UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 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 1, 2018

or

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

For transition period from to

Commission File Number: 001-37927

QUANTENNA COMMUNICATIONS, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**33-1127317**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

1704 Automation Parkway
San Jose, California 95131
(Address of principal executive offices, including zip code)

(669) 209-5500

(Registrant's telephone number, including area code)

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, 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	☐ (Do not check if a smaller reporting company)	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 27, 2018, 36,295,143 shares of the registrant's common stock, $0.0001 par value, were outstanding.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. In some cases, you can identify forward-looking statements because they contain words such as "may," "will," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements contained in this Quarterly Report on Form 10-Q include, but are not limited to, statements about our products, technology, customers, business, operations, and market and industry developments.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this Quarterly Report on Form 10-Q primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in the section titled "Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this Quarterly Report on Form 10-Q. We cannot assure you that the results, events and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements.

The forward-looking statements made in this Quarterly Report on Form 10-Q relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this Quarterly Report on Form 10-Q to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q or to reflect new information or the occurrence of unanticipated events, except as required by law.

PART I - FINANCIAL INFORMATION

Item 1. FINANCIAL STATEMENTS

Quantenna Communications, Inc.

Condensed Consolidated Balance Sheets
(In thousands, except share and per share data)
(Unaudited)

	April 1, 2018	December 31, 2017
Assets		
Current assets		
Cash and cash equivalents	$ 24,613	$ 24,432
Marketable securities	95,530	94,195
Accounts receivable	26,310	26,786
Inventory	18,420	12,662
Prepaid expenses and other current assets	2,949	2,744
Total current assets	167,822	160,819
Deferred tax assets	35,602	35,422
Property and equipment, net	12,415	12,511
Intangible and other assets, net	4,215	3,952
Total assets	$ 220,054	$ 212,704
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 10,696	$ 2,077
Accrued liabilities and other current liabilities	23,531	22,742
Long-term debt, current portion	—	3,943
Total current liabilities	34,227	28,762
Other long-term liabilities	3,222	3,339
Total liabilities	37,449	32,101
Commitments and contingencies (see Note 6)		
Stockholders' equity		
Common stock: $0.0001 par value, 1,000,000,000 shares authorized at April 1, 2018 and December 31, 2017, 36,185,035 and 35,528,880 shares issued and outstanding at April 1, 2018 and December 31, 2017, respectively	3	3
Additional paid-in capital	313,503	308,023
Accumulated other comprehensive loss	(438)	(207)
Accumulated deficit	(130,463)	(127,216)
Total stockholders' equity	182,605	180,603
Total liabilities and stockholders' equity	$ 220,054	$ 212,704

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Quantenna Communications, Inc.

Condensed Consolidated Statements of Operations
(In thousands, except per share data)
(Unaudited)

	Three Months Ended	
	April 1, 2018	April 2, 2017
Revenue	$ 45,117	$ 37,891
Cost of revenue	22,352	19,307
Gross profit	22,765	18,584
Operating expenses:		
Research and development	17,601	12,633
Sales and marketing	4,495	2,914
General and administrative	4,198	3,389
Total operating expenses	26,294	18,936
Loss from operations	(3,529)	(352)
Interest expense	—	(197)
Other income (expense), net	334	200
Loss before income taxes	(3,195)	(349)
Provision for income taxes	(52)	(535)
Net loss	$ (3,247)	$ (884)
Net loss per share, basic and diluted	$ (0.09)	$ (0.03)
Weighted average shares used to compute basic and diluted net loss per share	35,848	33,107

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Quantenna Communications, Inc.

Condensed Consolidated Statements of Comprehensive Loss
(In thousands)
(Unaudited)

	Three Months Ended	
	April 1, 2018	April 2, 2017
Net loss	$ (3,247)	$ (884)
Other comprehensive loss, net of tax:		
Unrealized losses on available-for-sale marketable securities	(231)	—
Comprehensive loss	$ (3,478)	$ (884)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Quantenna Communications, Inc.

Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Three Months Ended	
	April 1, 2018	April 2, 2017
Cash flows from operating activities	(in thousands)	
Net loss	$ (3,247)	$ (884)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	1,125	479
Stock-based compensation expense	4,592	2,104
Other	(50)	135
Changes in assets and liabilities:		
Accounts receivable	476	(3,332)
Inventory	(5,758)	2,459
Prepaid expenses and other current assets	(205)	(1,324)
Deferred rent and other assets	58	(511)
Accounts payable	8,725	(5,870)
Accrued liabilities and other current liabilities	1,053	6,309
Net cash provided by (used in) operating activities	6,769	(435)
Cash flows from investing activities		
Purchase of property and equipment	(924)	(1,700)
Purchase of long-term investment	(590)	—
Purchase of marketable securities	(13,211)	—
Maturities of marketable securities	11,515	—
Net cash used in investing activities	(3,210)	(1,700)
Cash flows from financing activities		
Proceeds from issuance of common stock, net	1,438	163
Payments of taxes withheld for vested stock awards	(601)	—
Payments related to intangible asset purchase	(272)	—
Repayments of long-term debt	(3,943)	(672)
Net cash used in financing activities	(3,378)	(509)
Net increase (decrease) in cash and cash equivalents	181	(2,644)
Cash and cash equivalents		
Beginning of period	24,432	117,045
End of period	$ 24,613	$ 114,401
Supplemental disclosure of cash flow information		
Interest paid during the period	$ —	$ 182
Income taxes paid during the period	$ 45	$ 62
Supplemental disclosure of non-cash investing activity		
Purchases of property and equipment included in accounts payable and accrued liabilities and other current liabilities	$ 266	$ 276

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

1. The Company and Summary of Significant Accounting Policies

Quantenna Communications, Inc. (the "Company") was incorporated in the State of Delaware on November 28, 2005. The Company designs, develops and markets advanced high-speed wireless communication solutions enabling wireless local area networking. The Company's solutions are designed to deliver leading-edge Wi-Fi performance to support an increasing number of connected devices accessing a rapidly growing pool of digital content. The Company applies its wireless systems and software expertise with high-performance radio frequency, mixed-signal and digital semiconductor design skills to provide highly integrated Wi-Fi solutions to its customers.

Reporting Calendar

The Company prepares financial statements on a 52- or 53-week fiscal year that ends on the Sunday closest to December 31. Fiscal 2018 will have 52 weeks and fiscal 2017 had 52 weeks. In a 52-week year, each fiscal quarter consists of 13 weeks. Fiscal 2018 will end on December 30, 2018.

Unaudited Interim Financial Information

The accompanying interim condensed consolidated financial statements and related disclosures are unaudited and in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for a fair statement of the results of operations for the periods presented. The year-end condensed consolidated balance sheet data was derived from audited financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America ("US GAAP"). The condensed consolidated results of operations for the three months ended April 1, 2018 are not necessarily indicative of the results to be expected for the full year or for any other future year or interim period. The accompanying condensed consolidated financial statements should be read in conjunction with the audited financial statements and the related notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the SEC on February 28, 2018 ("2016 Annual Report on Form 10-K").

Use of Estimates

Preparation of financial statements in conformity with accounting principles generally accepted in the United States of America, or US GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenue and expenses during the reporting periods covered by the financial statements and accompanying notes. Among the significant estimates affecting the financial statements are those related to inventories, revenue recognition, stock-based compensation and income taxes. Actual results could differ from those estimates.

Principles of Consolidation

The condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany transactions and balances have been eliminated in consolidation.

Significant Accounting Policies

During the three months ended April 1, 2018, there have been no changes in our significant accounting policies as described in the Company's 2017 Annual Report on Form 10-K, except as discussed below:

Revenue Recognition

The Company adopted Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* on January 1, 2018 which resulted in a change to our revenue policy relating to customer rebate arrangements. Refer to Note 2 to the the condensed consolidated financial statements, *Recent Accounting Pronouncements*, for further details.

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

2. Recent Accounting Pronouncements

On Feb. 14, 2018, the FASB released ASU 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.* The guidance allows a company to elect to reclassify from accumulated other comprehensive income (AOCI) to retained earnings the stranded tax effects from the adoption of the newly enacted federal corporate tax rate as a result of the Tax Act. The amount of the reclassification is calculated as the difference between the amount initially charged to other comprehensive income (OCI) at the time of the previously enacted tax rate that remains in AOCI and the amount that would have been charged using the newly enacted tax rate, excluding any valuation allowance previously charged to income. The ASU is effective for fiscal years beginning after Dec. 15, 2018 and interim periods within those fiscal years. Companies are allowed to early adopt the guidance. The company has decided not to early adopt the ASU 2018-02.

In August 2017, the FASB issued ASU No. 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*. The new standard is intended to improve and simplify accounting rules around hedge accounting. The new standard refines and expands hedge accounting for both financial (e.g., foreign currency) and commodity risks. Its provisions create more transparency around how economic results are presented, both on the face of the financial statements and in the footnotes, for investors and analysts. The new standard takes effect for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. Early adoption is permitted in any interim period or fiscal years before the effective date of the standard. The Company currently does not have any hedging activities but will evaluate the effects of this standard on its consolidated financial statements in future reporting periods.

In February 2016, the FASB issued ASU No. 2016-02, *Leases* ("ASC 842"), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than twelve months regardless of their classification. Leases with a term of twelve months or less will be accounted for similar to existing guidance for operating leases today. ASC 842 supersedes the previous leases standard, ASC 840 *Leases*. The standard is effective on January 1, 2019, with early adoption permitted. The Company is evaluating the effect that the adoption of this ASU will have on its financial statements. The Company currently expects that most of its operating lease commitments will be subject to the new standard and recognized as right-of-use assets and operating lease liabilities upon the adoption of ASU 2016-02, which will increase the total assets and total liabilities that it reports relative to such amounts prior to adoption.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which supersedes the revenue recognition requirements in ASC 605, *Revenue Recognition*. This ASU No. 2014-09 is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The ASU No. 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract.

In August 2015, FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, which effectively delayed the adoption date by one year, to an effective date for public entities for annual and interim periods beginning after December 15, 2017. In March, April, May and December 2016, the FASB issued additional updates to the new revenue standard relating to reporting revenue on a gross versus net basis, identifying performance obligations and licensing arrangements, and narrow-scope improvements and practical expedients, respectively. The effective date of this additional update is the same as that of ASU No. 2014-09. The guidance permits the use of either a retrospective or cumulative effect transition method. The FASB has issued, and may issue in the future, interpretive guidance which may cause the Company's evaluation to change.

The Company adopted Topic 606 as of January 1, 2018 using the modified retrospective transition method. Based on the evaluation of its current contracts and revenue streams under the new standard, the Company identified a change in accounting relating to customer rebate arrangements. Under the new standard, the Company is required to account for customer rebate arrangements as variable consideration which requires an estimate of the variable consideration to be made when revenue is recognized. In order to estimate this amount, the Company used historical data to determine an estimate of breakage which was applied to the amount of customer rebate due under its contractual arrangements. The cumulative effect upon adoption of Topic 606 was not material and did not have a material impact on the Company's consolidated financial position or results of operations. The impact of the estimate of breakage for the three months ended April 1, 2018 of $0.4 million recorded as a result of applying the new revenue standard is not considered material to revenue or any other affected financial statement line items.

The following table sets forth the Company's revenue by geographic region, based on ship-to destinations (in thousands):

	April 1, 2018		April 2, 2017	
	Amount	% of revenue	Amount	% of revenue
Asia-Pacific	$ 40,737	90%	$ 34,645	91%
Europe, Middle East and Africa	4,366	10	3,233	9
North America	14	—	13	—
Total	$ 45,117	100%	$ 37,891	100%

3. Earnings Per Share

The following table summarizes the Company's computation of basic and diluted net loss per share:

	Three Months Ended	
	April 1, 2018	April 2, 2017
	(in thousands, except per share data)	
Net loss	$ (3,247)	$ (884)
Weighted-average shares outstanding	35,882	33,165
Less: weighted average shares subject to repurchase due to early exercise	(34)	(58)
Weighted average shares used to compute basic and diluted net loss per share	35,848	33,107
Net loss per share, basic and diluted	$ (0.09)	$ (0.03)

The following potentially dilutive securities outstanding at the end of the periods have been excluded from the computation of diluted shares outstanding as the effect would have been anti-dilutive:

	Three Months Ended	
	April 1, 2018	April 2, 2017
	(in thousands)	
Warrants to purchase common stock	58	423
Shares available for Employee Stock Purchase Plan (ESPP)	374	286
Restricted Stock Units (RSUs)	2,147	827
Options to purchase common stock	5,398	6,827
Total	7,977	8,363

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

4. Balance Sheets Components

Marketable Securities

Marketable securities at April 1, 2018 consisted of the following:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
Corporate debt securities	$ 85,108	$ —	$ (464)	$ 84,644
Government debt securities	10,918	—	(32)	10,886
	$ 96,026	$ —	$ (496)	$ 95,530

The contractual maturities of marketable securities as of April 1, 2018 were as follows:

	Amortized Cost	Fair Value
	(in thousands)	
Due in one year or less	$ 68,595	$ 68,349
Due after one year to five years	27,431	27,181
	$ 96,026	$ 95,530

Marketable securities as of December 31, 2017 consisted of the following:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
Corporate debt securities	$ 83,570	$ 7	$ (250)	$ 83,327
Government debt securities	10,889	—	(21)	10,868
	$ 94,459	$ 7	$ (271)	$ 94,195

The contractual maturities of marketable securities as of December 31, 2017 were as follows:

	Amortized Cost	Fair Value
	(in thousands)	
Due in one year or less	$ 49,201	$ 49,144
Due after one year to five years	45,258	45,051
	$ 94,459	$ 94,195

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

Property and Equipment, Net

Property and equipment, net consisted of the following:

	April 1, 2018	December 31, 2017
	(in thousands)	
Computer and lab equipment	$ 14,903	$ 14,295
Computer software	830	795
Furniture and fixtures	1,629	1,589
Leasehold improvements	3,962	3,977
Sub-total	21,324	20,656
Accumulated depreciation and amortization	(8,909)	(8,145)
Property and equipment, net	$ 12,415	$ 12,511

Depreciation and amortization expense related to property and equipment was $0.9 million and $0.5 million, respectively, for the three months ended April 1, 2018 and April 2, 2017, respectively.

Inventory

Inventory consisted of the following:

	April 1, 2018	December 31, 2017
	(in thousands)	
Raw materials	$ 5,978	$ 5,812
Work in progress	3,537	1,069
Finished goods	8,905	5,781
	$ 18,420	$ 12,662

Accrued Liabilities and Other Current Liabilities

Accrued liabilities and other current liabilities consisted of the following:

	April 1, 2018	December 31, 2017
	(in thousands)	
Accrued customer rebates	$ 9,369	$ 8,710
Accrued payroll and related benefits	3,975	3,411
Accrued expenses	3,404	6,184
Accrual for inventory purchases	2,804	2,124
ESPP employee contributions	1,947	706
Other	2,032	1,607
	$ 23,531	$ 22,742

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

5. Fair Value Measurements

The Company determines fair value measurements used in its consolidated financial statements based upon the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (i) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (ii) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

Level 1: Valuations based on quoted prices in active markets for identical assets or liabilities that the entity has the ability to access.

Level 2: Valuations based on quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable data for substantially the full term of the assets or liabilities.

Level 3: Valuations based on inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company obtains the fair value of our Level 1 investments in money market funds, at the expected market price. These investments are expected to maintain a net asset value of $1 per share.

The Company determines the fair value of our Level 2 financial instruments from third-party asset managers, custodian banks, and the accounting service providers.

The Company classifies financial instruments in Level 3 of the fair value hierarchy when there is reliance on at least one significant unobservable input to the valuation model. In addition to these unobservable inputs, the valuation models for Level 3 financial instruments typically also rely on a number of inputs that are readily observable, either directly or indirectly. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability. There were no assets or liabilities in Level 3 of the fair value hierarchy and there were no transfers between Level 1 and Level 2 categories during the year ended any of the periods presented.

The Company utilizes the market approach to measure the fair value of our fixed income securities. The market approach is a valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. The fair value of our fixed income securities is obtained using readily-available market prices from a variety of industry standard data providers, large financial institutions and other third-party sources for the identical underlying securities.

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

Assets Measured at Fair Value on a Recurring Basis

The Company measures and reports certain assets at fair value at April 1, 2018 on a recurring basis as follows:

	Fair Value as of April 1, 2018			
	Level 1	Level 2	Level 3	Total
Assets:	(in thousands)			
Cash equivalents:				
Money market funds	$ 4,009	$ —	$ —	$ 4,009
Corporate debt securities	—	1,210	—	1,210
Total cash equivalents	4,009	1,210	—	5,219
Marketable Securities:				—
Corporate debt securities	—	84,644	—	84,644
Government debt securities	—	10,886	—	10,886
Total marketable securities	—	95,530	—	95,530
Total cash equivalents and marketable securities	$ 4,009	$ 96,740	$ —	$ 100,749

Assets at fair value at December 31, 2017 on a recurring basis were as follows:

	Fair Value as of December 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets:	(in thousands)			
Cash equivalents:				
Money market funds	$ 4,398	$ —	$ —	$ 4,398
Corporate debt securities	—	2,000	—	2,000
Total cash equivalents	4,398	2,000	—	6,398
Marketable Securities:				—
Corporate debt securities	—	83,329	—	83,329
Government debt securities	—	10,866	—	10,866
Total marketable securities	—	94,195	—	94,195
Total cash equivalents and marketable securities	$ 4,398	$ 96,195	$ —	$ 100,593

The Level 1 assets consist of money market funds. The Level 2 assets consist of available-for-sale investment portfolio, which are valued utilizing a market approach.

Common Stock Warrants

As of April 1, 2018, warrants issued and outstanding were as follows:

	Date of Issuance	Number of Warrants	Exercise Price	Expiration Date
Common stock warrants	September 2015	58,006	$ 2.50	February 2019

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

As of December 31, 2017, warrants issued and outstanding were as follows:

	Date of Issuance	Number of Warrants	Exercise Price	Expiration Date
Common stock warrants	September 2015	83,006	$ 2.50	February 2019

6. Commitments and Contingencies

Leases

The Company conducts its operations using leased office facilities in various locations. The following is a schedule of future minimum lease payments under operating leases as of April 1, 2018 (in thousands):

2018 (remaining nine months)	$ 1,924
2019	2,509
2020	2,159
2021	1,658
2022 and beyond	3,738
Total minimum lease payments	$ 11,988

The Company leases office space under arrangements expiring through 2026. Rent expense for the three months ended April 1, 2018 and April 2, 2017 was $0.7 million and $0.3 million respectively.

Purchase Commitments

The Company has purchase obligations of $31.0 million that are based on outstanding purchase orders as of April 1, 2018, related to the fabrication of certain wafers for which production has started. These purchase orders are cancellable at any time, provided that the Company is required to pay all costs incurred through the cancellation date. Historically, the Company has rarely canceled these agreements once production has started. The Company did not otherwise have any outstanding non-cancellable purchase obligations as of April 1, 2018.

Indemnification

In connection with the sale of its semiconductor products, the Company executes standard software license agreements allowing customers to use its firmware. Under the indemnification clauses of these license agreements, the Company agrees to defend the licensee against third-party claims asserting infringement by the Company's products of certain intellectual property rights, which may include patents, copyrights, trademarks or trade secrets, and to pay any judgments entered on such claims against the licensee, subject to certain restrictions and limitations. The Company has never incurred significant expense defending its licensees against third-party claims. Further, the Company has never incurred significant expense under its standard product or services performance warranties. As a result, the Company believes the estimated fair value of these agreements is minimal. Accordingly, the Company has no liabilities recorded for these agreements at April 1, 2018.

Commitments

In April 2012, an agreement was entered into with Joint Stock Company "RUSNANO" (formerly Open Joint Stock Company "RUSNANO"), which required the Company to form a wholly-owned subsidiary in the Russian Federation and to provide funding to the subsidiary in the three years following April 16, 2012. This wholly-owned subsidiary performs research and development activities for the Company. Funding means cash transfers to the subsidiary for equity investments, reimbursements of subsidiary operating expenses and Company expenses related to the subsidiary. RUSNANO also requires participation in subsidiary financial decisions.

In July 2014, the Company entered into an amended and restated letter agreement with RUSNANO pursuant to which the Company agreed, among other matters, to operate and fund its Russian operations in an aggregate amount of $13.0 million over six annual periods beginning on December 31, 2014. The annual funding requirements in period one to period six are $2.2 million, $1.7 million, $2.0 million, $2.2 million, $2.4 million, and $2.5 million, respectively. In the event that the Company fails to meet its funding obligations for any period, it will be required to pay RUSNANO a penalty fee of 10% on 80% of the difference between the funding obligation and the actual funding for that period, subject to a cure period of one calendar quarter after the applicable period funding deadline. As of April 1, 2018, the Company had met the minimum funding requirements and no penalty had been incurred.

As of April 1, 2018, the Company's non-cancellable obligations for its definite long-lived intangible assets which are comprised of software licenses were approximately $3.7 million, of which $1.1 million is due payable in fiscal 2018 and $2.6 million is due payable within the subsequent two years.

Legal Matters

From time to time, the Company is a party to litigation and subject to claims incident to the ordinary course of business, including intellectual property claims, labor and employment claims, breach of contract claims, and other matters. Significant judgment is required when we assess the likelihood of any adverse judgments or outcomes to a potential claim or legal proceeding, as well as potential ranges of probable losses, and when the outcomes of the claims or proceedings are probable and reasonably estimable. Because of uncertainties related to these matters, we base our estimates on the information available at the time. As additional information becomes available, we reassess the potential liability related to pending claims and litigation, and may revise our estimates. Any revisions in the estimates of potential liabilities could have a material impact on the Company's results of operations, financial position, and cash flows.

7. Long-term Debt

Loan and Security Agreement

The Company's Amended and Restated Loan and Security Agreement with Silicon Valley Bank ("SVB") (the "SVB Loan and Security Agreement") includes (i) term loans, (ii) revolving line of credit, and (iii) Mezzanine Loan. The Mezzanine Loan was canceled upon its expiration in fiscal 2017.

On December 31, 2017, the Company sought to extinguish its term loans under the SVB Loan and Security Agreement of which approximately $3.9 million (including interest and early termination fees) remained outstanding. The Company reclassified the final $3.9 million payment on December 31, 2017 to "Long-term debt, current portion" in its Condensed Consolidated Balance Sheet as of that date. The payment for the extinguishment of the term loans was processed on January 2, 2018.

As of April 1, 2018, the Company has an undrawn balance on the revolving line of credit of $20.0 million which can be drawn subject to 80% of eligible accounts receivable. The revolving line of credit has interest between 4.25% to 5.00% depending on the Company's consolidated leverage ratio.

8. Stockholders' Equity

Common Stock

The Company's Certificate of Incorporation, as amended, authorizes the Company to issue 1,000,000,000 shares of $0.0001 par value common stock. Each share of common stock is entitled to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when and if declared by the board of directors. The Company has never declared any dividends.

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

The Company had reserved shares of common stock for issuance, on an as-converted basis, as follows:

	April 1, 2018
Options issued and outstanding	5,398,342
RSUs issued and outstanding	2,146,670
Common stock warrants	58,006
Shares available for ESPP	1,646,188
Shares available for future stock awards	2,500,106
	11,749,312

During the three months ended April 1, 2018, the Company granted 1,254,398 RSUs and 666,250 options to employees. During the three months ended April 2, 2017, the Company granted 822,435 RSUs and 511,750 options to employees.

Options Subject to Repurchase

The Company has a right of repurchase with respect to unvested shares issued upon early exercise of options at an amount equal to the lower of (i) the exercise price of each restricted share being repurchased and (ii) the fair market value of such restricted share at the time the Company's right of repurchase is exercised. The Company's right to repurchase these shares lapses as to 1/36th of the total number of shares originally granted per month for 36 months. At April 1, 2018, 35,000 shares remained subject to the Company's right of repurchase.

The shares purchased by employees pursuant to the early exercise of stock options are not deemed, for accounting purposes, to be issued until those shares vest according to their respective vesting schedules. The cash received in exchange for unvested shares of early exercised stock options is recorded as an early exercise liability on the balance sheets and will be transferred to common stock and additional paid-in capital as such shares vest.

9. Stock-based Compensation

Total stock-based compensation expense for employees and non-employees recognized in the condensed consolidated statements of operations was as follows:

	Three Months Ended	
	April 1, 2018	April 2, 2017
	(in thousands)	
Cost of revenue	$ 34	$ 43
Research and development	2,393	1,205
Sales and marketing	984	353
General and administrative	1,181	503
Total stock-based compensation expense	$ 4,592	$ 2,104

The above stock-based compensation expense related to the following equity-based awards:

	Three Months Ended	
	April 1, 2018	April 2, 2017
	(in thousands)	
Stock options	$ 1,168	$ 2,104
RSU awards	2,803	—
ESPP shares	621	—
Total stock-based compensation expense	$ 4,592	$ 2,104

10. Income Taxes

The Company recorded an income tax provision of $0.1 million and $0.5 million, respectively, for the three months ended April 1, 2018 and April 2, 2017. The provision for income taxes consists primarily of income taxes in the foreign jurisdictions in which we conduct business. In the fourth quarter of fiscal 2017, management concluded that the valuation allowance for the Company's US federal and state (with the exception of California) deferred tax assets was no longer needed primarily due to the emergence from cumulative losses over the previous three years.

As of April 1, 2018, based on the available objective evidence, management still believes it is more likely than not that the net deferred tax assets will be realized for federal and state purposes (with the exception of California). We will continue to maintain a valuation allowance in those jurisdictions deemed necessary until sufficient positive evidence exists to support reversal. Such assessment may change in the future as further evidence becomes available.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act makes broad and complex changes to the U.S. tax code that affected 2017, the current year and onwards, including, but not limited to, a reduction of the U.S. federal corporate tax rate from as high as 35% to 21%, a general elimination of U.S. federal income taxes on dividends from foreign subsidiaries, net operating loss deduction limitations, and 100% disallowance of entertainment expense.

The 2017 Tax Cuts and Jobs Act (the " Tax Act") adds new provisions relating to "foreign derived intangible income" (FDII) and "global intangible low-taxed income" (GILTI). The Company has completed an analysis for FDII and GILTI and due to the forecasted results of the Company, there is currently no impact on the provision.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC 740, Income taxes for the year ended December 31, 2017. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the tax Act for which the accounting under ASC 740 is complete. The Company is still within the measurement period as of Q1 2018 and no further conclusions have been made, as the Company reviews the law change and the impact to the Company.

Under Internal Revenue Code Section 382, our ability to utilize NOL carry-forwards or other tax attributes such as research tax credits, in any taxable year may be limited if we experience, or have experienced, an “ownership change.” A Section 382 “ownership change” generally occurs if one or more stockholders or groups of stockholders, who own at least 5% of our stock, increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Similar rules may apply under state tax laws.

We have completed an IRC Section 382 analysis through December 31, 2016 and determined that there was no significant limitation to the utilization of NOL or tax credit carryforwards before they expire. We are in the process of updating the study through the current year and will update for any significant limitations to the utilization of NOL or tax credit carryforwards in the current year upon completion of the study.

Quantenna Communications, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

11. Employee Benefit Plans

Defined Contribution Plan

The Company adopted a 401(k) Plan that qualifies as a deferred compensation arrangement under Section 401 of the Internal Revenue Code. Under the 401(k) Plan, participating employees may defer a portion of their pretax earnings not to exceed the maximum amount allowable. The 401(k) Plan permits the Company to make matching contributions and profit sharing contributions to eligible participants. The Company has made matching contributions of $0.1 million for the three months ended April 1, 2018.

12. Related Party Transactions

Purchases from Cadence Design Systems, Inc.

Lip-Bu Tan, a member of the Company's board of directors since June 2015, is the President and Chief Executive Officer of Cadence, an electronic design automation software and engineering services company. Since 2012, the Company has paid licensing fees for digital and analog layout tools and simulation tools from Cadence in the ordinary course of business. The Company incurred fees of approximately $0.4 million and $1.0 million under the terms of this arrangement during the three months ended April 1, 2018 and April 2, 2017, respectively.

In fiscal 2017, the Company entered into a software license contract with Cadence for the use of various EDA software tools used for its research and development efforts. The Company has classified the software licenses under this contract as definite long-lived intangible assets in its Condensed Consolidated Balance Sheets and which amounted to approximately $2.7 million as of April 1, 2018, net of accumulated amortization of approximately $0.6 million.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the U.S. Securities and Exchange Commission (the "SEC") on February 28, 2018 ("2017 Annual Report on Form 10-K") and the condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q. This discussion contains forward-looking statements based upon current plans, expectations and beliefs that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, those discussed in the section titled "Risk Factors" and those included elsewhere in this Quarterly Report on Form 10-Q.

Our Management's discussion and analysis is organized as follows:

- **Overview.** Discussion of our business and overall analysis of financial and other highlights affecting our Company.
- **Results of Operations.** Analysis of our financial results comparing the first quarter of 2018 to the corresponding period in 2017.
- **Liquidity and Capital Resources.** Analysis of changes in our balance sheets and cash flows, and discussion of our financial condition and sources of liquidity.
- **Contractual Commitments.** Contractual obligations as of April 1, 2018.

Overview

We are a leader in the design, development, and marketing of advanced high-speed wireless communication solutions enabling wireless local area networking. Our solutions are designed to deliver leading-edge Wi-Fi performance to support an increasing number of connected devices accessing a rapidly growing pool of digital content. We apply our wireless systems and software expertise with high-performance radio frequency, mixed-signal and digital semiconductor design skills to provide highly integrated Wi-Fi solutions to our customers. Wi-Fi is a ubiquitous standard for wireless network connectivity, defined by the Institute of Electrical and Electronics Engineers, or IEEE, 802.11 standardization body working group that is rapidly evolving to deliver continued performance improvements while maintaining backward compatibility.

We sell our Wi-Fi solutions directly to global original equipment manufacturers ("OEMs"), original design manufacturers ("ODMs") and contract manufacturers ("CMs") that serve the end markets we address. In addition, we sell our Wi-Fi solutions to third-party distributors who, in turn, resell to OEMs, ODMs and CMs. OEMs incorporate our solutions into their products, which are then sold to their own customers, such as service providers, retailers, enterprises, small and medium businesses, and retail consumers. To date, we have primarily addressed the service provider market for home networking applications, including home gateways, repeaters, and set-top boxes. We are also addressing additional end markets, with solutions for (i) retail OEMs for home networking as well as small and medium business applications (e.g., routers and repeaters), (ii) enterprise OEMs for enterprise networking applications (e.g., access points), and (iii) potential future opportunities from consumer electronics OEMs for consumer connected home applications, including wireless streaming of audio and video, wireless TVs, and wireless speakers. We believe the life cycles of our customers' products can range from approximately one year to five years or more depending on the end market.

Some OEMs purchase our Wi-Fi solutions directly from us and use them in the design and manufacture (directly or through their third-party contract manufacturers) of their own products. Other OEMs utilize ODMs to design and build subsystem products incorporating our Wi-Fi solutions, which the OEMs then purchase from the ODM and incorporate into the OEM products. Accordingly, we ship our Wi-Fi solutions either directly to the OEM, its contract manufacturer, or its ODM, based on the requirements of each OEM. However, we maintain close relationships with the target OEM to monitor OEM end-market demand as the initial Wi-Fi solution design win is generally awarded by the OEM.

We derive the substantial majority of our revenue from the sale of our Wi-Fi solutions. In addition, historically we also derived a portion of our revenue from a limited number of licensing and non-recurring arrangements. While licensing and non-recurring arrangements are not part of primary focus, we may enter into such arrangements on an opportunistic basis from time to time.

The following table shows OEM, ODM and third-party distributor customers from which we derived 10% or more of our revenue:

	Three Months Ended	
	April 1, 2018	April 2, 2017
	(Percentage of revenue)	
Customer:		
A	16%	15%
B	18%	13%
C	10%	*

* Customer percentage of revenue was less than 10%.

Over 99% of our revenue (Refer to Note 2 to the the condensed consolidated financial statements, *Recent Accounting Pronouncements*, for further details of the Company's revenue by geographic region) was generated outside the United States for the three months ended April 1, 2018 and April 2, 2017, based on ship-to destinations, and we anticipate that the vast majority of our shipments will continue to be delivered outside the United States. Although almost all shipments are delivered outside the United States, we believe that a significant number of the Wi-Fi products that include our semiconductors, such as access points, gateways, set-top boxes and repeaters, are ultimately sold by OEM customers to service providers in North America and Western Europe. To date, all of our revenue has been denominated in U.S. dollars.

We use a fabless semiconductor business model and rely on third-party contractors to fabricate, assemble, and test our chipset designs. We purchase silicon wafers from Taiwan Semiconductor Manufacturing Company Limited ("TSMC"), our foundry partner, which are then shipped to third-party contractors who assemble and test our chipsets. Our inventory is distributed from the third-party contractors and a contracted warehouse in Taiwan. We believe this outsourced manufacturing approach gives us access to the best available process technology, reduces our capital requirements, and allows us to focus our resources on the design, development, marketing, sales, and customer integration of our Wi-Fi solutions. We typically receive purchase orders 16 to 18 weeks ahead of our customers' desired delivery date, and we build our inventory primarily on the basis of purchase orders from our customers.

First Quarter 2018 and Recent Highlights

Revenue increased $7.2 million, or 19%, to $45.1 million for the three months ended April 1, 2018 and net loss increased by $2.4 million for the same period when compared to the three months ended April 2, 2017. Gross profit increased $4.2 million, or 22%, to $22.8 million in the three months ended April 1, 2018 when compared to the three months ended April 2, 2017. The increase in revenue and gross profit were primarily due to an increase in sales of our Wi-Fi solutions driven by higher unit volumes. Operating expenses increased $7.4 million, or 39% for the three months ended April 1, 2018 when compared to the three months ended April 2, 2017 as we continue to expand our operations.

We generated cash from operations of $6.8 million for the three months ended April 1, 2018 and ended the first quarter of 2018 with cash and cash equivalents and marketable securities of $120.1 million, up 1% from December 31, 2017. On January 2, 2018, we extinguished our term loans by paying down the remaining outstanding balance of $3.9 million (including interest and early termination fees). See "Liquidity and Capital Resources" below for further details.

As of April 1, 2018, we had 386 employees, up 2% from 380 employees at the end of the fourth quarter of 2017, and up 18% from 328 employees at the end of the first quarter of 2017. We expect our headcount to continue to grow as we scale our business.

In the first three months of fiscal 2018, we publicly announced that we: partnered with Canal+ Group to deliver an end-to-end solution that enables wireless HD video redistribution from set-top box to a companion Over-The-Top (OTT) set-top box; enhanced Wi-Fi features on our QSR10G chipset family targeting gateways and access points that significantly improve the user experience of mobile Wi-Fi clients; partnered with Greenwave Systems, Inc., to deliver a full duplex 4x4 802.11ac Wave 2 Wi-Fi extender for superior whole-home coverage; and collaborated with Icotera to deliver innovative next-generation fiber gateway and Wi-Fi access point solutions to the European market.

We plan to continue to introduce leading edge premium Wi-Fi solutions and related technologies that increase our addressable market and expand our selling opportunities into the strategic customers which we serve.

Factors Affecting Our Performance

Design Wins with Existing and Prospective Service Providers

Existing and prospective service providers that we serve through our OEM and ODM customer partners tend to be global enterprises that are continuously working with their partners to deploy new products. We believe our Wi-Fi solutions enable service providers to differentiate their products and services and drive the next upgrade cycles in their end market to ultimately gain market share. We work closely with service providers to assist in the development of their product specifications and designs. We compete to secure service provider design wins through an extended sales cycle, which can often last six to 18 months. After a design win is achieved, we continue to work closely with the service providers to assist them and their OEMs and ODMs throughout their product development and early deployment, which can often last six to 18 months. We believe our design win performance is dependent on the investments we make in research and development and sales and marketing to bring innovative Wi-Fi solutions to our existing and new markets and develop close relationships with our customer partners and service providers. As a result, we expect our research and development and sales and marketing expenses to increase in absolute dollars as we continue to grow our business.

Because of this extended sales cycle, our revenue is highly dependent upon the ongoing achievement of service provider design wins. We expect future revenue to depend upon sales to service providers with whom we have existing relationships as well as our ability to garner design wins with new service providers with whom we currently do not have relationships or sales. Further, because we expect revenue relating to our earlier generation solutions to decline in the future, we consider these design wins critical to our future success.

Product Life Cycle of our Customer Partners and Service Providers; Expanding into Other End Markets

In the service provider home networking market, once service providers select our Wi-Fi solutions for integration into their products, we work with our OEM and ODM customer partners to monitor all phases of the product life cycle, including the initial design phase, prototype production and volume production. Our service providers' product life cycles typically range from three to five years or more, based on product features, size of subscriber base, and roll-out plans. In contrast, wireless products sold in the retail or consumer electronics end markets have shorter life cycles than those sold into the service provider home networking market. In the retail or consumer electronics markets, a wireless product typically has a product life cycle of one to two years.

Currently, the majority of our revenue is derived from sales to OEMs and ODMs serving the service provider home networking market, with relatively longer sales cycles, longer customer product development cycles and longer time to shipment, but also with longer product life cycles. However, as we expand into additional end markets, such as retail, small and medium business, enterprise or consumer electronics, we expect revenue from such markets to increase as a proportion of our revenue over time. The shorter product life cycles associated with such additional end markets typically require greater frequency of design wins, and they may also result in faster time to shipment of our Wi-Fi solutions.

Sales Volume and Customer Concentration

A typical design win can generate a wide range of sales volumes for our Wi-Fi solutions, depending on the end market demand for our customers' products. Such demand depends on several factors, including end market size, size of the service providers, product price and features, and the ability of our customer partners to sell their products into their end markets. As such, some design wins result in orders and significant revenue shortly after the design win is awarded and other design wins do not result in significant orders and revenue for several months or longer after the initial design win, if at all. As a result, an increase or decrease in the number of design wins we achieve on a quarterly or annual basis does not necessarily correlate to a likely increase or decrease in revenue in the same or immediately succeeding quarter or year. Nonetheless, design wins are critical to our continued sales, and we believe that the collective impact of design wins correlates to our overall revenue growth over time.

Our customer partners often share their product development schedules with us, including the projected launch dates of their wireless product offerings. Once our customer partners are in production, they generally will provide nine to 12-month forecasts of expected demand. However, they may change their purchase orders and demand forecasts at any time with limited or no prior notice.

We derive a significant portion of our revenue from a small number of OEMs and ODMs, and substantially all of our revenue to date has been generated by sales of our solutions to OEMs and ODMs serving the service provider market for home networking. While we strive to expand and diversify our customer base and we expect our customer concentration to decline over time, we anticipate that sales to a limited number of customer partners will continue to account for a significant percentage of our revenue in the foreseeable future. In light of this customer partner concentration, our revenue is likely to continue to be materially impacted by the purchasing decisions of our largest customer partners.

Wi-Fi Solutions Pricing, Cost and Gross Margin

Our average selling price ("ASP") can vary by product mix, customer mix and end market, due to end market-specific characteristics such as supply and demand, competitive landscape, the maturation of Wi-Fi solutions launched in prior years and the launch of new Wi-Fi solutions. Our gross margin depends on a variety of factors, including the sales volume, features, price, and manufacturing costs of our Wi-Fi solutions. We make continuous investments in our solutions to enhance existing and add new features, maintain our competitiveness, minimize ASP erosion, and reduce the cost of our solutions.

As we rely on third-party contractors for the fabrication, assembly and testing of our chipsets, we work closely with these third-parties to improve the manufacturability of our chipsets, lower wafer cost, enhance yields, lower assembly and test costs, and improve quality.

In general, our latest generation solutions have higher prices compared to our prior generation solutions. As is typical in the semiconductor industry and consistent with our historical trends, we expect the ASPs of our solutions to decline as those solutions mature and unit volumes increase. These ASP declines often coincide with improvements in manufacturing yields and lower wafer, assembly and testing costs, which may offset some or all of the margin reduction that results from lower ASPs.

Components of Results of Operations

Revenue

Our revenue is generated primarily from sales of our Wi-Fi solutions to our customer partners, net of accruals for estimated sales rebates. In addition, we sell our Wi-Fi solutions to third-party distributors who in turn resell to OEMs and ODMs. Our Wi-Fi solutions are integrated into OEM products, such as gateways, set-top boxes, repeaters or routers, which are then sold primarily to service providers. Our sales have historically been made on the basis of purchase orders against our standard terms and conditions, rather than long-term agreements and revenue is recognized on a sell-in basis. We account for rebates to end-user customer partners based on the maximum amount of rebate contractually due under the terms of the arrangement. Claims for customer rebates are accrued upon shipment to the ODM and adjusted based on historical settlement data. These rebate claim estimates are adjusted based on actual experience over time.

Sales of our Wi-Fi solutions fluctuate primarily based on competition, sales volume, customer inventory and price. We expect our revenue to fluctuate from quarter to quarter due to a variety of factors, such as customer product development and deployment cycles and the purchasing patterns of our customer partners and third-party distributors.

During the three months ended April 1, 2018 and April 2, 2017, we did not derive any revenue from licensing and non-recurring arrangements. While licensing and non-recurring arrangements are not part of primary focus, we may enter into such arrangements on an opportunistic basis from time to time.

Cost of Revenue, Gross Margin

We utilize third-party contractors for the production of the chipsets included in our Wi-Fi solutions. Cost of revenue primarily relates to the purchase of silicon wafers from our third-party foundry, and costs associated with assembly, testing and inbound and outbound shipping of our wafers and chipsets. After we purchase wafers from our third-party foundry, we bear the manufacturing yield risk related to assembling and testing these wafers into chipsets, which can result in benefit or expense recorded in cost of revenue. Cost of revenue also includes lower of cost or market adjustments to the carrying value of inventory, scrap and inventory obsolescence, royalty costs, and any accruals for warranty obligations, which we record when revenue is recognized. Additionally, cost of revenue includes manufacturing overhead expense, such as personnel cost which primarily consist of compensation costs related to employees, consultants and contractors, including salaries, sales commissions, bonuses, stock-based compensation and other employee benefits, depreciation expense, and allocated administrative costs associated with supply chain management and quality assurance activities as well as property insurance premiums.

We seek to negotiate price reductions, which historically has included rebates, from our third-party foundry on the purchase of silicon wafers upon achieving certain volume targets. Such rebates are recorded as a reduction of inventory cost and are recognized as a reduction of cost of revenue. Because we do not have long-term, fixed supply agreements, our wafer costs are subject to changes based on the cyclical demand for semiconductors.

We calculate gross margin as revenue less cost of revenue divided by revenue. Our gross margin has been and will continue to be affected by a variety of factors, including ASPs, sales volume, and wafer, assembly and testing costs. We believe the primary driver of our gross margin is the ASPs negotiated between us and our customer partners, relative to the wafer, assembly and testing costs for our Wi-Fi solutions. As each of our Wi-Fi solutions matures and sales volumes increase, we expect ASPs to decline. Historically, such ASP declines have often coincided with lower wafer, assembly and testing costs, which have offset some or all of the gross margin reduction resulting from lower ASPs. In the future, we expect our gross margin to fluctuate as a result of changes in ASPs, introductions of new Wi-Fi solutions, changes in our product and customer mix, and changes in wafer, assembly and testing costs.

Operating Expenses

Our operating expenses consist of research and development (“R&D”), sales and marketing (“S&M”) and general and administrative (“G&A”) expenses. Personnel costs are the largest component of operating expenses and primarily consist of compensation costs related to employees, consultants and contractors, including salaries, sales commissions, bonuses, stock-based compensation and other employee benefits. As we continue to grow our business, we expect operating expenses to increase in absolute dollars.

Research and Development. Our R&D expenses consisted primarily of personnel costs to support our R&D activities, including silicon design, software development and testing, and customers partner’s product development support and qualification. R&D expenses also include tape-out costs, which include layout services, mask sets, prototype wafers, mask set revisions, intellectual property license fees, and system qualification and testing incurred before releasing new semiconductor designs into production. In addition, R&D expenses include design software and simulation tools licenses, depreciation expense, and allocated administrative costs. All R&D costs are expensed as incurred.

Sales and Marketing. Our S&M expenses consist primarily of personnel costs for our S&M activities, including pre-sales support. S&M expenses also included sales-based commissions we pay to independent sales representatives, public relations costs, trade show expenses, product marketing and communication, promotional activities, travel and entertainment costs and allocated administrative costs.

General and Administrative. Our G&A expenses consist primarily of personnel costs for our administrative personnel in support of our infrastructure functions such as general management, finance, human resources, legal, facilities and information technology. G&A expenses also include professional services fees, insurance premiums, office equipment and supplies, depreciation expense and allocated administrative costs.

Other Income (Expense), Net

Other income (expense), net consists primarily of interest income from our cash and cash equivalents and marketable securities portfolio, and the effect of exchange rates on our foreign currency-denominated asset and liability balances.

Provision for Income Taxes

Provision for income taxes consists primarily of alternative minimum tax and income taxes in the foreign jurisdictions in which we conduct business.

Results of Operations

The following tables set forth our results of operations for the periods presented, in dollars and as a percentage of our revenue:

	Three Months Ended			
	April 1, 2018		April 2, 2017	
	Amount	% of Revenue	Amount	% of Revenue
	(In thousands, except per share data)			
Revenue	$ 45,117	100.0 %	$ 37,891	100.0 %
Cost of revenue (1)	22,352	49.5	19,307	51.0
Gross profit	22,765	50.5	18,584	49.0
Operating expenses (1)				
Research and development	17,601	39.0	12,633	33.3
Sales and marketing	4,495	10.0	2,914	7.7
General and administrative	4,198	9.2	3,389	8.9
Total operating expenses	26,294	58.2	18,936	49.9
Loss from operations	(3,529)	(7.7)	(352)	(0.9)
Interest expense	—	—	(197)	(0.5)
Other income (expense), net	334	0.7	200	0.6
Loss before income taxes	(3,195)	(7.0)	(349)	(0.8)
Provision for income taxes	(52)	(0.1)	(535)	(1.4)
Net loss	$ (3,247)	(7.1)%	$ (884)	(2.2)%
Net loss per share, basic and diluted	$ (0.09)		$ (0.03)	
Weighted average shares used to compute basic and diluted net loss per share	35,848		33,107	

(1) Cost of revenue and operating expenses include stock-based compensation expense as follows:

	Three Months Ended	
	April 1, 2018	April 2, 2017
	(In thousands)	
Cost of revenue	$ 34	$ 43
Research and development	2,393	1,205
Sales and marketing	984	353
General and administrative	1,181	503
Total stock-based compensation expense	$ 4,592	$ 2,104

Comparison of the three months ended April 1, 2018 and April 2, 2017

Revenue, Cost of Revenue, Gross Profit and Gross Margin

	Three Months Ended			
	April 1, 2018	April 2, 2017	Change	% Change
	(Dollars in thousands)			
Revenue	$ 45,117	$ 37,891	$ 7,226	19%
Cost of revenue	22,352	19,307	3,045	16%
Gross profit	$ 22,765	$ 18,584	$ 4,181	22%
Gross margin	*50.5%*	*49.0%*	*150bps*	

Revenue. Revenue increased $7.2 million, or 19%, to $45.1 million in the three months ended April 1, 2018 compared to the corresponding period in 2017, primarily due to higher unit volumes from increased sales of our 11ac Wave 2 products and our new 11ac Wave 3 (10G) products. This increase was partially offset by declining sales of our legacy 11n products. We expect that revenue will increase in absolute dollars in the second quarter of fiscal 2018 compared to the first quarter of fiscal 2018 due to overall higher unit shipments of our Wi-Fi solutions.

Cost of Revenue, Gross Profit and Gross Margin. Cost of revenue increased $3.0 million, or 16%, to $22.4 million in the three months ended April 1, 2018 compared to the corresponding period in 2017, as a result of higher unit volumes.

Gross profit increased $4.2 million, or 22%, to $22.8 million in the three months ended April 1, 2018 compared to the corresponding period in 2017 due to the higher unit volumes and changes in product mix.

Gross margin increased by 150 basis points, to 50.5%, in the three months ended April 1, 2018 compared to the corresponding period in 2017, primarily due to an increase in sales and reduced product costs of our Wi-Fi solutions driven by higher unit volumes. We expect gross margin to decrease in the second quarter of fiscal 2018 compared to the first quarter of fiscal 2018 due to changes in product mix.

Operating Expenses

	Three Months Ended					
	April 1, 2018		April 2, 2017			
	Amount	% of Revenue	Amount	% of Revenue	Change	% Change
	(Dollars in thousands)					
Operating expenses:						
Research and development	$ 17,601	39.0%	$ 12,633	33.3%	$ 4,968	39%
Sales and marketing	4,495	10.0	2,914	7.7	1,581	54
General and administrative	4,198	9.3	3,389	8.9	809	24
Total operating expenses	$ 26,294	58.3%	$ 18,936	49.9%	$ 7,358	39%

Research and Development Expenses. R&D expenses increased $5.0 million, or 39%, to $17.6 million in the three months ended April 1, 2018, compared to the corresponding period in 2017. The increase was due to a $2.7 million increase in personnel costs, including $1.2 million in stock-based compensation expense, resulting from a 15% increase in headcount to further develop and expand our solutions portfolio and to support increased customer product development activities, $1.0 million in tape-out and lay-out expenses, $0.7 million in allocated administrative costs, $0.5 million equipment related expenses to support and qualify new product platforms and $0.1 million in professional services. We expect that R&D expenses will be flat in the in the second quarter of fiscal 2018 compared to the first quarter of fiscal 2018.

Sales and Marketing Expenses. S&M expenses increased $1.6 million, or 54%, to $4.5 million in the three months ended April 1, 2018 compared to the corresponding period in 2017 due to an increase of $1.4 million in personnel related costs, including $0.6 million in stock based compensation expense to support our expanding business, $0.1 million in allocated administrative costs and $0.1 million in higher consulting expenses. We expect that S&M expenses will be flat in the second quarter of fiscal 2018 compared to the first quarter of fiscal 2018.

General and Administrative Expenses. G&A expenses increased $0.8 million, or 24%, to $4.2 million in the three months ended April 1, 2018 compared to the corresponding period in 2017, primarily due to a $1.0 million in personnel costs, including $0.7 million in stock-based compensation expense, as we increased our administrative headcount by 52% to support the growth of our business, $0.6 million in facility costs and $0.3 million in depreciation and amortization expense, partially offset by $0.7 million in lower allocated administrative costs and $0.4 million in professional services. We expect that G&A expenses will increase in the second quarter of fiscal 2018 compared to the first quarter of fiscal 2018.

Liquidity and Capital Resources

Since our inception in 2005, we have funded our operations primarily through sales of our common stock in conjunction with our IPO, private equity financing, gross profits generated from sales, technology licensing and debt financing arrangements. As of April 1, 2018 and December 31, 2017, we had cash and cash equivalents and marketable securities of $120.1 million and $118.6 million, respectively, and As of April 1, 2018, we had an accumulated deficit of $130.5 million. On November 2, 2016, we consummated our IPO and received net proceeds of approximately $97.4 million, after underwriting discounts, commissions and other offering expenses.

Credit Facilities

Our Amended and Restated Loan and Security Agreement with Silicon Valley Bank (“SVB”) (the “SVB Loan and Security Agreement”) includes (i) term loans, (ii) revolving line of credit, and (iii) Mezzanine Loan. The Mezzanine Loan was canceled upon its expiration in fiscal 2017.

On December 31, 2017, we sought to extinguish our term loans under the SVB Loan and Security Agreement of which approximately $3.9 million (including interest and early termination fees) remained outstanding. The Company reclassified the final $3.9 million payment on December 31, 2017 to “Long-term debt, current portion” in its Condensed Consolidated Balance Sheet as of that date. The payment for the extinguishment of the term loans was processed on January 2, 2018.

As of April 1, 2018, the Company has an undrawn balance on the revolving line of credit of $20.0 million which can be drawn subject to 80% of eligible accounts receivable. The revolving line of credit has interest between 4.25% to 5.00% depending on the Company’s consolidated leverage ratio.

Based on our current operating plan, we expect that our cash and cash equivalents and marketable securities will be sufficient to fund our operations through at least the next 12 months. However, our liquidity assumptions may prove to be incorrect, and we could utilize our available financial resources sooner than we currently expect.

In the event that additional capital is needed, we may not be able to raise such capital on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, results of operations, and financial condition would be adversely affected. We may also seek to raise capital opportunistically to support the anticipated growth of our business.

Cash Flows

The following table sets forth the primary sources and uses of cash and cash equivalents for each of the periods presented below:

	Three Months Ended	
	April 1, 2018	April 2, 2017
	(In thousands)	
Net cash provided by (used in):		
Operating activities	$ 6,769	$ (435)
Investing activities	(3,210)	(1,700)
Financing activities	$ (3,378)	$ (509)

Cash flows from Operating Activities.

Net cash provided by operating activities for the three months ended April 1, 2018 was $6.8 million, compared to net cash used in operating activities for the three months ended April 2, 2017 of $0.4 million.

Net cash provided by operating activities for the three months ended April 1, 2018 of $6.8 million resulted from a net loss of $3.2 million, net cash inflow from changes in operating assets and liabilities of $4.3 million and non-cash expenses of $4.6 million of stock based compensation and $1.1 million of depreciation and amortization. The $4.3 million cash inflow from changes in operating assets and liabilities primarily consisted of an increase of $8.7 million increase in accounts payable due to timing of payments to our suppliers, $1.1 million in accrued liabilities and other current liabilities from increased in expenses consistent with the growth of our business and a $0.5 million increase in accounts receivable due to increased sales and timing of collections offset by a $5.8 million decrease in inventory due to timing of raw materials purchases and a decrease of $0.2 million in prepaid expenses and other assets.

Net cash used in operating activities for the three months ended April 2, 2017 of $0.4 million was comprised of a net loss of $0.9 million, as well as net cash outflow from changes in operating assets and liabilities of $2.3 million, partially offset by non-cash expenses of $2.1 million of stock-based compensation, $0.5 million of depreciation and amortization and $0.1 of other non-cash expenses. The changes in operating assets and liabilities primarily consisted of a $5.9 million decrease in accounts payable due to timing of payments to our suppliers, $3.3 million increase in accounts receivable due to increased sales,$1.3 million increase in prepaid expenses and other current assets and an increase of $0.5 million of other assets offset by an increase of $6.3 million in accrued liabilities and other current liabilities as a result of an increase in expenses consistent with the growth of our business and a $2.5 million decrease in inventory due to timing of purchases of raw materials .

Cash flows from Investing Activities.

Net cash used in investing activities was $3.2 million for the three months ended April 1, 2018 compared to net cash used in investing activities for the three months ended April 2, 2017 of $1.7 million. Cash used in investing activities for the three months ended April 1, 2018 related to $13.2 million of marketable securities purchases, $0.9 million of property and equipment purchases and $0.6 million purchase of long-term investment, partially offset by maturities and sales of $11.5 million in marketable securities. Net cash used in investing activities for the three months ended April 2, 2017 related to $1.7 million of property and equipment purchases.

Cash flows from Financing Activities.

Net cash used in financing activities was $3.4 million for the three months ended April 1, 2018, compared to net cash used in financing activities for the three months ended April 2, 2017 of $0.5 million. Net cash flow used in financing activities during the three months ended April 1, 2018 reflected the repayment of our outstanding debt of $3.9 million on January 2, 2018, payment of $0.6 million of taxes withheld for vested stock awards and payments of $0.3 million related to intangible asset purchase, partially offset by $1.4 million in proceeds from issuance of common stock.

Net cash used in financing activities for the three months ended April 2, 2017 primarily reflected repayments of outstanding long-term debt of $0.7 million partially offset with proceeds from issuance of common stock of $0.2 million.

Contractual Obligations and Commitments

The following table summarizes our contractual commitments and obligations as of April 1, 2018:

	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
			(In thousands)		
Operating lease obligations	$ 11,988	$ 2,551	$ 6,119	$ 3,073	$ 245
Commitments[(1)]	4,900	2,400	2,500	—	—
Software license commitments	3,720	1,116	2,604	—	—
	$ 20,608	$ 6,067	$ 11,223	$ 3,073	$ 245

(1) In April 2012, we entered into a letter agreement with RUSNANO, pursuant to which we agreed, among other matters, to create a subsidiary to be incorporated in Russia and to fund such subsidiary in an aggregate amount of $20.0 million over three years. In July 2014, we amended and restated such letter agreement with RUSNANO, pursuant to which we agreed, among other matters, to operate and fund our Russian operations in an aggregate amount of $13.0 million over six annual periods beginning on December 31, 2014. The annual funding requirements in period one to period six are $2.2 million, $1.7 million, $2.0 million, $2.2 million, $2.4 million, and $2.5 million, respectively. In the event that we fail to meet our funding obligations for any period, we will be required to pay RUSNANO a penalty fee of 10% on 80% of the difference between the funding obligation and the actual funding for that period, subject to a cure period of one calendar quarter after the applicable period funding deadline. As of April 1, 2018, we had met the minimum funding requirements.

Obligations under contracts that we can cancel without a significant penalty are not included in the table above. As of April 1, 2018, we have purchase obligations of $31.0 million that are based on outstanding purchase orders related to the fabrication of silicon wafers for which production has started. These purchase orders are cancellable at any time, provided that we are required to pay all costs incurred through the cancellation date. Historically, we have rarely canceled these agreements once production has started.

Off-Balance Sheet Arrangements

As of April 1, 2018, we did not have any off-balance sheet arrangements.

JOBS Act Accounting Election

The JOBS Act permits an “emerging growth company” such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We are choosing to “opt out” of this provision and, as a result, we will comply with new or revised accounting standards as required when they are adopted. This decision to opt out of the extended transition period under the JOBS Act is irrevocable.

Critical Accounting Policies, Significant Judgments and Use of Estimates

Our Condensed Consolidated Financial Statements are prepared in accordance with accounting principles generally accepted in the United States (“US GAAP”). Our critical accounting policies are more fully described in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and Note 1, “The Company and Summary of Significant Accounting Policies” contained in the “Notes to Consolidated Financial Statements” of our 2017 Annual Report on Form 10-K. There were no changes to our significant accounting policies during the three months ended April 1, 2018.

An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different estimates that reasonably could have been used or changes in the accounting estimates that are reasonably likely to occur periodically, could materially impact our Condensed Consolidated Financial Statements. Our critical accounting policies include our more significant estimates and assumptions used in the preparation of our Condensed Consolidated Financial Statements. Our critical accounting policies are described in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our 2017 Annual Report on Form 10-K.

On an ongoing basis, we evaluate our critical accounting policies and estimates, including those related to revenue recognition, inventory valuation, stock-based compensation, common stock warrants, income taxes, contingencies and litigation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Recent Accounting Pronouncements

See Note 2 contained in the "Notes to Condensed Consolidated Financial Statements" in Item 1 of Part I of this Quarterly Report on Form 10-Q for a full description of the recent accounting pronouncements and our explanation of their impact, if any, on our results of operations and financial condition.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We have operations both within the United States and internationally, and we are exposed to market risks in the ordinary course of our business. We are primarily exposed to market risks related to changes in interest rates, foreign currency exchange rates and inflation, as well as risks relating to changes in the general economic conditions in the countries where we conduct business. These exposures may change over time as business practices evolve, and could have a material adverse impact on our financial results.

Interest Rate Risk

We had cash and cash equivalents and marketable securities of $120.1 million and $118.6 million as of April 1, 2018 and December 31, 2017, respectively. We manage our cash and cash equivalents portfolio and marketable securities for operating and working capital purposes.

Our cash and cash equivalents are held in cash, short-term money market funds, agency securities and commercial paper with maturities of less than 90 days when purchased. Due to the short-term nature of these instruments, we believe that we do not have any material exposure to changes in the fair value of our cash equivalents portfolio as a result of changes in interest rates. Declines in interest rates, however, would reduce our future interest income. During the three months ended April 1, 2018, the effect of a hypothetical 100-basis point (one percentage point) increase or decrease in overall interest rates would not have had a material impact on our interest income.

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio comprising of marketable securities. We invest in a number of securities including U.S. agency notes, U.S. treasuries, commercial paper, corporate bonds, municipal bonds and money market funds. We attempt to ensure the safety and preservation of our invested principal funds by limiting default risk, market risk and reinvestment risk. We mitigate default risk by investing in high grade investment securities.

The fair market value of our fixed rate securities may be adversely impacted by increases in interest rates while income earned may decline as a result of decreases in interest rates. A hypothetical 100 basis-point (one percentage point) increase or decrease in interest rates compared to rates at April 1, 2018 would have affected the fair value of our investment portfolio by approximately $0.6 million.

Foreign Currency Exchange Risk

To date, all of our revenue has been denominated in U.S. dollars. Some of our operating expenses are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Chinese Yuan Renminbi and the Russian Ruble. Fluctuations in foreign currency exchange rates may cause us to recognize transaction gains and losses in our consolidated statements of operations. To date, foreign currency gains and losses have not been material to our consolidated financial statements, and we have not engaged in any significant foreign currency hedging activities. As our international operations grow, we will continue to reassess our approach to managing the risks relating to fluctuations in foreign currency exchange rates. The effect of an immediate 10% adverse change in foreign exchange rates on foreign-denominated accounts as of April 1, 2018 would not have had a material impact on our condensed consolidated statements of operations.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of April 1, 2018, the last day of the period covered by this Quarterly Report on Form 10-Q. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), refers to controls and procedures that are designed to provide reasonable assurance 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 Securities and Exchange Commission’s (the “SEC”) rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to provide reasonable assurance 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, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Because of the material weakness in our internal control over financial reporting as previously disclosed in our final prospectus, dated October 27, 2016, or the Prospectus, and in our Annual Reports on Form 10-K for the fiscal years ended January 1, 2017 and December 31, 2017, and as described below, our Chief Executive Officer and Chief Financial Officer concluded that, as of April 1, 2018, our disclosure controls and procedures were not effective. Notwithstanding the material weakness in our internal control over financial reporting, our management, including our Chief Executive Officer and Chief Financial Officer, believes that, the condensed consolidated financial statements in this Quarterly Report on Form 10-Q fairly present, in all material respects, our financial position, results of operations and cash flows for the periods presented in conformity with US GAAP.

During the course of the preparation of our 2015 consolidated financial statements, we identified a control deficiency in our internal control over financial reporting. This control deficiency did not result in a misstatement of the annual or interim financial statements, however, this control deficiency could result in a misstatement of the consolidated financial statements or disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. Accordingly, our management has determined that this control deficiency constitutes a material weakness.

The material weakness was a result of a lack of sufficient qualified personnel within the finance and accounting function who possessed an appropriate level of expertise to effectively perform the following functions commensurate with our structure and financial reporting requirements:

- identify, select and apply US GAAP sufficiently to provide reasonable assurance that transactions were being appropriately recorded; and
- assess risk and design appropriate control activities over financial and reporting processes necessary to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements.

Management’s Remediation Efforts

In response to the identified material weakness, we have taken a number of steps to remediate this material weakness and improve our internal control over financial reporting. During fiscal 2017, we increased our dedicated finance and accounting personnel, including the addition of two directors of accounting who are certified public accountants. One director of accounting resigned in January 2018 and we hired another qualified individual to this position in March 2018. In the fourth quarter of fiscal 2017 and the first quarter of fiscal 2018, we added several finance support team members and implemented additional internal controls, including additional workflows relating to change management, review and approval processes, and account reconciliations. The additional resources added to the finance function have enabled us to further (i) allow separate preparation and review of reconciliations and other account analysis, (ii) enable us to develop a more structured close process, including enhancing our existing policies and procedures, to improve the completeness, timeliness and accuracy of our financial reporting, and (iii) identify and review complex or unusual transactions. We believe these individuals, including the replacement hire, will possess the appropriate knowledge and capacity to help fulfill our obligations to comply with the accounting and reporting requirements. Additionally, we have further significantly improved internal controls surrounding our financial reporting process.

While we believe that the foregoing actions have improved our internal control over financial reporting, the implementation of these measures is ongoing and will require validation and testing of the design and operating effectiveness of internal controls over a sustained period of financial reporting cycles. We also believe that our planned efforts to assess risk and identify, design and implement the necessary control activities to address such risk will be effective in remediating the material weakness described above. However, until the above remediation steps have been completed and operate for a sufficient period of time, and subsequent evaluation of their effectiveness is completed, the material weakness previously disclosed, and as described above, will continue to exist. We may also conclude that additional measures may be required to remediate the material weaknesses in our internal control over financial reporting, which may necessitate additional implementation and evaluation time. We will continue to assess the effectiveness of our internal control over financial reporting and take steps to remediate the known material weaknesses expeditiously.

Changes in Internal Control Over Financial Reporting

We are taking actions to remediate the material weakness relating to our internal control over financial reporting, as described above. Except as otherwise described herein, there were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rules 13(a)-15(d) and 15d-15(d) under the Exchange Act that occurred during the quarter ended April 1, 2018 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

We are currently not party to litigation that could have a material adverse effect on our business. From time to time, we may be subject to legal proceedings and claims arising in the ordinary course of business. The semiconductor and Wi-Fi industries are characterized by frequent claims and litigation, including claims regarding infringement of intellectual property rights. Litigation is often unpredictable, costly, diverts management's attention, and may result in an unfavorable outcome, including monetary damages or injunctive relief.

Item 1A. RISK FACTORS

You should carefully consider the risks and uncertainties described below, together with all of the other information in this Quarterly Report on Form 10-Q, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our condensed consolidated financial statements and related notes included elsewhere. The risks and uncertainties described below are not the only ones we face. Additional risk and uncertainties not presently known to us or that we presently deem less significant may also impair our business operations. If any of the events or circumstances described in the following risk factors actually occurs, our business, operating results, financial condition, cash flows and prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Industry

If we fail to develop and introduce new or enhanced Wi-Fi solutions to meet the requirements of our target markets on a timely basis, our ability to retain and attract customers could be impaired and our competitive position could be harmed.

We are largely dependent on sales of leading-edge, high-performance Wi-Fi solutions. The markets we target with our solutions are characterized by rapidly changing technology, changing customer and service provider needs, evolving industry standards, intense competition and frequent introductions of new products. To succeed, we must effectively anticipate customer and service provider requirements and respond to these requirements on a timely basis. For example, we were the first to announce an 802.11ac 8x8 product, our QSR-10G product, in September 2015. We also announced new products based on the draft 802.11ax standard in October 2016 and January 2017. If we fail to develop new Wi-Fi solutions or enhancements to our existing solutions that offer increased features and performance in a cost-effective manner, or if our customers or service providers do not believe that our solutions have compelling technological advantages, our business could be adversely affected. We must also successfully manage the transition from older solutions to new or enhanced solutions to minimize disruptions in our business. In addition, if our competitors introduce new products that outperform our solutions or provide similar performance at lower prices, we may lose market share or be required to reduce our prices. For example, in February 2017, Qualcomm announced a new 8x8 product based on the draft 802.11ax standard that may compete with our previously announced product. In addition, in August 2017, Broadcom announced new 4x4 Wi-Fi connectivity solutions based on the draft 802.11ax standard and in January 2018, Intel announced new chipsets based on the draft 802.11ax standard for mainstream 2x2 and 4x4 home routers and gateways. We expect our competitors will also introduce new products based on new standards and other next generation technologies in the future. In addition, establishment of new standards, such as 802.11ax, must go through an extensive process with the Institute of Electrical and Electronics Engineers and may be subject to delays and revision. Our failure to accurately predict market needs or timely develop Wi-Fi solutions that address market needs could harm our business, results of operations and financial condition.

The complexity of our solutions could result in unforeseen design and development delays or expenditures.

Developing our Wi-Fi solutions is expensive, complex and time-consuming, and involves uncertainties. We must often make significant investments in product roadmaps, design and development far in advance of established market needs and may not be able to consistently and accurately predict what those actual needs will be in the future. Each phase in the development of our solutions presents serious risks of failure, rework or delay, any one of which could impact the timing and cost-effective development of such solutions and could jeopardize customer acceptance of the solutions. Product development efforts may last two years or longer, and require significant investments of time, third-party development costs, prototypes and sample materials, as well as sales and marketing resources and expenses, which will not be recouped if the product launch is unsuccessful. We also have limited resources and may not be able to develop alternative designs or address a variety of differing market requirements in parallel. Our failure to adequately address any such delays in a cost-effective manner could harm our business, results of operations and financial condition.

In addition, as is common in our industry, our Wi-Fi solutions may contain defects, errors and bugs when they are first introduced or as new versions are released. We have in the past, and may in the future, experience defects, errors and bugs. For example, in 2015, in response to a defect we identified, we were required to make a revision to one of our semiconductors, which resulted in a four-month delay in product introduction. Product defects, errors or bugs could affect the performance of our products resulting in reliability, quality or compatibility problems, cause reduced manufacturing yields, result in excess or obsolete inventory, and delay the development or shipments of new solutions or new versions of our solutions. As a result, our reputation may be damaged and the market adoption of our Wi-Fi solutions could be adversely affected. If any of these problems are not found until after we have commenced shipment of a new solution, we may incur significant additional development costs to redesign, recall, repair or replace the defective solution. These problems may also trigger warranty or contractual indemnity claims against us by our customers or others, and our reputation and results of operations may be adversely affected.

Our solutions must also successfully operate with products from other vendors. As a result, when problems occur in a customer product in which our solution is used, it may be difficult to identify the source of these problems. The products of our customers that use our solutions can also be very complex, which can increase the possibility of design, development or production issues. The occurrence of hardware and software errors, whether or not caused by our solutions, could result in the delay or loss of market adoption of our solutions, and therefore delay our ability to recognize revenue from sales, and any necessary repairs may cause us to incur significant expenses. The occurrence of any such problems could harm our business, results of operations and financial condition.

We depend on a limited number of customers and service providers for a significant portion of our revenue.

We derive a significant portion of our revenue from a small number of OEMs and ODMs, and we anticipate that we will continue to do so for the foreseeable future. In 2017, six customers accounted for approximately 50% of our revenue. In addition, substantially all of our revenue to date has been generated by sales of our solutions to OEMs and ODMs serving the service provider market for home networking. Based on sell-through information provided to us by our OEM and ODM customers, we estimate that the two largest service providers, which are both based in the United States, represented on a combined basis approximately 33% of our revenue in 2017. The demand from these OEM and ODM customers and, their service provider customers, is subject to fluctuations based on a variety of factors affecting the service provider industry and their related businesses. The loss of a key customer or service provider, or a reduction in sales to any key customer or service provider could negatively impact our revenue, cause us to have excess or obsolete inventory, and harm our business, results of operations and financial condition.

We have an accumulated deficit and have incurred net losses in the past, and we may incur net losses in the future.

We have incurred net losses in the past and may incur net losses in the future. For the three months ended April 1, 2018 and April 2, 2017, we incurred net losses of $3.2 million and $0.9 million, respectively. As of April 1, 2018, we had an accumulated deficit of $130.5 million. We expect to continue to make significant investments related to the development of our Wi-Fi solutions and the expansion of our business, including investments to support our research and development, sales and marketing and general and administrative functions. As a public company, we also incur significant additional legal, accounting and other expenses. If we fail to continue to grow our revenue or if our revenue growth is not sufficient to offset the growth of these anticipated expenses, we may not be able to achieve or sustain profitability, and our stock price could decline.

We face intense competition from a number of larger and more established companies and expect competition to increase in the future, which could have an adverse effect on our market share, revenue and results of operations.

Many of our competitors, including Broadcom, Intel Corporation, Marvell, MediaTek, and Qualcomm, have greater financial, technical, sales, marketing and other resources than we do, as well as longer operating histories, greater name recognition, larger customer bases and more established customer relationships. In the future, we may also face competition from other new and emerging companies, including from companies in China.

Our competitors may be able to anticipate, influence or adapt more quickly to new or emerging technologies and standards and changes in customer and service provider requirements. Our competitors may also be able to devote greater resources to the promotion and sale of their products, initiate or withstand substantial price competition, take advantage of acquisitions or other opportunities more readily and develop and expand their product offerings more quickly than we can. In addition, many of our larger competitors offer a broader range of products than we do, including non-Wi-Fi products. These competitors may be able to sell at lower margins, bundle additional products and features with their Wi-Fi products, leverage incumbent positions, or create closed platforms that discourage customers or service providers from purchasing our Wi-Fi solutions. This strategy may be particularly effective for customers and service providers who prefer the convenience of purchasing all of their Wi-Fi products from a single provider. If we are unable to maintain our competitive advantages through the delivery of superior solutions, our business, results of operations and financial condition may be harmed.

Consolidation in our industry or in a related industry that involves our customers, service providers, partners and competitors could disrupt our business.

There has been a significant amount of consolidation in our industry and related industries. Examples include consolidation among service providers, such as the acquisition of DIRECTV by AT&T in 2015; consolidation involving our customers, such as the acquisition of the Cisco service provider consumer premise equipment (CPE) business by Technicolor in 2015 and the acquisition of Pace plc, by ARRIS Group, Inc., in 2016; consolidation involving our partners, such as the acquisition of Freescale Semiconductor by NXP Semiconductors in 2015; and consolidation involving our competitors, such as the acquisition of Broadcom by Avago Technologies in 2016, the pending acquisition of NXP Semiconductors by Qualcomm announced in October 2016 and the pending acquisition of Cavium Inc. by Marvell announced in November 2017. Also in November 2017, Broadcom announced an unsolicited offer to acquire Qualcomm. Broadcom subsequently withdrew and terminated its offer to acquire Qualcomm in March 2018 after the President of the United States issued an executive order prohibiting the acquisition of Qualcomm by Broadcom.

Consolidation among our customers, service providers, competitors and other industry related third parties, including during the period between the announcement and closing of acquisitions when the transaction may be undergoing regulatory scrutiny and otherwise seeking to satisfy required closing conditions, can create significant industry uncertainty, which could impact demand for our Wi-Fi solutions and could cause delays in the purchase of our Wi-Fi solutions or the loss of business. For example, in 2015 our two largest service providers consolidated, resulting in the cancellation of previously submitted purchase orders, which adversely impacted our revenue for several quarters. Consolidation among our customers, service providers, competitors and other industry related third parties could adversely affect the competitive landscape and industry dynamics, including causing increased pricing pressure, intensifying the focus of our competitors on certain markets or customers that could cause us to lose market share or customers, and enabling our competitors to leverage complementary products or technologies of the combined company. Accordingly, any industry consolidation could have an adverse effect on our business, results of operations and financial condition.

Our customers may cancel their orders, change production quantities or delay production, which could harm our business.

Our customers typically do not provide us with firm, long-term purchase commitments. Substantially all of our sales to date have been made on a purchase order basis, which permits our customers to cancel, change or delay their purchases of our solutions with little or no notice to us. As a result, our ability to accurately forecast customer demand is limited. Any such cancellation of or decrease in purchase orders subjects us to a number of risks, including unanticipated revenue shortfalls, loss of volume-based wafer rebates from our third-party foundry and excess or obsolete inventory.

We may face claims of intellectual property infringement, which could be time-consuming and costly to defend or settle and, if adversely adjudicated, could harm our business.

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights, which has resulted in protracted and expensive litigation for many companies. We have received communications from third parties, including non-practicing entities, alleging our infringement of their patents, and we may receive additional claims of infringement in the future. For example, in October 2016, a third party filed suit in the United States District Court for the Northern District of Illinois alleging infringement by us of nine expired United States patents. While this matter was favorably settled by us for an immaterial amount, we cannot predict the results of other future litigation with other third parties. See Note 6, “Commitments and Contingencies” of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K. In addition, our customers and service providers may become subject to litigation or receive communications regarding alleged infringement of their products that implicate our Wi-Fi solutions. We have certain contractual obligations to defend and indemnify our customers and other third parties from damages and costs which may arise in connection with any such infringement claims. We or our customers may be required to obtain licenses for such patents, which could require us to pay royalties. Any lawsuits could subject us to significant liability for damages, invalidate our proprietary rights and harm our business and our ability to compete. Any litigation, regardless of success or merit, could cause us to incur substantial expenses, reduce our sales and divert the efforts of our technical and management personnel. If we receive an adverse result in any litigation, we could be required to pay substantial damages, seek licenses from third parties, which may not be available on reasonable terms or at all, cease sale of products or licensing of our technology, expend significant resources to redesign our solutions, develop alternative technology or discontinue the use of processes requiring the relevant technology.

Our failure to adequately protect our intellectual property rights could impair our ability to compete effectively or defend ourselves from litigation, which could adversely affect our results of operations and financial condition.

Our success depends, in part, on our ability to adequately protect our intellectual property. We rely primarily on patent, copyright, trademark and trade secret laws, as well as confidentiality and non-disclosure agreements and other contractual provisions, to protect our proprietary technologies and know-how. As of April 1, 2018, we had 57 issued patents in the United States and five foreign counterpart patents issued in Taiwan. The rights granted to us may not be meaningful or provide us with any commercial advantage. For example, any patent claims we make may be deemed insufficient to cover the third party's product or technology or the patent could be opposed, contested, circumvented, designed around or be declared invalid or unenforceable in judicial or administrative proceedings. The failure of any of our patents to adequately protect our technology could make it easier for our competitors to offer similar products or technologies. Our foreign patent protection is not as comprehensive as our United States patent protection. As a result, we may not be able to effectively protect our intellectual property in some countries where our solutions are sold or may be sold in the future. Even if foreign patents are granted, effective enforcement in foreign countries may be challenging or may not be available. Furthermore, changes to the patent laws in the United States and other jurisdictions could also diminish the value of our patents and patent applications or narrow the scope of our patent protection.

We cannot ensure that the steps we have taken will prevent unauthorized use of our intellectual property or the reverse engineering of our technology. In addition to the protection afforded by patents, we rely on confidential proprietary information, including trade secrets and know-how, to develop and maintain our competitive position. Any disclosure or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate our proprietary information, thus eroding our competitive position. We seek to protect our proprietary information in part by confidentiality agreements with our employees, contractors, customers, partners and other third parties. These agreements are designed to protect our proprietary information; however, any of these parties may breach the agreements and disclose our proprietary information, and we may not be able to obtain adequate remedies for such breaches. Detecting and monitoring unauthorized use of our intellectual property can be difficult and costly. It is possible that unauthorized use of our intellectual property may have occurred or may occur without our knowledge. Our failure to adequately protect our intellectual property could adversely impact our ability to maintain a competitive advantage in our markets, thus harming our business, results of operations and financial condition.

We may in the future need to initiate infringement claims or litigation to try to protect our intellectual property rights. Litigation, whether we are a plaintiff or a defendant, can be very expensive and time-consuming and may divert the efforts of our technical and management personnel without resulting in a favorable outcome. Further, many of our current and potential competitors have the ability to dedicate substantially greater resources to defending intellectual property infringement claims and to enforcing their intellectual property rights. If we are unable to protect our proprietary rights or if third parties independently develop or gain access to our or similar technologies, our business, revenue, reputation and competitive position could be harmed.

We may have difficulty accurately predicting our future revenue, cost of revenue, operating expense, working capital, and capital investments.

We were incorporated in 2005 and only began shipments of our Wi-Fi solutions in 2010. As a result, we have a limited operating history from which to predict future operating results. This limited operating history, combined with the rapidly evolving nature of the markets in which we sell our Wi-Fi solutions, substantial uncertainty concerning how these markets may develop and other factors beyond our control, limit our ability to accurately forecast our future revenue, cost of revenue, operating expense, working capital, and capital investments. Additionally, if we are unable to accurately forecast customer demand or service provider deployments in a timely manner, we may not build enough supply or maintain enough inventory, which could lead to delays in product shipments and lost sales opportunities, as well as cause our customers to identify alternative sources of supply. Alternatively, we may accumulate excess or obsolete inventory. Any of these factors could harm our margins, increase our write-offs due to product obsolescence and restrict our ability to fund our operations. If our revenue does not increase as anticipated, we could incur significant losses to the extent we are unable to decrease our expenses in a timely manner to offset any shortfall in future revenue. Any failure to accurately predict our future operating results could cause us to miss our financial projections and adversely affect the price of our common stock.

If we are unable to effectively manage any future growth, we may not be able to execute our business plan and our results of operations could suffer.

We have expanded our operations significantly since our inception in 2005 and anticipate that further expansion will be required to achieve our business objectives. For example, we grew from 219 employees as of December 27, 2015 to 380 employees as of December 31, 2017, and expect our headcount to continue to grow as we scale our business. The growth and expansion of our business have placed and will continue to place a significant strain on our management, operations and financial resources. We expect that any future growth will also add complexity to, and require effective coordination throughout, our organization.

To manage any future growth effectively, we must continue to improve and expand our operating and administrative systems and controls. We may not be able to successfully implement improvements to these systems and controls in a timely or efficient manner, which could result in operating inefficiencies and could cause our costs to increase more than planned. If we are unable to effectively manage our future growth, our business, results of operations and financial condition may be harmed.

We rely on a limited number of third-party contractors and suppliers in connection with the design and manufacture of certain parts of our solutions. The failed performance or loss of any of these third parties may adversely impact our business.

We currently depend on a single foundry, Taiwan Semiconductor Manufacturing Company Limited ("TSMC"), for the supply of our mask-sets and for the fabrication of our wafers. We also depend on a limited number of sources in connection with the design, development, testing and assembly of our solutions and components thereof. We currently do not have long-term supply contracts with any of our third-party contractors or suppliers, and we typically negotiate pricing separately for each purchase order. Therefore, our contractors and suppliers are not obligated to perform services or supply products to us for any specific period, in any specific quantities, or at any specific price, except as may be provided in a particular purchase order. Sufficient capacity at our third-party foundry or the third-party contractors we rely on for assembly and testing may not be available when we need it or at reasonable prices. In addition, we rely on intellectual property rights and software development tools from third-parties such as Cadence Design Systems, Inc., Mentor Graphics Corporation, and Synopsys, Inc., to support the design, development, simulation and verification of new solutions or enhancement to existing solutions. If licenses to such technologies are not available on commercially reasonable terms and conditions, or such products become unavailable for any other reason, and we cannot otherwise integrate such technologies, our solutions or our customers' products could become unmarketable or obsolete, and we could lose market share. In such instances, we could also incur substantial unanticipated costs or scheduling delays to develop or acquire substitute technologies to deliver competitive products.

If we lose any of our single source or limited source contractors or suppliers, we could be required to transition to a new third party, which could increase our costs, result in delays in the manufacture and delivery of our solutions, require a redesign of our solutions to transition to alternative sources, or cause us to carry excess, obsolete or insufficient inventory. In addition, if these contractors or suppliers fail to produce and deliver our solutions according to required specifications, quantity, quality, cost and time requirements, our business, results of operations and financial condition could suffer.

Our results of operations are likely to vary significantly from period to period, which could cause the trading price of our common stock to decline.

Our results of operations have fluctuated from period to period, and we expect such results to continue to fluctuate as a result of a number of factors, many of which are outside our control and may be difficult to predict, including:

- the fluctuations in demand for high-performance Wi-Fi products in general;
- the inherent complexity, length and associated unpredictability of the sales cycles for our Wi-Fi solutions;
- changing market conditions and competitive dynamics of our markets, including new entrants and current and potential customer or service provider consolidation;
- timing of introductions of new products by our customers and service providers and our ability to secure design wins related to such products;

- changes to or inaccurate demand forecasts from our customers and service providers;
- delays in deployment schedules or program cancellations by service providers, which can result in delays or cancellations of purchases by our customers;
- the timing and amount of purchase orders, especially from significant customers;
- reductions in or cancellations of purchase orders by our customers, including with little or no notice;
- changes in the mix of our sales in the service provider market versus retail, enterprise or consumer electronics end markets and among different customers;
- declines in average selling prices ("ASPs") and the extent to which the impact of such declines is offset by increased sales volume or decreased manufacturing and other costs;
- changes in manufacturing costs, including wafer fabrication, testing and assembly costs, manufacturing yields and product quality and reliability;
- our ability to develop, introduce and ship new Wi-Fi solutions in a timely manner and anticipate future market demands that meet our customers' requirements;
- the timing and amount of tape-out costs;
- timing of headcount adjustments;
- the timing and amount of litigation expense or settlement of any litigation or other disputes;
- volatility in our stock price, which may lead to material changes in stock compensation expense;
- the impact and timing of taxes or changes in tax law; and
- our ability to derive benefits from our investments in research, development, sales, marketing, and other activities.

The effects of the risk factors noted herein could result in large fluctuations and unpredictability in our quarterly and annual results of operations. Therefore, comparing our results of operations 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 we fail to successfully address additional Wi-Fi markets, our revenue growth and financial condition could be harmed.

Currently, we sell most of our Wi-Fi solutions to OEMs and ODMs that target the service provider market for home networking. Our success will depend in part on our ability to expand beyond the service provider market to other Wi-Fi markets, including the enterprise and consumer electronics markets, as well as grow our market share in the retail market. These other markets have separate and unique requirements that may not be directly addressed by our current Wi-Fi solutions, including different specifications, performance requirements and product support needs. For example, our current Wi-Fi solutions may not be well suited for certain market opportunities and may require significant new functionality or features. Therefore, meeting the technical requirements and securing design wins with customers targeting these markets will require a substantial investment of our time and resources. We may also face challenges and delays in accurately understanding the specific needs of new markets, which in turn may impair our ability to develop the customer and partner relationships necessary to be successful in such markets. If any of these markets do not develop as we currently anticipate or if we are unable to penetrate them successfully, our growth opportunities could be harmed and our business, results of operations and financial condition could be negatively impacted.

If we fail to successfully leverage our engineering expertise to penetrate markets beyond Wi-Fi, our long-term revenue growth and financial condition could be harmed.

Our future growth will depend in part on our ability to leverage our engineering expertise in wireless and communications to address other markets beyond Wi-Fi. We have historically focused on high-performance Wi-Fi solutions, and may not be successful in identifying or implementing strategies to penetrate and sustain growth in new markets. If we are unable to develop solutions that are applicable beyond the Wi-Fi market, or to manage the expansion and growth of our business in such markets, our long-term revenue growth and financial condition could be harmed.

If we are unable to attract, train and retain qualified and key personnel, particularly our engineering personnel, we may not be able to execute our business strategy effectively.

We believe our future success will depend in large part upon our ability to attract, train and retain highly skilled management, engineering and sales and marketing personnel. Each of our employees is an at-will employee. The loss of any key employees or the inability to attract, train or retain qualified personnel, particularly our engineering personnel, could harm our business. For example, if any of these individuals were to leave unexpectedly, we could face substantial difficulty in hiring qualified successors and could experience a loss in productivity during the search for any such successor and while any successor is integrated into our business and operations.

Our key engineering personnel represent a significant asset and serve as the source of our technological and product innovations. We may not be successful in attracting, training and retaining sufficient numbers of technical and engineering personnel to support our anticipated growth. In addition, any changes to immigration laws, or uncertainty regarding potential changes, could impact our ability to hire technical and engineering personnel on a timely basis. The competition for qualified engineering personnel in our industry is very intense, especially in the San Francisco Bay Area, where we have a substantial presence and need for highly skilled personnel.

Changes to industry standards and government requirements relevant to our solutions and markets could adversely affect our business, results of operations and financial condition.

If our customers adopt new or competing industry standards with which our solutions are not compatible, our existing solutions would become less desirable and our revenue and results of operations would suffer. In addition, changes in government-imposed requirements, such as maximum power consumption regulations in Europe, can prevent our solutions from being shipped to certain countries if they do not meet such requirements.

To compete effectively in the Wi-Fi marketplace, we rely on industry partners to enable and complement our Wi-Fi solutions.

Our Wi-Fi solutions need to be integrated with other components and products, such as broadband processors, video system on chips and network processors, to serve the service provider markets. We have developed relationships with various third-party partners who enable and enhance our ability to bring our Wi-Fi solutions to various markets. These partners can provide critical support to enable us to reach certain markets and better address customer needs, including through the development of joint reference designs, the establishment of relationships with key customers, the validation of our Wi-Fi solutions, and the creation of bundled solutions to contend with competitive offerings. For example, when our Wi-Fi solution is designed into a product that also incorporates Intel or Broadcom network processors or other components, we depend on the ability of these partners to deliver their products in a timely fashion in order to meet shipping schedules. These partners may also be our competitors, which can negatively impact their willingness to collaborate with us, to support the integration of our solutions with their products, and to pursue joint sales and marketing efforts. In addition, in some cases it may be necessary to share competitively sensitive information with our partners that could enable our partners to compete more effectively against us or create uncertainty regarding ownership of intellectual property rights. If we are unable to continue to successfully develop or maintain these relationships, we may not be able to compete effectively and our business and results of operations may be adversely affected.

Our historical growth rate may not be indicative of future financial results.

You should not consider the growth rate in our revenue in recent periods as indicative of our future performance. For example, our revenue increased to 176.4 million in the year ended December 31, 2017 from $129.1 million in the year ended January 1, 2017, representing a 37% increase. We may not be able to grow at the same rate, or a higher rate, in future periods compared to historical rates. Our revenue may be adversely impacted by various factors, including reduced or delayed demand for our Wi-Fi solutions, increased competition, a decrease in the size of our target markets, and the failure to capitalize on growth opportunities and other risk factors described herein. Moreover, even if our revenue continues to increase in absolute terms, we expect that our revenue growth rate will decline over time as we mature as a public company.

We may pursue strategic acquisitions or partnerships which could require significant management attention, increase operating risk, dilute stockholder value, fail to achieve intended results, and adversely affect our business, results of operations and financial condition.

We may acquire other businesses, products or technologies, or partner with other businesses. Our ability to make and successfully integrate acquisitions is unproven. Even if we complete one or more acquisitions or strategic partnerships, we may not be able to strengthen our competitive position or realize the intended benefits of the acquisition or the strategic partnership in a timely manner, or at all. Any acquisitions or strategic partnerships may also be viewed negatively by our customers, financial markets or investors. In addition, any acquisitions we make could lead to difficulties in integrating technologies, products and operations from the acquired businesses and in retaining and motivating key personnel from these businesses. Acquisitions may disrupt our ongoing operations, divert management from their primary responsibilities, subject us to additional liabilities, increase our expense and adversely impact our business. Acquisitions may also reduce our cash available for operations and other uses, and could also result in an increase in amortization expense related to identifiable assets acquired, potentially dilutive issuances of equity securities or the incurrence of debt, any of which could harm our business.

Our business is subject to disruption from hazards, natural disasters, terrorism, political unrest and other similar events, which could cause significant delays in the design, development, production or shipment of our solutions.

Our operations and those of our third-party contractors are vulnerable to interruptions caused by technical breakdowns, computer hardware and software malfunctions, software viruses, infrastructure failures, fires, earthquakes, power losses, telecommunications failures, terrorist attacks, wars, political unrest and disputes, Internet failures and other events beyond our control. For example, our sole foundry, TSMC, is located in Taiwan, which has been subject to a number of earthquakes, which has in the past impacted, and may in the future impact, the fabrication of our solutions. In addition, a significant portion of our engineering equipment, servers, storage and networking equipment, and other office equipment is located in our offices in the seismically active San Francisco Bay Area and Taiwan. Another example relates to rising political tensions and the potential for one or more countries to engage in hostilities with North Korea that could adversely affect various locations where we or our customers conduct business. If we suffer a significant hazard or outage to these offices and equipment, our business could experience disruption, which could harm our business and negatively impact our business, results of operations and financial condition.

The average selling prices for our Wi-Fi solutions could decrease over time, which could harm our revenue, gross margin and results of operations.

Products sold in our industry, including our Wi-Fi solutions, have often experienced a decrease in ASPs over time. We anticipate that the ASPs of our solutions may decrease in the future in response to competitive pricing pressures, customer expectations for price reduction, increased sales discounts, and new product introductions by our competitors. Our future results of operations may be harmed due to the decrease of our average selling prices.

Additionally, because we use a fabless semiconductor business model and rely on third-party contractors to fabricate, assemble, and test our chipset designs, we may not be able to reduce our costs as rapidly as companies that operate their own manufacturing processes, and our costs may even increase, which could also reduce our gross margins. To maintain our current gross margins or increase our gross margins in the future, we must develop and introduce on a timely basis new solutions and enhancements to existing solutions; continually reduce the costs of manufacturing our solutions; and manage transitions from one solution to another in a timely and cost-effective manner. Our failure to do so would likely cause our revenue and gross margins to decline, which could have an adverse effect on our business, results of operations and financial condition.

Our international operations expose us to additional business risks, and failure to manage these risks may adversely affect our business.

We have international operations in China, Russia, Taiwan, Australia, Japan, Singapore and parts of Europe, and we derive substantially all of our revenue from shipments delivered outside the United States, particularly in Asia. International operations are subject to inherent risks, and our future results could be adversely affected by a number of factors, including:

- differing technical standards, existing or future regulatory and certification requirements and required product features and functionality;

- challenges related to managing and integrating operations in new markets with different languages, cultures and political systems;
- heightened risks of unfair or corrupt business practices in certain countries and of improper or fraudulent sales arrangements that may impact financial results and lead to restatements of, and irregularities in, our financial statements or violations of law, including the U.S. Foreign Corrupt Practices Act;
- tariffs and trade barriers, export controls and trade and economic sanctions regulations and other regulatory or contractual limitations on our ability to sell or develop our solutions in certain foreign markets, particularly in China and Russia;
- difficulties and costs associated with staffing and managing international operations;
- difficulties associated with enforcing and protecting intellectual property rights in some countries;
- requirements or preferences for in-country products, which could reduce demand for our products;
- difficulties in enforcing contracts and collecting accounts receivable, which may result in longer payment cycles, especially in emerging markets;
- potentially adverse tax consequences, including taxes impacting our ability to repatriate profits to the United States;
- added legal compliance obligations and complexity;
- public health emergencies and other disasters, such as earthquakes and tsunamis, that are more common in certain regions;
- increased cost of terminating employees in some countries;
- the effect of currency exchange rate fluctuations;
- the effect of inflation;
- political and economic instability;
- war between countries; and
- acts of terrorism.

In addition, the United States has recently enacted significant changes, and has indicated it may seek additional changes, with respect to a variety of issues, including trade agreements among nations, import and export regulations, tariffs and customs duties, foreign relations, and immigration, tax and corporate governance laws and regulations. For example, during the first quarter of 2018, the United States and China each imposed new tariffs, and announced further proposed tariffs, on various products imported from China and the United States, respectively. Additionally, the United States has announced restrictions on exports involving specific companies. In April 2018, the U.S. Department of Commerce's Bureau of Industry and Security imposed a denial of export privileges against Zhongxing Telecommunications Equipment Corporation ("ZTE") and a second ZTE entity. While it is not yet clear what the final outcome will be with respect these and other changes, and the corresponding impact on the Company, at a minimum, these actions likely increase the overall business risks related to international commerce and create additional uncertainty in connection with the Company's international operations.

In 2012, we established our Russian subsidiary for research and development activities pursuant to a letter agreement with Joint Stock Company RUSNANO ("RUSNANO"). Pursuant to the letter agreement, as amended, we have obligations to periodically fund the subsidiary, and RUSNANO has certain rights regarding the governance and operation of the subsidiary. While certain of these rights terminated upon completion of our initial public offering, RUSNANO may seek to continue to remain involved with our subsidiary, including its board of directors and use of our subsidiary's funds. We may incur specified penalties under the letter agreement if we fail to meet any applicable funding obligations, and may incur other unanticipated costs if we are required to restructure our operations in Russia.

We expect that we will continue to rely on our international operations, and our success will depend on our ability to anticipate and effectively manage these and other associated risks. Our failure to successfully manage any of these risks, and take appropriate action in a timely manner in response to any such new developments, could harm our international operations and adversely affect our business.

We could be subject to additional tax liabilities.

We are subject to U.S. federal, state and local income, sales and other taxes in the United States and foreign income taxes, withholding taxes and value-added and other transaction taxes in numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and our worldwide provision for taxes. During the ordinary course of business, there are many activities and transactions for which the ultimate tax determination is uncertain. Our tax obligations and effective tax rates could be adversely affected by changes in the relevant tax, accounting and other laws, regulations, principles and interpretations, including those relating to income tax nexus, by challenges to our intercompany arrangements, valuation methodologies and transfer pricing, by recognizing tax losses or lower than anticipated earnings in jurisdictions where we have lower statutory rates and higher than anticipated earnings in jurisdictions where we have higher statutory rates, by changes in foreign currency exchange rates, or by changes in the valuation of our deferred tax assets and liabilities. In addition, on December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was signed into legislation, which contains many significant changes to the U.S. tax laws. The Tax Act, among other changes, reduces the U.S. federal corporate tax rate from 34% to 21%, implements a modified territorial tax system that includes a one-time transition tax on deemed repatriation of previously untaxed accumulated earnings and profits of certain foreign subsidiaries, and creates new taxes on certain foreign-sourced earnings. We are still evaluating the impact of the recently enacted Tax Act, including whether and how state, local and foreign jurisdictions will react to such changes. The changes under the Tax Act could have an adverse impact on our tax liabilities. Changes in corporate tax rates, the realizability of the net deferred tax assets relating to our U.S. operations, the taxation of foreign earnings and the deductibility of expenses contained in the Tax Act or other tax reform legislation could result in significant one-time charges in the current or future taxable years and could increase our future U.S. tax expense. Furthermore, changes to the taxation of undistributed foreign earnings could change our future intentions regarding reinvestment of such earnings. The foregoing items could have an adverse effect on our operating results, cash flow or financial condition. We may also be audited in various jurisdictions, and such jurisdictions may challenge our intercompany structures or assess additional taxes, interest and penalties, including sales taxes and value-added taxes against us. Although we believe our tax estimates are reasonable, the final determination of any tax audits or litigation could be materially different from our historical tax provisions and accruals, which could have an adverse effect on our results of operations or cash flows in the period or periods for which a determination is made.

Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations.

We currently have a significant amount of net operating losses, or NOLs, which we expect will reduce our overall tax liability for the foreseeable future. However, if we undergo an ownership change our ability to utilize NOLs could be further limited by Section 382 of the Internal Revenue Code of 1986, as amended, or the Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we attain profitability.

Our use of open source software in our solutions, processes and technology may expose us to additional risks and compromise our proprietary intellectual property.

We incorporate open source software into our Wi-Fi solutions, including certain open source code governed by the GNU General Public License, the GNU Lesser General Public License and the Common Development and Distribution License. The terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that these licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our solutions. In such event, we could be required to seek licenses from third parties to continue offering our solutions, make our proprietary code generally available in source code form (for example, proprietary code that links to certain open source modules), re-engineer our solutions, discontinue the sale of our solutions if re-engineering cannot be accomplished on a cost-effective and timely basis, or become subject to other consequences, any of which could adversely affect our business, results of operations and financial condition.

The requirements of being a public company may strain our resources and divert management's attention from managing our business.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the listing requirements of the securities exchange on which our common stock is traded, and other applicable securities rules and regulations. Our management team and other personnel devote a substantial amount of time to compliance. Compliance with these rules and regulations has increased our legal and financial compliance costs, made some activities more difficult, time-consuming or costly, and increased demands on our administrative systems and resources. Among other things, the Exchange Act requires that we file annual, quarterly and current reports with respect to our business and results of operations, and maintain effective disclosure controls and procedures and internal control over financial reporting. To maintain and, if required, improve our disclosure controls and procedures and internal control over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could harm our business and results of operations. In addition, we have limited internal resources and we may need to hire additional employees to comply with these requirements in the future, which will increase our costs and expenses. We may also not be able to hire additional, qualified resources on a timely basis.

In addition, changing laws, regulations and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs, and making some activities more time consuming. These laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations, and standards, and this investment will increase our general and administrative expense and result in a diversion of management's time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations, and standards are unsuccessful, regulatory authorities may initiate legal proceedings against us and our business, results of operations and financial condition may be harmed.

We have identified a material weakness in our internal control over financial reporting that, if not properly remediated, could result in material misstatements in our financial statements in future periods and impair our ability to comply with the accounting and reporting requirements applicable to public companies.

During the course of the preparation of our 2015 consolidated financial statements, we identified a material weakness in our internal control over financial reporting as a result of a lack of sufficient qualified personnel within the finance and accounting function who possessed an appropriate level of expertise to effectively perform the following functions commensurate with our structure and financial reporting requirements: (i) identifying, selecting and applying generally accepted principles in the United States sufficiently to provide reasonable assurance that transactions are being appropriately recorded, and (ii) assessing risk and designing appropriate control activities over financial and reporting processes necessary to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements.

In response to the identified material weakness, although we do not believe it has been fully remediated yet, we have taken a number of steps towards remediating this material weakness and improving our internal control over financial reporting. During fiscal 2017, we increased our dedicated finance and accounting personnel, including the addition of two directors of accounting who are certified public accountants. One director of accounting resigned in January 2018 and we hired another qualified individual to this position in March 2018. In the fourth quarter of fiscal 2017 and the first quarter of fiscal 2018, we added several finance support team members and implemented additional internal controls, including additional workflows relating to change management, review and approval processes, and account reconciliations. The additional resources added to the finance function have enabled us to further (i) allow separate preparation and review of reconciliations and other account analysis, (ii) enable us to develop a more structured close process, including enhancing our existing policies and procedures, to improve the completeness, timeliness and accuracy of our financial reporting, and (iii) identify and review complex or unusual transactions.

While we believe that the foregoing actions will improve our internal control over financial reporting, the implementation of these measures is ongoing and will require validation and testing of the design and operating effectiveness of internal controls over a sustained period of financial reporting cycles. In addition, we may need to implement additional systems and controls, including further segregation of duties, to help ensure that our internal controls are effective. As a result, we determined that the material weaknesses had not been fully remediated as of April 1, 2018, and there is no assurance that these remediation efforts will be successful. If not properly remediated, this material weakness could result in material misstatements in our financial statements in future periods and impair our ability to comply with accounting and reporting requirements.

We also cannot be certain that other material weaknesses and control deficiencies will not be discovered in the future. In addition, if our remediation efforts are not successful or other material weaknesses or control deficiencies occur in the future, we may be unable to report our financial results accurately or on a timely basis, which could cause our reported financial results to be materially misstated and result in the loss of investor confidence or delisting and cause the trading price of our common stock to decline. As a result of any such failures, we could also become subject to investigations by the stock exchange on which our securities are listed, the SEC, or other regulatory authorities, and become subject to litigation from investors and stockholders, which could harm our reputation and financial condition, or divert financial and management resources from our core business.

We may not be able to implement an effective system of internal controls and accurately report our financial results on a timely basis, which may adversely affect investor confidence in our Company and negatively impact the trading price of our common stock.

Pursuant to the Exchange Act, we are required to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting in our Annual Report on Form 10-K. This assessment includes disclosure of a material weaknesses identified by our management in our internal control over financial reporting. We plan to continue to further document and test our internal controls in order to identify, evaluate and remediate any deficiencies in those internal controls and document the results of our evaluation, testing and remediation, provided, however, we may not be able to complete our evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, if we identify one or more additional material weaknesses in our internal control over financial reporting, as we did in preparing our 2015, 2016 and 2017 consolidated financial statements, that we are unable to remediate before the end of the same fiscal year in which the material weakness is identified, we will be unable to assert that our internal controls are effective. If we are unable to assert that our internal control over financial reporting is effective, or if our auditors, when required, are unable to attest to management's report on the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our common stock to decline.

We are subject to the cyclical nature of the semiconductor industry, which has suffered, and may in the future suffer, from cyclical downturns.

The semiconductor industry is highly cyclical and is characterized by constant and rapid technological change, rapid product obsolescence, price erosion, evolving standards, consolidation and wide fluctuations in product supply and demand. The industry has historically experienced cyclical downturns, including during global recessions, which have been characterized by diminished product demand, production overcapacity, high inventory levels and accelerated erosion of ASPs. A significant portion of our operating expense is incurred in connection with developing our Wi-Fi solutions, securing design wins and assisting customers and service providers in the development of their product specifications in advance of anticipated sales. As a result, in the event that such sales do not ultimately materialize due to a cyclical downturn or otherwise, we may not be able to decrease our operating expense rapidly enough to offset any unanticipated shortfall in revenue. There is a risk that future downturns could negatively impact our revenue, which could harm our business, results of operations and financial condition.

Our results of operations and financial condition could be seriously impacted by security breaches, including cyber security incidents.

We may not be able to effectively detect, prevent and recover from security breaches, including attacks on information technology and infrastructure by hackers and viruses. Cyber attacks could result in unauthorized parties gaining access to certain confidential business information, and could include unauthorized third parties obtaining trade secrets and proprietary information related to our solutions. For example, we offer a cloud-based Wi-Fi analytics and monitoring platform that collects certain Wi-Fi network and system data. While we utilize Amazon Web Services for this platform, which provides a number of sophisticated technical and physical controls designed to prevent unauthorized access to or disclosure of customer content, we cannot be certain that such controls will be sufficient to prevent a security breach. It can be difficult, if not impossible, to entirely prevent cyber attacks. As these threats continue to evolve, we may be required to expend significant resources to enhance our control environment, processes, practices and other protective measures. Despite these efforts, if we experience a cyber security incident, such incident could adversely affect our business, results of operations and financial condition.

Failure to comply with the terms of our loan and security agreements with a financial institution may adversely affect our working capital and financial condition.

Our Amended and Restated Loan and Security Agreement with Silicon Valley Bank ("SVB") contain customary covenants, which could restrict our ability to operate and finance our business and operations, such as nonpayment of amounts due under the revolving line of credit, violation of the restrictive covenants, violation of other contractual provisions, or a material adverse change in our business. Our ability to comply with these covenants may be affected by events beyond our control, and breaches of any of these covenants could result in default under the loan agreement. In addition, borrowings under this loan agreement are collateralized by certain of our assets, including our receivables and inventory, subject to customary exceptions and limits.

The SVB Loan and Security Agreement includes (i) term loans, (ii) revolving line of credit, and (iii) Mezzanine Loan. The Mezzanine Loan was canceled upon its expiration in fiscal 2017.

On December 31, 2017, the Company sought to effect the extinguishment of its term loans under the SVB Loan and Security Agreement, of which approximately $3.9 million (including interest and early termination fees) remained outstanding. The payment for the extinguishment of the term loans was processed on January 2, 2018. See Note 7 to the Notes to Condensed Consolidated Financial Statements, *Long-Term Debt*, for further details.

As of April 1, 2018, the Company has an undrawn balance on the revolving line of credit of $20.0 million which can be drawn subject to 80% of eligible accounts receivable.

The loan agreement also contains customary events of default. Defaults, if not waived, could cause all of the outstanding indebtedness under our loan agreement to become immediately due and payable and would permit SVB to exercise remedies against the collateral in which we granted SVB a security interest.

If we are unable to comply with the terms of this agreement, we may not be able to obtain additional debt or equity financing on favorable terms, if at all, and our assets may become subject to SVB’s security interest. This could materially and adversely affect our working capital, financial condition and our ability to operate.

We are exposed to fluctuations in currency exchange rates that could negatively impact our business, operating results and financial condition.

Because a portion of our business is conducted outside of the United States, we face exposure to adverse movements in foreign currency exchange rates. These exposures may change over time, as international customer mix, business practices and our international footprint evolve, and they could have a material adverse impact on our business, operating results and financial condition.

To date, all of our revenue has been denominated in U.S. dollars; however, most of our expenses associated with our international operations are denominated in local currencies. As a result, a decline in the value of the U.S. dollar relative to the value of these local currencies could have a material adverse effect on our results of operations. Conversely, an increase in the value of the U.S. dollar could result in our Wi-Fi solutions being more expensive to our customers in their local currencies, and could have an adverse impact on our pricing and our business.

To date, we have not used risk management techniques to hedge the risks associated with these fluctuations. Even if we were to implement hedging strategies, not every exposure can be hedged and, where hedges are put in place based on expected foreign currency exchange exposure, they are based on forecasts that may vary or that may later prove to have been inaccurate. As a result, fluctuations in foreign currency exchange rates or our failure to successfully hedge against these fluctuations could have a material adverse effect on business, operating results and financial condition.

Risks Related to Ownership of Our Common Stock

The market price of our common stock has been and may continue to be volatile, which could cause the value of an investment in our common stock to decline.

Technology stocks have historically experienced high levels of volatility. Prior to our initial public offering, there had been no public market for shares of our common stock. Since our initial public offering, the trading price of our common stock has fluctuated from an intra-day high of $25.45 to an intra-day low of $9.60 and may continue to fluctuate substantially. These fluctuations depend on many factors, some of which are beyond our control and may not be related to our operating performance. These fluctuations could cause an investor to lose all or part of their investment in our common stock. Factors that could cause fluctuations in the trading price of our common stock include the following:

- announcements of new products or technologies, commercial relationships, acquisitions or other events by us or our competitors;

- changes in how customers perceive the benefits of our Wi-Fi solutions;
- departures of key personnel;
- price and volume fluctuations in the overall stock market from time to time;
- fluctuations in the trading volume of our shares or the size of our public float;
- sales of large blocks of our common stock;
- sales of our common stock by our directors and officers;
- actual or anticipated changes or fluctuations in our results of operations;
- whether our results of operations meet the expectations of securities analysts or investors;
- changes in actual or future expectations of investors or securities analysts;
- litigation involving us, our industry, or both;
- regulatory developments in the United States, foreign countries or both;
- general economic conditions and trends;
- major catastrophic events in our domestic and foreign markets; and
- "flash crashes," "freeze flashes" or other glitches that disrupt trading on the securities exchange on which we are listed.

In addition, if the market for technology stocks or the stock market in general experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, results of operations or financial condition. The trading price of our common stock might also decline in reaction to events that affect other companies in our industry even if these events do not directly affect us. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. If our stock price is volatile, we may become the target of securities litigation. Securities litigation could result in substantial costs and divert our management's attention and resources from our business. This could have a material adverse effect on our business, results of operations and financial condition.

If securities analysts or industry analysts downgrade our stock, publish negative research or reports or fail to publish reports about our business, our stock price could be adversely affected.

The trading market for our common stock will, to some extent, depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us should downgrade our stock or publish negative research or reports, cease coverage of our company or fail to regularly publish reports about our business, such actions could adversely affect our stock price.

Sales of substantial amounts of our common stock in the public markets, or the perception that such sales might occur, could reduce the price that our common stock might otherwise attain.

Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could have an adverse effect on the market price of our common stock and may make it more difficult for investors to sell their shares of our common stock at a desirable time and price. For example, the lock-up period in connection with our initial public offering expired on April 25, 2017 with respect to shares of our common stock held by stockholders and rights to purchase shares of our common stock held by option holders and warrant holders prior to our initial public offering. Accordingly, such holders are now able to sell their shares in the public market, subject to applicable securities laws. We also previously filed a registration statement to register shares of our common stock reserved for future issuance under our employee equity incentive plans. As a result, subject to the satisfaction of applicable exercise periods and securities laws, the shares of our common stock that are issued upon exercise of outstanding options to purchase shares of our common stock or vesting of other types of equity awards will be available for immediate resale in the United States in the open market. In addition, our executive officers and directors may wish to sell shares of our common stock held by them, including sales through automatic and non-discretionary written plans, known as "Rule 10b5-1 Plans." Sales made by our executive officers and directors, including sales pursuant to Rule 10b5-1 Plans, regardless of the amount of such sales, could adversely affect the market price of our common stock.

Certain holders of our common stock also have rights, subject to some conditions, to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. Such a transaction could divert management's attention from the Company's core business, require us to incur additional expenses, and could have an adverse effect on the price of our common stock.

Our issuance of additional capital stock in connection with financings, acquisitions, investments, our stock incentive plans or otherwise will dilute all other stockholders.

We expect to issue additional capital stock in the future that will result in dilution to all other stockholders. We expect to grant equity awards to employees, directors and consultants under our stock incentive plans. We may also raise capital through equity financings in the future. As part of our business strategy, we may acquire or make investments in complementary companies, products or technologies and issue equity securities to pay for any such acquisition or investment. Any such issuances of additional capital stock may cause stockholders to experience significant dilution of their ownership interests and the per share value of our common stock to decline.

A limited number of stockholders will continue to have substantial control over us, which could limit your ability to influence the outcome of key transactions, including a change of control and other matters requiring stockholder approval.

Our directors, executive officers and each of our stockholders who own greater than 5% of our outstanding common stock, in the aggregate, beneficially own a significant portion of the outstanding shares of our common stock. As a result, these stockholders, if acting together, will be able to influence or control matters requiring approval by our stockholders, and limit your ability to influence the outcome of key transactions, including the election of directors and the approval of mergers, acquisitions or other extraordinary transactions. They may also have interests that differ from yours and may vote in a way with which you disagree and which may be adverse to your interests. This concentration of ownership may have the effect of delaying, preventing or deterring a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might ultimately affect the market price of our common stock.

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

We have never declared or paid any dividends on our common stock. We intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. In addition, our Amended and Restated Loan and Security Agreement and Mezzanine Loan impose restrictions on our ability to pay dividends on our common stock. As a result, you may only receive a return on your investment in our common stock if the market price of our common stock increases.

Delaware law and our corporate charter and bylaws contain anti-takeover provisions that could delay or discourage takeover attempts that stockholders may consider favorable.

Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it difficult for stockholders to elect directors who are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- 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;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our 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;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;

- the requirement that a special meeting of stockholders may be called only by our board of directors, the chairperson of our board of directors, our chief executive officer or our president (in the absence of a chief executive officer), which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement for the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our amended and restated certificate of incorporation relating to the management of our business (including our classified board structure) or certain provisions of our Amended and Restated Bylaws, which may inhibit the ability of an acquirer to effect such amendments to facilitate an unsolicited takeover attempt;
- the ability of our board of directors to amend the bylaws, which may allow our board of directors to take additional actions to prevent an unsolicited takeover and inhibit the ability of an acquirer to amend the bylaws to facilitate an unsolicited takeover attempt; and
- advance notice procedures with which stockholders must comply 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.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law, which may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a specified period of time.

Our Amended and Restated Bylaws designate a State or Federal court located within the State of Delaware as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our Amended and Restated Bylaws, unless we consent in writing to the selection of an alternative forum, the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law, or (4) any action asserting a claim against us that is governed by the internal affairs doctrine, shall be a State or Federal court located within the State of Delaware, in all cases subject to the court's having personal jurisdiction over indispensable parties named as defendants. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to this provision. The forum selection clause in our Amended and Restated Bylaws will limit stockholders' choice in selecting a judicial forum for disputes with our company and may have the effect of discouraging lawsuits against us or our directors and officers.

We may not be able to obtain capital when desired on favorable terms, if at all, or without dilution to our stockholders and our failure to raise capital when needed could prevent us from executing our growth strategy.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new and enhance our existing Wi-Fi solutions, improve our operating infrastructure or acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional equity financing, our stockholders may experience significant dilution of their ownership interests and the per share value of our common stock could decline. Furthermore, if we engage in debt financing, the holders of debt would have priority over the holders of common stock, and we may be required to accept terms that restrict our ability to incur additional indebtedness. We may also be required to take other actions that would otherwise be in the interests of the debt holders and force us to maintain specified liquidity or other ratios, any of which could harm our business, results of operations, and financial condition. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things:

- develop new or enhance our existing Wi-Fi solutions;
- expand our research and development and sales and marketing organizations;
- respond to competitive pressures or unanticipated working capital requirements;

- hire, train and retain employees;
- expand our operations, in the United States or internationally; or
- acquire complementary technologies, products or businesses.

Our failure to do any of these things could harm our business, financial condition and results of operations.

We are an "emerging growth company," and our election to comply with the reduced disclosure requirements as a public company may make our common stock less attractive to investors.

For so long as we remain an "emerging growth company," as defined in the Jumpstart Our Business Startups Act (the "JOBS Act") we have taken advantage of certain exemptions from various requirements that are applicable to public companies that are not "emerging growth companies," including not being required to comply with the independent auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We will remain an "emerging growth company" until the earliest of (i) the last day of the fiscal year following the fifth anniversary of the completion of our initial public offering, (ii) the last day of the first fiscal year in which our annual gross revenue is $1.07 billion or more, (iii) the date on which we have, during the previous rolling three-year period, issued more than $1 billion in non-convertible debt securities or (iv) the date on which we are deemed to be a "large accelerated filer" as defined in the Exchange Act. We cannot predict if investors will find our common stock less attractive because we have relied on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile and may decline.

In addition, the JOBS Act also provides that an "emerging growth company" can take advantage of an extended transition period for complying with new or revised accounting standards. However, we have chosen to "opt out" of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Unregistered Sales of Equity Securities

None.

Use of Proceeds

On October 27, 2016, the Registration Statement on Form S-1 (File No. 333-213871) for our initial public offering ("IPO") of our common stock was declared effective by the SEC, pursuant to which we sold 6,775,466 shares of our common stock, including the exercise of the underwriters' option to purchase an additional 75,466 shares, at an offering price of $16.00 per share, for an aggregate offering price of approximately $108.4 million. There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus, dated October 27, 2016, pursuant to Rule 424(b) of the Securities Act.

Issuer Purchases of Equity Securities

None.

Item 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Item 5. OTHER INFORMATION

Not applicable.

Item 6. EXHIBITS

Exhibit Number	Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date
10.36	Transition Agreement and Release, with an effective date of January 24, 2018, by and between Lionel Bonnot and Quantenna Communications, Inc.				
10.37	Consulting Agreement dated as of December 31, 2017, by and between Lionel Bonnot and Quantenna Communications, Inc.				
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
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.				
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				

* The certifications attached as Exhibit 32.1 that accompany this Quarterly Report on Form 10-Q is deemed furnished and not filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Quantenna Communications, 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 this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

QUANTENNA COMMUNICATIONS, INC.

Date: April 30, 2018	By: /s/ Sam Heidari *Sam Heidari* *Chairman and Chief Executive Officer* *(Principal Executive Officer)*
Date: April 30, 2018	By: /s/ Sean Sobers *Sean Sobers* *Chief Financial Officer* *(Principal Accounting and Financial Officer)*

Exhibit 10.36

TRANSITION AGREEMENT AND RELEASE

This **TRANSITION AGREEMENT AND RELEASE** ("Agreement") is made by and between **LIONEL BONNOT** ("Employee") and **QUANTENNA COMMUNICATIONS, INC.** (the "Company") (collectively referred to as the "Parties" or individually as a "Party") with an Effective Date set forth in Section 29 hereof.

RECITALS

WHEREAS, Employee was employed by the Company;

WHEREAS, Employee is subject to an offer letter with the Company dated October 30, 2007, an amendment dated December 23, 2008, a second amendment dated June 14, 2010, and a third amendment dated August 31, 2012 (collectively, the "Offer Letter");

WHEREAS, Employee signed an At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement with the Company on December 13, 2007 (the "Confidentiality Agreement");

WHEREAS, the Stock Option Report attached hereto as **Exhibit A** summarizes the outstanding options to purchase shares of the Company's Common Stock granted to Employee (the "Options"), under the Company's 2006 Stock Option Plan, the 2016 Equity Incentive Plan or the 2016 Omnibus Equity Incentive Plan, as applicable (each, a "Plan") and applicable Stock Option Agreements (each, an "Option Agreement"), and also summarizes the restricted stock unit award granted to the Employee (the "RSU") under a Plan and a Restricted Stock Unit Award Agreement (the "RSU Agreement", and collectively with the Plans and the Option Agreements, the "Stock Agreements");

WHEREAS, Employee's employment with the Company is terminated effective December 31, 2017 (the "Termination Date");

WHEREAS, effective as of the Termination Date, the Company and Employee wish to engage in a consulting arrangement as further described herein; and

WHEREAS, the Parties wish to resolve any and all disputes, claims, complaints, grievances, charges, actions, petitions, and demands that the Employee may have against the Company and any of the Releasees as defined below, including, but not limited to, any and all claims arising out of or in any way related to Employee's employment with or separation from the Company.

COVENANTS

NOW, THEREFORE, in consideration of the mutual promises made herein, the Company and Employee hereby agree as follows:

1. Consideration. In consideration of Employee's execution of this Agreement and Employee's fulfillment of all of its terms and conditions, and provided that Employee does not

revoke the Agreement under Section 29 below, notwithstanding anything in the Offer Letter to the contrary, the Company agrees as follows:

a. Severance Payments. The Company agrees to pay Employee: (x) a lump sum total amount of one hundred and thirty thousand dollars ($130,000.00) (which represents six (6) months of Employee's current base salary), less applicable withholdings and deductions, and (y) an additional lump sum severance payment of seventy-five thousand dollars ($75,000), less applicable withholdings and deductions. These Section 1.a payments will be made to Employee as soon as practicable after the Effective Date of this Agreement, but no earlier than January 1, 2018 (and no later than sixty (60) days following the Termination Date).

b. Option Acceleration. Fifty percent (50%) of the total number of shares subject to each then-outstanding Option as of the Termination Date will immediately become vested and exercisable as set forth on **Exhibit A** (or such lesser number of shares subject to the applicable Option that would provide for 100% of the outstanding portion of such Option becoming vested and exercisable).

c. Post-Employment Consulting Services. Effective as of the Termination Date, the Company agrees to retain Employee as a consultant, in which role Employee shall provide consulting services (collectively, the "Consulting Services") to the Company as an independent contractor pursuant to the terms of the Consulting Agreement attached hereto as **Exhibit B** (the "Consulting Agreement") through the six (6) month anniversary of the Termination Date (such period the "Consulting Term"). Nothing in this Agreement or the Consulting Agreement pertaining to Employee's anticipated role as a Consultant shall in any way be construed to constitute Employee as a continuing employee, agent, officer, executive, or representative of the Company after the Termination Date, and Employee shall perform the services under the Consulting Agreement solely as an independent contractor. The Parties agree that there will be no break in service between Employee's employment and Employee's provision of the Consulting Services. Therefore, pursuant to the terms of the applicable Stock Agreements, the Options and RSU shall continue to vest in accordance with the vesting schedule set forth in the applicable Stock Agreements while Employee remains a Service Provider (as defined in the applicable Stock Agreements) during the Consulting Term.

d. Option Extension. For the consideration contemplated herein, the portion of each Option that is vested as of Employee's cessation as a Service Provider (expected to occur upon the expiration of the Consulting Term), may be exercised through the twenty-four (24) month anniversary of the Effective Date. Notwithstanding the foregoing, in no event will any Option be exercisable or outstanding beyond the term or expiration date applicable to the Option and, further, the vested portion of the Options shall be subject to earlier termination in accordance with the change in control, merger, Company liquidation and similar provisions of the applicable Plan. The exercise of the vested portion of Employee's Options and the shares purchased thereunder shall otherwise continue to be governed by the terms and conditions of the applicable Stock Agreements. Employee acknowledges that the extension of the Options may be deemed a modification resulting in the loss of incentive stock option status for those Options.

e. RSU Acceleration and Supplemental Release. The Parties agree to execute the release attached hereto as **Exhibit C**, covering the period of time from the Effective Date through the Consulting Term and the termination of the Consulting Agreement (the "Supplemental Release"). Provided that Employee completes the full Consulting Term (or, if applicable, until a Qualified Termination as defined in the Consulting Agreement), abides by the terms of this Agreement and the Consulting Agreement, renders the Consulting Services in good faith and timely executes without revocation the Supplemental Release, as set forth in the Supplemental Release to the Consulting Agreement, Employee shall be entitled to the vesting of 100% of the shares subject to the RSU equity awards outstanding as of immediately prior to the expiration of the Consulting Term (the "Acceleration Shares") upon the effective date of the Supplemental Release (provided, however, that in no event shall the number of RSU shares subject to acceleration exceed 100% of the outstanding portion of the RSU award becoming vested and exercisable).

f. Acknowledgement. Employee acknowledges that without this Agreement, he is otherwise not entitled to the consideration listed in this Section 1. Employee specifically acknowledges and agrees that, other than any payment to be paid under the 2017 Executive Bonus Plan applicable to Employee (such payment to be paid in amount and timing in accordance with the terms and conditions of the 2017 Executive Bonus Plan), the consideration provided to him under this Section fully satisfies any obligation that the Company had to pay Employee severance payments and benefits due under the Offer Letter and that the amounts paid and benefits provided under this Agreement are in excess of any severance due to Employee under Offer Letter.

2. Benefits. Employee's health insurance benefits shall cease on December 31, 2017, subject to Employee's right to continue his health insurance under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), and Company reimbursement of COBRA premiums as described below. Employee's participation in all employee benefits and other incidents of employment, other than continued vesting of equity awards in accordance with Section 1.b., ceased as of the Termination Date. If Consultant elects continuation coverage pursuant to COBRA, within the time period prescribed pursuant to COBRA for Consultant and Consultant's eligible dependents, the Company will reimburse Consultant for the premiums necessary to continue the Company's health insurance benefits under COBRA for Consultant and Consultant's eligible dependents until the earliest of (A) three (3) months from the Termination Date, or (B) the date upon which Consultant and Consultant's eligible dependents, as applicable, ceases to be eligible for coverage under COBRA.

3. Payment of Salary and Receipt of All Benefits. Employee acknowledges and represents that, other than the consideration set forth in this Agreement, any applicable refund of contributions under the Company's Employee Stock Purchase Plan, and the bonus payment under the 2017 Executive Bonus Plan referenced in Section 1.f., the Company has paid or provided all salary, wages, bonuses, accrued vacation/paid time off, premiums, leaves, housing allowances, relocation costs, interest, severance, outplacement costs, fees, reimbursable expenses, commissions, equity (including stock, stock options, and RSUs), vesting, and any and all other benefits and compensation due to Employee.

4. Release of Claims. Employee agrees that the foregoing consideration represents settlement in full of all outstanding obligations owed to Employee by the Company and its current and former officers, directors, employees, agents, investors, attorneys, shareholders, administrators, affiliates, benefit plans, plan administrators, insurers, trustees, divisions, and subsidiaries, and predecessor and successor corporations and assigns (collectively, the "Releasees"). Employee, on

his own behalf and on behalf of his respective heirs, family members, executors, agents, and assigns, hereby and forever releases the Releasees from, and agrees not to sue concerning, or in any manner to institute, prosecute, or pursue, any claim, complaint, charge, duty, obligation, demand, or cause of action relating to any matters of any kind, whether presently known or unknown, suspected or unsuspected, that Employee may possess against any of the Releasees arising from any omissions, acts, facts, or damages that have occurred up until and including the Effective Date of this Agreement, including, without limitation:

a. any and all claims relating to or arising from Employee's employment relationship with the Company and the termination of that relationship;

b. any and all claims relating to, or arising from, Employee's right to purchase, or actual purchase of shares of stock of the Company, including, without limitation, any claims for fraud, misrepresentation, breach of fiduciary duty, breach of duty under applicable state corporate law, and securities fraud under any state or federal or country law;

c. any and all claims for wrongful discharge of employment; termination in violation of public policy; discrimination; harassment; retaliation; breach of contract, both express and implied; breach of covenant of good faith and fair dealing, both express and implied; promissory estoppel; negligent or intentional infliction of emotional distress; fraud; negligent or intentional misrepresentation; negligent or intentional interference with contract or prospective economic advantage; unfair business practices; defamation; libel; slander; negligence; personal injury; assault; battery; invasion of privacy; false imprisonment; conversion; and disability benefits;

d. any and all claims for violation of any and all claims for violation of any U.S. federal, state, or municipal statute, including, but not limited to, Title VII of the Civil Rights Act of 1964; the Civil Rights Act of 1991; the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; the Equal Pay Act; the Fair Labor Standards Act; the Fair Credit Reporting Act; the Age Discrimination in Employment Act of 1967; the Older Workers Benefit Protection Act; the Employee Retirement Income Security Act of 1974; the Worker Adjustment and Retraining Notification Act; the Family and Medical Leave Act; the Sarbanes-Oxley Act of 2002; the California Family Rights Act; the California Labor Code; the California Workers' Compensation Act; the California Fair Employment and Housing Act; and French country, provincial or regional laws and regulations.

e. any and all claims for violation of the federal or any state constitution;

f. any and all claims arising out of any other laws and regulations relating to employment or employment discrimination;

g. any claim for any loss, cost, damage, or expense arising out of any dispute over the nonwithholding or other tax treatment of any of the proceeds received by Employee as a result of this Agreement; and

h. any and all claims for attorneys' fees and costs.

Employee agrees that the release set forth in this section shall be and remain in effect in all respects as a complete general release as to the matters released. This release does not extend to any obligations incurred under this Agreement. This release does not release claims that cannot be released as a matter of law, including any Protected Activity (as defined below). Any and all disputed wage claims that are released herein shall be subject to binding arbitration as noted herein, except as required by applicable law. This release does not extend to any right Employee may have to unemployment compensation benefits.

5. Acknowledgment of Waiver of Claims under ADEA. Employee acknowledges that he is waiving and releasing any rights he may have under the Age Discrimination in Employment Act of 1967 ("ADEA"), and that this waiver and release is knowing and voluntary. Employee agrees that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the Effective Date of this Agreement. Employee acknowledges that the consideration given for this waiver and release is in addition to anything of value to which Employee was already entitled. Employee further acknowledges that he has been advised by this writing that: (a) he should consult with an attorney prior to executing this Agreement; (b) he has twenty-one (21) days within which to consider this Agreement; (c) he has seven (7) days following his execution of this Agreement to revoke this Agreement; (d) this Agreement shall not be effective until after the revocation period has expired; and (e) nothing in this Agreement prevents or precludes Employee from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties, or costs for doing so, unless specifically authorized by federal law. In the event Employee signs this Agreement and returns it to the Company in less than the 21-day period identified above, Employee hereby acknowledges that he has freely and voluntarily chosen to waive the time period allotted for considering this Agreement. Employee acknowledges and understands that revocation must be accomplished by a written notification to the person executing this Agreement on the Company's behalf that is received prior to the Effective Date. The Parties agree that changes, whether material or immaterial, do not restart the running of the 21-day period.

6. California Civil Code Section 1542. Employee acknowledges that he has been advised to consult with legal counsel and is familiar with the provisions of California Civil Code Section 1542, a statute that otherwise prohibits the release of unknown claims, which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

Employee, being aware of said code section, agrees to expressly waive any rights he may have thereunder, as well as under any other statute or common law principles of similar effect.

7. No Pending or Future Lawsuits. Employee represents that he has no lawsuits, claims, or actions pending in his name, or on behalf of any other person or entity, against the Company or any of the other Releasees. Employee also represents that he does not intend to bring any claims on his own behalf or on behalf of any other person or entity against the Company or any of the other

Releasees. Employee agrees to provide reasonable and prompt assistance to the Company at the Company's request in connection with any lawsuits, claims, investigations or actions, pending or threatened, against the Company from time to time.

8. Application for Employment. Employee understands and agrees that, as a condition of this Agreement, Employee shall not be entitled to any employment with the Company, and Employee hereby waives any right, or alleged right, of employment or re-employment with the Company.

9. Confidentiality. Subject to paragraph 12 governing Protected Activity, Employee agrees to maintain in complete confidence the existence of this Agreement, the contents and terms of this Agreement, and the consideration for this Agreement (hereinafter collectively referred to as "Separation Information"). Except as required by law, Employee may disclose Separation Information only to his immediate family members, the Court in any proceedings to enforce the terms of this Agreement, Employee's attorney(s), and Employee's accountant and any professional tax advisor to the extent that they need to know the Separation Information in order to provide advice on tax treatment or to prepare tax returns, and must prevent disclosure of any Separation Information to all other third parties. Employee agrees that he will not publicize, directly or indirectly, any Separation Information.

10. Trade Secrets and Confidential Information/Company Property. Employee reaffirms and agrees to observe and abide by the terms of the Confidentiality Agreement, specifically including the provisions therein regarding nondisclosure of the Company's trade secrets and confidential and proprietary information, and nonsolicitation of Company employees. Employee's signature below constitutes Employee's certification under penalty of perjury that Employee has returned all documents and other items provided to Employee by the Company (with the exception of a copy of the Employee Handbook and personnel documents specifically relating to Employee), developed or obtained by Employee in connection with Employee's employment with the Company, or otherwise belonging to the Company.

11. No Cooperation. Subject to paragraph 12 governing Protected Activity, Employee agrees that he will not knowingly encourage, counsel, or assist any attorneys or their clients in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints by any third party against any of the Releasees, unless under a subpoena or other court order to do so or as related directly to the ADEA waiver in this Agreement. Employee agrees both to immediately notify the Company upon receipt of any such subpoena or court order, and to furnish, within three (3) business days of its receipt, a copy of such subpoena or other court order. If approached by anyone for counsel or assistance in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints against any of the Releasees, Employee shall state no more than that he cannot provide counsel or assistance.

12. Protected Activity Not Prohibited. Employee understands that nothing in this Agreement shall in any way limit or prohibit Employee from engaging in any Protected Activity. For purposes of this Agreement, "Protected Activity" shall mean filing a charge, complaint, or report with, or otherwise communicating, cooperating, or participating in any investigation or proceeding that may be conducted by, any federal, state or local government agency or commission, including the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the

Occupational Safety and Health Administration, and the National Labor Relations Board ("Government Agencies"). Employee understands that in connection with such Protected Activity, Employee is permitted to disclose documents or other information as permitted by law, and without giving notice to, or receiving authorization from, the Company. Notwithstanding the foregoing, Employee agrees to take all reasonable precautions to prevent any unauthorized use or disclosure of any information that may constitute Company confidential information under the Confidentiality Agreement to any parties other than the Government Agencies. Employee further understands that "Protected Activity" does not include the disclosure of any Company attorney-client privileged communications. Any language in the Confidentiality Agreement regarding Employee's right to engage in Protected Activity that conflicts with, or is contrary to, this paragraph is superseded by this Agreement. In addition, pursuant to the Defend Trade Secrets Act of 2016, Employee is notified that an individual will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made in confidence to a federal, state, or local government official (directly or indirectly) or to an attorney *solely* for the purpose of reporting or investigating a suspected violation of law, or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if (and only if) such filing is made under seal. In addition, an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

13. Nondisparagement. Employee agrees to refrain from any disparaging statements about the Company or any of the other Releasees including, without limitation, the business, products, strategy, outlook, intellectual property, or financial standing of the Company, and also agrees to refrain from any defamation, libel, or slander of any of the Releasees, Employee further agrees that Employee shall not interfere with the Company's business relationships, and in particular shall refrain from any tortious interference, influence, encouragement or inducement, or any such attempt, of any of the Company's customers, end customers, partners, distributors, agents, vendors, suppliers, manufacturers, industry associations or other third parties associated with the Company to cease, limit, reduce, forego or not commence a business relationship with the Company.

14. Nonsolicitation. To the fullest extent permitted under applicable law, until twelve (12) months after the termination of the Consulting Period (the "***Restricted Period***"), Employee will not, without the Company's prior written consent, directly or indirectly, solicit any of the Company's employees to leave their employment, or attempt to solicit employees of the Company, either for Employee or for any other person or entity.

15. [RESERVED]

16. Compliance with Code of Conduct. Employee represents, warrants and covenants that Employee has complied, and will continue to comply through the duration of the Consulting Agreement, in all respects with the Company's Code of Business Conduct and Ethics and related Company policies.

17. Breach. Employee acknowledges and agrees that any material breach of this Agreement, unless such breach constitutes a legal action by Employee challenging or seeking a determination in good faith of the validity of the waiver herein under the ADEA, or of any provision

of the Confidentiality Agreement shall entitle the Company immediately to recover and/or cease providing the consideration provided to Employee under this Agreement and to obtain damages, except as provided by law.

18. No Admission of Liability. Employee understands and acknowledges that this Agreement constitutes a compromise and settlement of any and all actual or potential disputed claims by Employee. No action taken by the Company hereto, either previously or in connection with this Agreement, shall be deemed or construed to be (a) an admission of the truth or falsity of any actual or potential claims or (b) an acknowledgment or admission by the Company of any fault or liability whatsoever to Employee or to any third party.

19. Taxes; Section 409A.

a. Under this Agreement, the Company will withhold from any payment that is required to be made or benefit provided amounts sufficient to satisfy applicable withholding requirements under law as well as impute income to the Employee as required under applicable law, or subject such payments to applicable deductions. Employee agrees and understands that Employee is responsible for payment, if any, of personal U.S., French, or other local, personal state, and/or personal federal taxes on the payments and any other consideration provided hereunder by the Company and any penalties or assessments thereon. Employee represents that with respect to all compensation and benefits paid to Employee from the Company during the course of Employee's employment relationship with the Company, or to be paid to the Employee by the Company or its affiliates under this Agreement or otherwise, Employee has complied with, or if taxes or reporting are not yet due, will timely comply, with all applicable tax laws and reporting obligations (together, "Tax Compliance").

b. This Agreement and all payments and benefits hereunder are intended to be exempt from or otherwise comply with Section 409A of the Internal Revenue Code of 1986, as amended and the regulations thereunder (together, "Section 409A"), so that none of the payments and benefits to be provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted in that manner. Each payment and benefit payable under this Agreement is intended to constitute a separate payment for purposes of the Section 409A-related regulations, including Section 1.409A-2(b)(2) of the Treasury Regulations. Each cash payment under Section 1 of this Agreement will in all cases be made within the "short-term deferral" period (with the meaning of Section 409A). Notwithstanding the foregoing and except as provided by the following sentence, if and to the extent necessary to avoid subjecting Employee to an additional tax under Section 409A, payment of all or a portion of the Deferred Payments payable to Employee will be delayed until the date that is six (6) months and one (1) day following Employee's separation from service (within the meaning of Section 409A). Notwithstanding anything herein to the contrary, if Employee dies following Employee's separation from service, but prior to the six (6) month anniversary of the separation from service, then any payments delayed in accordance with the prior sentence will be payable in a lump sum as soon as administratively practicable after the date of Employee's death and all other Deferred Payments will be payable in accordance with the payment schedule applicable to each payment or benefit. Employee and the Company agree to work together to consider amendments to this offer letter and to take such reasonable actions to avoid imposition of any additional tax or income recognition under Section 409A prior to actual payment to Employee. In no event will the Company reimburse Employee for any taxes that may be imposed on Employee as a result of Section 409A or other tax rule or regulation. For the purposes of this Agreement, "Deferred Payment" means any severance pay or benefits to be paid or provided to Employee (or Employee's estate or beneficiaries) pursuant to this Agreement and any other severance payments or separation benefits, that in each case, when considered together, are considered deferred compensation under Section 409A.

c. For avoidance of doubt, the Parties intend and believe Employee shall have a "separation from service" (within the meaning of Section 409A) on the Termination Date, and during the Consulting Term it is intended and expected that Employee will provide Consulting Services that represent no more than twenty percent (20%) of the level of services performed by Employee for the Company during the immediately preceding thirty-six (36) month period.

d. Employee shall cooperate with, and provide support and assistance to, the Company in connection with any actions deemed reasonable or appropriate by the Company after consultation with tax experts and Employee regarding any payment of taxes by or on behalf of the Employee.

e. Employee agrees to pay directly to the applicable tax authorities as soon as practicable, but in no event later than April 15, 2018, all taxes owed by Employee, including Company withholding amounts, with respect to all compensation and benefits paid or provided to Employee by the Company (or its affiliates), including without limitation, all U.S. federal and California state (based on Employee's residence located in Fremont, California) income, employment or other taxes not collected from the Employee by the Company with respect to compensation and benefits paid or provided to Employee in 2017. Upon request, Employee will promptly certify that such payments, including the payment amount and payment date, have been remitted to the appropriate tax authorities, with such certification to occur in such manner as determined appropriate by the Company. In the event the applicable taxes are not paid by Employee by April 15, 2018, Employee shall be solely liable for any penalties and interest assessed with respect to Employee or the Company by the applicable tax authorities.

20. Indemnification. Employee agrees to indemnify and hold harmless the Company from and against any and all loss, taxes, costs, damages, or expenses, incurred by the Company arising out of Employee's breach of this Agreement or the Consulting Agreement, any tax obligations of the Employee that were uncollected from Employee and paid by the Company on Employee's behalf or for Employee's benefit or due to Employee's failure to pay, or from any false representation made herein by Employee.

21. Costs. The Parties shall each bear their own costs, attorneys' fees, and other fees incurred in connection with the preparation of this Agreement.

22. ARBITRATION. THE PARTIES AGREE THAT ANY AND ALL DISPUTES ARISING OUT OF THE TERMS OF THIS AGREEMENT, THEIR INTERPRETATION, EMPLOYEE'S EMPLOYMENT WITH THE COMPANY OR THE TERMS THEREOF, OR ANY OF THE MATTERS HEREIN RELEASED, SHALL BE SUBJECT TO ARBITRATION IN SANTA CLARA COUNTY, BEFORE JUDICIAL ARBITRATION & MEDIATION SERVICES ("JAMS"), PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES ("JAMS RULES"). THE ARBITRATOR MAY GRANT INJUNCTIONS AND OTHER RELIEF

IN SUCH DISPUTES. THE ARBITRATOR SHALL ADMINISTER AND CONDUCT ANY ARBITRATION IN ACCORDANCE WITH CALIFORNIA LAW, INCLUDING THE CALIFORNIA CODE OF CIVIL PROCEDURE, AND THE ARBITRATOR SHALL APPLY SUBSTANTIVE AND PROCEDURAL CALIFORNIA LAW TO ANY DISPUTE OR CLAIM, WITHOUT REFERENCE TO ANY CONFLICT-OF-LAW PROVISIONS OF ANY JURISDICTION. TO THE EXTENT THAT THE JAMS RULES CONFLICT WITH CALIFORNIA LAW, CALIFORNIA LAW SHALL TAKE PRECEDENCE. THE DECISION OF THE ARBITRATOR SHALL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. THE PARTIES AGREE THAT THE PREVAILING PARTY IN ANY ARBITRATION SHALL BE ENTITLED TO INJUNCTIVE RELIEF IN ANY COURT OF COMPETENT JURISDICTION TO ENFORCE THE ARBITRATION AWARD. THE PARTIES TO THE ARBITRATION SHALL EACH PAY AN EQUAL SHARE OF THE COSTS AND EXPENSES OF SUCH ARBITRATION, AND EACH PARTY SHALL SEPARATELY PAY FOR ITS RESPECTIVE COUNSEL FEES AND EXPENSES; PROVIDED, HOWEVER, THAT THE ARBITRATOR SHALL AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, EXCEPT AS PROHIBITED BY LAW. THE PARTIES HEREBY AGREE TO WAIVE THEIR RIGHT TO HAVE ANY DISPUTE BETWEEN THEM RESOLVED IN A COURT OF LAW BY A JUDGE OR JURY. NOTWITHSTANDING THE FOREGOING, THIS SECTION WILL NOT PREVENT EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF (OR ANY OTHER PROVISIONAL REMEDY) FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF THEIR DISPUTE RELATING TO THIS AGREEMENT AND THE AGREEMENTS INCORPORATED HEREIN BY REFERENCE. SHOULD ANY PART OF THE ARBITRATION AGREEMENT CONTAINED IN THIS PARAGRAPH CONFLICT WITH ANY OTHER ARBITRATION AGREEMENT BETWEEN THE PARTIES, THE PARTIES AGREE THAT THIS ARBITRATION AGREEMENT SHALL GOVERN.

23. Authority. The Company represents and warrants that the undersigned has the authority to act on behalf of the Company and to bind the Company and all who may claim through it to the terms and conditions of this Agreement. Employee represents and warrants that he has the capacity to act on his own behalf and on behalf of all who might claim through him to bind them to the terms and conditions of this Agreement. Each Party warrants and represents that there are no liens or claims of lien or assignments in law or equity or otherwise of or against any of the claims or causes of action released herein.

24. Severability. In the event that any provision or any portion of any provision hereof or any surviving agreement made a part hereof becomes or is declared by a court of competent jurisdiction or arbitrator to be illegal, unenforceable, or void, this Agreement shall continue in full force and effect without said provision or portion of provision.

25. [RESERVED]

26. Entire Agreement. This Agreement represents the entire agreement and understanding between the Company and Employee concerning the subject matter of this Agreement and Employee's employment with and separation from the Company and the events leading thereto and associated therewith, and supersedes and replaces any and all prior agreements and understandings concerning the subject matter of this Agreement and Employee's relationship with

the Company, including, but not limited to, the Offer Letter, with the exception of the Confidentiality Agreement and the Stock Agreements, except as otherwise modified or superseded herein.

27. No Oral Modification. This Agreement may only be amended in a writing signed by Employee and the Company's Chief Executive Officer.

28. Governing Law. This Agreement shall be governed by the laws of the State of California, without regard for choice-of-law provisions. Employee consents to personal and exclusive jurisdiction and venue in the State of California.

29. Effective Date. Employee understands that this Agreement shall be null and void if not executed by Employee within twenty one (21) days of the Termination Date. Each Party has seven (7) days after that Party signs this Agreement to revoke it. This Agreement will become effective on the eighth (8th) day after Employee signed this Agreement, so long as it has been signed by the Parties and has not been revoked by either Party before that date (the "Effective Date").

30. Counterparts. This Agreement may be executed in counterparts and by facsimile, and each counterpart and facsimile shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned.

31. Voluntary Execution of Agreement. This Agreement may be executed in counterparts and each counterpart shall be deemed an original and all of which counterparts taken together shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned. The counterparts of this Agreement may be executed and delivered by facsimile, photo, email PDF, or other electronic transmission or signature.

32. Voluntary Execution of Agreement. Employee understands and agrees that Employee executed this Agreement voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Employee's claims against the Company and any of the other Releases. Employee acknowledges that:

(a) Employee has read this Agreement;

(b) Employee has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of Employee's own choice or has elected not to retain legal counsel;

(c) Employee understands the terms and consequences of this Agreement and of the releases it contains;

(d) Employee is fully aware of the legal and binding effect of this Agreement; and

(e) Employee has not relied upon any representations or statements made by the Company that are not specifically set forth in this Agreement.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK; SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the respective dates set forth below.

Dated: 1/16, 2018

By: /s/ Lionel Bonnot
Name: Lionel Bonnot

QUANTENNA COMMUNICATIONS, INC.

Dated: 1/16, 2018

By: /s/ Sam Hedari
Name: Sam Hedari
Title: Chief Executive Officer

EXHIBIT A
STOCK OPTION AND RESTRICTED STOCK UNIT REPORT

EXHIBIT B

QUANTENNA COMMUNICATIONS, INC.
CONSULTING AGREEMENT

<u>EXHIBIT C</u>
(Supplemental Release)

1. <u>Compliance and General Release</u>. In consideration of the mutual promises, and consideration provided in the Transition Agreement and Release, effective as of __________________, 20___ (the "Agreement") and the Consulting Agreement dated as of December 31, 2017, Lionel Bonnot ("Consultant") hereby verifies and confirms Consultant's renewed agreement to the terms of the Agreement and the Consulting Agreement, including but not limited to each of the representations contained therein and continued compliance therewith, the release and waiver of any and all claims relating to the services provided to the Company, and further extends such release and waiver to any claims that may have arisen since the effective date of the Agreement and during the Consulting Period as defined therein, including but not limited to claims under any local ordinance or country or state or federal employment law, including laws prohibiting discrimination in employment on the basis of race, sex, age, disability, national origin, or religion, as well as any claims for misclassification, wrongful discharge, breach of contract, attorneys' fees, costs, or any claims of amounts due for fees, commissions, expenses, salary, bonuses, profit sharing or fringe benefits (the "Supplemental Release"). Any capitalized terms used but not defined herein have the meanings assigned to them in the Agreement or Consulting Agreement, as applicable.

2. <u>Supplemental Release Consideration (RSU Acceleration)</u>. Contingent on Consultant's execution and non-revocation of this Supplemental Release, and subject to: (i) Consultant having rendered the Consulting Services in good faith for the full Consulting Term (or, if applicable, until a Qualified Termination as defined in the Consulting Agreement), and (ii) Consultant abiding by the terms of the Agreement, the Consulting Agreement, and the Confidentiality Agreement, the Company agrees that upon the Effective Date of the Supplemental Release, Consultant shall be entitled to the vesting of 100% of the shares subject to the RSU equity awards outstanding as of immediately prior to the expiration of the Consulting Term (the "Acceleration Shares") upon the effective date of the Supplemental Release (provided, however, that in no event shall the number of RSU shares subject to acceleration exceed 100% of the outstanding portion of the RSU award becoming vested and exercisable).. (For the avoidance of doubt, such Acceleration Shares shall not be forfeited immediately upon the expiration of the Consulting Term so as to be available for potential acceleration of vesting pursuant to the prior sentence; if the Supplemental Release does not become effective within the time frame required therein, the Acceleration Shares shall thereafter immediately be forfeited for no consideration.) Consultant acknowledges that without continued compliance with the Agreement, the Consulting Agreement and execution and non-revocation of the Supplemental Release, Consultant is otherwise not entitled to the consideration listed in this Section 2. In all cases, except as may be required by Section 19 of the Agreement (Taxes; Section 409A), any Accelerated Shares due to Consultant will be made available to Consultant within sixty (60) days following the end of the Consulting Term.

3. <u>Return of Company Property</u>. Consultant's signature below constitutes Consultant's certification under penalty of perjury that Consultant has returned all documents and other items provided to Consultant by the Company, developed or obtained by Consultant in connection with Consultant's service relationship with the Company, or otherwise belonging to the Company.

4. <u>Payment of All Compensation and Fees</u>. Consultant acknowledges and represents that, other than the consideration set forth in this Supplemental Release, the Company has paid or provided all payments, fees, severance, reimbursable expenses, stock, stock options, vesting, and any and all other compensation due to Consultant.

5. ARBITRATION. THE PARTIES AGREE THAT ANY AND ALL DISPUTES ARISING OUT OF THE TERMS OF THE AGREEMENT, THE CONFIDENTIALITY AGREEMENT, OR THIS SUPPLEMENTAL RELEASE, THEIR INTERPRETATION, AND ANY OF THE MATTERS HEREIN RELEASED, SHALL BE SUBJECT TO ARBITRATION IN SANTA CLARA COUNTY, BEFORE JUDICIAL ARBITRATION & MEDIATION SERVICES ("JAMS"), PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES ("JAMS RULES"). CONSULTANT AGREES THAT THE USE OF THE JAMS RULES DOES NOT CHANGE CONSULTANT'S CLASSIFICATION TO THAT OF AN EMPLOYEE. THE ARBITRATOR MAY GRANT INJUNCTIONS AND OTHER RELIEF IN SUCH DISPUTES. THE ARBITRATOR SHALL ADMINISTER AND CONDUCT ANY ARBITRATION IN ACCORDANCE WITH CALIFORNIA LAW, INCLUDING THE CALIFORNIA CODE OF CIVIL PROCEDURE, AND THE ARBITRATOR SHALL APPLY SUBSTANTIVE AND PROCEDURAL CALIFORNIA LAW TO ANY DISPUTE OR CLAIM, WITHOUT REFERENCE TO ANY CONFLICT-OF-LAW PROVISIONS OF ANY JURISDICTION. TO THE EXTENT THAT THE JAMS RULES CONFLICT WITH CALIFORNIA LAW, CALIFORNIA LAW SHALL TAKE PRECEDENCE. THE DECISION OF THE ARBITRATOR SHALL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. THE PARTIES AGREE THAT THE PREVAILING PARTY IN ANY ARBITRATION SHALL BE ENTITLED TO INJUNCTIVE RELIEF IN ANY COURT OF COMPETENT JURISDICTION TO ENFORCE THE ARBITRATION AWARD. THE PARTIES TO THE ARBITRATION SHALL EACH PAY AN EQUAL SHARE OF THE COSTS AND EXPENSES OF SUCH ARBITRATION, AND EACH PARTY SHALL SEPARATELY PAY FOR ITS RESPECTIVE COUNSEL FEES AND EXPENSES; PROVIDED, HOWEVER, THAT THE ARBITRATOR SHALL AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, EXCEPT AS PROHIBITED BY LAW. THE PARTIES HEREBY AGREE TO WAIVE THEIR RIGHT TO HAVE ANY DISPUTE BETWEEN THEM RESOLVED IN A COURT OF LAW BY A JUDGE OR JURY. NOTWITHSTANDING THE FOREGOING, THIS SECTION WILL NOT PREVENT EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF (OR ANY OTHER PROVISIONAL REMEDY) FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF THEIR DISPUTE RELATING TO THIS AGREEMENT AND THE AGREEMENTS INCORPORATED HEREIN BY REFERENCE. SHOULD ANY PART OF THE ARBITRATION AGREEMENT CONTAINED IN THIS PARAGRAPH CONFLICT WITH ANY OTHER ARBITRATION AGREEMENT BETWEEN THE PARTIES, THE PARTIES AGREE THAT THIS ARBITRATION AGREEMENT SHALL GOVERN.

6. Entire Agreement. The Agreement and this Supplemental Release represent the entire agreement and understanding between the Company and Consultant concerning the subject matter of this Agreement and Consultant's relationship with and separation from the Company and the events leading thereto and associated therewith, and supersedes and replaces any and all prior agreements and understandings concerning the subject matter of this Supplemental Release and Consultant's relationship with the Company, with the exception of the Confidentiality Agreement and the Stock Agreements, except as amended by the Agreement. For purposes of clarity, the arbitration provision of this Supplemental Release (as set forth herein) supersedes and replaces the arbitration provisions in the Agreement and the Confidentiality Agreement.

7. Expiration of Supplemental Release. Consultant understands that this Supplemental Release shall be null and void if not executed by Consultant within twenty one (21) days following the end of the Consulting Term. Each Party has seven (7) days after that Party signs this Supplemental Release to revoke it. This Supplemental Release will become effective on the eighth (8th) day after Consultant signed this Supplemental Release, so long as it has been signed by the Parties and has not been revoked by either Party before that date (the "Effective Date").

8. Voluntary Execution of Agreement. Consultant understands and agrees that Consultant executed this Supplemental Release voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Consultant's claims against the Company and any of the other Releasees (as defined in the Agreement). Consultant further acknowledges that: (a) Consultant has read this Supplemental Release; (b) Consultant has been represented in the preparation, negotiation, and execution of this Supplemental Release by legal counsel of Consultant's own choice or has elected not to retain legal counsel; (c) Consultant understands the terms and consequences of this Supplemental Release and of the releases it contains; and (d) Consultant is fully aware of the legal and binding effect of this Supplemental Release.

IN WITNESS WHEREOF, the Parties have executed this Supplemental Release on the respective dates set forth below.

Dated: ____________________, 2018   By: ____
Name: Lionel Bonnot

QUANTENNA COMMUNICATIONS, INC.

Dated: ____________________, 2018   Signature: ________________________________
Print Name: ________________________________
Title: ________________________________

Exhibit 10.37

QUANTENNA COMMUNICATIONS, INC.
CONSULTING AGREEMENT

This Consulting Agreement (the "***Consulting Agreement***") is made and entered into as of December 31, 2017 (the "***Effective Date***") by and between **QUANTENNA COMMUNICATIONS, INC.** (the "***Company***"), and **LIONEL BONNOT**, an individual ("***Consultant***") (each herein referred to individually as a "***Party***," or collectively as the "***Parties***").

WHEREAS, the Company desires to retain Consultant as an independent contractor to perform consulting services for the Company, and Consultant is willing to perform such services, on the terms described below.

NOW, THEREFORE, in consideration of the mutual promises made herein, the Company and Employee hereby agree as follows:

1. Services and Compensation

Consultant shall perform the services described in **Exhibit B-1** (the "***Services***") for the Company (or its designee), and the Company agrees to pay Consultant the compensation described in **Exhibit B-1** for Consultant's performance of the Services.

2. Confidentiality

A. ***Definition of Confidential Information***. "***Confidential Information***" means any information (including any and all combinations of individual items of information) that relates to the actual or anticipated business and/or products, research or development of the Company, its affiliates or subsidiaries, or to the Company's, its affiliates' or subsidiaries' technical data, trade secrets, or know-how, including, but not limited to, research, product plans, or other information regarding the Company's, its affiliates' or subsidiaries' products or services and markets therefor, customer lists and customers (including, but not limited to, customers of the Company on whom Consultant called or with whom Consultant became acquainted during the term of this Consulting Agreement), software, developments, inventions, discoveries, ideas, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, and other business information disclosed by the Company, its affiliates or subsidiaries, either directly or indirectly, in writing, orally or by drawings or inspection of premises, parts, equipment, or other property of Company, its affiliates or subsidiaries. Notwithstanding the foregoing, Confidential Information shall not include any such information which Consultant can establish (i) was publicly known or made generally available prior to the time of disclosure to Consultant; (ii) becomes publicly known or made generally available after disclosure to Consultant through no wrongful action or inaction of Consultant; or (iii) is in the rightful possession of Consultant, without confidentiality obligations, at the time of disclosure as shown by Consultant's then-contemporaneous written records; provided that any combination of individual items of information shall not be deemed to be within any of the foregoing exceptions merely because one or more of the individual items are within such exception, unless the combination as a whole is within such exception.

B. ***Nonuse and Nondisclosure.*** During and after the term of this Consulting Agreement, Consultant will hold in the strictest confidence, and take all reasonable precautions to prevent any unauthorized use or disclosure of Confidential Information, and Consultant will not (i) use the Confidential Information for any purpose whatsoever other than as necessary for the performance of the Services on behalf of the Company, or (ii) subject to Consultant's right to engage in Protected Activity (as defined below), disclose the Confidential Information to any third party without the prior written consent of an authorized representative of the Company, except that Consultant may disclose Confidential Information to the extent compelled by applicable law; *provided however*, prior to such disclosure, Consultant shall provide prior written notice to Company and seek a protective order or such similar confidential protection as may be available under applicable law. Consultant agrees that no ownership of Confidential Information is conveyed to the Consultant. Without limiting the foregoing, Consultant shall not use or disclose any Company property, intellectual property rights, trade secrets or other proprietary know-how of the Company to invent, author, make, develop, design, or otherwise enable others to invent, author, make, develop, or design identical or substantially similar designs as those developed under this Consulting Agreement for any third party. Consultant agrees that Consultant's obligations under this Section 2.B shall continue after the termination of this Consulting Agreement.

C. ***Other Client Confidential Information.*** Consultant agrees that Consultant will not improperly use, disclose, or induce the Company to use any proprietary information or trade secrets of any former or current employer of Consultant or other person or entity with which Consultant has an obligation to keep in confidence. Consultant also agrees that Consultant will not bring onto the Company's premises or transfer onto the Company's technology systems any unpublished document, proprietary information, or trade secrets belonging to any third party unless disclosure to, and use by, the Company has been consented to in writing by such third party.

D. ***Third Party Confidential Information.*** Consultant recognizes that the Company has received and in the future will receive from third parties their confidential or proprietary information subject to a duty on the Company's part to maintain the confidentiality of such information and to use it only for certain limited purposes. Consultant agrees that at all times during the term of this Consulting Agreement and thereafter, Consultant owes the Company and such third parties a duty to hold all such confidential or proprietary information in the strictest confidence and not to use it or to disclose it to any person, firm, corporation, or other third party except as necessary in carrying out the Services for the Company consistent with the Company's agreement with such third party.

3. Ownership

A. ***Assignment of Inventions.*** Consultant agrees that all right, title, and interest in and to any copyrightable material, notes, records, drawings, designs, inventions, improvements, developments, discoveries, ideas and trade secrets conceived, discovered, authored, invented, developed or reduced to practice by Consultant, solely or in collaboration with others, during the term of this Consulting Agreement and arising out of, or in connection with, performing the Services under this Consulting Agreement and any copyrights, patents, trade secrets, mask work rights or other intellectual property rights relating to the foregoing (collectively, "***Inventions***"), are the sole property of the Company. Consultant also agrees to promptly make full written disclosure to the

Company of any Inventions and to deliver and assign (or cause to be assigned) and hereby irrevocably assigns fully to the Company all right, title and interest in and to the Inventions.

B. ***Pre-Existing Materials.*** Subject to Section 3.A, Consultant will provide the Company with prior written notice if, in the course of performing the Services, Consultant incorporates into any Invention or utilizes in the performance of the Services any invention, discovery, idea, original works of authorship, development, improvements, trade secret, concept, or other proprietary information or intellectual property right owned by Consultant or in which Consultant has an interest, prior to, or separate from, performing the Services under this Consulting Agreement ("***Prior Inventions***"), and the Company is hereby granted a nonexclusive, royalty-free, perpetual, irrevocable, transferable, worldwide license (with the right to grant and authorize sublicenses) to make, have made, use, import, offer for sale, sell, reproduce, distribute, modify, adapt, prepare derivative works of, display, perform, and otherwise exploit such Prior Inventions, without restriction, including, without limitation, as part of or in connection with such Invention, and to practice any method related thereto. Consultant will not incorporate any invention, discovery, idea, original works of authorship, development, improvements, trade secret, concept, or other proprietary information or intellectual property right owned by any third party into any Invention without Company's prior written permission.

C. ***Moral Rights.*** Any assignment to the Company of Inventions includes all rights of attribution, paternity, integrity, modification, disclosure and withdrawal, and any other rights throughout the world that may be known as or referred to as "moral rights," "artist's rights," "droit moral," or the like (collectively, "***Moral Rights***"). To the extent that Moral Rights cannot be assigned under applicable law, Consultant hereby waives and agrees not to enforce any and all Moral Rights, including, without limitation, any limitation on subsequent modification, to the extent permitted under applicable law.

D. ***Maintenance of Records.*** Consultant agrees to keep and maintain adequate, current, accurate, and authentic written records of all Inventions made by Consultant (solely or jointly with others) during the term of this Consulting Agreement, and for a period of three (3) years thereafter. The records will be in the form of notes, sketches, drawings, electronic files, reports, or any other format that is customary in the industry and/or otherwise specified by the Company. Such records are and remain the sole property of the Company at all times and upon Company's request, Consultant shall deliver (or cause to be delivered) the same.

E. ***Further Assurances.*** Consultant agrees to assist Company, or its designee, at the Company's expense, in every proper way to secure the Company's rights in Inventions in any and all countries, including the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, assignments and all other instruments that the Company may deem necessary in order to apply for, register, obtain, maintain, defend, and enforce such rights, and in order to deliver, assign and convey to the Company, its successors, assigns and nominees the sole and exclusive right, title, and interest in and to all Inventions and testifying in a suit or other proceeding relating to such Inventions. Consultant further agrees that Consultant's obligations under this Section 3.E shall continue after the termination of this Consulting Agreement.

F. ***Attorney-in-Fact.*** Consultant agrees that, if the Company is unable because of Consultant's unavailability, dissolution, mental or physical incapacity, or for any other reason, to secure Consultant's signature with respect to any Inventions, including, without limitation, for the purpose of applying for or pursuing any application for any United States or foreign patents or mask work or copyright registrations covering the Inventions assigned to the Company in Section 3.A, then Consultant hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Consultant's agent and attorney-in-fact, to act for and on Consultant's behalf to execute and file any papers and oaths and to do all other lawfully permitted acts with respect to such Inventions to further the prosecution and issuance of patents, copyright and mask work registrations with the same legal force and effect as if executed by Consultant. This power of attorney shall be deemed coupled with an interest, and shall be irrevocable.

4. Conflicting Obligations

A. Consultant represents and warrants that Consultant has no agreements, relationships, or commitments to any other person or entity that conflict with the provisions of this Consulting Agreement, Consultant's obligations to the Company under this Consulting Agreement, and/or Consultant's ability to perform the Services. Consultant will not enter into any such conflicting agreement during the term of this Consulting Agreement. For the avoidance of doubt, this Consulting Agreement shall not prevent Consultant from accepting other consulting or employment positions during or after the term of this Consulting Agreement, provided that Consultant complies with the terms and conditions of this Consulting Agreement.

B. From the Effective Date until six (6) months after the Effective Date, to the fullest extent permitted under applicable law, Consultant agrees not to directly or indirectly, whether as an officer, director, stockholder, partner, associate, consultant, or other capacity engage in, prepare to engage in, become financially interested in, or be employed by Broadcom, Celeno, Intel, Marvell, Mediatek or Qualcomm, or any subsidiaries or successors thereof; *provided, however*, that if such third party has any divisions or business units that are not directly or indirectly related to Wi-Fi, then such restriction shall not apply to such unrelated divisions or business units. Notwithstanding the foregoing, Consultant may own, as a passive investor, securities of such businesses so long as Consultant's direct holdings in any one such corporate entity is no more than 1% of the voting stock of such corporation. Consultant's violation of this Section 4.B will be considered a material breach under Section 6.B.

5. Return of Company Materials

Upon the termination of this Consulting Agreement, or upon Company's earlier request, Consultant will immediately deliver to the Company, and will not keep in Consultant's possession, recreate, or deliver to anyone else, any and all Company property, including, but not limited to, Confidential Information, tangible embodiments of the Inventions, all devices and equipment belonging to the Company, all electronically-stored information and passwords to access such property, those records maintained pursuant to Section 3.D and any reproductions of any of the foregoing items that Consultant may have in Consultant's possession or control.

6. **Term and Termination**

A. ***Term.*** The term of this Consulting Agreement will begin on the Effective Date of this Consulting Agreement and will continue until the earlier of (i) the six (6) month anniversary of the Effective Date, or (ii) termination as provided in Section 6.B.

B. ***Termination.*** The Company or Consultant may terminate this Consulting Agreement upon giving Consultant or the Company, respectively, fourteen (14) days prior written notice of such termination pursuant to Section 12.G of this Consulting Agreement. The Company may terminate this Consulting Agreement immediately and without prior notice if Consultant refuses to or is unable to perform the Services or is in breach of any material provision of this Consulting Agreement or the Transition Agreement and Release.

C. ***Survival.*** Upon any termination, all rights and duties of the Company and Consultant toward each other shall cease except Section 2 (Confidentiality), Section 3 (Ownership), Section 4 (Conflicting Obligations), Section 5 (Return of Company Materials), Section 6 (Term and Termination), Section 7 (Independent Contractor; Benefits), Section 9 (Nonsolicitation; Non-Interference), Section 10 (Limitation of Liability), Section 11 (Arbitration and Equitable Relief), and Section 12 (Miscellaneous) and the compensation and supplemental release obligations described in **Exhibit B-1**, will survive termination or expiration of this Consulting Agreement in accordance with their terms. In the event that Consultant terminates this Consulting Agreement or the Company terminates the Consulting Agreement for breach, Consultant shall not be entitled to any further compensation, benefits, vesting, acceleration of vesting or other rights hereunder.

7. **Independent Contractor; Benefits**

A. ***Independent Contractor.*** It is the express intention of the Company and Consultant that Consultant perform the Services as an independent contractor to the Company. Nothing in this Consulting Agreement shall in any way be construed to constitute Consultant as an agent, employee or representative of the Company. Without limiting the generality of the foregoing, Consultant is not authorized to bind the Company to any liability or obligation or to represent that Consultant has any such authority. Consultant agrees to furnish (or reimburse the Company for) all tools and materials necessary to accomplish this Consulting Agreement and shall incur all expenses associated with performance. Consultant acknowledges and agrees that Consultant is obligated to report as income all compensation received by Consultant pursuant to this Consulting Agreement. Consultant agrees to and acknowledges the obligation to pay all self-employment and other taxes on such income.

B. ***Benefits.*** Except as set forth in Section 3.c. of Exhibit B-1 hereto, the Company and Consultant agree that Consultant will receive no Company-sponsored benefits from the Company where benefits include, but are not limited to, paid vacation, sick leave, medical insurance and 401k participation. If Consultant is reclassified by a state or federal agency or court as the Company's employee, Consultant will become a reclassified employee and will receive no benefits from the Company, except those mandated by state or federal law, even if by the terms of the Company's benefit plans or programs of the Company in effect at the time of such reclassification, Consultant would otherwise be eligible for such benefits.

8. [RESERVED]

9. Nonsolicitation; Non-Interference; Code of Conduct

A. To the fullest extent permitted under applicable law, from the date of this Consulting Agreement until twelve (12) months after the termination of this Consulting Agreement for any reason (the "***Restricted Period***"), Consultant will not, without the Company's prior written consent, directly or indirectly, solicit any of the Company's employees to leave their employment, or attempt to solicit employees of the Company, either for Consultant or for any other person or entity. Consultant agrees that nothing in this Section 9 shall affect Consultant's continuing obligations under this Consulting Agreement during and after this twelve (12) month period, including, without limitation, Consultant's obligations under Section 2.

B. Consultant further agrees that Consultant shall not interfere with the Company's business relationships, and in particular shall refrain from any tortious interference, influence, encouragement or inducement, or any such attempt, of any of the Company's customers, end customers, partners, distributors, agents, vendors, suppliers, manufacturers, industry associations or other third parties associated with the Company to cease, limit, reduce, forego or not commence a business relationship with the Company.

C. Consultant shall comply in all respects with the Company's Code of Business Conduct and Ethics and other Company policies during the term of this Consulting Agreement.

10. Limitation of Liability

IN NO EVENT SHALL COMPANY BE LIABLE TO CONSULTANT OR TO ANY OTHER PARTY FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, OR DAMAGES FOR LOST PROFITS OR LOSS OF BUSINESS, HOWEVER CAUSED AND UNDER ANY THEORY OF LIABILITY, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHER THEORY OF LIABILITY, REGARDLESS OF WHETHER COMPANY WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY. IN NO EVENT SHALL COMPANY'S LIABILITY ARISING OUT OF OR IN CONNECTION WITH THIS CONSULTING AGREEMENT EXCEED THE AMOUNTS PAID BY COMPANY TO CONSULTANT UNDER THIS CONSULTING AGREEMENT FOR THE SERVICES, DELIVERABLES OR INVENTION GIVING RISE TO SUCH LIABILITY.

11. Arbitration and Equitable Relief

A. ***Arbitration*****.** IN CONSIDERATION OF CONSULTANT'S CONSULTING RELATIONSHIP WITH THE COMPANY, ITS PROMISE TO ARBITRATE ALL DISPUTES RELATED TO CONSULTANT'S CONSULTING RELATIONSHIP WITH THE COMPANY AND CONSULTANT'S RECEIPT OF THE COMPENSATION AND OTHER BENEFITS PAID TO CONSULTANT BY COMPANY, AT PRESENT AND IN THE FUTURE, CONSULTANT AGREES THAT ANY AND ALL CONTROVERSIES, CLAIMS, OR DISPUTES WITH ANYONE (INCLUDING COMPANY AND ANY EMPLOYEE, OFFICER, DIRECTOR,

SHAREHOLDER OR BENEFIT PLAN OF THE COMPANY IN THEIR CAPACITY AS SUCH OR OTHERWISE), ARISING OUT OF, RELATING TO, OR RESULTING FROM CONSULTANT'S CONSULTING OR OTHER RELATIONSHIP WITH THE COMPANY OR THE TERMINATION OF CONSULTANT'S CONSULTING OR OTHER RELATIONSHIP WITH THE COMPANY, INCLUDING ANY BREACH OF THIS CONSULTING AGREEMENT, SHALL BE SUBJECT TO BINDING ARBITRATION UNDER THE FEDERAL ARBITRATION ACT AND PURSUANT TO THE ARBITRATION PROVISIONS SET FORTH IN CALIFORNIA CODE OF CIVIL PROCEDURE SECTIONS 1280 THROUGH 1294.2 (THE "***CCP ACT***") AND PURSUANT TO CALIFORNIA LAW. CONSULTANT MAY BRING A PROCEEDING AS A PRIVATE ATTORNEY GENERAL AS PERMITTED BY LAW. THE FEDERAL ARBITRATION ACT GOVERNS THIS CONSULTING AGREEMENT AND SHALL CONTINUE TO APPLY WITH FULL FORCE AND EFFECT NOTWITHSTANDING THE APPLICATION OF PROCEDURAL RULES SET FORTH IN THE CCP ACT AND CALIFORNIA LAW. **CONSULTANT AGREES TO ARBITRATE ANY AND ALL COMMON LAW AND/OR STATUTORY CLAIMS UNDER LOCAL, STATE, OR FEDERAL LAW, INCLUDING, BUT NOT LIMITED TO, CLAIMS UNDER THE CALIFORNIA LABOR CODE, CLAIMS RELATING TO EMPLOYMENT OR INDEPENDENT CONTRACTOR STATUS, CLASSIFICATION, AND RELATIONSHIP WITH THE COMPANY, AND CLAIMS OF BREACH OF CONTRACT, EXCEPT AS PROHIBITED BY LAW. CONSULTANT ALSO AGREES TO ARBITRATE ANY AND ALL DISPUTES ARISING OUT OF OR RELATING TO THE INTERPRETATION OR APPLICATION OF THIS CONSULTING AGREEMENT TO ARBITRATE, BUT NOT TO DISPUTES ABOUT THE ENFORCEABILITY, REVOCABILITY OR VALIDITY OF THIS CONSULTING AGREEMENT TO ARBITRATE OR ANY PORTION HEREOF OR THE CLASS, COLLECTIVE AND REPRESENTATIVE PROCEEDING WAIVER HEREIN. WITH RESPECT TO ALL SUCH CLAIMS AND DISPUTES THAT CONSULTANT AGREES TO ARBITRATE, CONSULTANT HEREBY EXPRESSLY AGREES TO WAIVE, AND DOES WAIVE, ANY RIGHT TO A TRIAL BY JURY.** CONSULTANT FURTHER UNDERSTANDS THAT THIS CONSULTING AGREEMENT TO ARBITRATE ALSO APPLIES TO ANY DISPUTES THAT THE COMPANY MAY HAVE WITH CONSULTANT.

B. ***Procedure.*** CONSULTANT AGREES THAT ANY ARBITRATION WILL BE ADMINISTERED BY JUDICIAL ARBITRATION & MEDIATION SERVICES, INC. ("***JAMS***") PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES (THE "***JAMS RULES***"), WHICH ARE AVAILABLE AT http://www.jamsadr.com/rules-employment-arbitration/. CONSULTANT AGREES THAT THE USE OF THE JAMS RULES DOES NOT CHANGE CONSULTANT'S CLASSIFICATION TO THAT OF AN EMPLOYEE. TO THE CONTRARY, CONSULTANT REAFFIRMS THAT CONSULTANT IS AN INDEPENDENT CONTRACTOR. CONSULTANT AGREES THAT THE ARBITRATOR SHALL HAVE THE POWER TO DECIDE ANY MOTIONS BROUGHT BY ANY PARTY TO THE ARBITRATION, INCLUDING MOTIONS FOR SUMMARY JUDGMENT AND/OR ADJUDICATION AND MOTIONS TO DISMISS AND DEMURRERS APPLYING THE STANDARDS SET FORTH UNDER THE CALIFORNIA CODE OF CIVIL PROCEDURE. CONSULTANT AGREES THAT THE ARBITRATOR SHALL ISSUE A WRITTEN DECISION ON THE MERITS. CONSULTANT ALSO AGREES THAT THE ARBITRATOR SHALL HAVE THE POWER TO AWARD ANY

REMEDIES AVAILABLE UNDER APPLICABLE LAW, AND THAT THE ARBITRATOR SHALL AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY WHERE PROVIDED BY APPLICABLE LAW. CONSULTANT AGREES THAT THE DECREE OR AWARD RENDERED BY THE ARBITRATOR MAY BE ENTERED AS A FINAL AND BINDING JUDGMENT IN ANY COURT HAVING JURISDICTION THEREOF. CONSULTANT AGREES THAT THE ARBITRATOR SHALL ADMINISTER AND CONDUCT ANY ARBITRATION IN ACCORDANCE WITH CALIFORNIA LAW, INCLUDING THE CALIFORNIA CODE OF CIVIL PROCEDURE AND THE CALIFORNIA EVIDENCE CODE, AND THAT THE ARBITRATOR SHALL APPLY SUBSTANTIVE AND PROCEDURAL CALIFORNIA LAW TO ANY DISPUTE OR CLAIM, WITHOUT REFERENCE TO RULES OF CONFLICT OF LAW. TO THE EXTENT THAT THE JAMS RULES CONFLICT WITH CALIFORNIA LAW, CALIFORNIA LAW SHALL TAKE PRECEDENCE. CONSULTANT FURTHER AGREES THAT ANY ARBITRATION UNDER THIS CONSULTING AGREEMENT SHALL BE CONDUCTED IN SANTA CLARA COUNTY, CALIFORNIA.

C. ***Remedy.*** EXCEPT AS PROVIDED BY THE CCP ACT AND THIS CONSULTING AGREEMENT, ARBITRATION SHALL BE THE SOLE, EXCLUSIVE, AND FINAL REMEDY FOR ANY DISPUTE BETWEEN CONSULTANT AND THE COMPANY. ACCORDINGLY, EXCEPT AS PROVIDED FOR BY THE CCP ACT AND THIS CONSULTING AGREEMENT, NEITHER CONSULTANT NOR THE COMPANY WILL BE PERMITTED TO PURSUE COURT ACTION REGARDING CLAIMS THAT ARE SUBJECT TO ARBITRATION.

D. ***Availability of Injunctive Relief.*** IN ACCORDANCE WITH RULE 1281.8 OF THE CALIFORNIA CODE OF CIVIL PROCEDURE, THE PARTIES AGREE THAT ANY PARTY MAY ALSO PETITION THE COURT FOR INJUNCTIVE RELIEF WHERE EITHER PARTY ALLEGES OR CLAIMS A VIOLATION OF ANY AGREEMENT REGARDING INTELLECTUAL PROPERTY, CONFIDENTIAL INFORMATION OR NONINTERFERENCE. IN THE EVENT EITHER PARTY SEEKS INJUNCTIVE RELIEF, THE PREVAILING PARTY SHALL BE ENTITLED TO RECOVER REASONABLE COSTS AND ATTORNEYS' FEES.

E. ***Administrative Relief.*** CONSULTANT UNDERSTANDS THAT EXCEPT AS PERMITTED BY LAW THIS CONSULTING AGREEMENT DOES NOT PROHIBIT CONSULTANT FROM PURSUING CERTAIN ADMINISTRATIVE CLAIMS WITH LOCAL, STATE OR FEDERAL ADMINISTRATIVE BODIES OR GOVERNMENT AGENCIES SUCH AS THE DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION, THE NATIONAL LABOR RELATIONS BOARD, OR THE WORKERS' COMPENSATION BOARD. THIS CONSULTING AGREEMENT DOES, HOWEVER, PRECLUDE CONSULTANT FROM BRINGING ANY ALLEGED WAGE CLAIMS WITH THE DEPARTMENT OF LABOR STANDARDS ENFORCEMENT. LIKEWISE, THIS CONSULTING AGREEMENT DOES PRECLUDE CONSULTANT FROM PURSUING COURT ACTION REGARDING ANY ADMINISTRATIVE CLAIMS, EXCEPT AS PERMITTED BY LAW.

F. ***Voluntary Nature of Agreement.*** CONSULTANT ACKNOWLEDGES AND AGREES THAT CONSULTANT IS EXECUTING THIS CONSULTING AGREEMENT VOLUNTARILY AND WITHOUT ANY DURESS OR UNDUE INFLUENCE BY THE

COMPANY OR ANYONE ELSE. CONSULTANT FURTHER ACKNOWLEDGES AND AGREES THAT CONSULTANT HAS CAREFULLY READ THIS CONSULTING AGREEMENT AND THAT CONSULTANT HAS ASKED ANY QUESTIONS NEEDED FOR CONSULTANT TO UNDERSTAND THE TERMS, CONSEQUENCES AND BINDING EFFECT OF THIS CONSULTING AGREEMENT AND FULLY UNDERSTAND IT, INCLUDING THAT ***CONSULTANT IS WAIVING CONSULTANT'S RIGHT TO A JURY TRIAL*** . FINALLY, CONSULTANT AGREES THAT CONSULTANT HAS BEEN PROVIDED AN OPPORTUNITY TO SEEK THE ADVICE OF AN ATTORNEY OF CONSULTANT'S CHOICE BEFORE SIGNING THIS CONSULTING AGREEMENT.

12. Miscellaneous

A. ***Governing Law; Consent to Personal Jurisdiction.*** This Consulting Agreement shall be governed by the laws of the State of California, without regard to the conflicts of law provisions of any jurisdiction. To the extent that any lawsuit is permitted under this Consulting Agreement, the Parties hereby expressly consent to the personal and exclusive jurisdiction and venue of the state and federal courts located in California.

B. ***Assignability.*** This Consulting Agreement will be binding upon Consultant's heirs, executors, assigns, administrators, and other legal representatives, and will be for the benefit of the Company, its successors, and its assigns. There are no intended third-party beneficiaries to this Consulting Agreement, except as expressly stated. Except as may otherwise be provided in this Consulting Agreement, Consultant may not sell, assign or delegate any rights or obligations under this Consulting Agreement. Notwithstanding anything to the contrary herein, Company may assign this Consulting Agreement and its rights and obligations under this Consulting Agreement to any successor to all or substantially all of Company's relevant assets, whether by merger, consolidation, reorganization, reincorporation, sale of assets or stock, change of control or otherwise.

C. ***Entire Agreement.*** This Consulting Agreement constitutes the entire agreement and understanding between the Parties with respect to the subject matter herein and supersedes all prior written and oral agreements, discussions, or representations between the Parties. Consultant represents and warrants that Consultant is not relying on any statement or representation not contained in this Consulting Agreement. To the extent any terms set forth in any exhibit or schedule conflict with the terms set forth in this Consulting Agreement, the terms of this Consulting Agreement shall control unless otherwise expressly agreed by the Parties in such exhibit or schedule.

D. ***Headings.*** Headings are used in this Consulting Agreement for reference only and shall not be considered when interpreting this Consulting Agreement.

E. ***Severability.*** If a court or other body of competent jurisdiction finds, or the Parties mutually believe, any provision of this Consulting Agreement, or portion thereof, to be invalid or unenforceable, such provision will be enforced to the maximum extent permissible so as to effect the intent of the Parties, and the remainder of this Consulting Agreement will continue in full force and effect.

F. ***Modification, Waiver.*** No modification of or amendment to this Consulting Agreement, nor any waiver of any rights under this Consulting Agreement, will be effective unless in a writing signed by the Parties. Waiver by the Company of a breach of any provision of this Consulting Agreement will not operate as a waiver of any other or subsequent breach.

G. ***Notices.*** Any notice or other communication required or permitted by this Consulting Agreement to be given to a Party shall be in writing and shall be deemed given (i) if delivered personally or by commercial messenger or courier service, (ii) if sent by email from and to established email accounts with confirmation, or (iii) if mailed by U.S. registered or certified mail (return receipt requested), to the Party at the Party's address written below or at such other address as the Party may have previously specified by like notice. If by mail, delivery shall be deemed effective three business days after mailing in accordance with this Section 12.G.

(1) If to the Company, to:
Chief Executive Officer
1704 Automation Parkway, San Jose, CA 95131
With a copy to:
General Counsel
1704 Automation Parkway, San Jose, CA 95131

(2) If to Consultant, to the address for notice on the signature page to this Consulting Agreement or, if no such address is provided, to the last address of Consultant provided by Consultant to the Company.

H. ***Signatures.*** This Consulting Agreement may be signed in two counterparts, each of which shall be deemed an original, with the same force and effectiveness as though executed in a single document.

I. ***Protected Activity Not Prohibited.*** Consultant understands that nothing in this Consulting Agreement shall in any way limit or prohibit Consultant from engaging in any Protected Activity. For purposes of this Consulting Agreement, "***Protected Activity***" shall mean filing a charge, complaint, or report with, or otherwise communicating, cooperating, or participating in any investigation or proceeding that may be conducted by, any federal, state or local government agency or commission, including the Securities and Exchange Commission ("***Government Agencies***"). Consultant understands that in connection with such Protected Activity, Consultant is permitted to disclose documents or other information as permitted by law, and without giving notice to, or receiving authorization from, the Company. Notwithstanding the foregoing, Consultant agrees to take all reasonable precautions to prevent any unauthorized use or disclosure of any information that may constitute Company confidential information to any parties other than the Government Agencies. Consultant further understands that "***Protected Activity***" does not include the disclosure of any Company attorney-client privileged communications. Pursuant to the Defend Trade Secrets Act of 2016, Consultant is notified that an individual will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made in confidence to a federal, state, or local government official (directly or indirectly) or to an attorney *solely* for the purpose of reporting or investigating a suspected violation of law, or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if (and only if) such filing is made under seal. In addition, an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

IN WITNESS WHEREOF, the Parties hereto have executed this Consulting Agreement as of the date first written above.

CONSULTANT		**QUANTENNA COMMUNICATIONS, INC.**	
Signature:	/s/ Lionel Bonnot	Signature:	/s/ Sam Hedari
Name:	Lionel Bonnot	Name:	Sam Hedari
		Title:	CEO

Address for Notice:

____

____

EXHIBIT B-1

SERVICES AND COMPENSATION

Unless otherwise defined herein, the terms defined in the Consulting Agreement and the Transition Agreement and Release by and between the Parties (the "Transition Agreement") shall have the same defined meanings in this Exhibit B-1.

1. ***Contact.*** Consultant's principal Company contact:

Name: Sam Heidari

Title: CEO

Email:

Phone:

2. ***Services***. The Services will include, but will not be limited to, the following:

a. Monthly marketing report regarding industry marketing trends (or other areas to be mutually agreed upon by the Parties from time to time);

b. Customer and executive support for the Company's customers, including without limitation, Bouygues, Free, Orange and Sagemcom, from time to time as specifically requested by the Company's Chief Executive Officer (or as otherwise delegated by the Company's Chief Executive Officer);

c. Reasonable availability for teleconferences from time to time for transition matters and other consulting advice; and

d. Other *ad hoc* consulting services to be mutually agreed upon from time to time.

3. ***Compensation*.**

a. Contingent on Consultant's execution and non-revocation of the Supplemental Release, and subject to: (i) Consultant having rendered the Consulting Services in good faith for the full Consulting Term (or, if applicable, until a Qualified Termination as defined in subsection 3.c. below), and (ii) Consultant abiding by the terms of the Agreement, the Consulting Agreement, and the Confidentiality Agreement, as set forth in the Supplemental Release, the Company agrees that upon the Effective Date of the Supplemental Release, Consultant shall be entitled to the vesting of 100% of the shares subject to the RSU equity awards outstanding as of immediately prior to the expiration of the Consulting Term (the "Acceleration Shares") upon the effective date of the Supplemental Release (provided, however, that in no event shall the number of RSU shares subject to acceleration exceed 100% of the outstanding portion of the RSU award becoming vested and exercisable).

b. A "Qualified Termination" means that the Company has a Change of Control (as defined below) and this Consulting Agreement is terminated without Cause (as defined below) prior to its expiration by the successor corporation. A "Change of Control" means a change in the ownership of the Company which occurs on the date that any one person, or more than one person acting as a group ("Person"), acquires ownership of the stock of the Company that, with the stock held by such Person, constitutes more than 50% of the total voting power of the stock of the Company; provided, that for this subsection (i), the acquisition of additional stock by any one Person, who prior to such acquisition is considered to own more than 50% of the total voting power of the stock of the Company will not be considered a Change of Control. Further, if the stockholders of the Company immediately before such change in ownership continue to retain immediately after the change in ownership, in substantially the same proportions as their ownership of shares of the Company's voting stock immediately prior to the change in ownership, direct or indirect beneficial ownership of 50% or more of the total voting power of the stock of the Company or the ultimate parent entity of the Company, such event shall not be considered a Change of Control under this subsection. Further and for the avoidance of doubt, a transaction will not constitute a Change of Control if: (i) its sole purpose is to change the jurisdiction of the Company's incorporation, or (ii) its sole purpose is to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction. "Cause" means the Consultant's (1) failure to render the Consulting Services in good faith during the Consulting Term, or (2) failure to abide by the terms of the Agreement, the Consulting Agreement, and the Confidentiality Agreement, including without limitation, compliance with the Company's Code of Business Conduct and Ethics and other Company policies or unauthorized use or disclosure of any proprietary information of the Company or any other party to whom the Company owes an obligation of nondisclosure, (3) act of material dishonesty in connection with Consultant's responsibilities to, or on behalf of, the Company, or (4) violation of any federal, state, country, securities law or regulation in a manner detrimental to the business of the Company either during the term of the Consulting Agreement or prior employment with the Company.

c. If Consultant elects continuation coverage pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), within the time period prescribed pursuant to COBRA for Consultant and Consultant's eligible dependents, the Company will reimburse Consultant for the premiums necessary to continue the Company's health insurance benefits under COBRA for Consultant and Consultant's eligible dependents from April 1, 2018 until the earliest of (A) the expiration of the Consulting Term, or (B) the date upon which Consultant and Consultant's eligible dependents, as applicable, ceases to be eligible for coverage under COBRA.

d. All payments provided for under the Agreement (including this Exhibit A-1) are intended to be exempt from or otherwise comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations and guidance thereunder (together, "**Section 409A**"), so that none of the payments and benefits to be provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to be exempt or so comply. Each payment and benefit payable under the Agreement (including this Exhibit A-1) is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations. In no event will the Company reimburse Consultant for any taxes that may be imposed on Consultant as a result of Section 409A.

This **Exhibit B-1** is accepted and agreed upon as of December 31, 2017.

CONSULTANT		QUANTENNA COMMUNICATIONS, INC.	
Signature:	/s/ Lionel Bonnot	Signature:	/s/ Sam Hedari
Name:	Lionel Bonnot	Name:	Sam Hedari
		Title:	CEO

<u>EXHIBIT C</u>
(Supplemental Release)

1. <u>Compliance and General Release</u>. In consideration of the mutual promises, and consideration provided in the Transition Agreement and Release, effective as of __________________, 20___ (the "Agreement") and the Consulting Agreement dated as of December 31, 2017, Lionel Bonnot ("Consultant") hereby verifies and confirms Consultant's renewed agreement to the terms of the Agreement and the Consulting Agreement, including but not limited to each of the representations contained therein and continued compliance therewith, the release and waiver of any and all claims relating to the services provided to the Company, and further extends such release and waiver to any claims that may have arisen since the effective date of the Agreement and during the Consulting Period as defined therein, including but not limited to claims under any local ordinance or country or state or federal employment law, including laws prohibiting discrimination in employment on the basis of race, sex, age, disability, national origin, or religion, as well as any claims for misclassification, wrongful discharge, breach of contract, attorneys' fees, costs, or any claims of amounts due for fees, commissions, expenses, salary, bonuses, profit sharing or fringe benefits (the "Supplemental Release"). Any capitalized terms used but not defined herein have the meanings assigned to them in the Agreement or Consulting Agreement, as applicable.

2. <u>Supplemental Release Consideration (RSU Acceleration)</u>. Contingent on Consultant's execution and non-revocation of this Supplemental Release, and subject to: (i) Consultant having rendered the Consulting Services in good faith for the full Consulting Term (or, if applicable, until a Qualified Termination as defined in the Consulting Agreement), and (ii) Consultant abiding by the terms of the Agreement, the Consulting Agreement, and the Confidentiality Agreement, the Company agrees that upon the Effective Date of the Supplemental Release, Consultant shall be entitled to the vesting of 100% of the shares subject to the RSU equity awards outstanding as of immediately prior to the expiration of the Consulting Term (the "Acceleration Shares") upon the effective date of the Supplemental Release (provided, however, that in no event shall the number of RSU shares subject to acceleration exceed 100% of the outstanding portion of the RSU award becoming vested and exercisable).. (For the avoidance of doubt, such Acceleration Shares shall not be forfeited immediately upon the expiration of the Consulting Term so as to be available for potential acceleration of vesting pursuant to the prior sentence; if the Supplemental Release does not become effective within the time frame required therein, the Acceleration Shares shall thereafter immediately be forfeited for no consideration.) Consultant acknowledges that without continued compliance with the Agreement, the Consulting Agreement and execution and non-revocation of the Supplemental Release, Consultant is otherwise not entitled to the consideration listed in this Section 2. In all cases, except as may be required by Section 19 of the Agreement (Taxes; Section 409A), any Accelerated Shares due to Consultant will be made available to Consultant within sixty (60) days following the end of the Consulting Term.

3. <u>Return of Company Property</u>. Consultant's signature below constitutes Consultant's certification under penalty of perjury that Consultant has returned all documents and other items provided to Consultant by the Company, developed or obtained by Consultant in connection with Consultant's service relationship with the Company, or otherwise belonging to the Company.

4. <u>Payment of All Compensation and Fees</u>. Consultant acknowledges and represents that, other than the consideration set forth in this Supplemental Release, the Company has paid or provided

all payments, fees, severance, reimbursable expenses, stock, stock options, vesting, and any and all other compensation due to Consultant.

5. ARBITRATION. THE PARTIES AGREE THAT ANY AND ALL DISPUTES ARISING OUT OF THE TERMS OF THE AGREEMENT, THE CONFIDENTIALITY AGREEMENT, OR THIS SUPPLEMENTAL RELEASE, THEIR INTERPRETATION, AND ANY OF THE MATTERS HEREIN RELEASED, SHALL BE SUBJECT TO ARBITRATION IN SANTA CLARA COUNTY, BEFORE JUDICIAL ARBITRATION & MEDIATION SERVICES ("JAMS"), PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES ("JAMS RULES"). CONSULTANT AGREES THAT THE USE OF THE JAMS RULES DOES NOT CHANGE CONSULTANT'S CLASSIFICATION TO THAT OF AN EMPLOYEE. THE ARBITRATOR MAY GRANT INJUNCTIONS AND OTHER RELIEF IN SUCH DISPUTES. THE ARBITRATOR SHALL ADMINISTER AND CONDUCT ANY ARBITRATION IN ACCORDANCE WITH CALIFORNIA LAW, INCLUDING THE CALIFORNIA CODE OF CIVIL PROCEDURE, AND THE ARBITRATOR SHALL APPLY SUBSTANTIVE AND PROCEDURAL CALIFORNIA LAW TO ANY DISPUTE OR CLAIM, WITHOUT REFERENCE TO ANY CONFLICT-OF-LAW PROVISIONS OF ANY JURISDICTION. TO THE EXTENT THAT THE JAMS RULES CONFLICT WITH CALIFORNIA LAW, CALIFORNIA LAW SHALL TAKE PRECEDENCE. THE DECISION OF THE ARBITRATOR SHALL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. THE PARTIES AGREE THAT THE PREVAILING PARTY IN ANY ARBITRATION SHALL BE ENTITLED TO INJUNCTIVE RELIEF IN ANY COURT OF COMPETENT JURISDICTION TO ENFORCE THE ARBITRATION AWARD. THE PARTIES TO THE ARBITRATION SHALL EACH PAY AN EQUAL SHARE OF THE COSTS AND EXPENSES OF SUCH ARBITRATION, AND EACH PARTY SHALL SEPARATELY PAY FOR ITS RESPECTIVE COUNSEL FEES AND EXPENSES; PROVIDED, HOWEVER, THAT THE ARBITRATOR SHALL AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, EXCEPT AS PROHIBITED BY LAW. THE PARTIES HEREBY AGREE TO WAIVE THEIR RIGHT TO HAVE ANY DISPUTE BETWEEN THEM RESOLVED IN A COURT OF LAW BY A JUDGE OR JURY. NOTWITHSTANDING THE FOREGOING, THIS SECTION WILL NOT PREVENT EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF (OR ANY OTHER PROVISIONAL REMEDY) FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF THEIR DISPUTE RELATING TO THIS AGREEMENT AND THE AGREEMENTS INCORPORATED HEREIN BY REFERENCE. SHOULD ANY PART OF THE ARBITRATION AGREEMENT CONTAINED IN THIS PARAGRAPH CONFLICT WITH ANY OTHER ARBITRATION AGREEMENT BETWEEN THE PARTIES, THE PARTIES AGREE THAT THIS ARBITRATION AGREEMENT SHALL GOVERN.

6. Entire Agreement. The Agreement and this Supplemental Release represent the entire agreement and understanding between the Company and Consultant concerning the subject matter of this Agreement and Consultant's relationship with and separation from the Company and the events leading thereto and associated therewith, and supersedes and replaces any and all prior agreements and understandings concerning the subject matter of this Supplemental Release and Consultant's relationship with the Company, with the exception of the Confidentiality Agreement and the Stock Agreements, except as amended by the Agreement. For purposes of clarity, the arbitration provision of this Supplemental Release (as set forth herein) supersedes and replaces the arbitration provisions in the Agreement and the Confidentiality Agreement.

7. Expiration of Supplemental Release. Consultant understands that this Supplemental Release shall be null and void if not executed by Consultant within twenty one (21) days following the end of the Consulting Term. Each Party has seven (7) days after that Party signs this Supplemental Release to revoke it. This Supplemental Release will become effective on the eighth (8th) day after Consultant signed this Supplemental Release, so long as it has been signed by the Parties and has not been revoked by either Party before that date (the "Effective Date").

8. Voluntary Execution of Agreement. Consultant understands and agrees that Consultant executed this Supplemental Release voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Consultant's claims against the Company and any of the other Releasees (as defined in the Agreement). Consultant further acknowledges that: (a) Consultant has read this Supplemental Release; (b) Consultant has been represented in the preparation, negotiation, and execution of this Supplemental Release by legal counsel of Consultant's own choice or has elected not to retain legal counsel; (c) Consultant understands the terms and consequences of this Supplemental Release and of the releases it contains; and (d) Consultant is fully aware of the legal and binding effect of this Supplemental Release.

IN WITNESS WHEREOF, the Parties have executed this Supplemental Release on the respective dates set forth below.

Dated: ____________________, 2018 ______________________________________

LIONEL BONNOT

QUANTENNA COMMUNICATIONS, INC.

Dated: ____________________, 2018

Signature: ______________________________

Print Name: ______________________________

Title: ______________________________

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO
EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Sam Heidari, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Quantenna Communications, Inc.;

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 30, 2018	By: /s/ Sam Heidari
	Name: Sam Heidari
	Title: Chief Executive Officer
	(Principal Executive Officer)

Exhibit 31.2

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO
EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Sean Sobers, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Quantenna Communications, Inc.;

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 30, 2018	By: /s/ Sean Sobers
	Name: Sean Sobers
	Title: Chief Financial Officer
	(Principal 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, Sam Heidari, the Chief Executive Officer of Quantenna Communications, Inc., hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Quarterly Report on Form 10-Q of Quantenna Communications, Inc. for the fiscal quarter ended April 1, 2018 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 Quantenna Communications, Inc.

Date: April 30, 2018	By:	/s/ Sam Heidari
	Name:	Sam Heidari
	Title:	Chief Executive Officer
		(Principal Executive Officer)

I, Sean Sobers, the Chief Financial Officer of Quantenna Communications, Inc., hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Quarterly Report on Form 10-Q of Quantenna Communications, Inc. for the fiscal quarter ended April 1, 2018 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 Quantenna Communications, Inc.

Date: April 30, 2018	By:	/s/ Sean Sobers
	Name:	Sean Sobers
	Title:	Chief Financial Officer
		(Principal Financial Officer)