 3, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number: 001-34674

Calix, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**68-0438710**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

2777 Orchard Parkway, San Jose, CA 95134
(Address of Principal Executive Offices) (Zip Code)

(408) 514-3000
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, par value $0.025 per share	CALX	New York Stock Exchange

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes: ☒ No: ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes: ☒ No: ☐

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

Large Accelerated Filer	☐	Accelerated Filer	☒
Non-accelerated filer	☐	Smaller Reporting Company	☐
Emerging Growth Company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes: ☐ No: ☒

As of April 19, 2021, there were 62,853,519 shares of the Registrant's common stock, par value $0.025 outstanding.

CALIX, INC.

FORM 10-Q

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PART I. FINANCIAL INFORMATION

ITEM 1. Financial Statements

CALIX, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except par value)

	April 3, 2021	December 31, 2020
	(Unaudited)	(See Note 1)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 85,854	$ 80,807
Marketable securities	64,174	52,982
Accounts receivable, net	74,408	69,419
Inventory	72,211	52,268
Prepaid expenses and other current assets	13,122	11,414
Total current assets	309,769	266,890
Property and equipment, net	20,103	20,381
Right-of-use operating leases	11,015	11,741
Goodwill	116,175	116,175
Other assets	11,073	12,165
	$ 468,135	$ 427,352
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 29,224	$ 13,115
Accrued liabilities	56,031	68,736
Deferred revenue	24,127	19,189
Total current liabilities	109,382	101,040
Long-term portion of deferred revenue	20,329	19,904
Operating leases	12,167	12,946
Other long-term liabilities	11,542	13,137
Total liabilities	153,420	147,027
Commitments and contingencies (See Note 7)		
Stockholders' equity:		
Preferred stock, $0.025 par value; 5,000 shares authorized; no shares issued and outstanding as of April 3, 2021 and December 31, 2020	—	—
Common stock, $0.025 par value; 100,000 shares authorized; 62,851 shares issued and outstanding as of April 3, 2021, and 62,122 shares issued and outstanding as of December 31, 2020	1,572	1,553
Additional paid-in capital	961,846	948,055
Accumulated other comprehensive loss	(226)	(191)
Accumulated deficit	(648,477)	(669,092)
Total stockholders' equity	314,715	280,325
	$ 468,135	$ 427,352

See accompanying notes to condensed consolidated financial statements.

CALIX, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands, except per share data)
(Unaudited)

	Three Months Ended	
	April 3, 2021	March 28, 2020
Revenue:		
Systems	$ 153,302	$ 94,509
Services	8,772	7,173
Total revenue	162,074	101,682
Cost of revenue:		
Systems	69,663	50,708
Services	6,169	5,350
Total cost of revenue	75,832	56,058
Gross profit	86,242	45,624
Operating expenses:		
Sales and marketing	28,051	20,624
Research and development	24,364	20,671
General and administrative	13,025	10,669
Total operating expenses	65,440	51,964
Income (loss) from operations	20,802	(6,340)
Interest and other income, net:		
Interest expense, net	(125)	(290)
Other income, net	88	15
Total interest and other income, net	(37)	(275)
Income (loss) before provision for income taxes	20,765	(6,615)
Provision for income taxes	150	329
Net income (loss)	$ 20,615	$ (6,944)
Net income (loss) per common share:		
Basic	$ 0.33	$ (0.12)
Diluted	$ 0.31	$ (0.12)
Weighted-average number of shares used to compute net income (loss) per common share:		
Basic	62,554	56,540
Diluted	67,019	56,540
Net income (loss)	$ 20,615	$ (6,944)
Other comprehensive loss, net of tax - foreign currency translation adjustments, net	(35)	(252)
Comprehensive income (loss)	$ 20,580	$ (7,196)

See accompanying notes to condensed consolidated financial statements.

CALIX, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Treasury Stock	Total Stockholders' Equity
	Shares	Amount					
Balance at December 31, 2020	62,122	$ 1,553	$ 948,055	$ (191)	$ (669,092)	$ —	$ 280,325
Stock-based compensation	—	—	5,171	—	—	—	5,171
Issuance of common stock under equity incentive plans, net of forfeitures	729	19	8,620	—	—	—	8,639
Net income	—	—	—	—	20,615	—	20,615
Other comprehensive loss	—	—	—	(35)	—	—	(35)
Balance at April 3, 2021	62,851	$ 1,572	$ 961,846	$ (226)	$ (648,477)	$ —	$ 314,715

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Treasury Stock	Total Stockholders' Equity
	Shares	Amount					
Balance at December 31, 2019	56,448	$ 1,545	$ 895,899	$ (854)	$ (702,576)	$ (39,986)	$ 154,028
Stock-based compensation	—	—	2,984	—	—	—	2,984
Issuance of common stock under equity incentive plans, net of forfeitures	180	4	1,095	—	—	—	1,099
Net loss	—	—	—	—	(6,944)	—	(6,944)
Other comprehensive loss	—	—	—	(252)	—	—	(252)
Balance at March 28, 2020	56,628	$ 1,549	$ 899,978	$ (1,106)	$ (709,520)	$ (39,986)	$ 150,915

See accompanying notes to condensed consolidated financial statements.

CALIX, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands, unaudited)

	Three Months Ended	
	April 3, 2021	March 28, 2020
Operating activities:		
Net income (loss)	$ 20,615	$ (6,944)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Stock-based compensation	5,171	2,984
Depreciation and amortization	4,077	3,544
Changes in operating assets and liabilities:		
Accounts receivable, net	(4,989)	(20,627)
Inventory	(19,943)	9,614
Prepaid expenses and other assets	(1,321)	758
Accounts payable	16,156	9,472
Accrued liabilities	(12,856)	1,367
Deferred revenue	5,362	2,071
Other long-term liabilities	(2,374)	(990)
Net cash provided by operating activities	9,898	1,249
Investing activities		
Purchases of property and equipment	(2,274)	(1,729)
Purchases of marketable securities	(54,192)	—
Maturities of marketable securities	43,000	—
Net cash used in investing activities	(13,466)	(1,729)
Financing activities:		
Proceeds from common stock issuances related to employee benefit plans	8,639	1,099
Payments related to financing arrangements	—	(842)
Proceeds from line of credit	—	30,000
Repayment of line of credit	—	(30,000)
Payments to originate the line of credit	—	(177)
Net cash provided by financing activities	8,639	80
Effect of exchange rate changes on cash and cash equivalents	(24)	(240)
Net increase (decrease) in cash, cash equivalents and restricted cash	5,047	(640)
Cash, cash equivalents and restricted cash at beginning of period	80,807	47,457
Cash, cash equivalents and restricted cash at end of period	$ 85,854	$ 46,817

See accompanying notes to condensed consolidated financial statements.

CALIX, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Company and Basis of Presentation

Company

Calix, Inc. (together with its subsidiaries, “Calix” or the “Company”) was incorporated in August 1999 and is a Delaware corporation. The Company is the leading global provider of cloud and software platforms, systems and services that focus on the access network, the portion of the network that governs available bandwidth and determines the range and quality of services that can be offered to subscribers. These cloud and software platforms enable communications service providers (“CSPs”) of all types and sizes to innovate and transform their businesses. The Company’s CSP customers are empowered to utilize real-time data and insights from Calix platforms to simplify their businesses and deliver experiences that excite their subscribers. These insights enable CSPs to grow their businesses through increased subscriber acquisition, loyalty and revenue, thereby increasing the value of their businesses and contributions to their communities.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements, including the accounts of Calix, Inc. and its wholly-owned subsidiaries, have been prepared in accordance with the requirements of the U.S. Securities and Exchange Commission (“SEC”) for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by U.S. generally accepted accounting principles (“GAAP”) can be condensed or omitted. In the opinion of management, the financial statements include all normal and recurring adjustments that are considered necessary for the fair presentation of the Company’s financial position and operating results. All intercompany balances and transactions have been eliminated in consolidation. The Condensed Consolidated Balance Sheet at December 31, 2020 has been derived from the audited financial statements at that date.

The results of the Company’s operations can vary during each quarter of the year. Therefore, the results and trends in these interim financial statements may not be the same as those for the full year or any future periods. The information included in this Quarterly Report on Form 10-Q should be read in conjunction with the audited financial statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2020.

The Company’s fiscal year begins on January 1st and ends on December 31st. Quarterly periods are based on a 4-4-5 calendar with the first quarter ending on the Saturday closest to March 31st. As a result, the Company had five more days in the three months ended April 3, 2021 than for the three months ended March 28, 2020. The preparation of financial statements in conformity with GAAP for interim financial reporting requires management to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Risks and Uncertainties

The Company is subject to risks and uncertainties as a result of the COVID-19 pandemic. The extent of the impact of the COVID-19 pandemic on the Company’s business is highly uncertain and difficult to predict as coronavirus continues to spread around the world. Although the availability of vaccines has increased, there are no assurances as to when the pandemic will be fully contained. Since March 2020, the Company has instituted office closures, travel restrictions and a mandatory work-from-home policy for substantially all of its employees. The spread of COVID-19 has had a prolonged impact on the Company’s supply chain operations due to restrictions, reduced capacity and limited availability from suppliers whom the Company relies on for sourcing components and materials and from third-party partners whom the Company relies on for manufacturing, warehousing and logistics services. Although demand for the Company’s products has been strong in the short-term as subscribers seek more bandwidth and better Wi-Fi, customers’ purchasing decisions over the long-term may be impacted by the pandemic and its impact on the economy, which could in turn impact the Company’s revenue and results of operations. Furthermore, the Company’s supply chain continues to face constraints primarily due to challenges in sourcing components and materials for the Company’s products. The prolonged impact of COVID-19 could exacerbate these constraints or cause further supply chain disruptions. As of the issuance date of these condensed consolidated financial statements, the extent to which the COVID-19 pandemic may materially impact the Company’s financial condition, liquidity or results of operations is uncertain.

2. Significant Accounting Policies

The Company's significant accounting policies are disclosed in its Annual Report on Form 10-K for the year ended December 31, 2020. The Company's significant accounting policies did not change during the three months ended April 3, 2021.

Newly Adopted Accounting Standard

The Company did not adopt any new accounting standards during the three months ended April 3, 2021 that were significant to the Company.

Recent Accounting Pronouncements Not Yet Adopted

There have been no additional accounting pronouncements or changes in accounting pronouncements during the three months ended April 3, 2021 as compared to the recent accounting pronouncements described in the Company's Annual Report on Form 10-K for the year ended December 31, 2020, that are significant or potentially significant to the Company.

3. Cash, Cash Equivalents and Marketable Securities

The Company has invested its excess cash primarily in money market funds and highly liquid marketable securities such as commercial paper and U.S. government securities. The Company considers all investments with maturities of three months or less when purchased to be cash equivalents. Marketable securities represent highly liquid commercial paper and U.S. government securities with maturities greater than 90 days at date of purchase. Cash equivalents are stated at amounts that approximate fair value based on quoted market prices. Marketable securities are recorded at their fair values.

Marketable securities with maturities greater than one year are classified as current because management considers all marketable securities to be available for current operations.

The Company's investments have been classified and accounted for as available-for-sale. Such investments are recorded at fair value and unrealized holding gains and losses are reported as a separate component of accumulated other comprehensive loss in the stockholders' equity until realized. Realized gains and losses on sales of marketable securities, if any, are determined on the specific identification method and are reclassified from accumulated other comprehensive loss to results of operations as other income (expense), net. Realized and unrealized gains and losses were de minimis for the period ended April 3, 2021.

Cash, cash equivalents and marketable securities consisted of the following (in thousands):

	April 3, 2021	December 31, 2020
Cash and cash equivalents:		
Cash	$ 21,962	$ 30,745
U.S. government securities	—	39,994
Money market funds	33,904	10,068
Commercial paper	29,988	—
Total cash and cash equivalents	85,854	80,807
Marketable securities:		
U.S. government securities	39,998	52,982
Commercial paper	24,176	—
Total marketable securities	64,174	52,982
	$ 150,028	$ 133,789

The carrying amounts of the Company's money market funds approximate their fair values due to their nature, duration and short maturities.

4. Fair Value Measurements

The Company measures its cash equivalents and marketable securities at fair value on a recurring basis. Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. The Company utilizes the following three-tier value hierarchy which prioritizes the inputs used in measuring fair value:

Level 1 – Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 – Observable inputs other than quoted prices included in Level 1 for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-driven valuations in which all significant inputs and significant value drivers are observable in active markets.

Level 3 – Unobservable inputs to the valuation derived from fair valuation techniques in which one or more significant inputs or significant value drivers are unobservable. The fair value hierarchy also requires the Company to maximize the use of observable inputs, when available, and to minimize the use of unobservable inputs when determining inputs and determining fair value.

The following tables sets forth the Company's financial assets measured at fair value on a recurring basis based on the three-tier fair value hierarchy (in thousands):

As of April 3, 2021	**Level 1**	**Level 2**	**Total**
Money market funds	$ 33,904	$ —	$ 33,904
U.S. government securities	39,998	—	39,998
Commercial paper	—	54,164	54,164
	$ 73,902	$ 54,164	$ 128,066

As of December 31, 2020	**Level 1**
Money market funds	$ 10,068
U.S. government securities	92,976
	$ 103,044

5. Balance Sheet Details

Accounts receivable, net consisted of the following (in thousands):

	April 3, 2021	**December 31, 2020**
Accounts receivable	$ 75,594	$ 70,824
Allowance for doubtful accounts	(1,186)	(1,405)
	$ 74,408	$ 69,419

Inventory consisted of the following (in thousands):

	April 3, 2021	**December 31, 2020**
Raw materials	$ 58	$ 34
Finished goods	72,153	52,234
	$ 72,211	$ 52,268

Property and equipment, net consisted of the following (in thousands):

	April 3, 2021	**December 31, 2020**
Test equipment	$ 37,633	$ 37,670
Software	15,094	16,093
Computer equipment	9,512	9,062
Furniture and fixtures	2,024	2,069
Leasehold improvements	1,376	1,345
Total	65,639	66,239
Accumulated depreciation and amortization	(45,536)	(45,858)
	$ 20,103	$ 20,381

Other long-term assets consisted of the following (in thousands):

	April 3, 2021	December 31, 2020
Intangible asset	$ 8,859	$ 9,517
Other long-term assets	2,214	2,648
	$ 11,073	$ 12,165

Intangible Asset Acquisition

In March 2018, the Company entered into an agreement with a vendor to develop certain software product and related enhancements pursuant to which the Company is obligated to make revenue-share payments under the program, subject to aggregate minimum revenue-share payments of $15.8 million over the three years following availability for sale. The payments are based on a revenue-share rate applied to revenue from the developed-product and the corresponding hardware sales subject to a minimum and a maximum aggregate amount over the three-year sales period. The Company had its first sale in August 2019, and as a result, the Company capitalized an intangible asset with a value of $13.2 million in the third quarter of 2019 and also recognized a liability of $13.2 million (a non-cash investing activity). The net present value of the liability is $14.0 million of which $3.4 million is included in accrued liabilities and $10.6 million in other long-term liabilities in the accompanying Condensed Consolidated Balance Sheet as of April 3, 2021. As of December 31, 2020, the net present value of the liability was $13.9 million of which $2.9 million was included in accrued liabilities and $11.0 million in other long-term liabilities. The intangible asset has an estimated five-year useful life and is being amortized using the greater of the ratio of current gross revenue for the products to the total of current and anticipated future gross revenue for the products or the straight-line method. In December 2020, the agreement was amended to increase the revenue-share rate, limit the total revenue-share payments to $15.8 million and extend the revenue-share period until March 2024.

Accrued liabilities consisted of the following (in thousands):

	April 3, 2021	December 31, 2020
Compensation and related benefits	$ 15,031	$ 23,740
Warranty and retrofit	9,650	9,208
Taxes payable	4,220	3,476
Component inventory held by suppliers	4,213	3,992
Professional and consulting fees	3,713	4,497
Customer advances or rebates	3,704	8,374
Current portion of revenue share obligations	3,409	2,925
Operating leases	3,019	2,994
Product returns	2,244	1,888
Freight	1,892	1,955
Restructuring	323	408
Other	4,613	5,279
	$ 56,031	$ 68,736

Changes in the Company’s accrued warranty and retrofit liability were as follows (in thousands):

	Three Months Ended	
	April 3, 2021	March 28, 2020
Balance at beginning of period	$ 9,208	$ 7
Provision for warranty and retrofit charged to cost of revenue	1,202	1
Utilization of reserve	(760)	(1
Balance at end of period	$ 9,650	$ 7

Accrued Restructuring Charges

Responding to trends caused by the COVID-19 pandemic, the Company initiated a restructuring plan in June 2020 to accelerate the Company’s all platform future and to align with a work-from-anywhere culture. The Company incurred restructuring charges of approximately $6.3 million, consisting of facilities-related charges and severance and other termination-related benefits during 2020.

As part of the Company’s shift to a work-from-anywhere culture, many of the Company’s employees elected to work remotely on a permanent basis. In light of this change, the Company evaluated its space needs and determined that a portion of the Company's leased office spaces in Richardson, Texas and San Jose, California would no longer be utilized. As a result, the right-of-use assets related to these leases were written down, resulting in a charge of $3.5 million during 2020. In addition, the Company wrote off assets with net book value of $0.3 million and accrued common areas maintenance fees and property taxes related to the unused office space totaling $1.4 million during 2020.

The following table summarizes restructuring activities (in thousands):

	Facilities	Severance and Related Benefits	Total
Balance as of December 31, 2020	$ 1,244	$ 132	$ 1
Cash payments	(62)	(84)	(
Balance as of April 3, 2021	$ 1,182	$ 48	$ 1

6. Credit Agreements

Line of Credit

The Company has a loan and security agreement with Bank of America, N.A. (“BofA Loan Agreement”). The BofA Loan Agreement provides for a revolving facility up to a principal amount of $35.0 million, including a $10.0 million sublimit for letters of credit. The BofA Loan Agreement matures, and all outstanding amounts become due and payable, in January 2023. The BofA Loan Agreement is secured by substantially all of the Company’s assets, including its intellectual property. Loans under the credit facility bear interest at a rate per annum equal to either LIBOR (customarily defined) plus an applicable margin between 1.5% to 2.0% or Prime Rate (customarily defined) plus an applicable margin between 0.5% to 1.0% (3.75% as of April 3, 2021), in each case largely based on a fixed charge coverage ratio measured at the end of each fiscal quarter. As of April 3, 2021, the Company had no outstanding borrowings and had full availability of borrowings up to $35.0 million.

7. Commitments and Contingencies

Lease Commitments

The Company leases office space under non-cancelable operating leases. Certain of the Company’s operating leases contain renewal options and rent acceleration clauses. Future minimum payments under the non-cancelable operating leases consisted of the following as of April 3, 2021 (in thousands):

Period	Future Minimum Lease Payments
Remainder of 2021	$ 2,903
2022	3,809
2023	3,915
2024	3,725
2025	3,218
Thereafter	42
Total future minimum lease payments	17,612
Less imputed interest	(2,426)
	$ 15,186

As of April 3, 2021, the operating lease liability consisted of the following (in thousands):

Accrued liabilities - current portion of operating leases	$ 3,019
Operating leases	12,167
	$ 15,186

The Company leases its headquarters office space in San Jose, California under a lease agreement that expires in December 2025. The future minimum lease payments under the lease are $11.3 million and are included in the table above.

The weighted average discount rate for the Company's operating leases as of April 3, 2021 was 6.7%. The weighted average remaining lease term as of April 3, 2021 was 4.0 years.

Total rent expense of the Company was $1.1 million for the three months ended April 3, 2021 and March 28, 2020 for each respective period. Cash paid within operating cash flows for operating leases was $1.0 million for the three months ended April 3, 2021 and March 28, 2020 for each respective period.

Purchase Commitments

The Company's suppliers, including contract manufacturers ("CMs") and original design manufacturers ("ODMs"), place orders for certain component inventory in advance based upon the Company's build forecasts in order to reduce manufacturing lead times and ensure adequate component supply. The components are used by the CMs and ODMs to build the products included in the build forecasts. The Company generally does not take ownership of the components held by CMs and ODMs. The Company places purchase orders with its CMs and ODMs in order to fulfill its monthly finished product inventory requirements. The Company incurs a liability when the CMs and ODMs convert the component inventory to a finished product and takes ownership of the finished goods inventory. In the event of termination of services with a manufacturing partner, the Company has purchased, and may be required to purchase in the future, certain of the remaining components inventory held by the CM or ODM as well as any outstanding orders pursuant to the contractual provisions with such CM or ODM. As of April 3, 2021, the Company had approximately $107.8 million of outstanding purchase commitments for inventories to be delivered by its suppliers, including CMs and ODMs, within one year.

The Company has from time to time, and subject to certain conditions, reimbursed certain suppliers for component inventory purchases when this inventory has been rendered excess or obsolete, for example due to manufacturing and engineering change orders resulting from design changes, manufacturing discontinuation of products by its suppliers, or in cases where the Company has committed inventory levels that greatly exceed projected demand. The estimated excess and obsolete inventory liabilities related to such manufacturing and engineering change orders and other factors, which are included in accrued liabilities in the accompanying balance sheets, were $4.2 million and $4.0 million as of April 3, 2021 and December 31, 2020, respectively. The Company records the related charges in cost of systems revenue in its Condensed Consolidated Statements of Comprehensive Income (Loss).

Litigation

From time to time, the Company is involved in various legal proceedings arising from the normal course of business activities. The Company is not currently a party to any legal proceedings that, if determined adversely to the Company, in management's opinion, are currently expected to individually or in the aggregate have a material adverse effect on the Company's business, operating results or financial condition taken as a whole.

8. Stockholders' Equity

2019 Equity Incentive Award Plan

Employees and consultants of the Company, its subsidiaries and affiliates, as well as members of the Company's Board of Directors, are eligible to receive awards under the 2019 Equity Incentive Award Plan ("the 2019 Plan"). The 2019 Plan provides for the grant of stock options, including incentive stock options and nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, other stock or cash-based awards and dividend equivalents to eligible individuals. As of April 3, 2021, there were 3.6 million shares available for issuance under the 2019 Plan.

Stock Options

During the three months ended April 3, 2021, stock option awards exercisable for up to an aggregate of 0.1 million shares of common stock were granted with a grant date exercise price of $33.20 per share. These stock option awards vest 25% on the first anniversary of the vesting commencement date and on a quarterly basis thereafter over an additional three years.

In February 2021, performance-based stock option awards exercisable for up to an aggregate of 0.7 million shares of common stock were granted to certain Company executives with a grant date exercise price of $36.74 per share. The actual number of shares earned is contingent upon achievement of annual corporate financial targets for bookings and non-GAAP net income for 2021 (collectively, the "2021 Performance Targets") during the one-year performance period. These performance-based stock option awards will vest, subject to certification by the Compensation Committee of the Company's Board of Directors upon the achievement of the 2021 Performance Targets, as to 25% of the shares of common stock earned on the one year anniversary of the date of grant, and as to the remaining 75% of the shares of common stock earned, in substantially equal quarterly installments over the subsequent 36 months, subject to the executive's continuous service with the Company through the respective vesting dates. If the non-GAAP net income target is achieved below 80% of target or the bookings target is achieved below 90% of target, no shares would be awarded, and the performance-based stock option awards would be forfeited in full. If both targets are achieved at the minimum threshold of 80% of target for non-GAAP net income and 90% of target for bookings, then the shares are awarded at 50% of the granted shares, with an increasing percentage of shares awarded above the minimum

thresholds up to 100% of the granted shares if both targets are achieved at 100% or more of target. The probability of meeting the performance conditions related to these performance-based stock option awards was assessed to be probable as of April 3, 2021, and stock-based compensation expense of $1.0 million was recognized for the three months ended April 3, 2021.

During the three months ended April 3, 2021, 0.5 million shares of common stock were issued pursuant to the exercise of stock options at a weighted-average exercise price of $9.36 per share. As of April 3, 2021, unrecognized stock-based compensation expense of $26.1 million related to stock options, net of estimated forfeitures, is expected to be recognized over a weighted-average period of 2.5 years.

Employee Stock Purchase Plans

The Company maintains two employee stock purchase plans - the Amended and Restated Employee Stock Purchase Plan (the "ESPP") and the Amended and Restated 2017 Nonqualified Employee Stock Purchase Plan (the "NQ ESPP").

The ESPP allows eligible employees to purchase shares of the Company's common stock through payroll deductions of up to 15% of their eligible compensation subject to certain Internal Revenue Code limitations. In addition, no participant may purchase more than 2,000 shares of common stock in each offering period.

The offering periods under the ESPP are two six-month offering periods from August 15th through February 14th and February 15th through August 14th of each year. The price of common stock purchased under the ESPP is 85% of the lower of the fair market value of the common stock on the commencement date and the end date of each six-month offering period. As of April 3, 2021, there were 2.4 million shares available for issuance under the ESPP. During the three months ended April 3, 2021, 0.2 million shares were purchased under the ESPP. As of April 3, 2021, unrecognized stock-based compensation expense of $0.8 million related to the ESPP is expected to be recognized over a remaining service period of 0.4 years.

The NQ ESPP allows eligible employees to purchase shares of the Company's common stock through payroll deductions of up to 25% of their eligible compensation. Eligible employees have the right to (a) purchase the maximum number of whole shares of common stock that can be purchased with the elected payroll deductions during each offering period for which the employee is enrolled at a purchase price equal to the closing price of the Company's common stock on the last day of such offering period and (b) receive an equal number of shares of the Company's common stock that are subject to a risk of forfeiture in the event the employee terminates employment within the one year period immediately following the purchase date. The NQ ESPP provides two six-month offering periods from November 15th through May 14th and May 15th through November 14th of each year. As of April 3, 2021, there were 2.3 million shares available for issuance under the NQ ESPP with a maximum of 0.5 million shares allocated per purchase period. As of April 3, 2021, unrecognized stock-based compensation expense of $4.3 million related to the NQ ESPP is expected to be recognized over a remaining weighted-average service period of 1.0 year.

Stock-Based Compensation

The following table summarizes stock-based compensation expense (in thousands):

	Three Months Ended	
	April 3, 2021	March 28, 2020
Cost of revenue:		
Products	$ 162	$ 107
Services	150	115
Sales and marketing	1,447	956
Research and development	1,583	1,010
General and administrative	1,829	796
	$ 5,171	$ 2,984

9. Revenue from Contracts with Customers

The Company derives revenue from contracts with customers primarily from the following and categorizes its revenue as follows:

- Systems include revenue from the sale of access and premises systems, software platform licenses and cloud-based software subscriptions; and
- Services include revenue from professional services, customer support, software- and cloud-based maintenance, extended warranty subscriptions, training and managed services.

The following is a summary of revenue disaggregated by geographic region based upon the location of the customers (in thousands):

	Three Months Ended	
	April 3, 2021	March 28, 2020
United States	$ 134,705	$ 88,050
Middle East	7,089	2,301
Canada	6,506	3,563
Caribbean	4,763	2,372
Europe	3,414	4,121
Other	5,597	1,275
	$ 162,074	$ 101,682

Contract Asset

The primary contract asset is revenue recognized on professional services contracts where the services are transferred to the customer over time, which has yet to be billed, and is classified within accounts receivable. Amounts are billed in accordance with the agreed-upon contractual terms. The balance at December 31, 2020 was $2.3 million of which $1.0 million remained in the Company's Condensed Consolidated Balance Sheet at April 3, 2021. The closing balance at April 3, 2021 was $1.9 million of which the Company expects to bill 73% of the balance during the remainder of 2020. The decrease in the contract asset was driven by billings for past services and a reduction in expected cash collections on ongoing projects partially offset by additional unbilled work performed during the three months ended April 3, 2021.

Contract Liability

Deferred revenue consisted of the following (in thousands):

	April 3, 2021	December 31, 2020
Current:		
Products and services	$ 18,647	$ 14,651
Extended warranty	5,480	4,538
	24,127	19,189
Long-term:		
Products and services	2,801	1,879
Extended warranty	17,528	18,025
	20,329	19,904
	$ 44,456	$ 39,093

The increase in the deferred revenue balance for the three months ended April 3, 2021 is primarily driven by cash payments received or due in advance of satisfying the Company’s performance obligation offset by $8.3 million of revenue recognized that was included in the deferred revenue balance at the beginning of that period.

Revenue allocated to remaining performance obligations represent contract revenue that has not yet been recognized, which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. This amount was $75.1 million as of April 3, 2021, and the Company expects to recognize 39% of such revenue over the next 12 months and the remainder thereafter.

Contract Costs

The Company capitalizes certain sales commissions related primarily to multi-year subscriptions and extended warranty support for which the expected amortization period is greater than one year. As of April 3, 2021, the unamortized balance of deferred commissions was $1.4 million. For the three months ended April 3, 2021, the amount of amortization was $0.1 million and there was no impairment loss in relation to the costs capitalized.

Concentration of Customer Risk

No company accounted for more than 10% of the Company's total revenue for the three months ended April 3, 2021. Lumen Technologies, Inc. (formerly CenturyLink, Inc.) represented 15% of total revenue for three months ended March 28, 2020. No other customers accounted for more than 10% of the Company’s total revenue for three months ended March 28, 2020.

No customer represented more than 10% of the Company’s accounts receivable for the periods ended April 3, 2021 or December 31, 2020.

10. Income Taxes

The following table presents the provision for income taxes from operations and the effective tax rates for the periods indicated (in thousands, except percentages):

	Three Months Ended	
	April 3, 2021	March 28, 2020
Provision for income taxes	$ 150	$ 329
Effective tax rate	0.7 %	(5.0)

The effective tax rate for the three months ended April 3, 2021 was determined using an estimated annual effective tax rate adjusted for discrete items, if any, that occurred during the respective periods.

Deferred tax assets are recognized if realization of such assets is more likely than not. The Company has established and continues to maintain a full valuation allowance against its net deferred tax assets, with the exception of certain foreign deferred tax assets, as the Company does not believe that realization of those assets is more likely than not.

The Company’s effective tax rate may be subject to fluctuation during the year as new information is obtained, which may affect the assumptions used to estimate the annual effective tax rate, including factors such as the mix of forecasted pre-tax earnings in the various jurisdictions in which it operates, valuation allowances against deferred tax assets, the recognition or de-recognition of tax benefits related to uncertain tax positions and changes in or the interpretation of tax laws in jurisdictions where it conducts business.

While the Company has reported U.S. pre-tax income in the first quarter of 2021, the Company has not yet been able to establish a sustained level of profitability in the U.S. or other sufficient significant positive evidence to conclude that its U.S. deferred tax assets are more likely than not to be realized. Therefore, the Company continues to maintain a valuation allowance against most of its U.S. deferred tax assets. At some point, if the Company establishes a sustained level of profitability and projects continued profitability, the Company may reverse a significant portion of its valuation allowance recorded against U.S. deferred tax assets, resulting in a non-recurring non-cash income tax benefit.

11. Net Income (Loss) Per Common Share

The following table sets forth the computation of basic and diluted net income (loss) per common share for the periods indicated (in thousands, except per share data):

	Three Months Ended	
	April 3, 2021	March 28, 2020
Numerator:		
Net income (loss)	$ 20,615	$ (6
Denominator:		
Weighted-average common shares outstanding used to compute basic net income (loss) per share	62,554	56
Effect of dilutive common stock equivalents	4,465	
Weighted-average common shares outstanding used to compute diluted net income (loss) per share	67,019	56
Net income (loss) per common share:		
Basic net income (loss) per common share	$ 0.33	$ (
Diluted net income (loss) per common share	$ 0.31	$ (
Potentially dilutive shares, weighted average	415	7

Potentially dilutive shares have been excluded from the computation of diluted net income (loss) per common share when their effect is antidilutive. These antidilutive shares were primarily from stock options. For each of the periods presented where the Company reported a net loss, the effect of all potentially dilutive securities would be antidilutive, and as a result diluted net loss per common share is the same as basic net loss per common share.

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This report includes "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Securities and Exchange Act of 1934, as amended, or the Exchange Act. All statements other than statements of historical facts are "forward-looking statements" for purposes of these provisions, including any projections of earnings, revenue or other financial items, any statement of or concerning the following: the plans and objectives of management for future operations, proposed new products or licensing, product development, anticipated customer demand or capital expenditures, anticipated growth and trends in our business and industry, future economic and/or market conditions or performance and assumptions underlying any of the above. In some cases, forward-looking statements can be identified by the use of terminology such as "could," "may," "will," "would," "expects," "believes," "intends," "plans," "anticipates," "estimates," "projects," "predicts," "potential," or "continue" or the negative thereof or other comparable terminology. Readers are cautioned that these forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions that are difficult to predict. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, there can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from those projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including those identified in the Risk Factors discussed in Part II, Item 1A, of this report on Form 10-Q, as well as in other sections of this report and in our Annual Report on Form 10-K for the year ended December 31, 2020. All forward-looking statements and reasons why results may differ included in this Quarterly Report on Form 10-Q are made as of the date hereof, and we assume no obligation to update these forward-looking statements or reasons why actual results might differ.

Overview

We are the leading global provider of cloud and software platforms, systems and services that focus on the access network, the portion of the network that governs available bandwidth and determines the range and quality of services that can be offered to subscribers. These cloud and software platforms enable communications service providers, or CSPs, of all types and sizes to innovate and transform their businesses. Our CSP customers are empowered to utilize real-time data and insights from Calix platforms to simplify their businesses and deliver experiences that excite their subscribers. These insights enable CSPs to grow their businesses through increased subscriber acquisition, loyalty and revenue, thereby increasing the value of their businesses and contributions to their communities.

We market our cloud and software platforms, systems and services to CSPs globally through our direct sales force as well as select resellers. Our customers range from smaller, regional CSPs to some of the world's largest CSPs. We have enabled approximately 1,600 CSP customers purchasing directly and through partners to deploy passive optical, Active Ethernet and point-to-point Ethernet fiber access networks.

Our revenue and potential revenue growth will depend on our ability to sell and license our cloud and software platforms, systems and services to strategically aligned customers of all types such as wireless internet service providers, fiber overbuilders, cable MSOs, municipalities and electric cooperatives in the United States and internationally. Our growth is also highly dependent on the speed and willingness of customers to adopt these platforms.

Revenue fluctuations result from many factors, including, but not limited to: increases or decreases in customer orders for our products and services, market, financial or other factors that may delay or materially impact customer purchasing decisions, non-availability of products due to supply chain challenges, including disruptions as a result of the COVID-19 pandemic, contractual terms with customers that result in delayed revenue recognition and varying budget cycles and seasonal buying patterns of our customers. More specifically, our customers tend to spend less in the first quarter as they are finalizing their annual budgets, and in certain regions, customers are challenged by winter weather conditions that inhibit fiber deployment in outside infrastructure. Our revenue is also dependent upon our customers' timing of purchases, capital expenditure plans and decisions to upgrade their network or adopt new technologies, including adoption of our software and cloud platform solutions, as well as our ability to grow our customer base.

Cost of revenue is strongly correlated to revenue and tends to fluctuate due to all of the above factors that may cause revenue fluctuations. Factors that impacted our cost of revenue for the three months ended April 3, 2021, and that we expect will impact cost of revenue in future periods, also include: changes in the mix of products delivered, customer location and regional mix, changes in the cost of our inventory, including higher costs due to materials shortages including components, supply constraints or unfavorable changes in trade policies, investments to support expansion of cloud and customer support offerings, changes in product warranty and incurrence of retrofit costs, tariffs and associated costs to mitigate the impact of tariffs, amortization of intangibles, asset write-offs, support fees for silicon-related development work for our products and inventory write-downs. In particular, given the recent supply chain disruptions due to the COVID-19 pandemic, we have seen increases in our global freight charges as we have elected to ship by air in order to meet delivery commitments to our customers as well as air freight

rates have increased from prior year levels. Cost of revenue also includes fixed expenses related to our internal operations, which could increase our cost of revenue as a percentage of revenue if there are declines in revenue.

Our gross profit and gross margin fluctuate based on timing of factors such as changes in customer mix and changes in the mix of products demanded and sold (and any related write-downs of existing inventory) and have in the past been negatively impacted by increases in mix of revenue towards deployment services, increases in mix of revenue from channel sales rather than direct sales or other unfavorable customer or product mix, shipment volumes and any related volume discounts, changes in our product and services costs, pricing decreases or discounts, new product introductions or upgrades to existing products, customer rebates and incentive programs due to competitive pressure or materials shortages, supply constraints, investments to support expansion of cloud and customer support offerings, tariffs or unfavorable changes in trade policies.

Our operating expenses fluctuate based on the following factors among others: changes in headcount and personnel costs, which comprise a significant portion of our operating expenses; variable compensation due to fluctuations in shipment volumes or level of achievement against performance targets; timing of research and development expenses, including investments in innovative solutions and new customer segments, prototype builds and outsourced development resources; asset write-offs; investments in our business and information technology infrastructure; and fluctuations in stock-based compensation expenses due to timing of equity grants or other factors affecting vesting.

While we more recently had net income of $33.5 million in 2020 and $20.6 million for the first three months of 2021, we have incurred significant losses since our inception, and as of April 3, 2021, we had an accumulated deficit of $648.5 million. Further, as a result of factors contributing to the fluctuations described above among other factors, many of which are outside our control, our quarterly operating results fluctuate from period to period. Comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance.

COVID-19 Pandemic

We are subject to risks and uncertainties as a result of the COVID-19 pandemic. The extent of the impact of the COVID-19 pandemic on our business remains highly uncertain and difficult to predict as coronavirus continues to spread around the world including through new variants. Although the availability of vaccines has increased, there are no assurances as to when the pandemic will be contained. Since March 2020, we have instituted office closures, travel restrictions and a mandatory work-from-home policy for substantially all of our employees. The spread of COVID-19 has had a prolonged impact on our supply chain operations due to restrictions, reduced capacity and limited availability from suppliers whom we rely on for sourcing components and materials and from third-party partners whom we rely on for manufacturing, warehousing and logistics services. Although demand for our products has been strong in the short-term as subscribers seek more bandwidth and better Wi-Fi, customers' purchasing decisions over the long-term may be impacted by the pandemic and its impact on the economy, which could in turn impact our revenue and results of operations. Furthermore, our supply chain continues to face constraints primarily due to challenges in sourcing components and materials for our products. The prolonged impact of COVID-19 could exacerbate these constraints or cause further supply chain disruptions.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with U.S. GAAP. These accounting principles require us to make certain estimates and judgments that can affect the reported amounts of assets and liabilities as of the date of the financial statements, as well as the reported amounts of revenue and expenses during the periods presented. Management bases its estimates, assumptions and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances. To the extent there are material differences between these estimates and actual results, our financial statements may be affected. Our management evaluates its estimates, assumptions and judgments on an ongoing basis.

Our critical accounting policies and estimates, which are revenue recognition and inventory valuation, are described under "Critical Accounting Policies and Estimates" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K for the year ended December 31, 2020. For the three months ended April 3, 2021, there have been no significant changes in our critical accounting policies and estimates.

Recent Accounting Pronouncements

There have been no additional accounting pronouncements or changes in accounting pronouncements during the three months ended April 3, 2021 as compared to the recent accounting pronouncements described in our Annual Report on Form 10-K for the year ended December 31, 2020 that are significant or potentially significant to us.

Results of Operations

Comparison of the Three Months Ended April 3, 2021 and March 28, 2020

Revenue

The following table sets forth our revenue (dollars in thousands):

	Three Months Ended			
	April 3, 2021	March 28, 2020	Variance in Dollars	Variance in Percent
Revenue:				
Systems	$ 153,302	$ 94,509	$ 58,793	62 %
Services	8,772	7,173	1,599	22 %
	$ 162,074	$ 101,682	$ 60,392	59 %
Percent of total revenue:				
Systems	95 %	93 %		
Services	5 %	7 %		
	100 %	100 %		

Our revenue increased by $60.4 million for the three months ended April 3, 2021 as compared to the corresponding period in 2020 due to higher systems revenue of $58.8 million. Services revenue increased by $1.6 million compared to the corresponding period in 2020. The increase in systems revenue was primarily due to higher revenue from our small, regional customers and, to a lesser extent, our large-sized customers, as service providers accelerated some deployments to respond to demand for network capacity and relieve network capacity constraints as well as provide a better Wi-Fi experience. The increase in services revenue was due to the continued ramp in our service offerings aligned with cloud and software products offset by lower professional services related to CAF deployments.

For the three months ended April 3, 2021, revenue generated in the United States was $134.7 million, or 83% of our total revenue compared to $88.1 million, or 87% of our total revenue for the same period in 2020. International revenue was $27.4 million, or 17% of our total revenue, for the three months ended April 3, 2021, as compared to $13.6 million, or 13% of our total revenue, for the same period in 2020.

No company accounted for more than 10% of our total revenue for the three months ended April 3, 2021. For the three months ended March 28, 2020, only Lumen Technologies, Inc. (formerly CenturyLink, Inc.), or Lumen, accounted for more than 10% of our total revenue, representing 15% of our total revenue.

Cost of Revenue, Gross Profit and Gross Margin

The following table sets forth our cost of revenue (dollars in thousands):

	Three Months Ended			
	April 3, 2021	March 28, 2020	Variance in Dollars	Variance in Percent
Cost of revenue:				
Systems	$ 69,663	$ 50,708	$ 18,955	37 %
Services	6,169	5,350	819	15 %
	$ 75,832	$ 56,058	$ 19,774	35 %

Our cost of revenue increased by $19.8 million for the three months ended April 3, 2021 as compared with the corresponding period in 2020. The $19.0 million increase in our systems cost of revenue was less than the percentage increase in revenue compared with the corresponding period in 2020 and was due to the increasing spread between fixed costs in relation to revenue growth and continued growth in our All Platform offerings along with favorable customer and product mix. This was partially offset by increased freight costs due to higher prices for transportation as well as a mix towards more air shipments to meet delivery commitments. The increase in services cost of revenue for the three months ended April 3, 2021 compared with the corresponding period in 2020 was mainly due to increased personnel costs as we made further investments in our customer success organization.

The following table sets forth our gross profit and gross margin (dollars in thousands):

	Three Months Ended			
	April 3, 2021	March 28, 2020	Variance in Dollars	Variance in Percent
Gross profit:				
Systems	$ 83,639	$ 43,801	$ 39,838	91 %
Services	2,603	1,823	780	43 %
	$ 86,242	$ 45,624	$ 40,618	89 %
Gross margin:				
Systems	54.6 %	46.3 %		
Services	29.7 %	25.4 %		
Overall	53.2 %	44.9 %		

Gross profit increased to $86.2 million for the three months ended April 3, 2021 from $45.6 million during the corresponding period in 2020 due to higher systems gross margin. The increase in systems gross margin for the three months ended April 3, 2021 compared the corresponding period in 2020 was mainly due to continued growth in our All Platform offerings along with favorable product and customer mix. Services gross margin increased for the three months ended April 3, 2021 compared to the corresponding period in 2020 as our service revenue mix shifted away from low gross margin deployment services to higher gross margin software maintenance and services aligned with our platform offerings.

Operating Expenses

Sales and Marketing Expenses

The following table sets forth our sales and marketing expenses (dollars in thousands):

	Three Months Ended			
	April 3, 2021	March 28, 2020	Variance in Dollars	Variance in Percent
Sales and marketing expenses	$ 28,051	$ 20,624	$ 7,427	36 %
Percent of total revenue	17 %	20 %		

Sales and marketing expenses for the three months ended April 3, 2021 increased by $7.4 million compared with the corresponding period in 2020 primarily due to increases in personnel expenses of $6.8 million, mainly related to investments in sales headcount and higher sales incentive compensation expense, marketing expenses of $0.5 million, stock-based compensation of $0.5 million and outside services expenses of $0.5 million. These increases were partially offset by a decrease in travel expenses of $1.3 million.

We expect to slightly increase our investments in sales and marketing as a percentage of revenue in order to extend our market reach and grow our business in support of our key strategic initiatives.

Research and Development Expenses

The following table sets forth our research and development expenses (dollars in thousands):

	Three Months Ended			
	April 3, 2021	March 28, 2020	Variance in Dollars	Variance in Percent
Research and development expenses	$ 24,364	$ 20,671	$ 3,693	18 %
Percent of total revenue	15 %	20 %		
Percentage of systems gross profit	29 %	47 %		

Research and development expenses for the three months ended April 3, 2021 increased by $3.7 million as compared with the corresponding period in 2020 mainly due to increases in personnel expenses of $2.0 million, outside services of $1.7 million, stock-based compensation of $0.6 million and depreciation and amortization of $0.4 million. These increases were partially offset by lower facilities expenses of $0.8 million.

We expect to slightly increase our investments in research and development as a percentage of systems gross profit to expand the functionality and capabilities of our platforms.

General and Administrative Expenses

The following table sets forth our general and administrative expenses (dollars in thousands):

	Three Months Ended			
	April 3, 2021	March 28, 2020	Variance in Dollars	Variance in Percent
General and administrative expenses	$ 13,025	$ 10,669	$ 2,356	22 %
Percent of total revenue	8 %	10 %		

General and administrative expenses for the three months ended April 3, 2021 increased by $2.4 million as compared with the corresponding period in 2020 mainly due to increases in unallocated-facilities expenses of $1.2 million, stock-based compensation of $1.0 million and personnel expenses of $0.7 million. Beginning in the third quarter of 2020, we changed our facility allocation to align with our work-from-home initiative, and consequently, most of facilities expenses are retained in general and administrative expenses. These increases were partially offset by decreases in professional services fees of $0.3 million.

We expect to slightly increase our investments in general and administrative expenses as a percentage of revenue to enhance and automate our internal information systems, databases and processes.

Provision for Income Taxes

The following table sets forth our provision for income taxes (dollars in thousands):

	Three Months Ended			
	April 3, 2021	March 28, 2020	Variance in Dollars	Variance in Percent
Provision for income taxes	$ 150	$ 329	$ (179)	(54) %
Effective tax rate	0.7 %	(5.0)%		

The effective tax rate for the three months ended April 3, 2021 was determined using an estimated annual effective tax rate adjusted for discrete items, if any, that occurred during the respective periods.

While we have recently reported profitability, we have not yet been able to establish a sustained level of profitability in the U.S. or other sufficient significant positive evidence to conclude that our U.S. deferred tax assets are more likely than not to be realized. Therefore, we continue to maintain a valuation allowance against most of our U.S. deferred tax assets. At some point, if we establish a sustained level of profitability and project continued profitability, we may reverse a significant portion of our valuation allowance recorded against U.S. deferred tax assets, resulting in a non-recurring, non-cash income tax benefit.

Our effective tax rate may be subject to fluctuation during the year as new information is obtained, which may affect the assumptions used to estimate the annual effective tax rate, including factors such as the mix of forecasted pre-tax earnings in the various jurisdictions in which we operate, valuation allowances against deferred tax assets, the recognition or de-recognition of tax benefits related to uncertain tax positions and changes in or the interpretation of tax laws in jurisdictions where we conduct business.

Liquidity and Capital Resources

We have funded our operations and investing activities primarily through sales of our common stock, including an underwritten public offering in August 2020, cash flow generated from operations and a financing arrangement for consulting services. As of April 3, 2021, we had cash, cash equivalents and marketable securities of $150.0 million, which consisted of deposits held at banks and major financial institutions and highly liquid marketable securities such as U.S. government securities and commercial paper.

Operating Activities

Net cash provided by operating activities was $9.9 million for the three months ended April 3, 2021 and consisted of net income of $20.6 million and non-cash charges of $9.2 million, consisting of stock-based compensation of $5.2 million and depreciation and amortization of $4.1 million. This was partially offset by cash flow decreases of $20.0 million reflected in the net change in assets and liabilities.

Cash flow decreases resulting from the net change in assets and liabilities primarily consisted of an increase in inventory of $19.9 million to support revenue growth and to mitigate supply chain shortages and disruptions and a decrease in total accrued liabilities of $15.2 million, mainly related to incentive compensation payouts, rebate redemptions and a reduction of customer advance payments. In addition, there was an increase in accounts receivable of $5.0 million, due to product shipment timing, and an increase in prepaid expenses and other assets of $1.3 million mainly due to prepaid software licenses. These changes were partially offset by an increase in accounts payable of $16.2 million due to increased inventory purchases and an increase in deferred revenue of $5.4 million due to support contracts, extended warranties and Calix Cloud subscriptions.

During the three months ended March 28, 2020, net cash provided by operating activities was $1.2 million and consisted of $6.5 million of non-cash charges and $1.7 million of cash flow increases reflected in the net change in assets and liabilities, partially offset by a net loss of $6.9 million. Cash flow increases resulting from the net change in assets and liabilities primarily consisted of an increase in accounts payable of $9.5 million, primarily due to timing of payments to our contract manufacturers, or CMs, a decrease in inventory of $9.6 million due to lower deliveries due to the supply disruption during of the quarter, an increase in deferred revenue of $2.1 million mainly due to increased Calix Cloud subscriptions and an increase in accrued liabilities of $1.4 million due to an increase in inventory held by suppliers. This was partially offset by an increase in accounts receivable of $20.6 million, mainly due to timing of shipments and delays in processing invoices due to the ERP migration. Non-cash charges primarily consisted of stock-based compensation of $3.0 million and depreciation and amortization of $3.5 million.

Investing Activity

For the three months ended April 3, 2021, cash used in investing activities of $13.5 million consisted of net purchases of marketable securities of $11.2 million and capital expenditures of $2.3 million, consisting primarily of purchases of test equipment and computer equipment.

Net cash used in investing activities of $1.7 million for the three months ended March 28, 2020 consisted of capital expenditures primarily for purchases of test equipment, computer equipment and software.

Financing Activities

Net cash provided by financing activities of $8.6 million for the three months ended April 3, 2021 consisted of proceeds from the issuance of common stock related to our employee equity plans.

Net cash provided by financing activities of $0.1 million for the three months ended March 28, 2020 mainly consisted of proceeds from the issuance of common stock related to our employee equity plans of $1.1 million offset by payments related to financing arrangements of $0.8 million and payments to originate our loan and security agreement with Bank of America, or BofA Loan Agreement, of $0.2 million.

Working Capital and Capital Expenditure Needs

Our material cash commitments include non-cancelable firm purchase commitments, contractual obligations under our BofA Loan Agreement, normal recurring trade payables, compensation-related and expense accruals, operating leases and revenue-share obligations. We believe that our outsourced approach to manufacturing provides us significant flexibility in both managing inventory levels and financing our inventory. In the event that our revenue plan does not meet our expectations, we may be required to curtail or eliminate expenditures to mitigate the impact on our working capital.

The BofA Loan Agreement provides for a revolving facility up to a principal amount of up to $35.0 million, including a $10.0 million sublimit for letters of credit. The BofA Loan Agreement matures, and all outstanding amounts become due and payable, in January 2023. The BofA Loan Agreement is secured by substantially all of our assets, including our intellectual property.

Loans under the credit facility bear interest at a rate per annum equal to either LIBOR (customarily defined) plus an applicable margin between 1.5% to 2.0% or Prime Rate (customarily defined) plus an applicable margin between 0.5% to 1.0% (3.75% as of April 3, 2021), in each case largely based on a fixed charge coverage ratio measured at the end of each fiscal quarter. As of April 3, 2021, we had no outstanding borrowings and had full availability of $35.0 million.

In March 2018, we entered into an agreement with a vendor to develop software products pursuant to which we would become obligated, if the vendor delivered software that meets our technical requirements for commercial sale, to make minimum revenue-share payments of $15.8 million over the subsequent three years. The payments are based on a revenue-share rate applied to revenue from developed product sales subject to a minimum and a maximum aggregate amount over the three-year sales period. We had our first sale in August 2019. Revenue-share payments are paid quarterly in arrears, and we began making payments in the fourth quarter of 2020. In December 2020, we amended the agreement to increase the revenue-share rate, limit the revenue-share payments to $15.8 million and extend the revenue-share period until March 2024.

We believe, based on our current operating plan and expected operating cash flows, that our existing cash, cash equivalents and marketable securities will be sufficient to meet our anticipated cash needs for at least the next twelve months. If we are unable to execute on our current operating plan or continue to generate operating income and positive cash flows, our liquidity, results of operations and financial condition will be adversely affected, and we may need to seek other sources of liquidity, including the sale of additional equity or incremental borrowings, to support our working capital needs. In addition, we may choose to seek other sources of liquidity even if we believe we have generated sufficient cash flows to support our operational needs. There is no assurance that any other sources of liquidity may be available to us on acceptable terms or at all. If we are unable to generate sufficient cash flows or obtain other sources of liquidity, we will be forced to limit our development activities, reduce our investment in growth initiatives and institute cost-cutting measures, all of which may adversely impact our business and potential growth.

Contractual Obligations and Commitments

Our principal commitments as of April 3, 2021 consisted of our contractual obligations under non-cancelable outstanding purchase obligations, operating lease obligations for office space and a revenue share obligation. The following table summarizes our contractual obligations as of April 3, 2021 (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Non-cancelable purchase commitments [1]	$ 134,858	$ 116,770	$ 15,249	$ 2,839	$ —
Operating lease obligations [2]	17,612	3,885	7,744	5,983	—
Revenue share obligation [3]	15,314	2,555	12,759	—	—
	$ 167,784	$ 123,210	$ 35,752	$ 8,822	$ —

[1] Represents outstanding purchase commitments to be delivered by our third-party manufacturers or other vendors. See Note 7, "*Commitments and Contingencies*" of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further discussion regarding our outstanding purchase commitments.

[2] Future minimum operating lease obligations in the table above include primarily payments for our office locations, which expire at various dates through 2026. See Note 7 "*Commitments and Contingencies*" of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further discussion regarding our operating leases.

[3] Represents remaining payments related to a revenue-share obligation, including imputed interest associated with developed software product and related enhancements, by an engineering service provider. The schedule reflects our expected revenue-share payments based on our revenue projections for the developed products over a sales period through March 2024. If the minimum revenue-share payments are not achieved by the end of that period, a true-up payment will be due. See Note 5 *"Balance Sheet Details"* of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further discussion regarding our outstanding liability.

Off-Balance Sheet Arrangements

As of April 3, 2021 and December 31, 2020, we did not have any off-balance sheet arrangements.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

The primary objectives of our investment activity are to preserve principal, provide liquidity and maximize income without significantly increasing risk. By policy, we do not enter into investments for trading or speculative purposes. At April 3, 2021, we had cash, cash equivalents and marketable securities of $150.0 million, which was held primarily in cash, money market funds and highly liquid marketable securities such as U.S. government securities and commercial paper. Due to the nature of these money market funds and highly liquid marketable securities, we believe that we do not have any material exposure to changes in the fair value of our cash equivalents and marketable securities as a result of changes in interest rates.

Our exposure to interest rate risk also relates to the amount of interest we must pay on our borrowings under our Loan Agreement with BofA. Borrowings under the BofA Loan Agreement will bear interest through maturity at a variable annual rate based upon an annual rate of either a prime rate or a LIBOR rate, plus an applicable margin between 0.5% to 1.0% for prime rate advances and between 1.5% and 2.0% for LIBOR advances based on our fixed charge coverage ratio. As of April 3, 2021, we had no outstanding borrowings under the BofA Loan Agreement.

Foreign Currency Exchange Risk

Our primary foreign currency exposures are described below.

Economic Exposure

The direct effect of foreign currency fluctuations on our sales and expenses has not been material because our sales and expenses are primarily denominated in U.S. dollars, or USD. However, we are indirectly exposed to changes in foreign currency exchange rates to the extent of our use of foreign CMs whom we pay in USD. Increases in the local currency rates of these vendors in relation to USD could cause an increase in the price of products that we purchase. Additionally, if the USD strengthens relative to other currencies, such strengthening could have an indirect effect on our sales to the extent it raises the cost of our products to non-U.S. customers and thereby reduces demand. A weaker USD could have the opposite effect. The precise indirect effect of currency fluctuations is difficult to measure or predict because our sales are influenced by many factors in addition to the impact of such currency fluctuations.

Translation Exposure

Our sales contracts are primarily denominated in USD and, therefore, the majority of our revenue is not subject to foreign currency risk. We are directly exposed to changes in foreign exchange rates to the extent such changes affect our expenses related to our foreign assets and liabilities with our subsidiaries in China and the United Kingdom, whose functional currencies are Chinese Renminbi, or RMB, and British Pounds Sterling, or GBP.

Our operating expenses are incurred primarily in the United States, in China associated with our research and development operations that are maintained there and in the United Kingdom for our international sales and marketing activities. Our operating expenses are generally denominated in the functional currencies of our subsidiaries in which the operations are located. The percentages of our operating expenses denominated in the following currencies for the indicated periods were as follows:

	Three Months Ended	
	April 3, 2021	March 28, 2020
USD	91 %	91 %
RMB	6 %	6 %
GBP	3 %	3 %
	100 %	100 %

If USD had appreciated or depreciated by 10%, relative to RMB and GBP, our operating expenses for the first three months of 2021 would have decreased or increased by approximately $0.5 million, or approximately 1%. We do not currently enter into forward exchange contracts to hedge exposure denominated in foreign currencies or any derivative financial instruments. In the future, we may consider entering into hedging transactions to help mitigate our foreign currency exchange risk.

Foreign exchange rate fluctuations may also adversely impact our financial position as the assets and liabilities of our foreign operations are translated into USD in preparing our Condensed Consolidated Balance Sheets. The effect of foreign exchange rate fluctuations on our consolidated financial position for the three months ended April 3, 2021 was a net translation loss of $35,000. This loss is recognized as an adjustment to stockholders’ equity through accumulated other comprehensive loss.

Transaction Exposure

We have certain assets and liabilities, primarily receivables and accounts payable (including inter-company transactions) that are denominated in currencies other than the relevant entity's functional currency. In certain circumstances, changes in the functional currency value of these assets and liabilities create fluctuations in our reported consolidated financial position, cash flows and results of operations. Transaction gains and losses on these foreign currency denominated assets and liabilities are recognized each period within "Other expense, net" in our Condensed Consolidated Statements of Comprehensive Income (Loss). During the three months ended April 3, 2021, the net gain we recognized related to these foreign exchange assets and liabilities was approximately $0.2 million.

ITEM 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Based on their evaluation as of April 3, 2021, our Chief Executive Officer and Chief Financial Officer, with the participation of our management, have concluded that our disclosure controls and procedures (as defined in Rules 13a–15(e) and 15d–15(e) under the Exchange Act) were effective at the reasonable assurance level.

Limitations on the Effectiveness of Controls

Our disclosure controls and procedures provide our Chief Executive Officer and Chief Financial Officer reasonable assurance that our disclosure controls and procedures will achieve their objectives. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting can or will prevent all human error. Our management recognizes that a control system, no matter how well designed and implemented, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Furthermore, the design of a control system must reflect the fact that there are internal resource constraints, and the benefit of controls must be weighed relative to their corresponding costs. Because of the limitations in all control systems, no evaluation of controls can provide complete assurance that all control issues and instances of error, if any, within our company are detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur due to human error or mistake. Additionally, controls, no matter how well designed, could be circumvented by the individual acts of specific persons within the organization. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated objectives under all potential future conditions.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the period covered by this report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. Legal Proceedings

For a description of our material pending legal proceedings, please refer to Note 6 *"Commitments and Contingencies – Litigation"* of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q, which is incorporated by reference.

ITEM 1A. Risk Factors

We have identified the following additional risks and uncertainties that may affect our business, financial condition and/or results of operations. The risks described below include any material changes to and supersede the description of the risk factors disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2020, as filed with the Securities and Exchange Commission on February 22, 2021. Investors should carefully consider the risks described below, together with the other information set forth in this Quarterly Report on Form 10-Q, before making any investment decision. The risks described below are not the only ones we face. Additional risks not currently known to us or that we currently believe are immaterial may also significantly impair our business operations. Our business could be harmed by any of these risks. The trading price of our common stock could decline due to any of these risks, and investors may lose all or part of their investment.

Business and Operational Risks

Our business and results of operations have been and are expected to continue to be negatively affected by the COVID-19 pandemic that has severely impacted the global economy.

Since late 2019, the COVID-19 pandemic has severely impacted the global economy, disrupting financial markets, global manufacturing activities, customer purchasing patterns and general business operations, resulting in business closures, significant unemployment rates and substantial and prolonged government restrictions on business, travel and personal activities. These measures have disrupted our global supply chain activities and significantly limited our business travel, customer engagements and normal business activities, all of which heighten our business and operational risks. Our U.S. offices remain closed and we continue to focus significant management resources on the safety, well-being and productivity of our workforce amid the pandemic. Furthermore, we have transitioned our workforce to a work-from-anywhere model. While these measures help to contain and mitigate the transmission of COVID-19 and the impact on productivity, such measures are disruptive, require transition to new business processes and distracts our employees from normal business activities. We cannot predict the continued impact of the pandemic and the degree to which our business and results of operations may be affected, particularly given the extended duration of the COVID-19 impacts on the U.S. and other locations in which we operate. Although the availability of vaccines has increased, there continue to be outbreaks, including due to variants, and there are no assurances that the global economy will recover quickly or at all, or that impacted areas will be able to adequately contain COVID-19 infections.

In particular, the pandemic and related restrictions continue to adversely impact our global supply chain operations with materially longer lead times, increased competition for limited supplies, shortages of key components and materials and disruptions in operations, including office and factory closures, at our third-party manufacturers, logistics partners and suppliers. If the pandemic and related restrictive measures continue for a prolonged period, we may experience a sustained shortage of components and materials, which may have a material negative impact our ability to supply products to meet customer requirements and could materially adversely affect our business and results of operations. Business closures, infection outbreaks, travel restrictions and other impacts of the COVID-19 pandemic have also adversely affected economies, financial markets and the financial viability and liquidity of businesses in the U.S. and internationally, heightening our collections risk. Our customers' purchasing decisions may be impacted by the pandemic, which could in turn impact our sales and results of operations. Although demand for our products has been strong in the short-term as subscribers seek more bandwidth and better Wi-Fi, customers' purchasing decisions over the long-term may be impacted by the pandemic and its impact on the economy. For example, CSPs may choose not to invest at this time in our new platforms or delay infrastructure improvements due to the uncertainty in the global economy. The prolonged disruptions to our business and operations and other adverse impacts of the COVID-19 pandemic or further disruptions we may experience in the future could have a material adverse effect on our business, results of operations and financial condition.

We have risks associated with material dependencies on third-party vendors for our global supply chain operations that could disrupt our business and adversely impact our gross margin and results of operations.

We have material dependencies on third-party vendors for our global supply chain operations, including for services to design, source components and materials, manufacture and supply our products, which heighten the complexity of our global supply

chain operations. If any of these third-party vendors stop providing their services, for any reason, we would have to obtain similar services from alternative sources, which may not be available on commercially reasonable terms, if at all. We also have limited control over disruptions that may occur at the facilities of these third-party partners, such as supply interruptions, labor shortages, strikes, design and manufacturing failures, quality control issues, systems failures or even facility closures arising from the COVID-19 pandemic. In addition, switching development firms or manufacturers could delay the manufacture and availability of products and/or require us to re-qualify our products with our customers, which would be costly and time-consuming. For example, in recent years, we transitioned substantially all of our product manufacturing to locations outside of China, which required significant resources and involved unanticipated costs, disruptions in our operations and product shortages due to manufacturing and production delays that impaired our ability to fulfill customer orders and resulted in revenue below our plan in the first quarter of 2019. Any interruption in the development, supply or distribution of our products would adversely affect our ability to meet scheduled product deliveries to our customers and could result in lost revenue or higher costs, which would negatively impact our gross margin and operating results and harm our business.

Particular risks associated with management of our global supply chain operations include the following:

- ***Manufacturing constraints and disruptions.*** We do not have internal manufacturing capabilities and rely solely on a small number of manufacturing partners to manufacture and supply our products. Our business operations and ability to supply our products are highly dependent upon our ability to secure adequate third-party manufacturing capabilities and capacity and to effectively manage our manufacturing partners to meet our business needs. Our dependency solely on third-party manufacturers makes us vulnerable to possible supply and capacity constraints and reduces our control over manufacturing disruptions due to component availability, delivery schedules, quality, manufacturing yields and costs. If these manufacturing disruptions and constraints are prolonged, or if these manufacturing partners do not have adequate capabilities or business continuity plans to fulfill their obligations to us, our business could be disrupted. Furthermore, we expect to face increasing competition for manufacturing capacity and resources as more companies seek to transition manufacturing operations out of China due to the ongoing uncertainty of trade disputes. If we are unable to effectively manage our vendors or if we fail to invest adequate resources to manage our supply chain operations, our ability to meet customer orders and generate revenue may be negatively impacted. A substantial portion of our manufacturing is done at facilities outside of the U.S., largely in Asia, which presents increased supply risk, including the risk of supply interruptions or reductions in manufacturing quality or controls. Our international manufacturing also creates risks and uncertainties associated with regulatory changes or government actions such as local business requirements, trade restrictions and tariffs, economic sanctions or related legislation, which may complicate our export and import activities, be disruptive to the operations of our manufacturers and logistics partners or result in higher costs and variability of supply. Manufacturing in Asia further heightens our risk of meeting customer delivery requirements as we rely upon our logistics partners to transport and import significant volumes of products to the U.S. where we generate a substantial majority of our revenue.
- ***Extended lead times; component and materials shortages.*** We source components and materials to manufacture our products from a limited number of suppliers, resulting in our product supply being subject to such suppliers' lead times, volume constraints and increasing costs. We have experienced and may continue to experience extended lead times and product unavailability due to factory disruptions or closures as well as delays and unanticipated costs associated with the supply of our products, particularly in light of the COVID-19 pandemic. We also expect continued shortages and/or delay of critical components as a result of growing demand in the industry or other sectors. For example, increases in computing needs, Internet-of-Things devices, wireless products, automotive electronics and artificial intelligence all drive increased demand for certain components, such as chipsets and memory products, which may result in lower availability and increased prices for such components. More recently, one of our silicon suppliers extended their lead time from 32 to 50 weeks. Extended lead times and shortages could impair our ability to meet our customer requirements, require us to pay higher prices or incur expedite fees, which would harm our business and negatively impact our gross margin and results of operations.
- ***Limited sources and sole-sourced supply.*** We have sole-source or limited-source dependencies with suppliers for some key product components such as chipsets and certain of our application-specific integrated circuit processors and resistor components, including certain components sourced solely through suppliers located in China. Any of these suppliers upon whom we or our business partners rely could stop producing our components, be subject to higher costs or tariffs, epidemics or other conditions that disrupt their operations, cease operations or enter into exclusive arrangements with our competitors. For example, we are encountering disruptions in our supply of certain components that are sourced from suppliers in China, Southeast Asia, Mexico and other countries as a result of the COVID-19 pandemic, which have caused delays in supply of our products due to production disruptions, factory closures and longer lead times for components and from uncertainty around trade and tariff policies between the U.S. and China. Sole-source or limited-source dependencies on these suppliers limit our ability to mitigate these disruptions in our supply chain and such disruptions, particularly if prolonged, may adversely affect our ability to obtain components and

materials needed to manufacture our products at acceptable prices or at all, which would adversely affect our ability to meet scheduled product deliveries to our customers, increase costs and in turn harm our business and results of operations.

- ***Limitations on ability to manage third-party risks.*** Our business with third-party manufacturers typically represents a relatively small percentage of their total revenue, and our orders may not be given adequate priority if such manufacturers have to allocate limited capacity among competing customers, which could delay supplies of product to us or limit our ability to ramp product volumes within desired timeframes. If any of our manufacturing partners are unable or unwilling to continue manufacturing our products in required volumes and at high quality levels, we would have to identify, qualify and select acceptable alternative manufacturers, which could disrupt our ability to maintain continuous supply of product to meet customer requirements. An alternative manufacturer may not be available to us when needed or may not be in a position to satisfy our production requirements at commercially reasonable prices and quality. In addition, we and/or our manufacturers may not be able to negotiate commercially reasonable terms and sufficient quantities of component supplies with component and materials suppliers to meet our manufacturing needs because our purchase volumes may be too low for us to be considered a priority customer for securing supplies, particularly when there are shortages or limited availability of key components and materials. As a result, suppliers could stop selling to us and our manufacturers at commercially reasonable prices, or at all. Any such interruption or delay may force us and our manufacturers to seek components or materials from alternative sources, which may not be available, or result in higher prices. Switching suppliers could also require that we redesign our products to accommodate new components and could require us to re-qualify our products with our customers, which would be costly and time consuming. Any significant interruption in manufacturing or supply availability, including labor shortages or competition for components, would require us to reduce our product supply to customers, which would result in lost revenue and harm our customer relationships.
- ***Ability to forecast and manage inventory liability with vendors.*** We have experienced unanticipated increases in demand from customers, including from higher consumer demand for internet services and improved WiFi due to COVID-19, which in turn has resulted in delayed shipments and variable shipping patterns. If we underestimate our product demand, our manufacturers may have inadequate component inventory, which could interrupt our product manufacturing, increase our cost of product revenue associated with expedite fees and air freight and/or result in delays or cancellation of sales. If we are unable to deliver products in a timely fashion to our customers, we may lose customer goodwill or our customers may choose to purchase from other vendors, all of which may have a material negative impact on our revenue and operating results. If we overestimate our product demand, our manufacturers may purchase excess components and build excess inventory, and we could be required to pay for these excess parts or products and their storage costs. Long lead times for component supply, which have been exacerbated by factory closures and shortages due to the COVID-19 pandemic, and unanticipated demand for our products have in the past and are expected to continue to impact our ability to accurately forecast our production requirements. We may incur liabilities for certain component inventory purchases that have been rendered excess or obsolete, which may have an adverse effect on our gross margin, financial condition and results of operations.

We are subject to business and operational risks associated with our international operations that could harm our business.

We are subject to business and operational risks associated with our international operations, which include our global supply chain operations, our development center located in Nanjing, China and dependencies on third-party development partners in India, and, to a lesser extent, our international sales operations. We face a number of risks associated with our international operations, including costs of complying with differing and changing laws and regulatory requirements, tariffs, export quotas, custom duties and other trade restrictions; effects of inflation, currency controls and/or fluctuations in currency exchange rates; limited or unfavorable IP protection; and uncertainties associated with political conflicts and instabilities, variable economic conditions, terrorist attacks or acts of war. Our development operations and activities in China and India involve these and other significant risks, including: local labor conditions and regulations; knowledge transfer related to our technology and exposure to misappropriation of IP or confidential information, including information that is proprietary to us, our customers and third parties; heightened exposure to changes in the economic, security, political and pandemic conditions; international trade agreements and U.S. tax provisions that could adversely affect our international operations; complexities of managing development timelines and deliverables from abroad; and differences in local business practices and customs that may not align with our expectations and standards.

In addition to the foregoing risks, our international sales operations involve risks associated with greater costs and complexity localizing and supporting our products and platforms in local markets; trade regulations, compliance requirements and incremental costs applicable to the qualification, production, sale and delivery of our products; longer collection periods, financial instability and other difficulties impacting collection of accounts receivable in certain jurisdictions; more intense competition including from local equipment suppliers; and our reliance on value added resellers to sell and support our products in international markets given our limited presence and infrastructure outside the U.S. To expand our international operations,

we will need to invest time and resources to attract key talent, execute on our international strategy and drive international market demand for our products. If we invest substantial time and resources to expand our international operations and are unable to do so successfully and in a timely manner, our business, financial condition and results of operations may suffer.

Security breaches and data loss may expose us to liability, harm our reputation and adversely affect our business.

As part of our business operations, we collect, store, process, use and/or disclose sensitive data relating to our business, including in connection with the provision of our cloud services and in our information systems and data centers (including third-party data centers). We also engage third-party providers to assist in the development of our products and for services that may include the collection, handling, processing and/or storage of personal data on our behalf. In addition, we host our customers' subscriber data in third-party data centers in the course of providing our products and cloud-based platform solutions and services to our customers. While we and our third-party providers apply multiple layers of security to control access to data and use encryption and authentication technologies to secure data from unauthorized access, use, alteration and disclosure, these security measures may be compromised. Malicious hackers may attempt to gain access to our network or data centers; steal proprietary information related to our business, products, employees and customers; or interrupt our systems and services or those of our customers or others. In particular, there has been a spike in cybersecurity attacks as shelter-in-place orders and work-from-home requirements due to COVID-19 have led businesses to increase reliance on virtual environments and communications systems, which have been subjected to increasing third-party vulnerabilities and security risks. Although we monitor our networks and continue to enhance our security protections, particularly as we transition to a work-from-anywhere workforce, hackers are increasingly more sophisticated and aggressive, and our efforts may be inadequate to prevent all incidents of data breach or theft. The theft, loss or misuse of proprietary or personal data collected, stored or processed by us or our service providers to run our business could result in significantly increased security and remediation costs or costs related to defending legal claims. If we or our third-party providers do not allocate and effectively implement and manage the resources necessary to maintain adequate security measures, we could be subjected to data loss, unauthorized data disclosure or a compromise or breach of our systems, products or those of our third-party data centers. As we continue to grow our cloud-based platforms and services portfolio and rely on third-party development partners, risks arising from or related to security breaches or data loss are likely to increase. Any loss of data or compromise of our systems or data centers could result in loss of confidence in the security of our offerings and loss of customer goodwill, damage our reputation, cause the loss of current or potential customers or partners, lead to legal and regulatory liability and adversely affect our business, financial condition, operating results and cash flows.

We have a history of losses and fluctuations in our gross margin and operating results, which make it difficult to predict our future performance and could cause the market price of our stock to decline.

We have a history of net operating losses and fluctuations in our quarterly and annual gross margin and operating results, including due to factors outside of our control. Factors that impact variability of our operating results include our ability to predict our revenue and reduce and control our costs, our ability to predict product functions and features desired by our customers, the impact of global economic conditions, our ability to effectively manage our global supply chain operations, our ability to effectively manage third parties upon whom we depend to conduct our business, our customers' spending patterns and purchasing decisions, the impact of competition, customer adoption of our products, our ability to manage our legal, contractual and regulatory obligations and liabilities, and other risk factors identified in the lead-in to "Management's Discussion and Analysis of Financial Condition and Results of Operations" above and in this "Risk Factors" section. Our gross margin is further impacted by customer, geographic and product mix, the impact of competition on our prices, our ability to manage our costs associated with components and materials, excess and obsolescence, expedite fees and logistics-related activities, contractual commitments and other product costs. Fluctuating results make it difficult to predict our future performance and could cause the market price of our stock to decline. We expect to continue to incur significant expenses and cash outlays as we expand our business and operations and target new customer opportunities. Given our anticipated growth and the intense competitive pressures we face, we may be unable to adequately control our operating expenses or maintain positive operating income. Comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. If our revenue or operating results fall below the expectations of investors or securities analysts, or below any guidance we may provide to the market, the market price of our stock would likely decline.

We cannot guarantee that we will achieve sustained profitability. We will have to generate and sustain significant and consistent increased revenue, while continuing to control our expenses, to maintain profitability. If we are unable to generate positive operating income and positive cash flows from operations, our liquidity, results of operations and financial condition will be adversely affected. If we are unable to generate cash flows or obtain other sources of liquidity to support our operational needs, we will be forced to limit our development activities, reduce our investment in growth initiatives and institute cost-cutting measures, all of which would adversely impact our business and growth.

If we do not successfully execute on our business strategy to increase our sales to new and existing CSPs, our operating results, financial condition, cash flows and long-term growth may be negatively impacted.

Our growth is dependent upon our ability to increase sales to existing and new CSP customers of all types and sizes, and the execution of our strategy to increase sales to CSPs involves significant risk. The majority of our revenue is not recurring in nature, and our customers generally have no committed purchase requirements, may cancel orders and may cease to purchase our products at any time. If our customers stop purchasing our products for any reason, our business and results of operations would be harmed. If we are unable to successfully increase our sales to new and existing CSPs, our operating results, financial condition, cash flows and long-term growth may be negatively impacted. Our strategy includes investing in regional sales teams and select channel partners to sell to smaller regional CSPs. A large portion of our current sales are to customers with relatively smaller regional networks and limited capital expenditure budgets. The spending patterns of many of these customers are generally less formal and often characterized by small and sporadic purchases, and the potential revenue from any one of these customers is limited. We rely primarily on channel partners, including value added resellers, internationally and for certain U.S. markets. We face fierce competition for business with key channel partners. If we are unable to secure the services of channel partners that we believe are key to our strategy, we may fail to grow our sales as planned. Furthermore, we rely on our channel partners to promote and sell our products. The loss of a key channel partner or the failure of our partners to provide adequate services could have a negative effect on customer satisfaction and could cause harm to our business.

Our selling efforts to larger CSPs require substantial investments of technical, marketing and sales resources through lengthy equipment qualification and sales cycles without any assurance of generating sales. We may be required to invest in costly upgrades to meet more stringent performance criteria and interoperability requirements, develop new customer-specific features or adapt our products to meet required standards. We have invested and expect to continue to invest considerable time, effort and expenditures, including investment in product research and development, related to these opportunities without any assurance that our efforts will result in revenue.

The quality of our support and services offerings is important to sustain and increase our sales to new and existing customers. Our services to customers have increasingly broadened to help them deploy our products within their networks. Once our products are deployed within our customers' networks, they depend on our support organization to resolve any issues relating to those products. If we do not effectively assist our customers in deploying our products, succeed in helping them quickly resolve post-deployment issues or provide effective support, it could adversely affect our ability to sell our products to existing customers and harm our reputation with potential new customers. As a result, our failure to maintain high quality support and services could result in the loss of customers, which would harm our business.

If we do not successfully increase our sales through adoption of our platform offerings, our operating results, financial condition, cash flows and long-term growth may be negatively impacted.

We have platform offerings that are new and early in their life cycles and subject to uncertain market demand. If our customers are unwilling to adopt these new offerings, install our new products or deploy our new services, or if we are unable to achieve market acceptance of our products and platforms, our business and financial results may be harmed. Moreover, adoption of our cloud product offerings, such as our Revenue EDGE, is dependent on the success of our customers in investing, marketing, selling and deploying broader services—including ancillary services—to their subscribers, and our ability to differentiate our products from competing or substitutive product and service offerings. For example, our EDGE Suites include network security, parental controls and a growing ecosystem of services from partners like Arlo and Servify. However, if subscriber demand for such services does not grow as expected or declines, or our customers are unable or unwilling to invest in our platforms to deploy and market these services, demand for our products may decrease or fail to grow at rates we anticipate.

Changing market and customer requirements may adversely affect the valuation of our inventory.

Customer demand for our products can change rapidly in response to market and technology developments. We may, from time to time, adjust inventory valuations downward or end of life certain of our products in response to our assessment of our business strategy as well as consideration of demand from our customers for specific products or product lines. If we fail to accurately plan our inventory levels, we may have to write off excess or obsolete inventory. Such write-offs could have a material adverse effect on our gross margin, financial condition and results of operations.

We may have difficulty evolving and scaling our business and operations to meet customer and market demand, which could result in lower profitability or cause us to fail to execute on our business strategies.

In order to grow our business, we will need to continually evolve and scale our business and operations to meet customer and market demand. Evolving and scaling our business and operations places increased demands on our management as well as our financial and operational resources to effectively manage organizational change; design scalable processes; accelerate and/or refocus research and development activities; expand our manufacturing, supply chain and distribution capacity; increase our sales and marketing efforts; broaden our customer-support and services capabilities; maintain or increase operational efficiencies; scale support operations in a cost-effective manner; implement appropriate operational and financial systems; and

maintain effective financial disclosure controls and procedures. If we cannot evolve and scale our business and operations effectively, we may not be able to execute our business strategies in a cost-effective manner and our business, financial condition, profitability and results of operations could be adversely affected.

Historically, our customer base has been concentrated, and the loss of any of our key customers may adversely impact our revenue and results of operations, and any delays in payment by a key customer could negatively impact our cash flows and working capital.

Historically, a large portion of our sales has been, and in the future may be, to a limited number of large customers. Changes in the CSP market, such as financial difficulties, spending cuts or corporate consolidations that impact purchasing decisions by these customers have and may again negatively impact our revenue, and as a result, revenue from such customers may remain flat or continue to decline. For example, Lumen, our only greater than 10% customer in 2018, 2019 and 2020, completed a large acquisition in 2017 and more recently reorganized and rebranded, which disrupted its historical levels of purchases with us and have continued to result in significantly reduced levels of purchases. There is no assurance that purchasing levels by Lumen will increase from current levels. We have continued to experience delays or declines in purchases by certain CSPs due to deterioration in their financial condition. For example, Windstream, one of our medium-sized customers, completed its financial restructuring and emerged from Chapter 11 bankruptcy in September 2020. In April 2020, Frontier filed a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code in order to facilitate a financial restructuring plan and expects to emerge from bankruptcy in early 2021. Any decrease or delay in purchases and/or capital expenditure plans of any of our key customers, particularly if prolonged or sustained, or our inability to grow our sales with existing customers, may have a material negative impact on our revenue and results of operations.

In addition, some larger customers may demand discounts and rebates or desire to purchase their access systems and software from multiple providers. As a result of these factors, our future revenue opportunities may be limited, and we may face pricing pressures, which in turn could adversely impact our gross margin and our profitability. The loss of, reduction in or pricing discounts associated with orders from any key customer would significantly reduce our revenue and harm our business. Furthermore, delays in payment and/or extended payment terms from any of our key or larger customers could have a material negative impact on our cash flows and working capital to support our business operations.

Over the years, the CSP market has undergone substantial consolidation, reducing the number of potential customers and delays or decreases in capital spending. Continued consolidation of the CSP industry and among independent local exchange carriers and IOC customers, who represent a large part of our business, could make it more difficult for us to grow our customer base, increase sales of our products and maintain adequate gross margin.

We are exposed to customer credit risks that could adversely affect our operating results and financial condition.

We generally extend credit terms for sales to our customers which exposes us to credit risk. If we are unable to collect our accounts receivable balances as anticipated, our operating results and financial condition will be harmed. A number of factors contribute to this risk, including our ability to adequately assess a customer’s creditworthiness and financial condition, changes in a customer’s financial condition and/or liquidity, our ability to timely collect our accounts receivable from customers, disagreements with customers on invoiced balances and economic downturns or other unanticipated events impacting a customer’s ability to pay. Furthermore, some of our international customers operate in countries with developing economies, volatile financial markets or currency regulations that impact their ability to make payments in U.S. dollars. The COVID-19 pandemic has also presented financial challenges to numerous businesses, including delays in collections from some of our international customers in emerging markets and, if prolonged, may result in liquidity issues leading to heightened difficulties with collections. While we take measures to pursue collections on our accounts receivable, we have from time to time written down accounts receivable and written off doubtful accounts and may need to do so in future periods. The determination of allowances for doubtful accounts involves significant judgment, and if we underestimate our allowance for doubtful accounts, we will have to make further write-downs. Such write-downs or write-offs could negatively affect our operating results for the period in which they occur and could harm our cash flow or our financial condition.

We could become subject to litigation that could harm our business or negatively impact our results of operations.

In the ordinary course of business we are subject to legal claims, or may become involved in regulatory proceedings, related to disputes over commercial, competition, IP, labor and employment and other matters. Regardless of the merits of any such claims, litigation and regulatory proceedings are inherently uncertain, costly, disruptive to our business and operations, harmful to our reputation, and distracting to management. In particular, as a technology company, we may be subject to IP claims asserting patent, copyright, trademark and/or other infringement claims that are costly to defend and could limit our ability to use some technologies in the future. The risk of such claims is heightened as we expand our products and services and increasingly rely on more technologies, including third-party IP rights that we license and incorporate into our products and services. Third parties from whom we license IP may be unable or unwilling to indemnify us for such claims or offer any other remedy to us. Increasingly, patent infringement claims are asserted by patent holding companies, which are non-practicing entities that do not conduct business as an operating company and hold and own patents only for the purpose of aggressively

pursuing royalties through infringement assertions or patent infringement litigation. We have received and expect to continue to receive assertions from non-practicing entities and other third parties alleging that we may be infringing their patents or other IP rights; offering licenses to such IP; and/or threatening litigation. Any claims asserting that our products infringe the proprietary rights of third parties, with or without merit, could be time-consuming, result in costly litigation and divert the efforts of our engineering teams and management. These claims could also result in the suspension of ability to import, market and sell our products and services, product shipment delays or requirements to modify our products or enter into costly settlements or licensing agreements. Such royalty or licensing agreements, if required, may not be available to us on acceptable terms, if at all. Furthermore, we may additionally be financially responsible for claims made against our customers, including costs of litigation and damages awarded, under indemnity obligations which could further negatively impact our results of operations. Protracted litigation could cause us to incur significant defense costs, which would negatively impact our results of operations.

If we lose any of our key personnel, or are unable to attract, train and retain qualified personnel, our ability to manage our business and continue our growth would be negatively impacted.

Our success depends, in large part, on the continued contributions of our key personnel who are highly skilled and would be difficult to replace. Competition for skilled personnel is intense. We cannot be certain that we will be successful in attracting and retaining qualified personnel, or that newly hired personnel will function effectively, both individually and as a group. If we are unable to effectively recruit, hire and utilize new employees to align with our company objectives, execution of our business strategy and our ability to react to changing market conditions may be impeded, and our business, financial condition and results of operations may suffer. None of our key personnel are bound by a written employment contract to remain with us for a specified period. In addition, we do not currently maintain key person life insurance covering our key personnel. If we lose the services of any key personnel, our business, financial condition and results of operations may suffer.

If we experience disruptions with our enterprise resource planning system, we may not be able to effectively transact business or produce financial statements, which would adversely affect our business, results of operations and cash flows.

In January 2020, we migrated our Oracle enterprise resource planning, or ERP, system to Oracle’s cloud platform. With the migration to Oracle’s cloud platform, we are highly dependent upon Oracle to host, manage and maintain our ERP system, and any disruptions to their business or processes, or delays in their ability to provide services to us, may in turn disrupt our business operations or increase costs. Furthermore, we will receive quarterly system updates and enhancements on the cloud platform according to Oracle’s release timeline and change management processes, which if not managed properly may disrupt our business operations and delay our ability to process transactions and produce reports necessary to conduct our business. We are highly dependent upon our ERP system for critical business functions, including order processing and management, supply chain and procurement operations, financial planning, accounting and reporting; accordingly, protracted disruption in functionality or processing capabilities of the ERP system could materially impair our ability to conduct our business, process transactions timely or produce accurate financial statements on a timely basis. If our ability to conduct our business, process transactions or produce accurate financial statements on a timely basis remains impaired, our business, results of operations and cash flows would be adversely affected.

As a public company we are subject to significant accounting, legal and regulatory requirements; our failure to comply with these requirements may adversely affect our operating results and financial condition.

We are subject to significant accounting, legal and regulatory requirements, including requirements and rules under the Sarbanes-Oxley Act, or SOX, and the Dodd-Frank Wall Street Reform and Consumer Protection Act, or Dodd-Frank, among other rules and regulations implemented by the SEC, as well as listing requirements of the New York Stock Exchange, or NYSE. We incur significant accounting, legal and other expenses and must invest substantial time and resources to comply with public company reporting and compliance requirements, including costs to ensure we have adequate internal controls over accounting and financial reporting, proper documentation and testing procedures among other requirements. We cannot be certain that the actions we have taken to implement internal controls over financial reporting will be sufficient. We have in the past discovered, and may in the future discover, areas of our internal financial and accounting controls and procedures that need improvement, particularly as we enhance, automate and improve functionality of our processes and internal applications, including Oracle’s cloud platform. New laws and regulations as well as changes to existing laws and regulations affecting public companies, including the provisions of SOX and Dodd-Frank and rules adopted by the SEC and the NYSE, would likely result in increased costs to us as we respond to their requirements. We continue to invest resources to comply with evolving laws and regulations, and this investment may result in increased general and administrative expense.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our operating results and our stock price.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles. Our management does not expect that our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Because of the inherent

limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within our company will have been detected. If we are unable to produce accurate financial statements on a timely basis, investors could lose confidence in the reliability of our financial statements, which could cause the market price of our common stock to decline and make it more difficult for us to finance our operations and growth.

Risks Related to Our Products

Our products are highly technical and may contain undetected hardware or software defects or software bugs, which could harm our reputation and adversely affect our business.

Our products, including our smart home and business systems and our cloud and software platforms, are highly technical and, when deployed, are critical to the operation of many networks. Our products have contained and may contain undetected defects, bugs or security vulnerabilities, which risks may be exacerbated as we continue to expand our cloud and software portfolio. Some defects in our products may only be discovered after a product has been installed and used by customers and may in some cases only be detected under certain circumstances or after extended use. Any errors, bugs, defects or security vulnerabilities discovered in our products after commercial release could result in loss of revenue or delay in revenue recognition, loss of customers and increased service and warranty and retrofit costs, any of which could adversely affect our business, operating results and financial condition. In addition, we could face claims for security and data breach, product liability, tort or breach of warranty. Our contracts with customers contain provisions relating to warranty disclaimers and liability limitations, which may not be upheld. Defending a lawsuit, regardless of its merit, is costly and may divert management's attention and adversely affect the market's perception of us and our products. In addition, if our business liability insurance coverage proves inadequate or future coverage is unavailable on acceptable terms or at all, our business, operating results and financial condition could be adversely impacted.

If we are unable to ensure that our products interoperate properly and as required within our customers' networks, our business will be harmed.

Our products must interoperate with our customers' existing and planned networks, which often have varied and complex specifications, utilize multiple protocol standards, include software applications and customizations and products from multiple vendors and contain multiple generations of products that have been added over time. As a result, we must continually ensure that our products interoperate properly with these existing and planned networks. To meet these requirements, we must undertake development efforts, including test protocols, that require substantial capital investment and employee resources. We may not accomplish these development goals quickly or cost-effectively, if at all. If we fail to maintain compatibility with other software or equipment found in our customers' existing and planned networks, we may face substantially reduced demand for our products, which would reduce our revenue opportunities and market share. We rely upon interoperability arrangements with equipment and software vendors for the use or integration of their technology with our products. If these relationships fail, we may have to devote substantially more resources to the development of alternative products and processes and our efforts may not be as effective as the combined solutions under our current arrangements. In some cases, these other vendors are either companies that we compete with directly or companies that have extensive relationships with our existing and potential customers and may have influence over the purchasing decisions of those customers. Some of our competitors have stronger relationships with some of our interoperability partners, and as a result, our ability to have successful interoperability arrangements with these companies may be harmed. Our failure to establish or maintain key relationships with key interoperability vendors may harm our ability to successfully sell and market our products.

Our estimates regarding warranty or product obligations are highly subjective. If our estimates change, the liability for warranty or product obligations may be increased, impacting future cost of revenue.

Our products are highly complex, and our product testing may not be adequate to detect all defects, errors, failures and quality issues. Accordingly, our estimates regarding future warranty or product obligations are highly subjective, and if our estimates change, the liability for warranty or product obligations may be increased, impacting future cost of revenue. Quality or performance problems for products covered under warranty could adversely impact our reputation and negatively affect our operating results and financial position. The development and production of new products with high complexity often involves problems with software, components and manufacturing methods. If significant warranty or other product obligations arise due to reliability or quality issues arising from defects in software, faulty components or improper manufacturing methods, our operating results and financial position could be negatively impacted by cost associated with fixing software or hardware defects; high service and warranty expenses; high inventory obsolescence expense; delays in collecting accounts receivable; payment of liquidated damages for performance failures; and loss of customer goodwill and future sales.

Our business and operations depend on proprietary technologies, and our financial performance may suffer if we cannot protect and enforce the intellectual property rights.

Our success and ability to compete depend on proprietary technology. We rely significantly upon patent, copyright, trademark, trade secret and other IP laws, IP registration rights and agreements with our employees, customers, partners, suppliers and

other parties, to establish and maintain IP rights necessary for our business and operations. U.S. IP laws afford us only limited protection, and the laws of some foreign countries do not protect proprietary rights to the same extent. Our patent applications may not result in issued patents, and our issued patents may not be enforceable. Our IP rights could be challenged, invalidated, infringed or circumvented any of which could impair or harm our business and operations and be costly to defend. Our failure to adequately protect our IP rights could result in our competitors offering similar products, resulting in the loss of our competitive advantage and decreased sales.

We and our third-party providers may be unable to adequately prevent unauthorized third-party copying or use of our IP. For example, contractual provisions protecting our IP could be breached, our IP could be reverse engineered or unlawfully distributed. It may become more difficult to adequately protect our IP as we expand our reliance on third parties for the design, development and/or manufacture of our products. In addition, we may become subject to increased risks arising from or related to security breaches or data loss and have greater difficulty protecting our IP as our work-from-anywhere workforce and work product become more distributed. Policing the unauthorized use of our IP is difficult and costly. Litigation, which could result in substantial costs, diversion of resources and harm to our business, may be necessary to enforce our IP rights, protect our trade secrets or determine the validity and scope of proprietary rights.

If we are unable to obtain third-party technology licenses needed for our products and platform solutions, our business and operations will be impaired, and our operating results could be adversely affected.

We increasingly rely on technology licensed from third parties for our products and platform solutions. We may not be able to secure or maintain necessary technology licenses from these third parties on commercially reasonable terms or at all. Third parties may also choose to not renew licenses with us, demand unreasonable license fees or cease to offer technologies that we require. The inability to obtain necessary third-party licenses or to secure reasonable license terms at a cost acceptable to us could harm the competitiveness of our products and solutions, result in lost revenue and adversely affect our operating results. For example, we may be forced to forego product features or platform offerings, including features and offerings we believe are critical to our strategy, accept substitute technology of lower quality or performance standards or incur higher costs, or the time-to-market of our products or product features could be delayed. Furthermore, our ability to utilize third-party technology may be disrupted by disputes over IP rights, including claims of IP infringement, which could prevent us from offering or selling the products that utilize the disputed technology and adversely affect our operating results.

Our use of open source software could impose limitations on our ability to commercialize our products.

We incorporate open source software into our products. The terms of many open source software licenses have not been interpreted by the courts, and there is a risk that such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to sell our products. In such event, we could be required to make our proprietary software generally available to third parties, including competitors, at no cost, to seek licenses from third parties in order to continue offering our products, to re-engineer our products or to discontinue the sale of our products in the event re-engineering cannot be accomplished on a timely basis or at all, any of which could adversely affect our revenue and operating expenses.

Macroeconomic and Industry Risks

Adverse global economic conditions, geopolitical issues and other conditions that impact our increasingly global operations could have a negative effect on our business, results of operations and financial condition and liquidity.

As a global company, our performance is affected by global economic conditions as well as geopolitical issues and other conditions with global reach. In recent years, concerns about the global economic outlook have adversely affected market and business conditions in general. Macroeconomic weakness and uncertainty make it more difficult for us to manage our operations and accurately forecast revenue, gross margin and expenses. Geopolitical issues, such as ongoing conflicts between the United States and China, tariff and trade policy changes and the withdrawal of the United Kingdom from the European Union, have resulted in increasing global tensions and create uncertainty for global commerce. In particular, we incurred substantial costs and diversion of resources realigning our supply chain operations to move substantially all of our product manufacturing to locations outside of China as a result of U.S. tariff and trade policy changes. The global impact of the COVID-19 pandemic continues to create shortages in component and supplies and otherwise disrupt and delay our global supply chain operations. Sustained or worsening of global economic conditions, geopolitical issues and other adverse global economic conditions may increase our cost of doing business, materially disrupt our supply chain operations, cause our customers to reduce or delay spending and intensify pricing pressures. Any or all of these factors could negatively affect demand for our products and our business, financial condition and result of operations.

We face intense competition that could reduce our revenue and adversely affect our financial results.

The market for our products is highly competitive, and we expect competition from both established and new companies to increase. Our ability to compete successfully depends on a number of factors, including our ability to successfully develop new products and solutions that anticipate CSP and market requirements and changes in technology and industry standards; CSP acceptance and adoption of our products and solutions; our ability to differentiate our products from our competitors' offerings

based on performance, features, cost-effectiveness or other factors; our product capabilities to meet customer network requirements and preferences; and our success in marketing and selling our products and platform solutions.

Many of our current or potential competitors have longer operating histories, greater name recognition, broader product lines, larger customer bases and significantly greater financial, technical, sales, marketing and other resources than we do and are better positioned to acquire and offer complementary products and services. The broadband access equipment market has undergone and continues to undergo consolidation, as participants have merged, made acquisitions or entered into partnerships or other strategic relationships with one another to offer more comprehensive solutions than they individually had offered. Potential customers may also prefer to purchase from their existing suppliers rather than a new supplier, regardless of product performance or features, because the products that we and our competitors offer require a substantial investment of time and funds to qualify and install. The recent demand on network capacity due to shelter-in-place restrictions and shift towards remote workforces may attract new market entrants with competitive or substitutive products, which may lead to increased sales cycles, cause pricing pressure and impact adoption of our platforms due to the broader availability of product offerings. Some of our competitors may offer substantial discounts or rebates to win or retain customers. If we are forced to reduce prices to secure customers, we may be unable to sustain gross margin at desired levels or profitability. Competitive pressures could result in increased pricing pressure, reduced profit margin, increased sales and marketing expenses and failure to increase, or the loss of, market share, any of which could reduce our revenue and adversely affect our financial results.

Our industry is characterized by rapid technological advance, and if we fail to develop new products or enhancements that meet changing CSP requirements, we could experience lower sales.

Our industry is characterized by rapid technological change, changing needs of CSPs, evolving industry standards and frequent introductions of new products and platforms. We invest significant amounts to pursue innovative technologies that we believe will be adopted by CSPs. For example, we have invested and continue to invest resources in our cloud and software platforms. In addition, on an ongoing basis, we expect to reposition our product and service offerings and introduce new offerings as we encounter rapidly changing CSP requirements and increasing competitive pressures. If we cannot increase sales of our new platforms and services, keep pace with rapid technological developments to meet customer needs and compete with evolving standards or if the technologies we choose to invest in fail to meet customer needs or are not adopted by customers in the timeframes that we expect, our financial condition and results of operations would be adversely affected.

Developing our products is complex and involves uncertainties, including pricing risks for key materials, component shortages and limited suppliers. We may experience design, manufacturing, software development quality, support, marketing and other difficulties that could delay or prevent the development, introduction or marketing of new products and enhancements. If we fail to meet our development targets, demand for our products will decline. If we are unable to anticipate and develop new products or enhancements to our existing products on a timely and cost-effective basis, our products may become technologically obsolete more rapidly than anticipated over time, resulting in lower sales which would harm our business. Furthermore, the introduction of new or enhanced products also requires that we manage the transition from older products in accordance with customer requirements. If we fail to maintain compatibility requirements in our customers' networks, demand for our products would decline, which would reduce our revenue opportunities and market share.

Increasingly, we have relied on third-party development partners to meet our development needs to remain competitive. Investment in third-party development services for our product and service platforms reduces our direct control and may result in increased challenges in design, integration and support of the third-party features in our product and service offerings. In addition, these investments may take several years to generate positive returns, if ever. We have engineering services arrangements that include future revenue-share payments on our sale of the developed products and that require us to make minimum payments whether or not we achieve the desired revenue levels. If our actual demand falls short of expectations, we will be obligated to make the minimum payments, and we may be required to write-down the value of the developed products, which could adversely affect our financial results.

Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense. As a result, our sales are difficult to predict and may vary substantially, which may cause our operating results to fluctuate significantly.

The timing of our revenue is difficult to predict. Our sales efforts often involve educating CSPs about the use and benefits of our products, platforms and services. CSPs typically undertake a significant evaluation process, which frequently involves not only our products, platforms and services, but also those of our competitors and results in a lengthy sales cycle. Sales cycles for larger customers are relatively longer and require considerably more time and expense. We spend substantial time, effort and money in our sales efforts without any assurance that our efforts will produce sales. In addition, product purchases are frequently subject to budget constraints, multiple approvals and unplanned administrative, processing and other delays. The timing of revenue related to sales of products and services that have installation requirements may be difficult to predict due to interdependencies that may be beyond our control, such as CSP testing and turn-up protocols or other vendors' products, services or installations of equipment upon which our products and services rely. Such delays may result in fluctuations in our

quarterly revenue. If sales expected from a specific customer for a particular quarter are not realized in that quarter or at all, we may not achieve our revenue forecasts and our financial results would be adversely affected.

Our business is dependent on the capital spending patterns and decisions of CSPs, and any decrease or delay in capital spending by CSPs, including due to the timing and availability of capital, would reduce our revenue and harm our business.

Demand for our products depends on the magnitude and timing of capital spending by CSPs as they construct, expand, upgrade and maintain their access networks as well as CSPs' adoption of our platforms and cloud-based services. Capital spending is cyclical in our industry, sporadic among individual CSPs and can change on short notice, which gives us little visibility into changes in spending behavior in any particular quarter. Capital spending for network infrastructure projects could be delayed or canceled in response to factors outside our control, such as reduced consumer spending, challenging capital markets or declining liquidity trends. CSP spending is also affected by reductions in budgets, delays in purchasing cycles, access to government funding programs or capital markets, and seasonality and delays in capital allocation decisions. Historically, our customers may spend less or have less deployments in the first quarter due to pending annual budgets or, in certain regions, due to weather conditions that inhibit outside fiber deployment, resulting in weaker demand for our products in the first quarter. Softness in demand in any of our customer markets, including due to macro-economic conditions beyond our control or uncertainties associated with regulatory reforms, has in the past and could in the future lead to unexpected decline or slowdown in customer capital expenditure. Further, CSPs may pursue capital investment in network technologies other than those offered by us or may choose not to adopt our products and platform solutions in their networks. Reductions in capital expenditures by CSPs, particularly our significant customers, would have a material negative impact on our revenue and results of operations and slow our rate of revenue growth. As a consequence, our results for a particular period may be difficult to predict, and our prior results are not necessarily indicative of results in future periods.

Government-sponsored programs and U.S. federal government shutdowns could impact the timing and buying patterns of CSPs, which may cause fluctuations in our operating results.

We sell to CSPs, which include U.S.-based Independent Operating Companies, or IOCs, which have revenue that is particularly dependent upon interstate and intrastate access charges and federal and state subsidies. The Federal Communications Commission, or FCC, and some states may consider changes to such payments and subsidies, and these changes could reduce IOC revenue. Furthermore, many IOCs use or expect to use government-supported loan programs or grants, such as Rural Utility Service loans and grants, to finance capital spending. These government-supported loan programs and grants generally include conditions such as deployment criteria, domestic preference provisions and other requirements that apply to the project and selected equipment as conditions for funding. Changes to the terms or administration of these programs, including uncertainty from government and administrative change, potential funding limitations that impact our ability to meet program requirements or delays due to U.S. federal government shutdowns could reduce the ability of IOCs to access capital or secure funding these programs to purchase our products and services and thus reduce our revenue opportunities. Many of our customers depend heavily on grants, loans or funds distributed under government stimulus programs such as the FCC's CAF, the CARES Act or the more recent Rural Digital Opportunity Fund. Customers may curtail purchases if they receive less funding than planned, are negatively impacted by federal government shutdowns or changes in government regulations and subsidies, or as funding winds down, any of which could have an adverse effect on our operating results and financial condition.

Government and Regulatory Risks

Increasing data privacy regulations could impact our business and expose us to increased liability.

Government and regulatory authorities in the United States and around the world have implemented and are continuing to implement broader and more stringent laws and regulations concerning data protection. The interpretation and application of these data protection laws and regulations are often uncertain and changing, and it is possible that they may be interpreted and applied in a manner that is inconsistent with our data practices. For example, the General Data Protection Regulation, or GDPR, adopted by the European Union, or EU, imposes specific duties and requirements upon companies that collect, process or control personal data of EU residents. Although we currently do not have material operations or business in the EU, we would incur substantial costs in order to expand our business and operations to the EU. Furthermore, the GDPR imposes significant penalties for noncompliance of up to the greater of €20 million or 4% of a company's worldwide revenue; accordingly, any non-compliance with the GDPR could result in a material adverse effect on our business, financial condition and results of operations. In January 2020, the California Consumer Privacy Act became effective, imposing significant new data privacy rights for consumers and requirements for the handling of consumer personal data. More recently, the Court of Justice of the EU invalidated the EU-U.S. Privacy Shield as a valid mechanism for the transfer of personal data from the EU to the United States, and California adopted the Consumer Privacy Rights Act expected to take effect in 2023. Complying with new and changing laws could cause us to incur substantial costs in order to market and sell our cloud-based solutions in the U.S. and internationally, deter customers from adopting our cloud-based solutions or require us to redesign our platform in order to meet customer requirements related to such laws. Regulatory actions or claims involving our practices in the collection, storage,

processing, use or disclosure of consumer information or other personal data, even if unfounded, could damage our reputation and adversely affect our operating results. The failure or perceived failure to comply may result in government or civil proceedings or actions against us, or could cause us to lose customers, which could have an adverse effect on our business.

If we fail to comply with evolving industry standards, sales of our products would be adversely affected.

The markets for our products are characterized by a significant number of domestic and international standards which evolve as new technologies are developed and deployed. As we expand into new global markets, we are likely to encounter additional standards. Our products must comply with these standards in order to be widely marketable. In some cases, we are required to obtain certifications or authorizations before our products can be introduced, marketed or sold in new markets or to new customers. For example, our ability to maintain Operations System Modification for Intelligent Network Elements certification for our products will affect our ongoing ability to continue to sell our products to large CSPs. In addition, our ability to expand our international operations may be limited by standards in countries or may require us to redesign our products or develop new products to meet local standards. We may not be able to design our products to comply with local requirements, which would harm our ability to grow our business. Moreover, as we expand our business and operations globally, we must make increasing investments to maintain compliance with evolving standards across a broader global footprint. The costs of complying with evolving standards or failure to obtain timely domestic or foreign authorizations or certification could prevent us from selling our products where these standards or regulations apply, which would result in lower revenue and lost market share.

Our failure or the failure of our manufacturers to comply with environmental and other legal regulations could adversely impact our results of operations.

The manufacture, assembly and testing of our products may require the use and disposal of hazardous materials that are subject to environmental, health and safety regulations, or materials subject to laws restricting the use of conflict minerals. We depend substantially on our third-party manufacturers to comply with these requirements. Any failure by us or our third-party manufacturers to comply with these requirements could result in regulatory penalties, legal claims or disruption of production of our products. In addition, any failure to properly manage the use, transportation, emission, discharge, storage, recycling or disposal of hazardous materials could subject us to increased costs or liabilities. Existing and future environmental regulations and other legal requirements may restrict our use of certain materials to manufacture, assemble and test products. Any of these consequences could adversely impact our results of operations by increasing our expenses and/or requiring us to alter our manufacturing processes.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in additional international markets.

Our products are subject to U.S. export and trade controls and restrictions. International shipments of certain of our products may require export licenses or are subject to additional export requirements. In addition, the import laws of other countries may limit our ability to distribute our products, or our customers' ability to buy and use our products, in those countries. Changes in our products or changes in export and import regulations or duties may create delays in the introduction of our products in international markets, prevent our customers with international operations from deploying our products or, in some cases, prevent the export or import of our products to certain countries altogether. Any change in export or import regulations, duties or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons or technologies targeted by such regulations, could negatively impact our ability to sell, profitably or at all, our products to existing or potential international customers.

Regulatory and physical impacts of climate change and other natural events may affect our customers and our manufacturers, resulting in adverse effects on our operating results.

As emissions of greenhouse gases continue to alter the composition of the atmosphere, affecting large-scale weather patterns and the global climate, any new regulation of greenhouse gas emissions may result in additional costs to our customers and our manufacturers. In addition, the physical impacts of climate change and other natural events, including changes in weather patterns, drought, rising ocean and temperature levels, earthquakes and tsunamis may impact our customers, suppliers and manufacturers, and our operations. These potential physical effects may adversely affect our revenue, costs, production and delivery schedules, and cause harm to our results of operations and financial condition.

Our customers are subject to government regulation, and changes in current or future laws or regulations that negatively impact our customers could harm our business.

The FCC has jurisdiction over our U.S. customers and FCC regulatory policies that create disincentives for investment in access network infrastructure or impact the competitive environment in which our customers operate may harm our business. For example, adoption of regulations that affect providers of broadband Internet access services could impede the penetration of our customers into certain markets or affect the prices they may charge in such markets. Similarly, changes to regulatory tariff requirements or other regulations relating to pricing or terms of carriage on communication networks could slow the development or expansion of network infrastructures, which could adversely affect the sale of our products and services. Many of our customers are subject to FCC rate regulation of interstate telecommunications services and are recipients of CAF incentive payments. The imposition of limits or restrictions on access to these programs could affect the ability of IOCs to access capital, which would in turn reduce our revenue opportunities. In addition, many of our customers are subject to state regulation of intrastate telecommunications services, including rates for such services, and may also receive funding from state universal service funds. Changes in rate regulations or universal service funding rules, either at the U.S. federal or state level, could adversely affect our customers' revenue and capital spending plans. Moreover, various international regulatory bodies have jurisdiction over certain of our non-U.S. customers. Changes in these domestic and international standards, laws and regulations, or judgments in favor of plaintiffs in lawsuits against CSPs based on changed standards, laws and regulations could adversely affect the development of broadband networks and services. This, in turn, could directly or indirectly adversely impact the communications industry in which our customers operate.

Risks Related to Ownership of Our Common Stock

Our stock price may continue to be volatile, and the value of an investment in our common stock may decline.

The trading price of our common stock has been, and is likely to continue to be, volatile, which means that it could decline substantially within a short period of time and could fluctuate widely in response to various factors, some of which are beyond our control. These factors include those discussed above and others such as quarterly variations in our results of operations or those of our competitors; failure to meet any guidance that we have previously provided regarding our anticipated results; changes in earnings estimates or recommendations by securities analysts; failure to meet securities analysts' estimates; announcements by us or our competitors of new products, significant contracts, commercial relationships, acquisitions or capital commitments; developments with respect to IP rights; our ability to develop and market new and enhanced products on a timely basis; our commencement of, or involvement in, litigation and developments relating to such litigation; changes in governmental regulations; and a slowdown in the communications industry or the general economy.

In recent years, the stock market in general, and the market for technology companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. Recently, the COVID-19 pandemic has severely impacted U.S. markets, causing dramatic swings in the U.S. stock exchanges that resulted in increased volatility in the trading price of our common stock. Historically, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these companies. Such litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

If securities or industry analysts do not publish research or reports about our business or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. If any of the analysts who cover us issue an adverse or misleading opinion regarding our stock, our stock price would likely decline. If several of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of our management and Board of Directors.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could have the effect of delaying or preventing changes in control or changes in our management or our Board of Directors. These provisions include: (1) a classified Board of Directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our Board of Directors; (2) no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates; (3) the exclusive right of our Board of Directors to elect a director to fill a vacancy created by the expansion of the Board of Directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our Board of Directors; (4) the ability of our Board of Directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer; (5) a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special

meeting of our stockholders; (6) the requirement that a special meeting of stockholders may be called only by the chairman of the Board of Directors, the chief executive officer or the Board of Directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and (7) advance notice procedures that stockholders must comply with in order to nominate candidates to our Board of Directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us. We are also subject to certain anti-takeover provisions under Delaware law. Under Delaware law, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other things, the Board of Directors has approved the transaction.

We may need additional capital in the future to finance our business.

Our working capital needs and cash use have continued to increase to support our business operations and growth, and we may need additional capital if our current plans and assumptions change. Under the BofA Loan Agreement, our available borrowing base is subject to our financial condition. If our financial position deteriorates, our borrowing capacity under the credit facility may be reduced. Failure to maintain certain restrictive covenants and requirements under the BofA Loan Agreement could result in limiting the amount of borrowings that are available to us, increase the cost of borrowings under the credit facility and/or cause us to make immediate payments to reduce borrowings or result in an event of default. If future financings involve the issuance of equity securities, our then-existing stockholders would suffer dilution. If we raise additional debt financing, we may be subject to restrictive covenants that limit our ability to conduct our business. If we are unable to sustain positive operating income and cash flows from operations, our liquidity, results of operations and financial condition may be adversely affected. Furthermore, if we are unable to generate sufficient cash flows to support our operational needs, we may need to seek additional sources of liquidity, including borrowings, to support our working capital needs. In addition, we may choose to seek other sources of liquidity even if we believe we have generated sufficient cash flows to support our operational needs. There is no assurance that any other sources of liquidity may be available to us on acceptable terms or at all. If we are unable to generate sufficient cash flows or obtain other sources of liquidity, we will be forced to limit our development activities, reduce our investment in growth initiatives and institute cost-cutting measures, all of which would adversely impact our business and growth.

Our ability to incur debt could be limited by covenants in our loan and security agreement for our revolving credit facility.

The BofA Loan Agreement includes covenants that place certain restrictions on our ability to, among other things, borrow secured debt or unsecured debt beyond a certain amount, create or suffer to exist any liens, sell or transfer any assets, make distributions, liquidate, dissolve, merge, amalgamate, combine or consolidate, or become a party to certain agreements restricting our ability to incur or repay debt, grant liens, make distributions or modify loan agreements, in each case subject to certain exceptions. Failure to maintain these covenants can limit the amount of borrowings that are available to us, increase the cost of borrowings under the facility and/or require us to make immediate payments to reduce borrowings. The BofA Loan Agreement covenants may also affect our ability to obtain future financing and to pursue attractive business opportunities and our flexibility in planning for, and reacting to, changes in business conditions. These covenants could place us at a disadvantage compared to some of our competitors.

We do not currently intend to pay dividends on our common stock and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation in the price of our common stock.

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Additionally, the terms of our credit facility restrict our ability to pay dividends under certain circumstances. Therefore, our stockholders are not likely to receive any dividends on our common stock for the foreseeable future.

Our failure to adequately address and resolve risks and uncertainties associated with acquisitions could have a material adverse impact on our financial condition and results of operations.

We may in the future acquire businesses, products or technologies to expand our product offerings and capabilities, customer base and business. We have evaluated and expect to continue to evaluate a wide array of potential strategic transactions. Such investments may involve significant risks and uncertainties, including distraction of management from current operations, unanticipated costs, and legal and regulatory challenges, all of which could have a material adverse impact on our financial condition and results of operations. In addition, the anticipated benefit of any acquisition may never materialize or the process of integrating acquired businesses, products or technologies may create unforeseen operating difficulties and expenditures.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

ITEM 3. Defaults Upon Senior Securities

None.

ITEM 4. Mine Safety Disclosures

Not applicable.

ITEM 5. Other Information

None.

ITEM 6. Exhibits

Exhibit Number	Description
10.1*	Calix, Inc. Amended and Restated Executive Change in Control and Severance Plan effective March 26, 2021.
10.2*	Calix, Inc. Non-Employee Director Cash Compensation Policy, as amended February 11, 2021.
10.3*	Calix, Inc. Non-Employee Director Equity Compensation Policy, as amended February 11, 2021.
31.1	Certification of Chief Executive Officer of Calix, Inc. Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer of Calix, Inc. Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer and Chief Financial Officer of Calix, Inc. Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Indicates management contract or compensatory plan or arrangement.

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.

	CALIX, INC. (Registrant)	
Date: April 27, 2021	By:	/s/ Carl Russo
		Carl Russo **Chief Executive Officer** **(Principal Executive Officer)**
Date: April 27, 2021	By:	/s/ Cory Sindelar
		Cory Sindelar **Chief Financial Officer** **(Principal Financial Officer)**

CALIX, INC.

AMENDED AND RESTATED EXECUTIVE CHANGE IN CONTROL AND SEVERANCE PLAN

EFFECTIVE MARCH 26, 2021

INTRODUCTION

This Calix, Inc. Amended and Restated Executive Change in Control and Severance Plan (this "Plan") sets forth the severance benefits available to certain executives of Calix, Inc. (the "Company") at the level of Vice President and above who meet the eligibility requirements set forth in Section 1 below in the event of a termination of employment or a Change in Control (as defined below). Effective as of the Effective Date, this Plan amends and restates in its entirety the Calix, Inc. Amended and Restated Executive Change in Control and Severance Plan, as amended August 1, 2018 and August 13, 2020. Each executive of the Company who meets the eligibility requirements set forth in Section 1 below is eligible to participate in the Plan, and the Plan is intended to replace any existing employment agreement between the Company and such employee regarding severance or Change in Control. The goal is to create an equitable and consistent program for such executives that is commensurate with their level of employment, and to protect the Company's stockholders and other stakeholders by mitigating agency conflicts that may arise in any future transaction involving a termination of employment from the Company or Change in Control.

PLAN PROVISIONS

1. General Eligibility. Except as otherwise determined by the Plan Administrator, you will only be eligible to participate in this Plan (a "Participant") if you are a common law employee of the Company, your official Company title (as provided in the Company's human resource information system) is at the level of Senior Vice President and above, you principally perform services for the Company in the United States, your customary employment is 20 hours or more per week and you have been designated by the Plan Administrator as a Participant in Group A, B, C or D. As a Participant, you shall remain eligible for this Plan in the case of sick leave, military leave or any other leave of absence approved pursuant to the regular leave policy of the Company.

2. Severance Benefits. If you are a Participant designated in Group A, B or C and if, outside of a Change in Control Period (as defined below), you experience a Covered Termination (as defined below), then, subject to (i) you executing and not revoking during any applicable revocation period a general release of all claims against the Company and its Affiliates in a form acceptable to the Company (a "Release") within sixty (60) days (or such shorter period specified by the Company) following the date of your Covered Termination and (ii) your continued compliance with the restrictive covenants set forth in Section 20 below, in addition to any accrued but unpaid salary, wages, vacation and other amounts required by applicable law, you will be entitled to receive the following benefits described in this Section 2.

(a) Severance Payment. You will be entitled to receive a severance payment equal to the Severance Multiplier (as defined below) multiplied by your annual base salary in a cash lump sum, less applicable withholding obligations, within ten (10) days following the date your Release is no longer subject to revocation.

(b) Pro Rata Bonus Payment. You will be entitled to receive an additional severance payment equal to the Severance Multiplier multiplied by a pro-rated portion of your annual target bonus opportunity based upon the actual number of days you were employed by the Company during the fiscal year in which your Covered Termination occurs, payable in a cash lump sum, less applicable withholding obligations, within ten (10) days following the date your Release is no longer subject to revocation.

(c) Accelerated Vesting. Each outstanding equity award that you hold as of the date of your Covered Termination will vest and, if applicable, become exercisable to the same extent such equity

award would have vested had you continued to remain employed by the Company during the Severance Period (as defined below).

(d) Continued Healthcare. Subject to the requirements of the Internal Revenue Code of 1986, as amended (the "Code") or similar applicable law, the Company will pay, or, at its election, reimburse you for, premiums for health insurance coverage to the same extent it paid health insurance premiums on your behalf as of immediately prior to your termination of employment if you elect to continue health insurance pursuant to the Consolidated Omnibus Budget Reconciliation Act ("COBRA") or similar applicable law (this health coverage is generally referred to as "Company-Paid Premiums"). The Company-Paid Premiums will continue for the Severance Period; provided, however, that the Company-Paid Premiums will terminate earlier if you cancel the underlying coverage or such coverage otherwise ends sooner because you become eligible for and elect health coverage with another employer. If your Company-Paid Premiums included your dependents immediately prior to your termination of employment, the Company will continue to pay for the premiums of such dependents after your termination of employment to the same extent, and for the same duration, as are paid by the Company for you unless you elect otherwise.

3. Change in Control Benefits. If you are a Participant designated in Group A, B, C or D and if, during the period of time commencing sixty (60) days prior to a Change in Control and ending twelve (12) months following the Change in Control (the "Change in Control Period"), you experience a Covered Termination, then, subject to (i) you executing and not revoking during any applicable revocation period a Release within sixty (60) days (or such shorter period specified by the Company) following such termination of employment and (ii) your continued compliance with the restrictive covenants set forth in Section 20 below, in addition to any accrued but unpaid salary, wages, vacation and other amounts required by applicable law and in lieu of any benefits set forth in Section 2 above, you will be entitled to receive the following benefits described in this Section 3.

(a) Severance Payment. You will be entitled to receive a severance payment equal to the Change in Control Multiplier multiplied by your annual base salary in a cash lump sum, less applicable withholding obligations, within ten (10) days following the date your Release is no longer subject to revocation.

(b) Bonus Payment. You will be entitled to receive an additional severance payment equal to the Change in Control Multiplier multiplied by your annual target bonus opportunity in a cash lump sum, less applicable withholding obligations, within ten (10) days following the date your Release is no longer subject to revocation.

(c) Pro Rata Bonus Payment. Upon attainment of the performance criteria with respect to your annual target bonus opportunity for the fiscal year in which your Covered Termination occurs, a pro-rated portion of such annual variable cash incentive based upon the actual number of days you were employed by the Company during such fiscal year, payable in a cash lump sum, less applicable withholding obligations, when bonuses for such fiscal year are paid to executive level employees generally (but in no event later than two and one-half months following the end of such fiscal year).

(d) Accelerated Vesting; Extended Exercisability. Each outstanding equity award that you hold as of the date of your Covered Termination will vest and, if applicable, become exercisable with respect to one hundred percent (100%) of the shares subject thereto. In addition, each outstanding stock option that you hold as of the date of your Covered Termination will remain outstanding and exercisable through the earlier of the original expiration date of such stock option or the first anniversary of your Covered Termination.

(e) Continued Healthcare. Subject to the requirements of the Code or similar applicable law, your Company-Paid Premiums will continue for the Change in Control Severance Period; provided, however, that the Company-Paid Premiums will terminate earlier if you cancel the underlying coverage

or coverage otherwise ends sooner because you become eligible for and elect health coverage with another employer. If your Company-Paid Premiums included your dependents immediately prior to your termination of employment, the Company will continue to pay the premiums for such dependents after your termination of employment to the same extent, and for the same duration, as are paid by the Company for you unless you elect otherwise.

4. Definitions. For the purposes of this Plan, the following terms shall have the following meanings:

(a) Affiliate. "Affiliate" means any company controlled by, controlling or under common control with the Company.

(b) Board. "Board" means the Board of Directors of the Company.

(c) Cause. "Cause" means:

(i) your repeated intentional failure to perform, or repeated gross negligence in the performance of, one or more of your essential duties and responsibilities to the Company and/or your failure to follow the lawful directives of the Board;

(ii) your extended or repeated absence from the Company's offices and/or active participation in Company and/or leadership team meetings other than as a result of Company-related travel, Board-approved time off or as otherwise approved by the Company;

(iii) your deliberate and material violation of any Company policy;

(iv) your conviction of a felony or your commission of any act of fraud, embezzlement, dishonesty or any other willful misconduct that has caused or is reasonably expected to result in material injury to the Company;

(v) your unauthorized use or disclosure of any material proprietary information or trade secrets of the Company or any other party to whom you owe an obligation of nondisclosure as a result of your relationship with the Company;

(vi) your willful breach of any of your material obligations under any written agreement or covenant with the Company; or

(vii) your death or any disability that renders you, in the good faith determination of the Board, unable to perform the essential duties and responsibilities of your job.

(d) Change in Control. "Change in Control" means and includes each and all of the following occurrences:

(i) a transaction or series of transactions (other than an offering of Company common stock to the general public through a registration statement filed with the Securities and Exchange Commission) whereby any "person" or related "group" of "persons" (as such terms are used in Sections 13(d) and 14(d)(2) of the Securities and Exchange Act of 1934 (the "Exchange Act")) (other than the Company or any of its Affiliates or an employee benefit plan maintained by the Company or any of its Affiliates) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company possessing more than 50% of the total combined voting power of the Company's securities outstanding immediately after such acquisition; or

(ii) during any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new director(s) (other than a director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in the preceding or subsequent paragraph) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two- thirds of the directors then still in office who either were directors at the beginning of the two- year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(iii) the consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company's assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

A. which results in the Company's voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company's assets or otherwise succeeds to the business of the Company (the Company or such person, the "Successor Entity")) directly or indirectly, at least a majority of the combined voting power of the Successor Entity's outstanding voting securities immediately after the transaction, and

B. after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; provided, however, that no person or group shall be treated for purposes of this subsection as beneficially owning 50% or more of combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction.

Notwithstanding the foregoing, if a Change in Control constitutes a payment event with respect to any amount that constitutes Deferred Compensation and is subject to Section 409A of the Code, the transaction must also constitute a "change in control event," as defined in Treasury Regulation §1.409A-3(i)(5) to the extent required by Section 409A of the Code.

(e) Change in Control Multiplier. "Change in Control Multiplier" means:

(i) With respect to a Participant designated in Group A, two (2);

(ii) With respect to a Participant designated in Group B, one (1);

(iii) With respect to a Participant designated in Group C, three-quarters (0.75); and

(iv) With respect to a Participant designated in Group D, one-quarter (0.25).

(f) Change in Control Severance Period. "Change in Control Severance Period" means that period of time commencing upon a Participant's termination of employment and ending upon:

(i) With respect to a Participant designated in Group A, the second anniversary thereof;

(ii) With respect to a Participant designated in Group B, the first anniversary thereof;

(iii) With respect to a Participant designated in Group C, the nine (9)-month anniversary thereof; and

(iv) With respect to a Participant designated in Group D, the three (3)-month anniversary thereof.

(g) Covered Termination. "Covered Termination" means the termination of any Participant that occurs (i) involuntarily by the Company for reasons other than Cause, death or disability or (ii), only during a Change in Control Period, voluntarily by the Participant for Good Reason. For the avoidance of doubt, a termination shall not be considered a Covered Termination if a Participant voluntarily terminates his/her employment for any reason, including for Good Reason, outside of a Change in Control Period.

(h) Good Reason. "Good Reason" means the occurrence of one or more of the following, without your express written consent, during a Change in Control Period:

(i) a material reduction of your duties or responsibilities (taken as a whole), relative to your duties or responsibilities as in effect immediately prior to such reduction, provided, that any change made solely as the result of the Company becoming a subsidiary or business unit of a larger company in a Change in Control shall not provide for your resignation for Good Reason hereunder;

(ii) a reduction by the Company in your targeted total cash compensation of more than ten percent (10%) from your targeted total cash compensation in effect immediately prior to such reduction, except in connection with a reduction in targeted total cash compensation affecting all executive level employees of the Company;

(iii) the Company's material breach of any of its obligations under your offer letter or employment agreement, including, without limitation, failure to obtain a successor's assumption of any such agreement; or

(iv) a material relocation of your principal office to a place more than thirty (30) miles from its then present location, except that required travel on the Company's business to an extent substantially consistent with your business travel obligations as of immediately prior to change shall not be considered a relocation.

A resignation will not be for Good Reason unless the event or condition giving rise to such resignation continues more than thirty (30) days following your written notice of such event or condition provided to the Company within ninety (90) days of the first occurrence of such event or condition and such resignation is effective within thirty (30) days following the end of such notice period.

(i) Plan Administrator. "Plan Administrator" means the Compensation Committee of the Board.

(j) Severance Multiplier. "Severance Multiplier" means:

(i) With respect to a Participant designated in Group A, one (1);

(ii) With respect to a Participant designated in Group B, one (1); and

(iii) With respect to a Participant designated in Group C, one-half (0.5).

(k) Severance Period. "Severance Period" means that period of time commencing upon a Participant's termination of employment and ending upon:

(i) With respect to a Participant designated in Group A, the first anniversary thereof;

(ii) With respect to a Participant designated in Group B, the first anniversary thereof; and

(iii) With respect to a Participant designated in Group C, the six (6)-month anniversary thereof.

5. Best Pay Provision. Notwithstanding anything in the Plan to the contrary, if any payment or benefit (including without limitation, any accelerated vesting of equity awards) you would receive pursuant to the Plan or otherwise ("Payment") would (a) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (b) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "Excise Tax"), then such Payment shall either be (i) delivered in full, or (ii) delivered as to such lesser extent which would result in no portion of such Payment being subject to the Excise Tax, whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Excise Tax, results in the receipt by you on an after-tax basis, of the largest payment, notwithstanding that all or some portion the Payment may be taxable under Section 4999 of the Code. If a reduction in a Payment is to be made, the reduction in Payment will occur in the following order: (1) reduction of cash payments; (2) cancellation of accelerated vesting of equity awards other than stock options; (3) cancellation of accelerated vesting of stock options; and (4) reduction of other benefits payable to you. In the event that acceleration of vesting of equity award compensation is to be reduced, such acceleration of vesting will be cancelled in the reverse order of the date of grant of your equity awards.

6. Certain Reductions. Notwithstanding anything herein to the contrary, the Company shall reduce your severance benefits under this Plan, in whole or in part, by any other severance benefits, pay in lieu of notice, or other similar benefits payable to you by the Company in connection with your termination, including but not limited to payments or benefits pursuant to (a) any applicable legal requirement, including, without limitation, the Worker Adjustment and Retraining Notification Act, or (b) any individual agreement between you and the Company or any Company agreement, arrangement, policy or practice relating to your termination of employment with the Company. The benefits provided under this Plan are intended to satisfy, to the greatest extent possible, any and all statutory obligations that may arise out of your termination of employment. Such reductions shall be applied on a retroactive basis, with severance benefits previously paid being recharacterized as payments pursuant to the Company's statutory obligation.

7. Effective Date of Plan. This Plan shall be effective as of August 13, 2020 (the "Effective Date").

8. Amendment and Termination of this Plan. The Plan may be terminated or amended in any respect by resolution adopted by the Compensation Committee of the Board, provided, that during a Change in Control Period, no amendment or termination of the Plan shall impair any rights of or obligations to any Participant under this Plan unless such Participant expressly consents to such amendment or termination.

9. Plan Administration. The Plan Administrator shall have discretionary authority to construe and interpret the terms of the Plan, to determine eligibility and to make all other determinations under the Plan.

10. Arbitration.

(a) Dispute Resolution. Without limiting any rights to seek equitable relief in a court in accordance with Section 20 below and except as provided herein, any and all disputes which arise out of

or relate to your employment, the termination of your employment, or the terms of this Plan shall be resolved through final and binding arbitration. Such arbitration shall be in lieu of any trial before a judge and/or jury, and, as a condition to participate in this Plan, you expressly waive all rights to have such disputes resolved via trial before a judge and/or jury. Such disputes shall include, without limitation, claims for breach of contract or of the covenant of good faith and fair dealing, claims of discrimination, claims under any federal, state or local law or regulation now in existence or hereinafter enacted and as amended from time to time concerning in any way your employment with the Company or its termination. The only claims not covered by this paragraph, which shall instead be resolved pursuant to applicable law, are: (i) claims under unemployment insurance benefits; (ii) claims for workers' compensation benefits under any of the Company's workers' compensation insurance policy or fund; (iii) claims under the National Labor Relations Act; and (iv) claims that may not be arbitrated as a matter of law.

(b) Location. Arbitration will be conducted in San Jose, California. Arbitration shall be conducted in accordance with the Federal Arbitration Act ("FAA") and the National Rules for the Resolution of Employment Disputes of the American Arbitration Association ("AAA Rules" available at www.adr.org), provided, however, that the arbitrator shall allow the discovery authorized by California Code of Civil Procedure section 1282, et seq., or any other discovery required by applicable law in arbitration proceedings, including, but not limited to, discovery available under the applicable state and/or federal arbitration statutes. Also, to the extent that any of the AAA Rules or anything in this arbitration section conflicts with any arbitration procedures required by applicable law, the arbitration procedures required by applicable law shall govern.

(c) Costs. During the course of arbitration, the Company will bear the cost of (i) the arbitrator's fee and (ii) the cost of the initiation of the arbitration. Each party to such arbitration shall bear his, her or its own attorneys' fees incurred in connection with the arbitration. The arbitrator will not have authority to award attorneys' fees unless a statute or contract at issue in the dispute authorizes the award of attorneys' fees to the prevailing party. In such case, the arbitrator shall have the authority to make an award of attorneys' fees as required or permitted by the applicable statute or contract.

(d) Findings. The arbitrator shall issue a written award that sets forth the essential findings of fact and conclusions of law on which the award is based. The arbitrator shall have the authority to award any relief authorized by law in connection with the asserted claims or disputes. The arbitrator's award shall be subject to correction, confirmation, or vacation, as provided by applicable law setting forth the standard of judicial review of arbitration awards. Judgment upon the arbitrator's award may be entered in any court having jurisdiction thereof. Except as required by applicable law, the arbitration shall be confidential.

(e) Whistle Blower Protection. This arbitration provision does not prohibit you from pursuing an administrative claim with a local, state or federal administrative agency such as the Department of Fair Employment and Housing, the Equal Employment Opportunity Commission, or the applicable state Workers' Compensation Board, but this provision does prohibit you from seeking or pursuing court action regarding any such claim. For further avoidance of doubt, nothing in this paragraph or this Plan will be construed to prohibit you from filing a charge with, reporting possible violations to, or participating or cooperating with any governmental agency or entity, including but not limited to the Department of Justice, the Securities and Exchange Commission, Congress, or any agency Inspector General, or making other disclosures that are protected under the whistleblower, anti-discrimination, or anti-retaliation provisions of federal, state or local law or regulation. You do not need the prior authorization of the Company to make any such reports or disclosures, and you are not required to notify the Company that you have made such reports or disclosures.

11. Funding and Payment of Benefits. This Plan shall be maintained in a manner to be considered "unfunded". The Company shall be required to make payments only as benefits become due and payable. No person shall have any right, other than the right of an unsecured general creditor against the Company, with respect to the benefits payable hereunder, or which may be payable hereunder, to any Participant, surviving

spouse or beneficiary hereunder. If the Company, acting in its sole discretion, establishes a reserve or other fund associated with this Plan, no person shall have any right to or interest in any specific amount or asset of such reserve or fund by reason of amounts which may be payable to such person under this Plan, nor shall such person have any right to receive any payment under this Plan except as and to the extent expressly provided in this Plan. The assets in any such reserve or fund shall be part of the general assets of the Company, subject to the control of the Company.

12. Plan Application. This Plan shall be the only plan or agreement with respect to which benefits may be provided to you upon a termination of your employment in a manner described in Section 2 or Section 3, as and if applicable, provided, that this Plan shall not adversely affect the express terms of any equity award granted to you by the Company.

13. Successors. Any successor to the Company (whether direct or indirect and whether by purchase, lease, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets shall assume the obligations under this Plan and agree expressly to perform any of the Company's obligations under this Plan. For all purposes under this Plan, the term "Company" shall include any successor to the Company's business and/or assets which executes and delivers an assumption agreement or which becomes bound by the terms of this Plan by operation of law. All of your rights hereunder shall inure to the benefit of, and be enforceable by, your personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

14. Limitation On Employee Rights; At-Will Employment. This Plan shall not give any employee the right to be retained in the service of the Company or interfere with or restrict the right of the Company to discharge or retire the employee. All employees of the Company are employed at will.

15. No Third-Party Beneficiaries. This Plan shall not give any rights or remedies to any person other than Participants and the Company.

16. Governing Law. With respect to each Participant, this Plan shall be administered, interpreted and enforced under the internal laws of the jurisdiction in which such Participant principally performs services for the Company without regard to conflicts of laws thereof.

17. No Assignment of Benefits. The rights of any person to payments or benefits under this Plan shall not be made subject to option or assignment, either by voluntary or involuntary assignment or by operation of law, including (without limitation) bankruptcy, garnishment, attachment or other creditor's process, and any action in violation of this subsection shall be void.

18. Miscellaneous. Where the context so indicates, the singular will include the plural and vice versa. Unless the context clearly indicates to the contrary, a reference to a statute or document shall be construed as referring to any subsequently enacted, adopted, or executed counterpart.

19. Section 409A.

(a) Separation from Service. Notwithstanding anything in this Plan to the contrary, any compensation or benefits payable under this Plan to a Participant that constitutes "nonqualified deferred compensation" ("Deferred Compensation") within the meaning of Section 409A of the Code, and which is designated under this Plan as payable upon your termination of employment shall be payable only upon your "separation from service" with the Company within the meaning of Section 409A of the Code (a "Separation from Service") and, except as provided under Section 19(b) of this Plan, any such compensation or benefits shall not be paid, or, in the case of installments, shall not commence payment, until the sixtieth (60th) day following your Separation from Service. Any installment payments that would have been made to you during the sixty (60) day period immediately following your Separation from Service but for the preceding sentence shall be paid to you on the sixtieth (60th) day following your Separation from Service and the remaining payments shall be made as provided in this Plan.

(b) Specified Employees. Notwithstanding any provision herein to the contrary, if you are deemed by the Company at the time of your Separation from Service to be a "specified employee" for purposes of Section 409A(a)(2)(B)(i) of the Code, to the extent delayed commencement of any portion of the benefits to which you are entitled under this Plan is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code, such portion of your benefits shall not be provided to you prior to the earlier of (i) the expiration of the six-month period measured from the date of your Separation from Service or (ii) the date of your death. Upon the first business day following the expiration of the applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to the preceding sentence shall be paid in a lump sum to you (or your estate or beneficiaries), and any remaining payments due to you under this Plan shall be paid as otherwise provided herein.

(c) Installments. Your right to receive any installment payments under this Plan shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment as permitted under Treasury Regulation Section 1.409A-2(b)(2)(iii).

(d) General. To the extent applicable, this Plan shall be interpreted in accordance with, and incorporate the terms and conditions required by, Section 409A of the Code and Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the adoption of this Plan. Notwithstanding any provision of this Plan to the contrary, in the event that the Company determines that any amounts payable hereunder will be immediately taxable to you under Section 409A of the Code and related Department of Department of Treasury guidance, to the extent permitted under Section 409A of the Code, the Company may, to the extent permitted under Section 409A of the Code (i) cooperate in good faith to adopt such amendments to this Plan and appropriate policies and procedures, including amendments and policies with retroactive effect, that they determine necessary or appropriate to preserve the intended tax treatment of the benefits provided by this Plan, preserve the economic benefits of this Plan and/or (ii) take such other actions as mutually determined necessary or appropriate to exempt the amounts payable hereunder from Section 409A of the Code or to comply with the requirements of Section 409A of the Code and thereby avoid the application of penalty taxes under such section. To the extent applicable, each of the exceptions to Code Section 409A's prohibition on acceleration of payments of Deferred Compensation provided under Treasury Regulation 1.409A-3(j)(4) shall be permitted under the Plan.

20. Restrictive Covenants. To protect the trade secrets and Proprietary Information (as defined below) of the Company and its customers and clients that have been and will be entrusted to you, the business goodwill of the Company and its subsidiaries (collectively, the "Company Group") that will be developed in and through you and the business opportunities that will be disclosed or entrusted to you by the Company Group, and in exchange for the payments and benefits set forth in this Plan, you acknowledge and agree to the following:

(a) During your employment with the Company and for one year after its termination (to the extent permitted by applicable law), you will not, without the prior consent of the Board, directly or indirectly participate in or assist any business, organization or person other than the Company Group (whether as owner, partner, officer, director, employee, consultant, investor, lender or otherwise, except as the holder of not more than 1% of the outstanding stock of a publicly-held company) whose business, activities, products or services are competitive with the Business of the Company Group. Notwithstanding the foregoing, this Section 20(a) shall not apply to services rendered by you in California after the date your employment with the Company terminates. For purposes hereof, "Business" means the business of manufacturing, providing or supplying communications software, systems, and services as conducted, planned to be conducted or discussed as being conducted by the Company Group as of the time of determination or, from and after the termination of your employment, as of such date.

(b) During your employment with the Company and for one year after its termination, you will not personally or through others recruit, solicit or induce any employee, independent contractor or consultant of the Company Group to terminate his or her employment or engagement with the Company Group; provided, however, that general public solicitations and advertisements not directed at employees or contractors of the Company Group, and the extension of offers to persons who respond to such general solicitations and advertisements, will not be deemed violations of this provision. During your employment with the Company and for one year after its termination, you will not solicit the business of any customer or client of the Company Group on your own behalf or on behalf of any person or entity other than the Company Group; provided that this sentence shall not apply to services rendered by you in California after the date your employment with the Company terminates.

(c) During your employment with the Company and for one year after its termination, you will not use Proprietary Information (as defined below) to, directly or indirectly, either alone or with any other person, (i) engage in, participate in, work for, render services to or invest in the Business, or any portion thereof, or (ii) aid or abet or give information or financial assistance to any person engaged in the Business, or any portion thereof, in any case, in any region in which the Company Group is then operating or has firm plans to operate. The term "Proprietary Information" shall mean any and all trade secrets, confidential or proprietary knowledge, know-how, data, information or materials that relate to the Company Group's business, business practices, customer lists, strategies, designs, products, processes, technologies and inventions or that belong to the Company Group, in whatever form and whether or not marked as confidential or proprietary, including, without limitation, all derivatives, improvements and enhancements to any of the above, whether provided to you, or created or developed by you.

(d) This Section 20 is of a special and unique nature, the breach of which cannot be adequately compensated for in damages by an action at law, and that any breach or threatened breach of such provisions would cause the Company Group irreparable harm. In the event of a breach or threatened breach by you of the provisions of this Section 20, the Company Group shall be entitled to an injunction restraining you from such breach without the need to post bond thereof. Nothing contained in this Section 20 shall be construed as prohibiting the Company from pursuing, or limiting the Company Group's ability to pursue, any other remedies available for any breach or threatened breach of this Plan by you. The provisions of Section 10 above relating to arbitration of disputes shall not be applicable to the Company Group to the extent it seeks a temporary or permanent injunction in any court to restrain you from violating this Section 20.

(e) Except as specifically provided in this Section 20, the termination of your employment will not have any effect on the continuing operation of this Section 20, and this Section 20 shall continue to apply in accordance with its terms during and after your employment with the Company, whether or not any other provisions of this Plan remain in effect at such time.

(f) Notwithstanding anything herein to the contrary, in accordance with 18 U.S.C. § 1833: (i) you shall not be in breach of this Agreement, and shall not be held criminally or civilly liable under any federal or state trade secret law (x) for the disclosure of a trade secret that is made in confidence to a federal, state, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, or (y) for the disclosure of a trade secret that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal; and (ii) if you file a lawsuit for retaliation by the Company for reporting a suspected violation of law, you may disclose the trade secret to your attorney, and may use the trade secret information in the court proceeding, if you file any document containing the trade secret under seal, and do not disclose the trade secret, except pursuant to court order.

* * * * *

Exhibit 10.2

CALIX, INC.

Non-Employee Director Cash Compensation Policy, as amended February 11, 2021

1. General. This Non-Employee Director Cash Compensation Policy ("Policy") was adopted by the Board of Directors ("Board") of Calix, Inc. ("Company") on and is effective as of February 11, 2021.

2. Annual Cash Compensation. Each member of the board who is not employed by the Company or one of its affiliates shall be entitled to an annual retainer with the amount determined as follows (the net sum for each director, his or her "Annual Retainer"):

	Amount
Base Retainer	$50,000
Board and Committee Chair Service (in addition to Base Retainer)	
Board Chair	$50,000
Audit Committee Chair	$35,000
Compensation Committee Chair	$20,000
Nominating and Corporate Governance Committee Chair	$10,000
Cybersecurity Committee Chair	$10,000
Strategic Committee Chair	$10,000
Non-Chair Committee Service (in addition to Base Retainer)	
Audit Committee	$10,000
Compensation Committee	$7,500
Nominating and Corporate Governance Committee	$5,000
Cybersecurity Committee	$5,000
Strategic Committee	$5,000

3. Timing of Payment. Annual Retainers shall be paid in quarterly installments in arrears on the date of each regularly scheduled quarterly board meeting. Installments will be pro-rated for any partial period of service.

4. Policy Subject to Amendment, Modification and Termination. This Policy may be amended, modified or terminated by the Board at any time in the future at its sole discretion.

Exhibit 10.3

CALIX, INC.

Non-Employee Director Equity Compensation Policy, as amended February 11, 2021

1. General. This Non-Employee Director Equity Compensation Policy (the "Policy") is adopted by the Board of Directors (the "Board") in accordance with Section 4.6 of the Calix, Inc. Amended and Restated 2019 Equity Incentive Award Plan (as amended from time to time, the "Plan"). Capitalized but undefined terms used herein shall have the meanings provided for in the Plan.

2. Board Authority. Pursuant to Section 4.6 of the Plan, the Board is responsible for adopting a written policy for the grant of Awards under the Plan to Non-Employee Directors, which policy is to specify, with respect to any such Awards, the type of Award(s) to be granted Non-Employee Directors, the number of shares of Common Stock to be subject to Non-Employee Director Awards, the conditions on which such Awards shall be granted, become exercisable and/or payable and expire, and such other terms and conditions as the Board determines in its discretion.

3. Initial Option Grant to Non-Employee Directors. Each person who is initially elected to the Board as a Non-Employee Director shall be granted, automatically and without necessity of any action by the Board or any committee thereof, on the date of such initial election an Option to purchase that number of shares of Common Stock equal to the product obtained multiplying (a) the result of dividing (i) $175,000 by (ii) the Black Scholes value of an option to purchase one share of Common Stock as of the date of grant, as determined below, by (b) a fraction, the numerator of which is the number of whole days that will have passed from the date of election through the scheduled date of the Company's next annual stockholder meeting and the denominator of which is 365, rounded down to the nearest whole share (an "Initial Director Option Grant"). Members of the Board who are employees of the Company and who subsequently terminate employment with the Company and remain members of the Board shall not receive an Initial Director Option Grant. For the purposes of this Policy, the Black-Scholes value of an Option to purchase a share of Common Stock shall be determined using the average closing trading price of a share of Common Stock on the stock exchange on which the Common Stock is then listed or traded over the thirty (30) consecutive trading days ending on the trading day prior to the date of grant and the volatility, risk-free rate and life expectancy assumptions shall be as set forth in the Company's then-most recent filing with the Securities and Exchange Commission that discloses such assumptions.

4. Subsequent Option Grants to Non-Employee Directors. Each person who is a Non-Employee Director immediately following an annual meeting of stockholders shall be granted, automatically and without necessity of any action by the Board or any committee thereof, on the date of such annual meeting an Option to purchase that number of shares of Common Stock equal to the result of dividing (i) $175,000 by (ii) the Black Scholes value of an option to purchase one share of Common Stock as of the date of grant, as determined in accordance with the last sentence of Section 3 above, and rounded down to the nearest whole share ("Annual Director Option Grant"). Members of the Board who are employees of the Company and who subsequently terminate employment with the Company and remain on the Board, to the extent that they are otherwise eligible, shall receive, after termination of employment with the Company, Annual Director Option Grants under this Section 4.

5. Terms of Options Granted to Non-Employee Directors

. Each Option granted under this Policy shall have an exercise price per share equal to the Fair Market Value of a share of Common Stock on the date of grant. Each Option granted under this Policy shall vest and become exercisable with respect to 100% of the shares of Common Stock underlying the Option on the earlier of (i) the one-year anniversary of the date of grant or (ii) the day immediately preceding the date of the annual meeting of stockholders that occurs in the year following the year of grant. The Stock Option Agreement evidencing each grant of Initial Director Option Grants and Annual Director Option Grants shall contain such other terms, provisions and conditions not inconsistent with the Plan as may be determined by the Administrator in its sole discretion.

6. Effect of Acquisition. Upon a Change in Control of the Company, all Awards and all other stock options, restricted stock units and other equity awards with respect to the Common Stock that are held by a Non-Employee Director shall become fully vested and/or exercisable.

7. Effect of Other Plan Provisions. The other provisions of the Plan shall apply to the Awards granted automatically pursuant to this Policy, except to the extent such other provisions are inconsistent with this Policy.

8. Incorporation of the Plan. All applicable terms of the Plan apply to this Policy as if fully set forth herein, and all grants of Awards hereby are subject in all respect to the terms of such Plan.

9. Written Grant Agreement. The grant of any Award under this Policy shall be made solely by and subject to the terms set forth in a written agreement in a form to be approved by the Board and duly executed by an executive officer of the Company.

10. Policy Subject to Amendment, Modification and Termination. This Policy may be amended, modified or terminated by the Board in the future at its sole discretion. No Non-Employee Director shall have any rights hereunder unless and until an Award is actually granted. Without limiting the generality of the foregoing, the Board hereby expressly reserves the authority to terminate this Policy during any year up and until the election of directors at a given annual meeting of stockholders.

11. Effectiveness. This Policy, as amended and restated herein, shall become effective as of February 11, 2021.

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Carl Russo, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Calix, Inc. for the quarter ended April 3, 2021;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 27, 2021

/s/ Carl Russo
Carl Russo
Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Cory Sindelar, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Calix, Inc. for the quarter ended April 3, 2021;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 27, 2021

/s/ Cory Sindelar

Cory Sindelar
Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Carl Russo, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Calix, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended April 3, 2021 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: April 27, 2021

/s/ Carl Russo
Carl Russo
Chief Executive Officer

I, Cory Sindelar, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Calix, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended April 3, 2021 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: April 27, 2021

/s/ Cory Sindelar
Cory Sindelar
Chief Financial Officer

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Calix, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.