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 30, 2019

or

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

For the transition period from to

Commission File Number 001-35594

PALO ALTO NETWORKS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**20-2530195**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

3000 Tannery Way
Santa Clara, California 95054
(Address of principal executive office, including zip code)

(408) 753-4000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $0.0001 par value per share	PANW	New York Stock Exchange

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

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

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

The number of shares outstanding of the registrant's common stock as of May 16, 2019 was 95,974,993 .

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PART I

ITEM 1. FINANCIAL STATEMENTS

PALO ALTO NETWORKS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in millions, except per share data)

	April 30, 2019	July 31, 2018
		(As Adjusted)
Assets		
Current assets:		
Cash and cash equivalents	$ 1,314.9	$ 2,506.9
Short-term investments	1,733.2	896.5
Accounts receivable, net of allowance for doubtful accounts of $0.8 and $1.2 at April 30, 2019 and July 31, 2018, respectively	407.5	467.0
Prepaid expenses and other current assets	261.9	268.1
Total current assets	3,717.5	4,138.5
Property and equipment, net	275.0	273.1
Long-term investments	669.9	547.5
Goodwill	1,027.3	522.8
Intangible assets, net	234.2	140.8
Other assets	337.9	326.2
Total assets	$ 6,261.8	$ 5,948.9
Liabilities, temporary equity, and stockholders' equity		
Current liabilities:		
Accounts payable	$ 68.6	$ 49.4
Accrued compensation	144.0	163.7
Accrued and other liabilities	178.5	124.6
Deferred revenue	1,449.6	1,213.6
Convertible senior notes, net	158.1	550.4
Total current liabilities	1,998.8	2,101.7
Convertible senior notes, net	1,414.7	1,369.7
Long-term deferred revenue	1,182.6	1,065.7
Other long-term liabilities	211.1	229.6
Commitments and contingencies (Note 10)		
Temporary equity	1.1	21.9
Stockholders' equity:		
Preferred stock; $0.0001 par value; 100.0 shares authorized; none issued and outstanding at April 30, 2019 and July 31, 2018	—	—
Common stock and additional paid-in capital; $0.0001 par value; 1,000.0 shares authorized; 95.9 and 93.6 shares issued and outstanding at April 30, 2019 and July 31, 2018, respectively	2,340.8	1,967.4
Accumulated other comprehensive loss	(7.2)	(16.4)
Accumulated deficit	(880.1)	(790.7)
Total stockholders' equity	1,453.5	1,160.3
Total liabilities, temporary equity, and stockholders' equity	$ 6,261.8	$ 5,948.9

See notes to condensed consolidated financial statements.

PALO ALTO NETWORKS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in millions, except per share data)

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018 (As Adjusted)	2019	2018 (As Adjusted)
Revenue:				
Product	$ 278.4	$ 218.1	$ 790.5	$ 607.7
Subscription and support	448.2	349.6	1,303.3	1,007.4
Total revenue	726.6	567.7	2,093.8	1,615.1
Cost of revenue:				
Product	78.0	68.9	233.7	190.4
Subscription and support	126.9	91.0	357.3	270.2
Total cost of revenue	204.9	159.9	591.0	460.6
Total gross profit	521.7	407.8	1,502.8	1,154.5
Operating expenses:				
Research and development	139.1	99.6	380.8	290.4
Sales and marketing	339.0	271.4	973.6	784.3
General and administrative	62.3	82.1	192.6	201.1
Total operating expenses	540.4	453.1	1,547.0	1,275.8
Operating loss	(18.7)	(45.3)	(44.2)	(121.3)
Interest expense	(20.6)	(6.5)	(63.9)	(19.2)
Other income, net	18.2	8.6	47.2	18.3
Loss before income taxes	(21.1)	(43.2)	(60.9)	(122.2)
Provision for (benefit from) income taxes	(0.9)	(2.8)	0.2	7.0
Net loss	$ (20.2)	$ (40.4)	$ (61.1)	$ (129.2)
Net loss per share, basic and diluted	$ (0.21)	$ (0.44)	$ (0.65)	$ (1.42)
Weighted-average shares used to compute net loss per share, basic and diluted	94.4	91.9	94.1	91.3

See notes to condensed consolidated financial statements .

PALO ALTO NETWORKS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited, in millions)

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018	2019	2018
		(As Adjusted)		(As Adjusted)
Net loss	$ (20.2)	$ (40.4)	$ (61.1)	$ (129.2)
Other comprehensive income (loss), net of tax:				
Change in unrealized gains (losses) on investments	2.4	(1.9)	8.1	(9.1)
Change in unrealized gains (losses) on cash flow hedges	0.2	(4.1)	1.1	(0.7)
Other comprehensive income (loss)	2.6	(6.0)	9.2	(9.8)
Comprehensive loss	$ (17.6)	$ (46.4)	$ (51.9)	$ (139.0)

See notes to condensed consolidated financial statements .

PALO ALTO NETWORKS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited, in millions)

	Three Months Ended April 30, 2019				
	Common Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance as of January 31, 2019	93.7	$ 1,941.5	$ (9.8)	$ (859.9)	$ 1,071.8
Net loss	—	—	—	(20.2)	(20.2)
Other comprehensive income	—	—	2.6	—	2.6
Issuance of common stock in connection with employee equity incentive plans	1.0	36.6	—	—	36.6
Taxes paid related to net share settlement of equity awards	—	(3.6)	—	—	(3.6)
Share-based compensation for equity-based awards	—	140.4	—	—	140.4
Issuance of common and restricted common stock in connection with acquisition	1.2	224.2	—	—	224.2
Temporary equity reclassification	—	1.7	—	—	1.7
Balance as of April 30, 2019	95.9	$ 2,340.8	$ (7.2)	$ (880.1)	$ 1,453.5

	Three Months Ended April 30, 2018				
	Common Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
				(As Adjusted)	(As Adjusted)
Balance as of January 31, 2018	91.8	$ 1,575.9	$ (7.2)	$ (757.3)	$ 811.4
Net loss	—	—	—	(40.4)	(40.4)
Other comprehensive loss	—	—	(6.0)	—	(6.0)
Issuance of common stock in connection with employee equity incentive plans	1.1	29.4	—	—	29.4
Taxes paid related to net share settlement of equity awards	—	(11.4)	—	—	(11.4)
Share-based compensation for equity-based awards	—	117.9	—	—	117.9
Temporary equity reclassification	—	5.8	—	—	5.8
Balance as of April 30, 2018	92.9	$ 1,717.6	$ (13.2)	$ (797.7)	$ 906.7

	Nine Months Ended April 30, 2019				
	Common Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 31, 2018 (as adjusted)	93.6	$ 1,967.4	$ (16.4)	$ (790.7)	$ 1,160.3
Cumulative-effect adjustment from adoption of new accounting pronouncement	—	—	—	(28.3)	(28.3)
Net loss	—	—	—	(61.1)	(61.1)
Other comprehensive income	—	—	9.2	—	9.2
Issuance of common stock in connection with employee equity incentive plans	3.0	70.5	—	—	70.5
Taxes paid related to net share settlement of equity awards	—	(24.6)	—	—	(24.6)
Share-based compensation for equity-based awards	—	423.0	—	—	423.0
Repurchase and retirement of common stock	(1.9)	(330.0)	—	—	(330.0)
Settlement of convertible notes	1.7	(12.2)	—	—	(12.2)
Common stock received from exercise of note hedges	(1.7)	—	—	—	—
Issuance of common and restricted common stock in connection with acquisition	1.2	225.9	—	—	225.9
Temporary equity reclassification	—	20.8	—	—	20.8
Balance as of April 30, 2019	95.9	$ 2,340.8	$ (7.2)	$ (880.1)	$ 1,453.5

	Nine Months Ended April 30, 2018				
	Common Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
				(As Adjusted)	(As Adjusted)
Balance as of July 31, 2017	91.5	$ 1,599.7	$ (3.4)	$ (668.5)	$ 927.8
Net loss	—	—	—	(129.2)	(129.2)
Other comprehensive loss	—	—	(9.8)	—	(9.8)
Issuance of common stock in connection with employee equity incentive plans	3.1	53.0	—	—	53.0
Taxes paid related to net share settlement of equity awards	—	(34.3)	—	—	(34.3)
Share-based compensation for equity-based awards	—	376.9	—	—	376.9
Repurchase and retirement of common stock	(1.7)	(250.0)	—	—	(250.0)
Temporary equity reclassification	—	(27.7)	—	—	(27.7)
Balance as of April 30, 2018	92.9	$ 1,717.6	$ (13.2)	$ (797.7)	$ 906.7

See notes to condensed consolidated financial statements.

PALO ALTO NETWORKS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in millions)

	Nine Months Ended April 30,	
	2019	2018
		(As Adjusted)
Cash flows from operating activities		
Net loss	$ (61.1)	$ (129.2)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Share-based compensation for equity-based awards	417.5	373.1
Depreciation and amortization	111.6	68.0
Cease-use loss related to facility exit	4.1	41.1
Amortization of deferred contract costs	147.6	101.9
Amortization of debt discount and debt issuance costs	53.6	19.2
Amortization of investment premiums, net of accretion of purchase discounts	(13.0)	0.6
Loss on conversions of convertible senior notes	2.6	—
Repayments of convertible senior notes attributable to debt discount	(67.1)	—
Changes in operating assets and liabilities, net of effects of acquisitions:		
Accounts receivable, net	63.8	71.8
Prepaid expenses and other assets	(164.4)	(177.1)
Accounts payable	23.2	(4.6)
Accrued compensation	(22.7)	(24.4)
Accrued and other liabilities	(10.7)	41.9
Deferred revenue	339.1	378.2
Net cash provided by operating activities	824.1	760.5
Cash flows from investing activities		
Purchases of investments	(2,426.6)	(387.9)
Proceeds from sales of investments	3.5	—
Proceeds from maturities of investments	1,506.8	531.0
Business acquisitions, net of cash acquired	(382.8)	(370.1)
Purchases of property, equipment, and other assets	(78.1)	(86.6)
Net cash used in investing activities	(1,377.2)	(313.6)
Cash flows from financing activities		
Repayments of convertible senior notes attributable to principal and equity component	(348.5)	—
Payments for debt issuance costs	(3.7)	—
Repurchases of common stock	(330.0)	(259.1)
Proceeds from sales of shares through employee equity incentive plans	70.3	52.6
Payments for taxes related to net share settlement of equity awards	(24.6)	(34.3)
Payment of deferred consideration related to prior year business acquisition	(1.3)	—
Net cash used in financing activities	(637.8)	(240.8)
Net increase (decrease) in cash, cash equivalents, and restricted cash	(1,190.9)	206.1
Cash, cash equivalents, and restricted cash—beginning of period	2,509.2	745.5
Cash, cash equivalents, and restricted cash—end of period	$ 1,318.3	$ 951.6

Reconciliation of cash, cash equivalents, and restricted cash to the condensed consolidated balance sheets		
Cash and cash equivalents	$ 1,314.9	$ 949.0
Restricted cash included in prepaid expenses and other current assets	2.2	1.3
Restricted cash included in other assets	1.2	1.3
Total cash, cash equivalents, and restricted cash	$ 1,318.3	$ 951.6

Non-cash investing and financing activities

Equity consideration for business acquisitions	$	(225.9)	$	—
Property and equipment acquired through lease incentives	$	—	$	37.8

See notes to condensed consolidated financial statements .

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1 . Description of Business and Summary of Significant Accounting Policies

Description of Business

Palo Alto Networks, Inc. (the “Company,” “we,” “us,” or “our”), located in Santa Clara, California, was incorporated in March 2005 under the laws of the State of Delaware and commenced operations in April 2005. We offer a security operating platform that empowers enterprises, service providers, and government entities to secure their organizations by safely enabling applications and data running in their networks, on their endpoints, and in the cloud, and by preventing breaches that stem from targeted cyberattacks.

Basis of Presentation and Principles of Consolidation

The accompanying condensed consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles (“GAAP”) , consistent in all material respects with those applied in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018 , filed with the Securities and Exchange Commission (“SEC”) on September 13, 2018. Our condensed consolidated financial statements include our accounts and our wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Our condensed consolidated financial statements are unaudited, but include all adjustments of a normal recurring nature necessary for a fair presentation of our quarterly results. We have made estimates and judgments affecting the amounts reported in our condensed consolidated financial statements and the accompanying notes. The actual results that we experience may differ materially from our estimates.

Certain prior period amounts have been reclassified to conform to our current period presentation. In addition, certain prior period amounts have been adjusted due to our retrospective adoption of new accounting guidance related to revenue from contracts with customers and new accounting guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to “Recently Adopted Accounting Pronouncements” below for more information.

Our condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and related notes in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018 .

Summary of Significant Accounting Policies

There have been no material changes to our significant accounting policies as of and for the nine months ended April 30, 2019 , as compared to the significant accounting policies described in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018 , except for the change in our accounting policies for revenue recognition and deferred contract costs due to our adoption of new accounting guidance related to revenue from contracts with customers. Refer to “Recently Adopted Accounting Pronouncements” below, Note 2 . Revenue, and Note 8 . Deferred Contract Costs for more information.

Recently Adopted Accounting Pronouncements

Implementation Costs Incurred in a Cloud Computing Arrangement

In August 2018, the Financial Accounting Standards Board (“FASB”) issued authoritative guidance on customers’ accounting for implementation costs incurred in a cloud computing arrangement that is a service contract, which requires customers to apply internal-use software guidance to determine the implementation costs that are able to be capitalized. Under the new standard, capitalized implementation costs are generally amortized over the term of the arrangement, beginning when the module or component of the hosting arrangement is ready for its intended use. We early adopted this standard in our second quarter of fiscal 2019 on a prospective basis. The adoption of the standard did not have a material impact on our condensed consolidated financial statements.

Business Combinations - Definition of a Business

In January 2017, the FASB issued authoritative guidance clarifying the definition of a business to assist companies with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. We adopted this standard in our first quarter of fiscal 2019 on a prospective basis. The adoption of the standard did not have an impact on our condensed consolidated financial statements.

Statement of Cash Flows - Restricted Cash

In November 2016, the FASB issued authoritative guidance on the presentation of restricted cash or restricted cash equivalents in the statement of cash flows. Under the new standard, restricted cash or restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. We adopted this standard in our first quarter of fiscal 2019 on a retrospective basis. The adoption of the standard did not have a material impact on our condensed consolidated financial statements because our restricted cash balance has not been material.

Income Taxes - Intra-Entity Asset Transfers

In October 2016, the FASB issued authoritative guidance requiring the recognition of income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. We adopted the standard in our first quarter of fiscal 2019 on a modified retrospective basis. As a result, we recorded the cumulative effect of the change as an increase to accumulated deficit of $28.3 million , with a corresponding decrease to prepaid expenses and other current assets and other assets in our condensed consolidated balance sheets as of August 1, 2018, the date of adoption. The cumulative effect adjustment represents the reclassification of unrecognized income tax effects from intra-entity transfers of assets other than inventory that occurred prior to the date of adoption.

Statement of Cash Flows - Classification of Certain Cash Receipts and Cash Payments

In August 2016, the FASB issued new authoritative guidance addressing eight specific cash flow issues with the objective of reducing the existing diversity in practice in how certain transactions are presented and classified in the statement of cash flows. We adopted this standard in our first quarter of fiscal 2019 on a retrospective basis. The adoption of the standard did not have an impact on our condensed consolidated financial statements.

Financial Instruments - Recognition and Measurement

In January 2016, the FASB issued authoritative guidance requiring equity instruments to be measured at fair value with changes in fair value recognized through net income. We adopted this standard in our first quarter of fiscal 2019 on a prospective basis for non-marketable equity securities and a modified retrospective basis for marketable equity investments. The adoption of the standard did not have an impact on our condensed consolidated financial statements.

Revenue Recognition

In May 2014, the FASB issued new authoritative guidance on revenue from contracts with customers. The new standard provides principles for recognizing revenue when control of promised goods or services is transferred to customers with the expected consideration in exchange for those goods or services, as well as guidance on the recognition of costs related to obtaining and fulfilling customer contracts. The standard also requires expanded disclosures about the nature, amount, timing, and uncertainty of revenues 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. We adopted the standard in our first quarter of fiscal 2019 using the full retrospective method.

The adoption of the new standard did not have a material impact on our condensed consolidated financial statements for the fiscal years ended July 31, 2018 and 2017, with the exception of the accounting for incremental costs to obtain customer contracts, which primarily consist of sales commissions, due to the longer period of amortization. Under the previous accounting guidance, we deferred and amortized these costs over the term of the related contract. Under the new standard, we defer and amortize these costs for initial contracts that are not commensurate with renewal commissions over a benefit period of five years , which is typically longer than the initial contract term.

The adoption of the standard using the full retrospective method required us to restate the prior periods presented in this Quarterly Report on Form 10-Q, with the cumulative effect of the change of $168.2 million reflected in accumulated deficit as of July 31, 2017. In adopting the new standard, we have also applied a transition practical expedient and have not disclosed revenue expected to be recognized from remaining performance obligations for periods prior to August 1, 2018.

The following tables present the impact of the adoption of the standard on our previously reported results (in millions, except per share data):

	Three Months Ended April 30, 2018			Nine Months Ended April 30, 2018		
	As Previously Reported	Impact of Adoption	As Adjusted	As Previously Reported	Impact of Adoption	As Adjusted
Condensed Consolidated Statements of Operations						
Product revenue	$ 215.2	$ 2.9	$ 218.1	$ 603.9	$ 3.8	$ 607.7
Subscription and support revenue	351.9	(2.3)	349.6	1,011.1	(3.7)	1,007.4
Total revenue	567.1	0.6	567.7	1,615.0	0.1	1,615.1
Total cost of revenue	159.9	—	159.9	460.6	—	460.6
Total operating expenses	458.8	(5.7)	453.1	1,292.1	(16.3)	1,275.8
Operating loss	(51.6)	6.3	(45.3)	(137.7)	16.4	(121.3)
Net loss	(46.7)	6.3	(40.4)	(145.6)	16.4	(129.2)
Net loss per share, basic and diluted	$ (0.51)	$ 0.07	$ (0.44)	$ (1.59)	$ 0.17	$ (1.42)

	July 31, 2018		
	As Previously Reported	Impact of Adoption	As Adjusted
Condensed Consolidated Balance Sheet			
Accounts receivable, net	$ 467.3	$ (0.3)	$ 467.0
Prepaid expenses and other current assets	261.3	6.8	268.1
Other assets	206.8	119.4	326.2
Accrued and other liabilities	107.0	17.6	124.6
Deferred revenue	1,268.9	(55.3)	1,213.6
Long-term deferred revenue	1,096.0	(30.3)	1,065.7
Accumulated deficit	$ (984.6)	$ 193.9	$ (790.7)

The adoption of the standard did not impact net cash flows from operating, investing, or financing activities in our condensed consolidated statements of cash flows.

Recently Issued Accounting Pronouncements

Financial Instruments - Credit Losses

In June 2016, the FASB issued new authoritative guidance on the accounting for credit losses on most financial assets and certain financial instruments. The standard replaces the existing incurred loss model with an expected credit loss model for financial assets measured at amortized cost, including trade receivables, and requires that credit losses on available-for-sale debt securities be presented as an allowance rather than as a write-down. The standard is effective for us in our first quarter of fiscal 2021 and will be applied on a modified retrospective basis. Early adoption is permitted beginning our first quarter of fiscal 2020. We are currently evaluating adoption timing and whether this standard will have a material impact on our condensed consolidated financial statements.

Leases

In February 2016, the FASB issued new authoritative guidance on lease accounting. Among its provisions, the standard requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet for operating leases and also requires additional qualitative and quantitative disclosures about lease arrangements. The standard is effective for us in our first quarter of fiscal 2020 and will be applied on a modified retrospective basis, with the option to elect certain practical expedients. Early adoption is permitted; however, we plan to adopt the new standard in our first quarter of fiscal 2020. We expect to recognize right-of-use assets and operating lease liabilities on our consolidated balance sheets upon adoption for our operating leases disclosed in Note 10 . Commitments and Contingencies, which will materially increase our total assets and liabilities. We do not expect the adoption of this standard to have a material impact to our consolidated statements of operations and consolidated statements of cash flows. We continue to evaluate the accounting, transition, and disclosure requirements of this standard, including its impact on our systems, accounting policies, and processes.

2 . Revenue

Revenue Recognition

Our revenue consists of product revenue and subscription and support revenue. Revenue is recognized when control of promised products, subscriptions and support services are transferred to customers with the expected consideration in exchange for those products and services. Depending on who the contract is with, our customers are either our channel partners or our end-customers.

We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer.
- Identification of the performance obligations in the contract.
- Determination of the transaction price.
- Allocation of the transaction price to the performance obligations in the contract.
- Recognition of revenue when, or as, we satisfy a performance obligation.

Revenues are reported net of sales taxes. Shipping charges billed to channel partners are included in revenues and related costs are included in cost of revenue.

Product Revenue

Product revenue is derived primarily from sales of our appliances. Product revenue also includes revenue derived from software licenses of Panorama and the VM-Series. We recognize product revenue at the time of hardware shipment or delivery of software license.

Subscription and Support Revenue

Subscription and support revenue is derived primarily from sales of our subscription and support offerings. We recognize subscription and support revenue over time as the services are performed. Our contractual subscription and support contracts are typically one to five years .

Contracts with Multiple Performance Obligations

The majority of our contracts with our customers include various combinations of our products and subscriptions and support which are distinct and accounted for as separate performance obligations. We account for multiple agreements with a single customer as a single contract if the contractual terms and/or substance of those agreements indicate that they may be so closely related that they are, in effect, parts of a single contract. The amount of consideration we expect to receive in exchange for delivering on the contract is allocated to each performance obligation based on its relative standalone selling price. If a contract contains a single performance obligation, no allocation is required.

We establish standalone selling price using the prices charged for a deliverable when sold separately. If the standalone selling price is not observable through past transactions, we estimate the standalone selling price based on our pricing model and our go-to-market strategy, which include factors such as type of sales channel (reseller, distributor, or end-customer), the geographies in which our offerings were sold (domestic or international), and offering type (products, subscriptions, or support).

Deferred Revenue

We record deferred revenue when cash payments are received or due in advance of our performance. Our payment terms typically require payment within 30 to 45 days of the date we issue an invoice. The current portion of deferred revenue represents the amounts that are expected to be recognized as revenue within one year of the condensed consolidated balance sheet date. During the nine months ended April 30, 2019 , we recognized approximately $955.0 million of revenue pertaining to amounts that were deferred as of July 31, 2018 .

Remaining Performance Obligations

Revenue expected to be recognized from remaining performance obligations was $2.7 billion as of April 30, 2019 , of which we expect to recognize approximately $1.5 billion over the next 12 months and the remainder thereafter.

Disaggregation of Revenue

The following table presents revenue by geographic theater (in millions):

	Three Months Ended April 30, 2019	Three Months Ended April 30, 2018 (As Adjusted)	Nine Months Ended April 30, 2019	Nine Months Ended April 30, 2018 (As Adjusted)
Revenue:				
Americas				
United States	$ 464.3	$ 358.0	$ 1,314.8	$ 1,030.0
Other Americas	33.5	29.7	108.2	80.3
Total Americas	497.8	387.7	1,423.0	1,110.3
Europe, the Middle East, and Africa (“EMEA”)	138.7	110.1	414.7	312.0
Asia Pacific and Japan (“APAC”)	90.1	69.9	256.1	192.8
Total revenue	$ 726.6	$ 567.7	$ 2,093.8	$ 1,615.1

The following table presents revenue for groups of similar products and services (in millions):

	Three Months Ended April 30, 2019	Three Months Ended April 30, 2018 (As Adjusted)	Nine Months Ended April 30, 2019	Nine Months Ended April 30, 2018 (As Adjusted)
Revenue:				
Product	$ 278.4	$ 218.1	$ 790.5	$ 607.7
Subscription and support				
Subscription	258.8	192.0	739.8	544.3
Support	189.4	157.6	563.5	463.1
Total subscription and support	448.2	349.6	1,303.3	1,007.4
Total revenue	$ 726.6	$ 567.7	$ 2,093.8	$ 1,615.1

3 . Fair Value Measurements

We categorize assets and liabilities recorded or disclosed at fair value on our condensed consolidated balance sheets based upon the level of judgment associated with inputs used to measure their fair value. The categories are as follows:

- Level 1—Inputs are unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2—Inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the assets or liabilities, either directly or indirectly through market corroboration, for substantially the full term of the financial instruments.
- Level 3—Inputs are unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value. The inputs require significant management judgment or estimation.

The following table presents the fair value of our financial assets and liabilities measured at fair value on a recurring basis using the above input categories as of April 30, 2019 and July 31, 2018 (in millions):

	April 30, 2019				July 31, 2018			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cash equivalents:								
Money market funds	$ 155.0	$ —	$ —	$ 155.0	$ 1,512.3	$ —	$ —	$ 1,512.3
Commercial paper	—	27.0	—	27.0	—	52.0	—	52.0
Corporate debt securities	—	15.0	—	15.0	—	—	—	—
U.S. government and agency securities	—	340.0	—	340.0	—	397.3	—	397.3
Total cash equivalents	155.0	382.0	—	537.0	1,512.3	449.3	—	1,961.6
Short-term investments:								
Certificates of deposit	—	—	—	—	—	5.4	—	5.4
Non-U.S. government securities	—	—	—	—	—	20.0	—	20.0
Commercial paper	—	19.5	—	19.5	—	22.3	—	22.3
Corporate debt securities	—	269.8	—	269.8	—	139.8	—	139.8
U.S. government and agency securities	—	1,443.9	—	1,443.9	—	709.0	—	709.0
Total short-term investments	—	1,733.2	—	1,733.2	—	896.5	—	896.5
Long-term investments:								
Corporate debt securities	—	271.3	—	271.3	—	153.6	—	153.6
U.S. government and agency securities	—	398.6	—	398.6	—	393.9	—	393.9
Total long-term investments	—	669.9	—	669.9	—	547.5	—	547.5
Prepaid expenses and other current assets:								
Foreign currency forward contracts	—	0.1	—	0.1	—	—	—	—
Total prepaid expenses and other current assets	—	0.1	—	0.1	—	—	—	—
Total assets measured at fair value	$ 155.0	$ 2,785.2	$ —	$ 2,940.2	$ 1,512.3	$ 1,893.3	$ —	$ 3,405.6
Accrued and other liabilities:								
Foreign currency forward contracts	$ —	$ 5.3	$ —	$ 5.3	$ —	$ 6.9	$ —	$ 6.9
Total accrued and other liabilities	—	5.3	—	5.3	—	6.9	—	6.9
Total liabilities measured at fair value	$ —	$ 5.3	$ —	$ 5.3	$ —	$ 6.9	$ —	$ 6.9

Refer to Note 9 . Debt for the carrying amount and estimated fair value of our convertible senior notes as of April 30, 2019 and July 31, 2018 .

4 . Cash Equivalents and Investments

Available-for-sale Securities

The following tables summarize the amortized cost, unrealized gains and losses, and fair value of our available-for-sale securities as of April 30, 2019 and July 31, 2018 (in millions):

	April 30, 2019			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Commercial paper	$ 27.0	$ —	$ —	$ 27.0
Corporate debt securities	15.0	—	—	15.0
U.S. government and agency securities	340.0	—	—	340.0
Total available-for-sale cash equivalents	$ 382.0	$ —	$ —	$ 382.0
Investments:				
Commercial paper	$ 19.5	$ —	$ —	$ 19.5
Corporate debt securities	540.5	1.3	(0.7)	541.1
U.S. government and agency securities	1,843.2	1.6	(2.3)	1,842.5
Total available-for-sale investments	$ 2,403.2	$ 2.9	$ (3.0)	$ 2,403.1

	July 31, 2018			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Commercial paper	$ 52.0	$ —	$ —	$ 52.0
U.S. government and agency securities	397.3	—	—	397.3
Total available-for-sale cash equivalents	$ 449.3	$ —	$ —	$ 449.3
Investments:				
Certificates of deposit	$ 5.4	$ —	$ —	$ 5.4
Non-U.S. government securities	20.0	—	—	20.0
Commercial paper	22.3	—	—	22.3
Corporate debt securities	295.9	—	(2.5)	293.4
U.S. government and agency securities	1,110.6	—	(7.7)	1,102.9
Total available-for-sale investments	$ 1,454.2	$ —	$ (10.2)	$ 1,444.0

Unrealized losses related to these securities are due to interest rate fluctuations as opposed to credit quality. In addition, we do not intend to sell and it is not likely that we would be required to sell these securities before recovery of their amortized cost basis, which may be at maturity. As a result, there were no other-than-temporary impairments for these securities at April 30, 2019 and July 31, 2018 .

The following table summarizes the amortized cost and fair value of our available-for-sale securities as of April 30, 2019 , by contractual years-to-maturity (in millions):

	Amortized Cost	Fair Value
Due within one year	$ 2,116.0	$ 2,115.2
Due between one and three years	669.2	669.9
Total	$ 2,785.2	$ 2,785.1

Marketable Equity Securities

Marketable equity securities consist of money market funds and are included in cash and cash equivalents in our condensed consolidated balance sheets. As of April 30, 2019 and July 31, 2018 , the carrying value of our marketable equity securities were $155.0 million and $1.5 billion , respectively. There were no unrealized gains or losses recognized for these securities during the three and nine months ended April 30, 2019 and 2018 .

5 . Derivative Instruments

As a global business, we are exposed to currency exchange rate risk. Substantially all of our revenue is transacted in U.S. dollars, however, a portion of our operating expenditures are incurred outside of the United States and are denominated in foreign currencies, making them subject to fluctuations in foreign currency exchange rates. We enter into foreign currency derivative contracts with maturities of 12 months or less which we designate as cash flow hedges to manage the foreign currency exchange rate risk associated with these expenditures.

These derivative contracts expose us to credit risk to the extent that the counterparties may be unable to meet the terms of the arrangement. We mitigate this credit risk by transacting with major financial institutions with high credit ratings and also enter into master netting arrangements, which permit net settlement of transactions with the same counterparty. We are not required to pledge, and are not entitled to receive, cash collateral related to these derivative instruments. We do not enter into derivative contracts for trading or speculative purposes.

Our derivative financial instruments are recorded at fair value, on a gross basis, as either assets or liabilities in our condensed consolidated balance sheets. Gains or losses related to our cash flow hedges are recorded as a component of accumulated other comprehensive income (loss) ("AOCI") in our condensed consolidated balance sheets and are reclassified into the financial statement line item associated with the underlying hedged transaction in our condensed consolidated statements of operations when the underlying hedged transaction is recognized in earnings. If it becomes probable that the hedged transaction will not occur, the cumulative unrealized gain or loss is reclassified immediately from AOCI into the financial statement line item associated with the underlying hedged transaction in our condensed consolidated statements of operations. Gains or losses related to non-designated derivative instruments are recognized in other income (expense), net in our condensed consolidated statements of operations for each period until the instrument matures, is terminated, is re-designated as a qualified cash flow hedge, or is sold. Derivatives designated as cash flow hedges are classified in our condensed consolidated statements of cash flows in the same manner as the underlying hedged transaction, primarily within cash flows from operating activities.

As of April 30, 2019 and July 31, 2018 , the total notional amount of our outstanding foreign currency forward contracts was $142.8 million and $288.5 million , respectively. Refer to Note 3 . Fair Value Measurements for the fair value of our derivative instruments as reported in our condensed consolidated balance sheets as of April 30, 2019 .

During the three and nine months ended April 30, 2019 and 2018 , both unrealized gains and losses recognized in AOCI related to our cash flow hedges and amounts reclassified into earnings were not material. Unrealized losses in AOCI related to our cash flow hedges as of April 30, 2019 and 2018 were not material.

6 . Acquisitions

Demisto, Inc.

On March 28, 2019, we completed our acquisition of 100% of the voting equity interest of Demisto, Inc. ("Demisto") , a privately-held security company specializing in security orchestration, automation and response ("SOAR"). The acquisition expands the functionality of our platform with the addition of Demisto's SOAR product. The total purchase consideration for the acquisition of Demisto was $474.2 million , which consisted of the following (in millions):

	Amount
Cash	$ 250.0
Common stock (0.9 million shares)	214.7
Fair value of replacement equity awards	9.5
Total purchase consideration	$ 474.2

As part of the acquisition, we issued replacement equity awards, which included 0.3 million shares of our restricted common stock. The total fair value of the replacement equity awards was $105.2 million , of which the portion attributable to services performed prior to the acquisition date was allocated to the purchase consideration. The remaining fair value was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

We have accounted for this transaction as a business combination and allocated the purchase consideration to assets acquired and liabilities assumed based on preliminary estimated fair values, as presented in the following table (in millions):

	Amount	
Goodwill	$	387.8
Identified intangible assets		76.3
Cash		25.9
Net liabilities assumed		(15.8)
Total	$	474.2

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating Demisto 's product into our platform. The goodwill is not deductible for income tax purposes.

The following table presents details of the identified intangible assets acquired (in millions, except years):

	Fair Value		Estimated Useful Life
Developed technology	$	56.6	6 years
Customer relationships		19.7	6 years
Total	$	76.3	

RedLock Inc.

On October 12, 2018, we completed our acquisition of 100% of the voting equity interest of RedLock, Inc. (“RedLock”) , a privately-held cloud security company. The acquisition expands our security capabilities for the public cloud with the addition of RedLock 's cloud security analytics technology. The total purchase consideration for the acquisition of RedLock was $158.2 million , which consisted of $155.0 million in cash paid upon closing and $3.2 million in fair value of unvested equity awards attributable to services performed prior to the acquisition date.

As part of the acquisition, we assumed RedLock equity awards with a total fair value of $57.4 million . Of the total fair value, a portion was allocated to the purchase consideration and the remainder was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

We have accounted for this transaction as a business combination and allocated the purchase consideration to assets acquired and liabilities assumed based on preliminary estimated fair values, as presented in the following table (in millions):

	Amount	
Goodwill	$	113.6
Identified intangible assets		54.8
Net liabilities assumed		(10.2)
Total	$	158.2

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating RedLock 's technology into our platform. The goodwill is not deductible for income tax purposes.

The following table presents details of the identified intangible assets acquired (in millions, except years):

	Fair Value		Estimated Useful Life
Developed technology	$	48.6	4 years
Customer relationships		5.3	8 years
Trade name and trademarks		0.9	6 months
Total	$	54.8	

Additional Acquisition-Related Information

The operating results of the acquired companies are included in our condensed consolidated statements of operations from the dates of acquisition. Pro forma results of operations have not been presented because the effects of the acquisitions were not material to our condensed consolidated statements of operations.

Additional information related to the acquired companies, such as that related to income tax and other contingencies, existing as of the acquisition date but unknown to us may become known during the remainder of the measurement period, not to exceed 12 months from the respective acquisition date, which may result in changes to the amounts and allocations recorded.

7 . Goodwill and Intangible Assets

Goodwill

The following table presents details of our goodwill during the nine months ended April 30, 2019 (in millions):

	Amount
Balance as of July 31, 2018	$ 522.8
Goodwill acquired	504.5
Balance as of April 30, 2019	$ 1,027.3

Purchased Intangible Assets

The following table presents details of our purchased intangible assets as of April 30, 2019 and July 31, 2018 (in millions):

	April 30, 2019			July 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Intangible assets subject to amortization:						
Developed technology	$ 259.9	$ (65.2)	$ 194.7	$ 154.7	$ (38.2)	$ 116.5
Customer relationships	37.2	(3.2)	34.0	12.2	(1.2)	11.0
Acquired intellectual property	8.9	(5.0)	3.9	8.9	(4.5)	4.4
Trade name and trademarks	9.4	(9.4)	—	8.5	(0.4)	8.1
Other	2.2	(2.2)	—	2.2	(2.2)	—
Total intangible assets subject to amortization	317.6	(85.0)	232.6	186.5	(46.5)	140.0
Intangible assets not subject to amortization:						
In-process research and development	1.6	—	1.6	0.8	—	0.8
Total purchased intangible assets	$ 319.2	$ (85.0)	$ 234.2	$ 187.3	$ (46.5)	$ 140.8

We recognized amortization expense of $14.7 million and $38.5 million for the three and nine months ended April 30, 2019 , respectively, and $3.8 million and $9.2 million for the three and nine months ended April 30, 2018 , respectively.

The following table summarizes estimated future amortization expense of our intangible assets as of April 30, 2019 (in millions):

		Amount
Fiscal years ending July 31:		
Remaining 2019	$	14.3
2020		56.9
2021		54.9
2022		50.4
2023		24.5
2024 and thereafter		31.6
Total future amortization expense	$	232.6

8 . Deferred Contract Costs

We defer contract costs that are recoverable and incremental to obtaining customer sales contracts. Contract costs, which primarily consist of sales commissions, are amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. Sales commissions paid for initial contracts are generally not commensurate with the commissions paid for renewal contracts, given the substantive difference in commission rates in proportion to their respective contract values. Sales commissions for initial contracts that are not commensurate are amortized over a benefit period of five years , consistent with the revenue recognition pattern of the performance obligations in the related contracts including expected renewals. The benefit period is determined by taking into consideration contract length, technology life, and other quantitative and qualitative factors. The expected renewals are estimated based on historical renewal trends. Sales commissions for initial contracts that are commensurate and sales commissions for renewal contracts are amortized over the related contractual period in proportion to the revenue recognized.

We classify deferred contract costs as short-term or long-term based on when we expect to recognize the expense. Short-term deferred contract costs are included in prepaid expenses and other current assets and long-term deferred contract costs are included in other assets in our condensed consolidated balance sheets. Deferred contract costs are periodically reviewed for impairment. The amortization of deferred contract costs is included in sales and marketing expense in our condensed consolidated statements of operations.

The following table presents details of our short-term and long-term deferred contract costs as of April 30, 2019 and July 31, 2018 (in millions):

		April 30, 2019		July 31, 2018
Short-term deferred contract costs	$	125.8	$	113.2
Long-term deferred contract costs		251.8		224.8
Total deferred contract costs	$	377.6	$	338.0

We recognized amortization expense for our deferred contract costs of $57.2 million and $147.6 million during the three and nine months ended April 30, 2019 , respectively, and $37.7 million and $101.9 million during the three and nine months ended April 30, 2018 , respectively. We did not recognize any impairment losses on our deferred contract costs during the three and nine months ended April 30, 2019 or 2018 .

9 . Debt

Convertible Senior Notes

In June 2014, we issued $575.0 million aggregate principal amount of 0.0% Convertible Senior Notes due 2019 (the “2019 Notes”) and in July 2018, we issued $1.7 billion aggregate principal amount of 0.75% Convertible Senior Notes due 2023 (the “2023 Notes” and, together with the 2019 Notes, the “Notes”). The 2023 Notes bear interest at a fixed rate of 0.75% per year, payable semi-annually in arrears on January 1 and July 1 of each year, beginning on January 1, 2019. Each series of Notes is governed by an indenture between us, as the issuer, and U.S. Bank National Association, as Trustee (individually, each an “Indenture,” and together, the “Indentures”). The Notes of each series are unsecured, unsubordinated obligations and the applicable Indenture governing each series of Notes does not contain any financial covenants or restrictions on the payments of dividends, the incurrence of indebtedness, or the issuance or repurchase of securities by us or any of our subsidiaries. The 2019 Notes and 2023 Notes mature on July 1, 2019 and July 1, 2023 , respectively. We cannot redeem either series of Notes prior to the applicable maturity date.

The following table presents details of the Notes (number of shares in millions):

	Conversion Rate per $1,000 Principal	Initial Conversion Price	Convertible Date	Initial Number of Shares
2019 Notes	9.0680	$ 110.28	January 1, 2019	5.2
2023 Notes	3.7545	$ 266.35	April 1, 2023	6.4

Holders of the Notes may surrender their Notes for conversion at their option at any time prior to the close of business on the business day immediately preceding their respective convertible dates only under the following circumstances:

- during any fiscal quarter commencing after the fiscal quarters ending on October 31, 2014 and October 31, 2018, for the 2019 Notes and 2023 Notes, respectively (and only during such fiscal quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the applicable conversion price for the respective Notes on each applicable trading day (the “sale price condition”);

- during the five business day period after any five consecutive trading day period (the “measurement period”) in which the trading price per $1,000 principal amount of the applicable series of Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the applicable conversion rate for the respective Notes on each such trading day; or

- upon the occurrence of specified corporate events.

On or after the respective convertible date, holders may surrender all or any portion of their Notes for conversion at any time prior to the close of business on the second scheduled trading day immediately preceding the applicable maturity date regardless of the foregoing conditions, and such conversions will be settled upon the applicable maturity date. Upon conversion, holders of the Notes of a series will receive cash equal to the aggregate principal amount of the Notes of such series to be converted, and, at our election, cash and/or shares of our common stock for any amounts in excess of the aggregate principal amount of the Notes of such series being converted.

The conversion price will be subject to adjustment in some events. Holders of the Notes of a series who convert their Notes of such series in connection with certain corporate events that constitute a “make-whole fundamental change” under the applicable Indenture are, under certain circumstances, entitled to an increase in the conversion rate for such series of Notes. Additionally, upon the occurrence of a corporate event that constitutes a “fundamental change” under the applicable Indenture, holders of the Notes of such series may require us to repurchase for cash all or a portion of the Notes of such series at a repurchase price equal to 100% of the principal amount of the Notes of such series plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The sale price condition was met for the 2019 Notes during the fiscal quarters ended July 31, 2018 and October 31, 2018. As a result, holders were able to convert their 2019 Notes at any time during the fiscal quarter ended October 31, 2018 and up to January 1, 2019. On or after January 1, 2019, holders may surrender their 2019 Notes for conversion at any time prior to maturity, in accordance with the terms described above. Such conversion requests will settle upon maturity of the 2019 Notes in the fourth quarter of fiscal 2019. Accordingly, the net carrying amount of the 2019 Notes was classified as a current liability and the portion of the equity component representing the conversion option was classified as temporary equity in our condensed consolidated balance sheets as of April 30, 2019 . As of April 30, 2019 , $159.4 million in aggregate principal amount of the 2019 Notes remained outstanding.

There were no conversions of the 2019 Notes during the three months ended April 30, 2019 . The following table presents details of conversions of the 2019 Notes during the nine months ended April 30, 2019 (in millions):

	Nine Months Ended April 30, 2019
2019 Notes principal converted and repaid in cash:	
Allocated to liability component (1)	$ 403.4
Allocated to equity component (2)	12.2
Total principal converted and repaid in cash	$ 415.6
Loss on conversions of convertible senior notes (3)	$ 2.6
Shares of common stock issued in connection with conversion of convertible senior notes (4)	1.7

(1) Recorded as a reduction to convertible senior notes, net in our condensed consolidated balance sheets and calculated by measuring the fair value of a similar liability that did not have an associated convertible feature.

(2) Recorded as a reduction to additional paid-in capital in our condensed consolidated balance sheets.

(3) Represents the difference between the cash consideration allocated to the liability component and the net carrying amount of the liability component on the respective settlement dates. The amount is included in other income, net in our condensed consolidated statement of operations.

(4) Shares of common stock issued to the holders for the conversion value in excess of the principal amount. These shares were fully offset by shares received from the corresponding exercise of the associated note hedges.

The sale price condition was not met for the 2023 Notes during the fiscal quarters ended April 30, 2019 or July 31, 2018 . Since the 2023 Notes were not convertible, the net carrying amount of the 2023 Notes was classified as a long-term liability and the equity component was included in additional paid-in capital in our condensed consolidated balance sheets as of April 30, 2019 and July 31, 2018 . As of April 30, 2019 , all of the 2023 Notes remained outstanding.

The following table sets forth the components of the Notes as of April 30, 2019 and July 31, 2018 (in millions):

	April 30, 2019			July 31, 2018		
	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total
Liability component:						
Principal	$ 159.4	$ 1,693.0	$ 1,852.4	$ 575.0	$ 1,693.0	$ 2,268.0
Less: debt discount and debt issuance costs, net of amortization	1.3	278.3	279.6	24.6	323.3	347.9
Net carrying amount	$ 158.1	$ 1,414.7	$ 1,572.8	$ 550.4	$ 1,369.7	$ 1,920.1
Equity component (including amounts classified as temporary equity)	$ 30.4	$ 315.0	$ 345.4	$ 109.8	$ 315.0	$ 424.8

The total estimated fair value of the Notes was $2.3 billion and $2.7 billion at April 30, 2019 and July 31, 2018 , respectively. The fair value was determined based on the closing trading price per $100 of the Notes as of the last day of trading for the period. We consider the fair value of the Notes at April 30, 2019 and July 31, 2018 to be a Level 2 measurement. The fair value of the Notes is primarily affected by the trading price of our common stock and market interest rates. As of April 30, 2019 , the if-converted value of the 2019 Notes exceeded its principal amount by $191.1 million . Based on the closing price of our common stock on April 30, 2019 , the if-converted value of the 2023 Notes was less than its principal amount.

The following table sets forth interest expense recognized related to the Notes (dollars in millions):

	Three Months Ended April 30,						Nine Months Ended April 30,					
	2019			2018			2019			2018		
	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total
Contractual interest expense	$ —	$ 3.3	$ 3.3	$ —	$ —	$ —	$ —	$ 9.6	$ 9.6	$ —	$ —	$ —
Amortization of debt discount	1.6	14.7	16.3	5.7	—	5.7	7.6	43.6	51.2	17.1	—	17.1
Amortization of debt issuance costs	0.3	0.5	0.8	0.8	—	0.8	1.0	1.4	2.4	2.1	—	2.1
Total interest expense recognized	$ 1.9	$ 18.5	$ 20.4	$ 6.5	$ —	$ 6.5	$ 8.6	$ 54.6	$ 63.2	$ 19.2	$ —	$ 19.2
Effective interest rate of the liability component	4.8%	5.2%		4.8%	—%		4.8%	5.2%		4.8%	—%	

Note Hedges

To minimize the impact of potential economic dilution upon conversion of the Notes, we entered into separate convertible note hedge transactions (the "2019 Note Hedges," with respect to the 2019 Notes, and the "2023 Note Hedges," with respect to the 2023 Notes, and collectively, the "Note Hedges") with respect to our common stock concurrent with the issuance of each series of Notes.

The following table presents details of the Note Hedges (in millions):

	Initial Number of Shares	Aggregate Purchase
2019 Note Hedges	5.2	$ 111.0
2023 Note Hedges	6.4	$ 332.0

The Note Hedges cover shares of our common stock at a strike price per share that corresponds to the initial applicable conversion price of the applicable series of Notes, which are also subject to adjustment, and are exercisable upon conversion of the applicable series of Notes. The Note Hedges will expire upon maturity of the applicable series of Notes. The Note Hedges are separate transactions and are not part of the terms of the applicable series of the Notes. Holders of the Notes of either series will not have any rights with respect to the Note Hedges. Any shares of our common stock receivable by us under the Note Hedges are excluded from the calculation of diluted earnings per share as they are antidilutive. The aggregate amounts paid for the Note Hedges are included in additional paid-in capital in our consolidated balance sheets.

As a result of the conversions of the 2019 Notes settled during the nine months ended April 30, 2019 , we exercised the corresponding portion of our 2019 Note Hedges and received 1.7 million shares of common stock during the period.

Warrants

Separately, but concurrently with the issuance of each series of Notes, we entered into transactions whereby we sold warrants (the "2019 Warrants," with respect to the 2019 Notes, and the "2023 Warrants," with respect to the 2023 Notes, and collectively, the "Warrants") to acquire shares of our common stock, subject to anti-dilution adjustments. The 2019 Warrants and 2023 Warrants are exercisable beginning October 2019 and October 2023, respectively.

The following table presents details of the Warrants (in millions, except per share data):

	Initial Number of Shares	Strike Price per Share	Aggregate Proceeds
2019 Warrants	5.2	$ 137.85	$ 78.3
2023 Warrants	6.4	$ 417.80	$ 145.4

The shares issuable under the Warrants will be included in the calculation of diluted earnings per share when the average market value per share of our common stock for the reporting period exceeds the applicable strike price for such series of Warrants. The Warrants are separate transactions and are not part of either series of Notes or Note Hedges and are not remeasured through earnings each reporting period. Holders of the Notes of either series will not have any rights with respect to the Warrants. The aggregate proceeds received from the sale of the Warrants are included in additional paid-in capital in our consolidated balance sheets.

Revolving Credit Facility

On September 4, 2018, we entered into a credit agreement (the “Credit Agreement”) with certain institutional lenders that provides for a $400.0 million unsecured revolving credit facility (the “Credit Facility”), with an option to increase the amount of the Credit Facility by up to an additional $350.0 million , subject to certain conditions. The Credit Facility matures on the earlier of (i) September 4, 2023 and (ii) the date that is 91 days prior to the stated maturity of our 2023 Notes if (a) any of the 2023 Notes are still outstanding and (b) our unrestricted cash and cash equivalents are less than the then outstanding principal amount of our 2023 Notes plus $400.0 million .

The borrowings under the Credit Facility bear interest, at our option, at a base rate plus a spread of 0.00% to 0.75% , or an adjusted LIBO rate plus a spread of 1.00% to 1.75% , in each case with such spread being determined based on our leverage ratio. We are obligated to pay an ongoing commitment fee on undrawn amounts at a rate of 0.125% to 0.250% , depending on our leverage ratio. As of April 30, 2019 , there were no amounts outstanding and we were in compliance with all covenants under the Credit Agreement.

10 . Commitments and Contingencies

Leases

We lease our facilities under various non-cancelable operating leases, which expire through the year ending July 31, 2028 .

In May 2015 and October 2015, we entered into a total of three lease agreements for approximately 941,000 square feet of corporate office space in Santa Clara, California, which serves as our new corporate headquarters. The leases contain rent holiday periods, scheduled rent increases, lease incentives, and renewal options which allow the lease terms to be extended beyond their expiration dates of July 2028 through July 2046. In September 2017, per the terms of the lease agreements, the landlords exercised their option to amend our lease payment schedules and eliminate our rent holiday periods, which increased our rental payments by $24.4 million , $11.8 million , and $2.0 million for fiscal 2018 , 2019 , and 2020 , respectively. In exchange, we received an upfront cash reimbursement of $38.2 million during the three months ended October 31, 2017, which we have applied and will apply against the future additional rental payments when due. As amended, rental payments under the three lease agreements are approximately $412.0 million over the lease term.

In May 2015, we also entered into a lease agreement for approximately 122,000 square feet of space in Santa Clara, California, to serve as an extension of our previous corporate headquarters. The lease contains scheduled rent increases, lease incentives, and renewal options which allow the lease term to be extended beyond the expiration date of April 2021 through July 2046. Rental payments under the lease agreement are approximately $23.1 million over the lease term. In December 2017, we entered into an agreement to sublease this office space for the remaining lease term. Proceeds from this sublease will be approximately $16.3 million over the sublease term.

In September 2012, we entered into two lease agreements for a total of approximately 300,000 square feet of space in Santa Clara, California, which served as our previous corporate headquarters through August 2017, when we relocated to our new corporate campus. The leases contain rent holiday periods and two separate five -year options to extend the lease term beyond their expiration dates of July 2023. Rental payments under these lease agreements are approximately $94.3 million over the lease term. In August 2017, we exited our previous corporate headquarter facilities and relocated to our new corporate campus, which resulted in the recognition of a cease-use loss of $39.2 million during the year ended July 31, 2018 . Due to changes in market conditions in recent months, and the resulting changes to the amount and timing of estimated cash flows from sublease rentals that could be reasonably obtained, we recognized an additional cease-use loss of $4.1 million as general and administrative expense in our condensed consolidated statements of operations during the three and nine months ended April 30, 2019 , and a corresponding liability in our condensed consolidated balance sheets. During the three and nine months ended April 30, 2019 , we released $2.6 million and $7.6 million , respectively, of the cease-use liability through rental payments. As of April 30, 2019 and July 31, 2018 , the remaining balance of the cease-use liability was $25.6 million and $29.1 million , respectively, which is expected to be paid through the end of the lease term in July 2023.

The following table presents details of the aggregate future non-cancelable minimum rental payments under our operating leases as of April 30, 2019 (in millions):

	Amount
Fiscal years ending July 31:	
Remaining 2019	$ 17.8
2020	73.2

2021		67.2
2022		63.0
2023		60.1
2024 and thereafter		227.7
Committed gross lease payments		509.0
Less: proceeds from sublease rentals		11.2
Net operating lease obligation	$	497.8

Purchase Commitments

Manufacturing Purchase Commitments

Our electronics manufacturing service provider ("EMS provider") procures components and assembles our products based on our forecasts. These forecasts are based on estimates of demand for our products primarily for the next 12 months, which are in turn based on historical trends and an analysis from our sales and product management organizations, adjusted for overall market conditions. In order to reduce manufacturing lead times and plan for adequate supply, we may issue non-cancelable orders for products and components to our manufacturing partners or component suppliers. As of April 30, 2019 , our purchase commitments under such orders were $129.3 million , excluding obligations under contracts that we can cancel without a significant penalty.

Other Purchase Commitments

We have entered into various non-cancelable agreements with third-party providers for our use of certain cloud services, under which we are committed to minimum purchases through the year ending July 31, 2026 . The following table presents details of the aggregate future non-cancelable purchase commitments under these agreements as of April 30, 2019 (in millions):

		Amount
Fiscal years ending July 31:		
Remaining 2019	$	—
2020		8.0
2021		27.3
2022		47.5
2023		57.5
2024 and thereafter		165.0
Total other purchase commitments	$	305.3

Litigation

We are subject to legal proceedings, claims, and litigation arising in the ordinary course of business, including intellectual property litigation. Such matters are subject to many uncertainties and outcomes are not predictable with assurance. We accrue for contingencies when we believe that a loss is probable and that we can reasonably estimate the amount of any such loss.

To the extent there is a reasonable possibility that a loss exceeding amounts already recognized may be incurred and the amount of such additional loss would be material, we will either disclose the estimated additional loss or state that such an estimate cannot be made. As of April 30, 2019 , we have not recorded any significant accruals for loss contingencies associated with such legal proceedings, determined that an unfavorable outcome is probable or reasonably possible, or determined that the amount or range of any possible loss is reasonably estimable.

11 . Stockholders' Equity

Share Repurchase Program

In August 2016, our board of directors authorized a $500.0 million share repurchase program to be funded from available working capital. In February 2017, our board of directors authorized a $500.0 million increase to our repurchase program, bringing the total authorization to $1.0 billion (our "original authorization"). Repurchases could be made at management's discretion from time to time on the open market, through privately negotiated transactions, transactions structured through investment banking institutions, block purchase techniques, 10b5-1 trading plans, or a combination of the foregoing. This repurchase program expired on December 31, 2018 .

In February 2019, our board of directors authorized a new $1.0 billion share repurchase program which will be funded from available working capital. Repurchases may be made at management's discretion from time to time on the open market, through privately negotiated transactions, transactions structured through investment banking institutions, block purchase techniques, 10b5-1 trading plans, or a combination of the foregoing. This repurchase authorization will expire on December 31, 2020 , and may be suspended or discontinued at any time.

During the nine months ended April 30, 2019 , we repurchased and retired 1.9 million shares of our common stock under our original authorization for an aggregate purchase price of $330.0 million , including transaction costs. The total price of the shares repurchased and related transaction costs are reflected as a reduction to common stock and additional paid-in capital on our condensed consolidated balance sheets. As of April 30, 2019 , $1.0 billion remained available for future share repurchases under our current repurchase authorization.

12 . Equity Award Plans

Share-Based Compensation Plans

RedLock Inc. 2015 Stock Plan

In connection with our acquisition of RedLock on October 12, 2018, we assumed RedLock's 2015 Stock Plan, as amended (the "RedLock Plan"), under which the assumed RedLock equity awards were granted. The assumed equity awards will be settled in shares of our common stock and will retain the terms and conditions under which they were originally granted; forfeited awards will not be returned to the RedLock Plan. No additional equity awards will be granted under the RedLock Plan. Refer to Note 6 . Acquisitions for more information on the RedLock acquisition and the related equity awards assumed.

Demisto, Inc. 2015 Stock Option Plan

In connection with our acquisition of Demisto on March 28, 2019, we assumed Demisto's 2015 Stock Option Plan, as amended (the "Demisto Plan"), under which the assumed Demisto equity awards were granted. The assumed equity awards will be settled in shares of our common stock and will retain the terms and conditions under which they were originally granted; forfeited awards will not be returned to the Demisto Plan. No additional equity awards will be granted under the Demisto Plan. Refer to Note 6 . Acquisitions for more information on the Demisto acquisition and the related equity awards assumed.

Stock Option Activities

The following table summarizes the stock option and performance stock option ("PSO") activity under our stock plans during the reporting period (in millions, except per share amounts):

	Stock Options Outstanding				PSOs Outstanding			
	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance—July 31, 2018	1.0	$ 13.29	3.1	$ 199.8	1.2	$ 198.50	7.0	$ —
Granted	—	$ —			2.6	$ 191.97		
Exercised	(0.6)	$ 13.07			—	$ —		
Forfeited	—	$ —			—	$ —		
Balance—April 30, 2019	0.4	$ 13.54	2.5	$ 122.7	3.8	$ 193.98	6.5	$ 206.9
Exercisable—April 30, 2019	0.4	$ 13.54	2.5	$ 122.7	3.8	$ 193.98	6.5	$ 206.9

During the nine months ended April 30, 2019 , we granted 2.6 million PSOs with both a market condition and a service condition to certain executives. The market condition requires the price of our common stock to equal or exceed $297.75 , $397.00 , $496.25 , and $595.50 (the "stock price targets") during the four -, five -, six -, and seven -year periods following the date of grant, respectively. To the extent that the stock price targets have been met, one-fourth of the PSOs will vest on the anniversary date of the grant date for such PSOs, subject to continued service. All outstanding PSOs may be exercised prior to vesting ("early exercised"). Shares of common stock issued upon early exercise of the PSOs will be restricted and, at our option, subject to repurchase if the option holder ceases to be a service provider.

The aggregate fair value of the PSOs granted during the nine months ended April 30, 2019 was $154.5 million , which was estimated on the grant date using a Monte Carlo simulation model. The following table summarizes the assumptions used and the resulting grant-date fair values of our PSOs:

	Nine Months Ended April 30, 2019
Volatility	35.6% - 36.5%
Dividend yield	— %
Risk-free interest rate	3.1% - 3.2%
Weighted-average grant-date fair value per share	$56.44 - $59.64

The expected volatility is based on a combination of implied volatility from traded options on our common stock and the historical volatility of our common stock. The dividend yield assumption is based on our current expectations about our anticipated dividend policy. The risk-free interest rate is based on the implied yield available on U.S. Treasury zero-coupon issues with terms equal to the contractual terms of each tranche. The expected term assumption takes into consideration the vesting term and the contractual term of the PSOs. We recognize share-based compensation expense for our PSOs on a straight-line basis over the requisite service period for each separately vesting portion of the award.

Restricted Stock Award ("RSA") , Performance-Based Stock Award ("PSA") , Restricted Stock Unit ("RSU") , and Performance-Based Stock Unit ("PSU") Activities

The following table summarizes the RSA , PSA , RSU , and PSU activity under our stock plans during the reporting period (in millions, except per share amounts):

	RSAs and PSAs Outstanding		RSUs and PSUs Outstanding			
	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance—July 31, 2018	0.3	$ 160.85	6.7	$ 160.20	1.6	$ 1,335.2
Granted (1)(2)	—	$ —	3.0	$ 206.85		
Vested	(0.2)	$ 166.07	(2.1)	$ 156.83		
Forfeited	—	$ —	(0.6)	$ 159.19		
Balance—April 30, 2019	0.1	$ 148.54	7.0	$ 181.14	1.5	$ 1,738.8

(1) For PSA s and PSU s, shares granted represents the aggregate maximum number of shares that may be earned and issued with respect to these awards over their full terms.

(2) Includes 0.3 million RSUs granted under the assumed RedLock Plan and Demisto Plan with a weighted-average grant-date fair value of $219.25 per share.

Our PSAs and PSUs vest over a period of four years from the date of grant. The actual number of PSAs and PSUs earned and eligible to vest are determined based on level of achievement against a pre-established billings target for the fiscal year in which the awards are granted. We recognize share-based compensation expense for our PSAs and PSUs on a straight-line basis over the requisite service period for each separately vesting portion of the award when it is probable that the performance condition will be achieved.

Share-Based Compensation

The following table summarizes share-based compensation included in costs and expenses (in millions):

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018	2019	2018
Cost of product revenue	$ 1.3	$ 1.7	$ 4.3	$ 5.5
Cost of subscription and support revenue	17.2	15.1	52.9	50.9
Research and development	45.1	35.4	129.6	108.4
Sales and marketing	54.5	50.7	169.2	155.2
General and administrative	20.1	20.8	75.7	60.2
Total share-based compensation	$ 138.2	$ 123.7	$ 431.7	$ 380.2

In connection with our acquisition of RedLock, we accelerated the vesting of certain equity awards and as a result, we recorded $14.2 million of share-based compensation within general and administrative expense during the three months ended October 31, 2018.

As of April 30, 2019 , total compensation cost related to unvested share-based awards not yet recognized was $1.4 billion . This cost is expected to be amortized over a weighted-average period of approximately 2.8 years . Future grants will increase the amount of compensation expense to be recorded in these periods.

13 . Income Taxes

Our provision for (benefit from) income taxes for the three and nine months ended April 30, 2019 reflects an effective tax rate of 4.3% and (0.3)% , respectively. Our effective tax rate for the nine months ended April 30, 2019 was negative as we recorded a provision for income taxes on year to date losses. The key components of our income tax provision, excluding one-time items, primarily consist of foreign and U.S. state income taxes and withholding taxes. During the nine months ended April 30, 2019 , the effect of these key components was primarily offset by one-time tax benefits of $9.4 million and $4.9 million from partial releases of our valuation allowance related to the acquisitions of RedLock and Demisto recorded during the three months ended October 31, 2018 and April 30, 2019 , respectively. Our effective tax rates differ from the U.S. statutory tax rate primarily due to deductibility of our share-based compensation, foreign income at other than U.S. tax rates, and changes in our valuation allowance.

Our provision for (benefit from) income taxes for the three and nine months ended April 30, 2018 reflects an effective tax rate of 6.5% and (5.7)% . Our effective tax rate for the nine months ended April 30, 2018 was negative as we recorded a provision for income taxes on year to date losses. The key components of our income tax provision primarily consisted of foreign income taxes, withholding taxes, and amortization of our deferred tax charges. In addition, we recorded the following one-time tax benefits during the nine months ended April 30, 2018 : $5.8 million due to new tax legislation enacted during the fiscal quarter ended January 31, 2018; $4.6 million due to a partial release of our valuation allowance related to our acquisition of Evident.io, Inc. during the fiscal quarter ended April 30, 2018; and $3.5 million due to an Israeli judicial ruling related to share-based compensation during the fiscal quarter ended April 30, 2018. Our effective tax rates differed from the U.S. statutory tax rate primarily due to deductibility of our share-based compensation, foreign income at other than U.S. tax rates, and changes in our valuation allowance.

In December 2017, the Tax Cuts and Jobs Act (“TCJA”) was enacted into law. The SEC staff and FASB previously issued guidance that allowed companies to record provisional amounts for the effects of the TCJA during a measurement period not to extend beyond one year from the enactment date. The measurement period ended in December 2018 and we completed our accounting for the income tax effects of the TCJA during the three months ended January 31, 2019. During the three and nine months ended April 30, 2019 , we did not have any significant adjustments to provisional estimates recorded in previous periods. The recorded impact for the effects of the TCJA is based on our current knowledge, assumptions, and interpretations of available guidance. We will continue to monitor the issuance of further guidance and record the necessary adjustments in the period additional guidance is issued.

14 . Net Loss Per Share

Basic net loss per share is computed by dividing net loss by basic weighted-average shares outstanding during the period. Diluted net loss per share is computed by dividing net loss by diluted weighted-average shares outstanding, including potentially dilutive securities.

The following table presents the computation of basic and diluted net loss per share of common stock (in millions, except per share data):

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018 (As Adjusted)	2019	2018 (As Adjusted)
Net loss	$ (20.2)	$ (40.4)	$ (61.1)	$ (129.2)
Weighted-average shares used to compute net loss per share, basic and diluted	94.4	91.9	94.1	91.3
Net loss per share, basic and diluted	$ (0.21)	$ (0.44)	$ (0.65)	$ (1.42)

The following securities were excluded from the computation of diluted net loss per share of common stock for the periods presented as their effect would have been antidilutive (in millions):

	Three and Nine Months Ended April 30,	
	2019	2018
Convertible senior notes	7.8	5.2
Warrants related to the issuance of convertible senior notes	11.6	5.2
RSUs and PSUs	7.0	6.1
Options to purchase common stock, including PSOs	4.2	1.2
RSAs and PSAs	0.1	0.4
ESPP shares	0.1	0.1
Total	30.8	18.2

15. Other Income, Net

The following table sets forth the components of other income, net (in millions):

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018	2019	2018
Interest income	$ 18.3	$ 6.7	$ 51.7	$ 17.7
Foreign currency exchange gains (losses), net	(0.1)	2.7	(1.3)	0.9
Other	—	(0.8)	(3.2)	(0.3)
Total other income, net	$ 18.2	$ 8.6	$ 47.2	$ 18.3

16. Related Party Transactions

Certain members of our board of directors are affiliated with Greylock Partners, a venture capital firm. Entities affiliated with Greylock Partners owned a portion of the outstanding shares of Demisto immediately prior to completion of our acquisition of Demisto on March 28, 2019 and, as a result, received purchase consideration valued at $85.6 million during the three months ended April 30, 2019. Refer to Note 6 . Acquisitions for more information on our acquisition of Demisto.

17 . Subsequent Events

Business Combination

In May 2019, we entered into a definitive agreement to acquire Twistlock Ltd. ("Twistlock"), a privately-held container security company, for total consideration of approximately $410.0 million in cash, subject to adjustment. In May 2019, we also entered into a definitive agreement to acquire PureSec Ltd. ("PureSec"), a privately-held serverless security company, for total consideration of approximately $47.0 million in cash, subject to adjustment. We expect the acquisitions will extend our cloud security strategy with the additions of Twistlock and PureSec to our Prisma cloud security offerings. The acquisitions are expected to close during our fourth quarter of fiscal 2019.

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 condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q. The following discussion and analysis contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include, among other things: expectations regarding drivers of and factors affecting growth in our business; the performance advantages of our products and subscription and support offerings and the potential benefits to our customers; statements regarding trends in billings, our mix of product and subscription and support revenue, cost of revenue, gross margin, cash flows, operating expenses, including future share-based compensation expense, income taxes, investment plans and liquidity; expectations regarding our revenues, including the seasonality and cyclicality from quarter to quarter; expectations and intentions with respect to the products and technologies that we acquire and introduce, including through deployment of new capabilities via security applications developed by third parties; expected impact of the adoption of certain recent accounting pronouncements and the anticipated timing of adopting such standards; expected recurring revenues resulting from expected growth in our installed base and increased adoption of our products and cloud-based subscription services; the sufficiency of our existing cash and investments to meet our cash needs for the foreseeable future; our plans to use the upfront cash reimbursement received from our landlords against future rental payments; the timing and amount of capital expenditures and share repurchases; our plans to acquire Twistlock Ltd. ("Twistlock") and PureSec Ltd. ("PureSec"); the timing of when the Twistlock and PureSec acquisitions will be completed; the finalization of the accounting for the Twistlock and PureSec acquisitions; the expected benefits of each acquisition of Twistlock and PureSec to us and our customers; the expected impact of the acquisitions on our offerings; and other statements regarding our future operations, financial condition and prospects, and business strategies. Forward-looking statements generally can be identified by words such as "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "predicts," "projects," "would," "will be," "will continue," "will likely result," and similar expressions. These forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties, which could cause our actual results to differ materially from those anticipated or implied by any forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Quarterly Report on Form 10-Q, and in particular, the risks discussed under the caption "Risk Factors" in Part II, Item 1A of this report and those discussed in other documents we file with the Securities and Exchange Commission ("SEC") . We undertake no obligation to revise or publicly release the results of any revision to *these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.*

Our Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is organized as follows:

- ***Overview.*** A discussion of our business and overall analysis of financial and other highlights in order to provide context for the remainder of MD&A .
- ***Key Financial Metrics.*** A summary of our generally accepted accounting principles ("GAAP") and non- GAAP key financial metrics, which management monitors to evaluate our performance.
- ***Results of Operations.*** A discussion of the nature and trends in our financial results and an analysis of our financial results comparing the three and nine months ended April 30, 2019 to the three and nine months ended April 30, 2018 .
- ***Liquidity and Capital Resources.*** An analysis of changes in our balance sheets and cash flows, and a discussion of our financial condition and our ability to meet cash needs.
- ***Contractual Obligations and Commitments.*** An overview of our contractual obligations, contingent liabilities, commitments, and off-balance sheet arrangements outstanding as of April 30, 2019 , including expected payment schedules.
- ***Critical Accounting Estimates.*** A discussion of our accounting policies that require critical estimates, assumptions, and judgments.
- ***Recent Accounting Pronouncements.*** A discussion of expected impacts of impending accounting changes on financial information to be reported in the future.

Overview

We have pioneered the next generation of security through our innovative Security Operating Platform that empowers enterprises, service providers, and government entities to secure their organizations by safely enabling applications and data running in their networks, on their endpoints, and in the cloud, and by preventing breaches that stem from targeted cyberattacks. Our platform uses an innovative traffic classification engine that identifies network traffic by application, user, and content and provides consistent security across the network, endpoint, and cloud. Accordingly, our platform enables our end-customers to pursue transformative digital initiatives, like public cloud and mobility, that grow their business, while maintaining the visibility and control needed to protect their valued data and critical control systems. We believe the architecture of our platform offers superior performance compared to legacy approaches and reduces the total cost of ownership for organizations by simplifying their security operations and infrastructure and eliminating the need for multiple, stand-alone hardware and software security products, and consists of three primary areas of security capabilities.

Secure the Enterprise:

- Secure the network through our Next-Generation Firewalls, available as physical appliances, virtual appliances called VM-Series, or a cloud-delivered service called Prisma Access (*formerly GlobalProtect cloud service*), and Panorama management delivered as an appliance or as a virtual machine for the public or private cloud. This also includes security services such as WildFire, Threat Prevention, URL Filtering, GlobalProtect, and DNS Security that are delivered as SaaS subscriptions to our Next-Generation Firewalls.
- Secure the endpoints through our Traps advanced endpoint protection software, delivered as a light-weight software agent with cloud or on-premise management capabilities.

Secure the Cloud:

- Secure the cloud through our Prisma cloud security offerings, such as Prisma Public Cloud (*formerly RedLock*) for infrastructure monitoring and compliance in public clouds, Prisma Access (*formerly GlobalProtect cloud service*) for securing access to the cloud for mobile and branch office workers, and Prisma SaaS (*formerly Aperture*) for protecting SaaS applications, as well as VM-Series for in-line protection of workloads in public and private clouds and Traps for host-based public cloud infrastructure protection. These products are delivered as software or SaaS subscriptions.

Secure the Future:

- Secure the future of security operations through our Cortex open and integrated AI-based continuous security platform with applications and services such as AutoFocus, Cortex XDR (*formerly Magnifier*), Demisto, and Cortex Data Lake (*formerly Logging Service*) that are delivered as SaaS subscriptions.

For the third quarter of fiscal 2019 and 2018 , total revenue was $726.6 million and $567.7 million , respectively, representing year-over-year growth of 28.0% . Our growth reflects the increased adoption of our hybrid SaaS revenue model, which consists of product, subscriptions, and support. We believe this model will enable us to benefit from recurring revenues as we continue to grow our installed end-customer base. As of April 30, 2019 , we had end-customers in over 150 countries. Our end-customers represent a broad range of industries, including education, energy, financial services, government entities, healthcare, Internet and media, manufacturing, public sector, and telecommunications, and include some of the largest Fortune 100 and Global 2000 companies in the world. We maintain a field sales force that works closely with our channel partners in developing sales opportunities. We use a two-tiered, indirect fulfillment model whereby we sell our products, subscriptions, and support to our distributors, which, in turn, sell to our resellers, which then sell to our end-customers.

Our product revenue was $278.4 million , or 38.3% of total revenue, for the third quarter of fiscal 2019 , representing year-over-year growth of 27.6% . Product revenue is generated from sales of our appliances, primarily our Next-Generation Firewall, which is available in physical and virtualized form. Our Next-Generation Firewall incorporates our proprietary PAN-OS operating system, which provides a consistent set of capabilities across our entire product line. Our products are designed for different performance requirements throughout an organization, ranging from our PA-220, which is designed for small organizations and remote or branch offices, to our top-of-the-line PA-7080, which is especially suited for very large enterprise deployments and service provider customers. The same firewall functionality that is delivered in our physical appliances is also available in our VM-Series virtual firewalls, which secure virtualized and cloud-based computing environments.

Our subscription and support revenue was $448.2 million , or 61.7% of total revenue, for the third quarter of fiscal 2019 , representing year-over-year growth of 28.2% . Our subscriptions provide our end-customers with real-time access to the latest antivirus, intrusion prevention, web filtering, and modern malware prevention capabilities across the network, endpoints, and the cloud. When end-customers purchase our physical or virtual firewall appliances, they typically purchase support in order to receive ongoing security updates, upgrades, bug fixes, and repairs. In addition to the subscriptions purchased with these appliances, end-customers may also purchase other subscriptions on a per-user, per-endpoint, or capacity-based basis.

We continue to invest in innovation as we evolve and further extend the capabilities of our platform, as we believe that innovation and timely development of new features and products is essential to meeting the needs of our end-customers and improving our competitive position. For example: in October 2018, we acquired RedLock, Inc. (“RedLock”) , which expanded our security capabilities for the public cloud with the addition of RedLock ’s cloud security analytics technology; in February 2019, we introduced PAN-OS 9.0, with over 60 new features, our new DNS Security Service subscription, which uses machine learning to proactively block malicious domains and stop attacks in progress, and Cortex XDR, our cloud-based detection, investigation, and response application that natively integrates network, endpoint, and cloud data; and in March 2019, we acquired Demisto, Inc. (“Demisto”) , which expanded the functionality of our platform with the addition of Demisto ’s security orchestration, automation, and response product.

We believe that the growth of our business and our short-term and long-term success are dependent upon many factors, including our ability to extend our technology leadership, grow our base of end-customers, expand deployment of our platform and support offerings within existing end-customers, and focus on end-customer satisfaction. To manage any future growth effectively, we must continue to improve and expand our information technology and financial infrastructure, our operating and administrative systems and controls, and our ability to manage headcount, capital, and processes in an efficient manner. While these areas present significant opportunities for us, they also pose challenges and risks that we must successfully address in order to sustain the growth of our business and improve our operating results. For additional information regarding the challenges and risks we face, see the “Risk Factors” section in Part II, Item 1A of this Quarterly Report on Form 10-Q.

Key Financial Metrics

We monitor the key financial metrics set forth in the tables below to help us evaluate growth trends, establish budgets, measure the effectiveness of our sales and marketing efforts, and assess operational efficiencies. We discuss revenue, gross margin, and the components of operating loss and margin below under “—Results of Operations.”

	April 30, 2019	July 31, 2018
	(in millions)	
Total deferred revenue [1]	$ 2,632.2	$ 2,279.3
Cash, cash equivalents, and investments	$ 3,718.0	$ 3,950.9

(1) The amount for fiscal 2018 has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018 (1)	2019	2018 (1)
	(dollars in millions)			
Total revenue	$ 726.6	$ 567.7	$ 2,093.8	$ 1,615.1
Total revenue year-over-year percentage increase	28.0 %	32.5 %	29.6 %	29.5 %
Gross margin	71.8 %	71.8 %	71.8 %	71.5 %
Operating loss	$ (18.7)	$ (45.3)	$ (44.2)	$ (121.3)
Operating margin	(2.6)%	(8.0)%	(2.1)%	(7.5)%
Billings	$ 821.9	$ 724.7	$ 2,432.9	$ 1,993.3
Billings year-over-year percentage increase	13.4 %	32.7 %	22.1 %	26.1 %
Cash flow provided by operating activities			$ 824.1	$ 760.5
Free cash flow (non-GAAP)			$ 746.0	$ 673.9

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard and new guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

- ***Deferred Revenue.*** Our deferred revenue primarily consists of amounts that have been invoiced but have not been recognized as revenue as of the period end. The majority of our deferred revenue balance consists of subscription and support revenue that is recognized ratably over the contractual service period. We monitor our deferred revenue balance because it represents a significant portion of revenue to be recognized in future periods.

- ***Billings.*** We define billings as total revenue plus the change in total deferred revenue, net of acquired deferred revenue, during the period. We consider billings to be a key metric used by management to manage our business given our hybrid SaaS revenue model, and believe billings provides investors with an important indicator of the health and visibility of our business because it includes subscription and support revenue, which is recognized ratably over the contractual service period, and product revenue, which is recognized at the time of shipment, provided that all other conditions for revenue recognition have been met. We consider billings to be a useful metric for management and investors, particularly if we continue to experience increased sales of subscriptions and strong renewal rates for subscription and support offerings, and as we monitor our near-term cash flows. While we believe that billings provides useful information to investors and others in understanding and evaluating our operating results in the same manner as our management, it is important to note that other companies, including companies in our industry, may not use billings, may calculate billings differently, may have different billing frequencies, or may use other financial measures to evaluate their performance, all of which could reduce the usefulness of billings as a comparative measure. We calculate billings in the following manner:

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018 (1)	2019	2018 (1)
	(in millions)			
Billings:				
Total revenue	$ 726.6	$ 567.7	$ 2,093.8	$ 1,615.1
Add: change in total deferred revenue, net of acquired deferred revenue	95.3	157.0	339.1	378.2
Billings	$ 821.9	$ 724.7	$ 2,432.9	$ 1,993.3

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

- ***Cash Flow Provided by Operating Activities.*** We monitor cash flow provided by operating activities as a measure of our overall business performance. Our cash flow provided by operating activities is driven in large part by sales of our products and from up-front payments for subscription and support offerings. Monitoring cash flow provided by operating activities enables us to analyze our financial performance without the non-cash effects of certain items such as depreciation, amortization, and share-based compensation costs, thereby allowing us to better understand and manage the cash needs of our business.

- ***Free Cash Flow (non-GAAP).*** We define free cash flow, a non- GAAP financial measure, as cash provided by operating activities less purchases of property, equipment, and other assets. We consider free cash flow to be a profitability and liquidity measure that provides useful information to management and investors about the amount of cash generated by the business after necessary capital expenditures. A limitation of the utility of free cash flow as a measure of our financial performance and liquidity is that it does not represent the total increase or decrease in our cash balance for the period. In addition, it is important to note that other companies, including companies in our industry, may not use free cash flow, may calculate free cash flow in a different manner than we do, or may use other financial measures to evaluate their performance, all of which could reduce the usefulness of free cash flow as a comparative measure. A reconciliation of free cash flow to cash flow provided by operating activities, the most directly comparable financial measure calculated and presented in accordance with GAAP, is provided below:

	Nine Months Ended April 30,	
	2019	2018
	(in millions)	
Free cash flow (non-GAAP):		
Net cash provided by operating activities (1)	$ 824.1	$ 760.5
Less: purchases of property, equipment, and other assets	78.1	86.6
Free cash flow (non-GAAP) (1)	$ 746.0	$ 673.9
Net cash used in investing activities	$ (1,377.2)	$ (313.6)
Net cash used in financing activities	$ (637.8)	$ (240.8)

(1) The amount for fiscal 2018 has been adjusted due to our adoption of new guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Results of Operations

The following table summarizes our results of operations for the periods presented and as a percentage of our total revenue for those periods based on our condensed consolidated statements of operations data. The period to period comparison of results is not necessarily indicative of results for future periods.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019		2018 (1)		2019		2018 (1)	
	Amount	% of Revenue	Amount	% of Revenue	Amount	% of Revenue	Amount	% of Revenue
	(dollars in millions)							
Revenue:								
Product	$ 278.4	38.3 %	$ 218.1	38.4 %	$ 790.5	37.8 %	$ 607.7	37.6 %
Subscription and support	448.2	61.7 %	349.6	61.6 %	1,303.3	62.2 %	1,007.4	62.4 %
Total revenue	726.6	100.0 %	567.7	100.0 %	2,093.8	100.0 %	1,615.1	100.0 %
Cost of revenue:								
Product	78.0	10.7 %	68.9	12.1 %	233.7	11.2 %	190.4	11.8 %
Subscription and support	126.9	17.5 %	91.0	16.1 %	357.3	17.0 %	270.2	16.7 %
Total cost of revenue (2)	204.9	28.2 %	159.9	28.2 %	591.0	28.2 %	460.6	28.5 %
Total gross profit	521.7	71.8 %	407.8	71.8 %	1,502.8	71.8 %	1,154.5	71.5 %
Operating expenses:								
Research and development	139.1	19.1 %	99.6	17.5 %	380.8	18.2 %	290.4	18.0 %
Sales and marketing	339.0	46.7 %	271.4	47.8 %	973.6	46.5 %	784.3	48.5 %
General and administrative	62.3	8.6 %	82.1	14.5 %	192.6	9.2 %	201.1	12.5 %
Total operating expenses (2)	540.4	74.4 %	453.1	79.8 %	1,547.0	73.9 %	1,275.8	79.0 %
Operating loss	(18.7)	(2.6)%	(45.3)	(8.0)%	(44.2)	(2.1)%	(121.3)	(7.5)%
Interest expense	(20.6)	(2.8)%	(6.5)	(1.1)%	(63.9)	(3.1)%	(19.2)	(1.2)%
Other income, net	18.2	2.5 %	8.6	1.5 %	47.2	2.3 %	18.3	1.1 %
Loss before income taxes	(21.1)	(2.9)%	(43.2)	(7.6)%	(60.9)	(2.9)%	(122.2)	(7.6)%
Provision for (benefit from) income taxes	(0.9)	(0.1)%	(2.8)	(0.5)%	0.2	— %	7.0	0.4 %
Net loss	$ (20.2)	(2.8)%	$ (40.4)	(7.1)%	$ (61.1)	(2.9)%	$ (129.2)	(8.0)%

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(1) Certain amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

(2) Includes share-based compensation as follows:

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2019	2018	2019	2018
	(in millions)			
Cost of product revenue	$ 1.3	$ 1.7	$ 4.3	$ 5.5
Cost of subscription and support revenue	17.2	15.1	52.9	50.9
Research and development	45.1	35.4	129.6	108.4
Sales and marketing	54.5	50.7	169.2	155.2
General and administrative	20.1	20.8	75.7	60.2
Total share-based compensation	$ 138.2	$ 123.7	$ 431.7	$ 380.2

Revenue

Our revenue consists of product revenue and subscription and support revenue. Revenue is recognized upon transfer of control of the corresponding promised products and subscriptions and support to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those products and subscriptions and support. We expect our revenue to vary from quarter to quarter based on seasonal and cyclical factors.

Product Revenue

Product revenue is derived primarily from sales of our appliances. Product revenue also includes revenue derived from software licenses of Panorama and the VM-Series. We recognize product revenue at the time of hardware shipment or delivery of software license.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018 (1)	Change		2019	2018 (1)	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Product	$ 278.4	$ 218.1	$ 60.3	27.6%	$ 790.5	$ 607.7	$ 182.8	30.1%

(1) This amount has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Product revenue increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was primarily due to increased demand for our appliances. The change in product revenue due to pricing was not significant for either period.

Subscription and Support Revenue

Subscription and support revenue is derived primarily from sales of our subscription and support offerings. Our contractual subscription and support contracts are typically one to five years. We recognize revenue from subscriptions and support over time as the services are performed. As a percentage of total revenue, we expect our subscription and support revenue to vary from quarter to quarter and increase over the long term as we introduce new subscriptions, renew existing subscription and support contracts, and expand our installed end-customer base.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018 (1)	Change		2019	2018 (1)	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Subscription	$ 258.8	$ 192.0	$ 66.8	34.8%	$ 739.8	$ 544.3	$ 195.5	35.9%
Support	189.4	157.6	31.8	20.2%	563.5	463.1	100.4	21.7%
Total subscription and support	$ 448.2	$ 349.6	$ 98.6	28.2%	$ 1,303.3	$ 1,007.4	$ 295.9	29.4%

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Subscription and support revenue increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was due to increased demand for our subscription and support offerings from both new and existing end-customers. The mix between subscription revenue and support revenue will fluctuate over time, depending on the introduction of new subscription offerings, renewals of support services, and our ability to increase sales to new and existing customers. The change in subscription and support revenue due to changes in pricing was not significant for either period.

Revenue by Geographic Theater

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018 [1]	Change		2019	2018 [1]	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Americas	$ 497.8	$ 387.7	$ 110.1	28.4%	$ 1,423.0	$ 1,110.3	$ 312.7	28.2%
EMEA	138.7	110.1	28.6	26.0%	414.7	312.0	102.7	32.9%
APAC	90.1	69.9	20.2	28.9%	256.1	192.8	63.3	32.8%
Total revenue	$ 726.6	$ 567.7	$ 158.9	28.0%	$ 2,093.8	$ 1,615.1	$ 478.7	29.6%

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(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

With respect to geographic theaters, the Americas contributed the largest portion of the increase in revenue for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 , due to its larger and more established sales force compared to our other theaters. Revenue from both Europe, the Middle East, and Africa ("EMEA") and Asia Pacific and Japan ("APAC") increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 , due to our investment in increasing the size of our sales force and number of channel partners in these theaters.

Cost of Revenue

Our cost of revenue consists of cost of product revenue and cost of subscription and support revenue.

Cost of Product Revenue

Cost of product revenue primarily includes costs paid to our manufacturing partners. Our cost of product revenue also includes personnel costs, which consist of salaries, benefits, bonuses, share-based compensation, and travel and entertainment associated with our operations organization, amortization of intellectual property licenses, product testing costs, shipping costs, and allocated costs. Allocated costs consist of certain facilities, depreciation, benefits, recruiting, and information technology costs that we allocate based on headcount. We expect our cost of product revenue to increase as our product revenue increases.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018	Change		2019	2018	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Cost of product revenue	$ 78.0	$ 68.9	$ 9.1	13.2%	$ 233.7	$ 190.4	$ 43.3	22.7%
Number of employees at period end	99	92	7	7.6%	99	92	7	7.6%

Cost of product revenue increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was primarily due to an increase in product unit volume.

Cost of Subscription and Support Revenue

Cost of subscription and support revenue includes personnel costs for our global customer support and technical operations organizations, customer support and repair costs, third-party professional services costs, data center and cloud hosting costs, amortization of acquired intangible assets, and allocated costs. We expect our cost of subscription and support revenue to increase as our installed end-customer base grows and adoption of our cloud-based subscription offerings increases.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018	Change		2019	2018	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Cost of subscription and support revenue [1]	$ 126.9	$ 91.0	$ 35.9	39.5%	$ 357.3	$ 270.2	$ 87.1	32.2%
Number of employees at period end	1,114	895	219	24.5%	1,114	895	219	24.5%

(1) The amounts for fiscal 2018 have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Cost of subscription and support revenue increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was primarily due to increased costs to support the growth of our subscription and support business. Personnel costs grew $15.5 million to $66.0 million for the three months ended April 30, 2019 compared to the three months ended April 30, 2018 , and grew $35.7 million to $187.6 million for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018 , primarily due to headcount growth. Amortization of purchased intangible assets increased $7.3 million for the three months ended April 30, 2019 compared to the three months ended April 30, 2018, and increased $18.7 million for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018, as a result of our recent acquisitions. The remaining increase in both periods was primarily due to an increase in data center and cloud hosting costs to support the adoption of our cloud-based subscription offerings and costs to expand our customer service capabilities.

Gross Margin

Gross margin, or gross profit as a percentage of revenue, has been and will continue to be affected by a variety of factors, including the introduction of new products, manufacturing costs, the average sales price of our products, the mix of products sold, and the mix of revenue between product and subscription and support offerings. For sales of our products, our higher-end firewall products generally have higher gross margins than our lower-end firewall products within each product series. For sales of our subscription and support offerings, our subscription offerings typically have higher gross margins than our support offerings. We expect our gross margins to fluctuate over time depending on the factors described above.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019		2018 [1]		2019		2018 [1]	
	Amount	Gross Margin	Amount	Gross Margin	Amount	Gross Margin	Amount	Gross Margin
	(dollars in millions)							
Product	$ 200.4	72.0%	$ 149.2	68.4%	$ 556.8	70.4%	$ 417.3	68.7%
Subscription and support	321.3	71.7%	258.6	74.0%	946.0	72.6%	737.2	73.2%
Total gross profit	$ 521.7	71.8%	$ 407.8	71.8%	$ 1,502.8	71.8%	$ 1,154.5	71.5%

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Product gross margin increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 , primarily due to improved operations in our supply chain management and increased leverage of our operations organization.

Subscription and support gross margin decreased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 , primarily due to higher costs to support the adoption of our cloud-based subscription offerings, partially offset by increased leverage of our global customer support organization.

Operating Expenses

Our operating expenses consist of research and development, sales and marketing, and general and administrative expense. Personnel costs are the most significant component of operating expenses and consist of salaries, benefits, bonuses, share-based compensation, travel and entertainment, and with regard to sales and marketing expense, sales commissions. Our operating expenses also include allocated costs, which consist of certain facilities, depreciation, benefits, recruiting, and information technology costs that we allocate based on headcount. We expect operating expenses to increase in absolute dollars and decrease over the long term as a percentage of revenue as we continue to scale our business. As of April 30, 2019 , we expect to recognize approximately $1.4 billion of share-based compensation expense over a weighted-average period of approximately 2.8 years , excluding additional share-based compensation expense related to any future grants of share-based awards. Share-based compensation expense is generally recognized on a straight-line basis over the requisite service periods of the awards.

Research and Development

Research and development expense consists primarily of personnel costs. Research and development expense also includes prototype related expenses and allocated costs. We expect research and development expense to increase in absolute dollars as we continue to invest in our future products and services, although our research and development expense may fluctuate as a percentage of total revenue.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018	Change		2019	2018	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Research and development	$ 139.1	$ 99.6	$ 39.5	39.7%	$ 380.8	$ 290.4	$ 90.4	31.1%
Number of employees at period end	1,336	899	437	48.6%	1,336	899	437	48.6%

Research and development expense increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was primarily due to an increase in personnel costs, which grew $29.1 million to $111.5 million for the three months ended April 30, 2019 compared to the three months ended April 30, 2018 , and grew $67.4 million to $308.3 million for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018 . The increase in personnel costs in both periods was largely due to headcount growth. The remaining increase in both periods was primarily driven by an increase in allocated costs.

Sales and Marketing

Sales and marketing expense consists primarily of personnel costs, including commission expense. Sales and marketing expense also includes costs for market development programs, promotional and other marketing costs, professional services, and allocated costs. We continue to thoughtfully invest in headcount and have substantially grown our sales presence internationally. We expect sales and marketing expense to continue to increase in absolute dollars as we increase the size of our sales and marketing organizations to increase touch points with end-customers and to expand our international presence, although our sales and marketing expense may fluctuate as a percentage of total revenue.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018	Change		2019	2018	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
				(dollars in millions)				
Sales and marketing [(1)]	$ 339.0	$ 271.4	$ 67.6	24.9%	$ 973.6	$ 784.3	$ 189.3	24.1%
Number of employees at period end	3,194	2,599	595	22.9%	3,194	2,599	595	22.9%

(1) The amounts for fiscal 2018 have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Sales and marketing expense increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was primarily due to an increase in personnel costs, which grew $45.4 million to $255.9 million for the three months ended April 30, 2019 compared to the three months ended April 30, 2018 , and grew $119.6 million to $727.1 million for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018 . The increase in personnel costs in both periods was largely due to headcount growth. The remaining increase in both periods was primarily driven by an increase in allocated costs and an increase in costs associated with marketing-related activities.

General and Administrative

General and administrative expense consists primarily of personnel costs for our executive, finance, human resources, legal, and information technology organizations, and professional services costs, which consist primarily of legal, auditing, accounting, and other consulting costs. General and administrative expense also includes certain non-recurring general expenses and impairment losses. Certain facilities, depreciation, benefits, recruiting, and information technology costs are allocated to other organizations based on headcount. We expect general and administrative expense to increase in absolute dollars due to additional costs associated with accounting, compliance, and insurance, although our general and administrative expense may fluctuate as a percentage of total revenue.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018	Change		2019	2018	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
				(dollars in millions)				
General and administrative	$ 62.3	$ 82.1	$ (19.8)	(24.1)%	$ 192.6	$ 201.1	$ (8.5)	(4.2)%
Number of employees at period end	760	636	124	19.5 %	760	636	124	19.5 %

General and administrative expense decreased for the three months ended April 30, 2019 compared to the three months ended April 30, 2018 , primarily due to a net decrease of $19.7 million in cease-use losses recognized on the lease of our previous corporate headquarter facilities. The remaining decrease was primarily driven by a decrease in costs related to business acquisitions, offset by an increase in personnel costs, which grew $8.2 million to $39.0 million for the three months ended April 30, 2019 compared to the three months ended April 30, 2018 , largely due to headcount growth.

General and administrative expense decreased for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018 , primarily due to a net decrease of $35.1 million in cease-use losses recognized on the lease of our previous corporate headquarter facilities. The decrease was partially offset by an increase in personnel costs, which grew $24.4 million to $128.9 million for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018 , primarily due to headcount growth and expense related to the accelerated vesting of certain equity awards in connection with the RedLock acquisition of $14.2 million recognized during the three months ended October 31, 2018.

Interest Expense

Interest expense primarily consists of non-cash interest expense from the amortization of the debt discount and debt issuance costs related to our 0.0% Convertible Senior Notes due 2019 (the "2019 Notes") and 0.75% Convertible Senior Notes due 2023 (the "2023 Notes" and, together with the 2019 Notes, the "Notes"), and also includes the contractual interest expense related to our 2023 Notes.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018	Change		2019	2018	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
				(dollars in millions)				
Interest expense	$ 20.6	$ 6.5	$ 14.1	216.9%	$ 63.9	$ 19.2	$ 44.7	232.8%

Interest expense increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was primarily due to interest expense recognized on the 2023 Notes issued in July 2018, partially offset by a reduction in interest expense recognized on the 2019 Notes due to early conversions. We expect interest expense to increase in fiscal 2019 due to interest expense to be incurred on the 2023 Notes. Refer to Note 9 . Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the Notes.

Other Income, Net

Other income, net includes interest income earned on our cash, cash equivalents, and investments, foreign currency remeasurement gains and losses, and foreign currency transaction gains and losses.

	Three Months Ended April 30,				Nine Months Ended April 30,			
	2019	2018	Change		2019	2018	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
				(dollars in millions)				
Other income, net	$ 18.2	$ 8.6	$ 9.6	111.6%	$ 47.2	$ 18.3	$ 28.9	157.9%

Other income, net increased for the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in both periods was primarily driven by an increase in interest income, which grew $11.6 million for the three months ended April 30, 2019 compared to the three months ended April 30, 2018 , and grew $34.0 million for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018 . The increase in interest income was largely due to higher cash, cash equivalents, and investments balances and higher yields on these balances during the three and nine months ended April 30, 2019 compared to the three and nine months ended April 30, 2018 . The increase in interest income for the three months ended April 30, 2019 was partially offset by an increase in foreign currency remeasurement losses. The increase in interest income for the nine months ended April 30, 2019 was partially offset by a loss of $2.6 million recognized related to the settlement of the 2019 Notes. Refer to Note 9 . Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the Notes.

Provision for (Benefit from) Income Taxes

Provision for (benefit from) income taxes consists primarily of income taxes in foreign jurisdictions in which we conduct business, withholding taxes, and U.S. state income taxes. We maintain a full valuation allowance for domestic and certain foreign deferred tax assets, including net operating loss carryforwards and certain domestic tax credits. In recent years, we reorganized our corporate structure and intercompany relationships to more closely align with the international nature of our business activities. Our corporate structure has caused, and may continue to cause, disproportionate relationships between our overall effective tax rate and other jurisdictional measures. To the extent we revisit our corporate structure, it may have an impact on our tax provision.

	Three Months Ended April 30,		Change		Nine Months Ended April 30,		Change	
	2019	2018	Amount	%	2019	2018	Amount	%
				(dollars in millions)				
Provision for (benefit from) income taxes	$ (0.9)	$ (2.8)	$ 1.9	(67.9)%	$ 0.2	$ 7.0	$ (6.8)	(97.1)%
Effective tax rate	4.3%	6.5%			(0.3)%	(5.7)%		

We recorded an income tax benefit and an income tax provision for the three and nine months ended April 30, 2019 , respectively. Key components of our provision for income taxes, excluding one-time items, include foreign and U.S. state income taxes and withholding taxes. Our provision for income taxes increased for the three months ended April 30, 2019 compared to the three months ended April 30, 2018 , primarily due to a one-time tax benefit of $3.5 million recognized during the three months ended April 30, 2018 from an Israeli judicial ruling related to share-based compensation. Our provision for income taxes decreased for the nine months ended April 30, 2019 compared to the nine months ended April 30, 2018 , primarily due to one-time tax benefits related to our acquisitions. Refer to Note 13 . Income Taxes in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Liquidity and Capital Resources

	April 30, 2019	July 31, 2018
	(in millions)	
Working capital [(1)(2)]	$ 1,718.7	$ 2,036.8
Cash, cash equivalents, and investments:		
Cash and cash equivalents	$ 1,314.9	$ 2,506.9
Investments	2,403.1	1,444.0
Total cash, cash equivalents, and investments	$ 3,718.0	$ 3,950.9

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(1) The amount for fiscal 2018 has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

(2) The net carrying amount of the 0.0% Convertible Senior Notes due 2019 (the “2019 Notes”) was classified in current liabilities in our condensed consolidated balance sheets as of April 30, 2019 and July 31, 2018, respectively. Refer to Note 9 . Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

As of April 30, 2019 , our total cash, cash equivalents, and investments of $3.7 billion were held for general corporate purposes, of which approximately $375.0 million was held outside of the United States. As of April 30, 2019 , we had no unremitted earnings when evaluating our outside basis difference relating to our U.S. investment in foreign subsidiaries. However, there could be local withholding taxes payable due to various foreign countries if certain lower tier earnings are distributed. Withholding taxes that would be payable upon remittance of these lower tier earnings were not material as of April 30, 2019 .

In June 2014, we issued the 2019 Notes with an aggregate principal amount of $575.0 million and in July 2018, we issued the 2023 Notes with an aggregate principal amount of $1.7 billion. As of April 30, 2019 , $159.4 million of the 2019 Notes remained outstanding and all of the 2023 Notes remained outstanding. The 2019 Notes and the 2023 Notes mature on July 1, 2019 and July 1, 2023, respectively; however, under certain circumstances, holders may surrender their Notes of a series for conversion prior to the applicable maturity dates. Upon conversion of the Notes of a series, we will pay cash equal to the aggregate principal amount of the Notes of such series to be converted, and, at our election, will pay or deliver cash and/or shares of our common stock for the amount of our conversion obligation in excess of the aggregate principal amount of the Notes of such series being converted. There were no conversions of the 2019 Notes during the three months ended April 30, 2019 . During the nine months ended April 30, 2019 , holders converted $415.6 million in aggregate principal amount of the 2019 Notes, which we repaid in cash. We also issued 1.7 million shares of common stock to the holders during the nine months ended April 30, 2019 for the conversion value in excess of the principal amount of the 2019 Notes converted, which were fully offset by shares received from our exercise of the associated note hedges. Refer to Note 9 . Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for information on the Notes.

In September 2018, we entered into a credit agreement (the “Credit Agreement”) that provides for a $400.0 million unsecured revolving credit facility (the “Credit Facility”), with an option to increase the amount of the credit facility up to an additional $350.0 million, subject to certain conditions. As of April 30, 2019 , there were no amounts outstanding, and we were in compliance with all covenants under the Credit Agreement. Refer to Note 9 . Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the Credit Agreement.

In August 2016, our board of directors authorized a $500.0 million share repurchase program and, in February 2017, authorized a $500.0 million increase to the repurchase program, bringing the total authorization to $1.0 billion . Repurchases were to be funded from available working capital and could be made at management’s discretion from time to time. The repurchase program expired on December 31, 2018 . In February 2019, our board of directors authorized a new $1.0 billion share repurchase program which will be funded from available working capital and will expire on December 31, 2020 . As of April 30, 2019 , $1.0 billion remained available for future share repurchases under the new repurchase authorization. Refer to Note 11 . Stockholders’ Equity in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the repurchase programs.

The following table summarizes our cash flows for the nine months ended April 30, 2019 and 2018 :

	Nine Months Ended April 30,	
	2019	2018
	(in millions)	
Net cash provided by operating activities [1]	$ 824.1	$ 760.5
Net cash used in investing activities	(1,377.2)	(313.6)
Net cash used in financing activities	(637.8)	(240.8)
Net increase (decrease) in cash, cash equivalents, and restricted cash [1]	$ (1,190.9)	$ 206.1

(1) The amount for fiscal 2018 has been adjusted due to our adoption of new guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

We believe that our cash flow from operations with existing cash and cash equivalents will be sufficient to meet our anticipated cash needs for the foreseeable future. Our future capital requirements will depend on many factors including our growth rate, the timing and extent of spending to support development efforts, the expansion of sales and marketing activities, the introduction of new and enhanced products and subscription and support offerings, the costs to acquire or invest in complementary businesses and technologies, the costs to ensure access to adequate manufacturing capacity, the investments in our infrastructure to support the adoption of our cloud-based subscription offerings, the investments in our new corporate headquarters, and the continuing market acceptance of our products and subscription and support offerings. In addition, from time to time we may incur additional tax liability in connection with certain corporate structuring decisions.

We may also choose to seek additional equity or debt financing. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, operating results, and financial condition may be adversely affected.

Operating Activities

Our operating activities have consisted of net losses adjusted for certain non-cash items and changes in assets and liabilities.

Cash provided by operating activities during the nine months ended April 30, 2019 was $824.1 million , an increase of $63.6 million compared to the nine months ended April 30, 2018 . The increase was due to growth of our business, as reflected by an increase in billings, and an increase in collections during the nine months ended April 30, 2019 . This was partially offset by a decrease due to repayments of the 2019 Notes attributable to the debt discount of $67.1 million during the nine months ended April 30, 2019 , and the receipt of an upfront cash reimbursement of $38.2 million related to certain of our lease agreements during the nine months ended April 30, 2018 .

Investing Activities

Our investing activities have consisted of capital expenditures, net investment purchases, sales, and maturities, and business acquisitions. We expect to continue such activities as our business grows.

Cash used in investing activities during the nine months ended April 30, 2019 was $1.4 billion , an increase of $1.1 billion compared to the nine months ended April 30, 2018 , primarily due to higher net purchases of investments during the nine months ended April 30, 2019 .

Financing Activities

Our financing activities have consisted of net proceeds from the issuance of the Notes and related transactions, repayments of the 2019 Notes, proceeds from sales of shares through employee equity incentive plans, cash used to repurchase shares of our common stock, and payments for tax withholding obligations of certain employees related to the net share settlement of equity awards.

Cash used in financing activities during the nine months ended April 30, 2019 was $637.8 million , an increase of $397.0 million compared to the nine months ended April 30, 2018 , primarily due to repayments of our 2019 Notes and an increase in repurchases of our common stock during the nine months ended April 30, 2019 .

Contractual Obligations and Commitments

The following summarizes our contractual obligations and commitments as of April 30, 2019 :

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
	(in millions)				
0.0% Convertible Senior Notes due 2019 (1)	$ 159.4	$ 159.4	$ —	$ —	$ —
0.75% Convertible Senior Notes due 2023	1,693.0	—	—	1,693.0	—
Operating lease obligations (2)	509.0	73.3	132.1	109.9	193.7
Purchase obligations (3)	434.6	137.3	27.3	105.0	165.0
Total (4)	$ 2,796.0	$ 370.0	$ 159.4	$ 1,907.9	$ 358.7

(1) The 2019 Notes mature on July 1, 2019. Refer to Note 9 . Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

(2) Consists of contractual obligations from our non-cancelable operating leases. Excludes contractual sublease proceeds of $11.2 million , which consists of $5.6 million to be received in less than one year and $5.6 million to be received in one to three years. Refer to Note 10 . Commitments and Contingencies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on our operating leases.

(3) Consists of minimum purchase commitments of products and components with our manufacturing partners and component suppliers, as well as minimum purchase commitments for our use of certain cloud services with third-party providers. Obligations under contracts that we can cancel without a significant penalty are not included in the table above.

(4) No amounts related to income taxes are included. As of April 30, 2019 , we had approximately $69.7 million of tax liabilities recorded related to uncertainty in income tax positions.

Off-Balance Sheet Arrangements

As of April 30, 2019 , we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Estimates

Our condensed consolidated financial statements have been prepared in accordance with U.S. GAAP. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses, and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Actual results may differ from these estimates. To the extent that there are material differences between these estimates and our actual results, our future financial statements will be affected.

We believe the critical accounting estimates discussed under Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018 , reflect our more significant judgments and estimates used in the preparation of our condensed consolidated financial statements. There have been no significant changes to our critical accounting estimates as filed in such report, except for revenue recognition and deferred contract costs, due to our adoption of new accounting guidance, as described below. Refer to “Recently Adopted Accounting Pronouncements” in Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on our adoption of the new accounting guidance.

Revenue Recognition

The majority of our contracts with our customers include various combinations of our products and subscriptions and support which are distinct and accounted for as separate performance obligations. We account for multiple agreements with a single customer as a single contract if the contractual terms and/or substance of those agreements indicate that they may be so closely related that they are, in effect, parts of a single contract. The amount we are due in exchange for delivering on the contract is allocated to each performance obligation based on its relative standalone selling price.

We establish standalone selling price using the prices charged for a deliverable when sold separately. If not observable through past transactions, we estimate the standalone selling price based on our pricing model and our go-to-market strategy, which include factors such as type of sales channel (reseller, distributor, or end-customer), the geographies in which our offerings were sold (domestic or international) and offering type (products, subscriptions, or support). As our business offerings evolve over time, we may be required to modify our estimated standalone selling prices, and as a result the timing and classification of our revenue could be affected.

Deferred Contract Costs

We defer contract costs that are recoverable and incremental to obtaining customer sales contracts. Contract costs, which primarily consist of sales commissions, are amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. Sales commissions for initial contracts that are not commensurate with renewal commissions are amortized over a benefit period of five years, consistent with the revenue recognition pattern of the performance obligations in the related contracts including expected renewals. The benefit period is determined by taking into consideration of contract length, technology life, and other quantitative and qualitative factors. The expected renewals are estimated based on historical renewal trends. Sales commissions for initial contracts that are commensurate and sales commissions for renewal contracts are amortized over the related contractual period in proportion to the revenue recognized.

Recent Accounting Pronouncements

Refer to “Recently Issued Accounting Pronouncements” in Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our assessment of our exposures to market risk has not changed materially since the presentation set forth in Part II, Item 7A of our Annual Report on Form 10-K for the fiscal year ended July 31, 2018 .

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 pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) , as of the end of the period covered by this report. Based on our evaluation, our chief executive officer and chief financial officer concluded that, as of April 30, 2019 , our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the fiscal quarter ended April 30, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Controls

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Further, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the Company have been detected.

PART II

ITEM 1. LEGAL PROCEEDINGS

The information set forth under the “Litigation” subheading in Note 10 . Commitments and Contingencies in Part I, Item 1 of this Quarterly Report on Form 10-Q is incorporated herein by reference.

ITEM 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties including those described below. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, also may become important factors that affect us. If any of the following risks or others not specified below materialize, our business, financial condition, and operating results could be materially adversely affected and the market price of our common stock could decline.

Risks Related to Our Business and Our Industry

Our business and operations have experienced rapid growth in recent periods, and if we do not effectively manage any future growth or are unable to improve our systems, processes, and controls, our operating results could be adversely affected.

We have experienced rapid growth and increased demand for our products and subscriptions over the last few years. As a result, our employee headcount has increased significantly, and we expect it to continue to grow over the next year. For example, from the end of fiscal 2018 to the end of the third quarter of fiscal 2019 , our headcount increased from 5,348 to 6,503 employees. In addition, as we have grown, our number of end-customers has also increased significantly, and we have increasingly managed more complex deployments of our products and subscriptions with larger end-customers. The growth and expansion of our business and product, subscription, and support offerings places a significant strain on our management, operational, and financial resources. To manage any future growth effectively, we must continue to improve and expand our information technology and financial infrastructure, our operating and administrative systems and controls, and our ability to manage headcount, capital, and processes in an efficient manner.

We may not be able to successfully implement or scale improvements to our systems, processes, and controls in an efficient or timely manner. In addition, our existing systems, processes, and controls may not prevent or detect all errors, omissions, or fraud. We may also experience difficulties in managing improvements to our systems, processes, and controls or in connection with third-party software licensed to help us with such improvements. Any future growth would add complexity to our organization and require effective coordination throughout our organization. Failure to manage any future growth effectively could result in increased costs, disrupt our existing end-customer relationships, reduce demand for or limit us to smaller deployments of our platform, or harm our business performance and operating results.

Our operating results may vary significantly from period to period and be unpredictable, which could cause the market price of our common stock to decline.

Our operating results, in particular, our revenues, gross margins, operating margins, and operating expenses, have historically varied from period to period, and even though we have experienced growth, we expect variation to continue as a result of a number of factors, many of which are outside of our control and may be difficult to predict, including:

- our ability to attract and retain new end-customers or sell additional products and subscriptions to our existing end-customers;
- the budgeting cycles, seasonal buying patterns, and purchasing practices of our end-customers;
- changes in end-customer, distributor or reseller requirements, or market needs;
- price competition;
- the timing and success of new product and service introductions by us or our competitors or any other change in the competitive landscape of our industry, including consolidation among our competitors or end-customers and strategic partnerships entered into by and between our competitors;
- changes in the mix of our products, subscriptions, and support, including changes in multi-year subscriptions and support;
- our ability to successfully and continuously expand our business domestically and internationally;
- changes in the growth rate of the enterprise security market;
- deferral of orders from end-customers in anticipation of new products or product enhancements announced by us or our competitors;

- the timing and costs related to the development or acquisition of technologies or businesses or strategic partnerships;
- lack of synergy or the inability to realize expected synergies, resulting from acquisitions or strategic partnerships;
- our inability to execute, complete or integrate efficiently any acquisitions that we may undertake;
- increased expenses, unforeseen liabilities, or write-downs and any impact on our operating results from any acquisitions we consummate;
- our ability to increase the size and productivity of our distribution channel;
- decisions by potential end-customers to purchase security solutions from larger, more established security vendors or from their primary network equipment vendors;
- changes in end-customer penetration or attach and renewal rates for our subscriptions;
- timing of revenue recognition and revenue deferrals;
- our ability to manage production and manufacturing related costs, global customer service organization costs, inventory excess and obsolescence costs, and warranty costs;
- insolvency or credit difficulties confronting our end-customers, which could adversely affect their ability to purchase or pay for our products and subscription and support offerings, or confronting our key suppliers, including our sole source suppliers, which could disrupt our supply chain;
- any disruption in our channel or termination of our relationships with important channel partners, including as a result of consolidation among distributors and resellers of security solutions;
- our inability to fulfill our end-customers' orders due to supply chain delays or events that impact our manufacturers or their suppliers;
- the cost and potential outcomes of litigation, which could have a material adverse effect on our business;
- seasonality or cyclical fluctuations in our markets;
- future accounting pronouncements or changes in our accounting policies, including the impact of the adoption and implementation of the Financial Accounting Standards Board's new standard regarding revenue recognition;
- increases or decreases in our expenses caused by fluctuations in foreign currency exchange rates, as an increasing amount of our expenses is incurred and paid in currencies other than the U.S. dollar;
- political, economic and social instability caused by the referendum in June 2016, in which voters in the United Kingdom (the "U.K.") approved an exit from the European Union (the "E.U.") and the U.K. government subsequently notified the E.U. of its withdrawal, which is commonly referred to as "Brexit," continued hostilities in the Middle East, terrorist activities, and any disruption these events may cause to the broader global industrial economy; and
- general macroeconomic conditions, both domestically and in our foreign markets that could impact some or all regions where we operate.

Any one of the factors above, or the cumulative effect of some of the factors referred to above, may result in significant fluctuations in our financial and other operating results. This variability and unpredictability could result in our failure to meet our revenue, margin, or other operating result expectations or those of securities analysts or investors for a particular period. If we fail to meet or exceed such expectations for these or any other reasons, the market price of our common stock could fall substantially, and we could face costly lawsuits, including securities class action suits.

Uncertain or weakened global economic conditions could have an adverse effect on our business and operating results.

We operate globally and as a result our business and revenues are impacted by global macroeconomic conditions. The global macroeconomic environment has been and may continue to be inconsistent and challenging due to instability in the global credit markets, the current economic challenges in China, falling demand for oil and other commodities, uncertainties regarding the effects of "Brexit," uncertainties related to elections and changes in public policies such as domestic and international regulations, taxes, or international trade agreements, international trade disputes, government shutdowns, geopolitical turmoil and other disruptions to global and regional economies and markets. As a result, any continued or further uncertainty, weakness or deterioration in global macroeconomic and market conditions may cause our end-customers to modify spending priorities or delay purchasing decisions, and result in lengthened sales cycles, any of which could harm our business and operating results.

Our revenue growth rate in recent periods may not be indicative of our future performance.

We have experienced revenue growth rates of 29.6% and 29.5% in the nine months ended April 30, 2019 and the nine months ended April 30, 2018 , respectively. Our revenue for any prior quarterly or annual period should not be relied upon as an indication of our future revenue or revenue growth for any future period. If we are unable to maintain consistent or increasing revenue or revenue growth, the market price of our common stock could be volatile, and it may be difficult for us to achieve and maintain profitability or maintain or increase cash flow on a consistent basis.

We have a history of losses, anticipate increasing our operating expenses in the future, and may not be able to achieve or maintain profitability or maintain or increase cash flow on a consistent basis, which could cause our business, financial condition, and operating results to suffer.

Other than fiscal 2012, we have incurred losses in all fiscal years since our inception. As a result, we had an accumulated deficit of $880.1 million as of April 30, 2019 . We anticipate that our operating expenses will continue to increase in the foreseeable future as we continue to grow our business. Our growth efforts may prove more expensive than we currently anticipate, and we may not succeed in increasing our revenues sufficiently, or at all, to offset increasing expenses. Revenue growth may slow or revenue may decline for a number of possible reasons, including slowing demand for our products or subscriptions, increasing competition, a decrease in the growth of our overall market, or a failure to capitalize on growth opportunities. Any failure to increase our revenue as we grow our business could prevent us from achieving or maintaining profitability or maintaining or increasing cash flow on a consistent basis. In addition, we may have difficulty achieving profitability under U.S. GAAP due to share-based compensation expense and other non-cash charges. If we are unable to navigate these challenges as we encounter them, our business, financial condition, and operating results may suffer.

If we are unable to sell additional product, subscription, and support offerings to our end-customers, our future revenue and operating results will be harmed.

Our future success depends, in part, on our ability to expand the deployment of our platform with existing end-customers. This may require increasingly sophisticated and costly sales efforts that may not result in additional sales. The rate at which our end-customers purchase additional products, subscriptions, and support depends on a number of factors, including the perceived need for additional security products, including subscription and support offerings, as well as general economic conditions. Further, existing end-customers have no contractual obligation to and may not renew their subscription and support contracts after the completion of their initial contract period. Our end-customers' renewal rates may decline or fluctuate as a result of a number of factors, including their level of satisfaction with our subscriptions and our support offerings, the frequency and severity of subscription outages, our product uptime or latency, and the pricing of our, or competing, subscriptions. Additionally, our end-customers may renew their subscription and support agreements for shorter contract lengths or on other terms that are less economically beneficial to us. We also cannot be certain that our end-customers will renew their subscription and support agreements. If our efforts to sell additional products and subscriptions to our end-customers are not successful or our end-customers do not renew their subscription and support agreements or renew them on less favorable terms, our revenues may grow more slowly than expected or decline.

We face intense competition in our market, especially from larger, well-established companies, and we may lack sufficient financial or other resources to maintain or improve our competitive position.

The market for enterprise security products is intensely competitive, and we expect competition to increase in the future from established competitors and new market entrants. Our main competitors fall into three categories:

- large companies that incorporate security features in their products, such as Cisco Systems, Inc. ("Cisco") and Juniper Networks, Inc. ("Juniper") , or those that have acquired, or may acquire, large network and endpoint security vendors and have the technical and financial resources to bring competitive solutions to the market;

- independent security vendors, such as Symantec Corporation , Check Point Software Technologies Ltd. ("Check Point") , Fortinet, Inc. , and FireEye, Inc. , that offer a mix of network and endpoint security products; and

- small and large companies that offer point solutions and/or cloud security services that compete with some of the features present in our platform.

Many of our existing competitors have, and some of our potential competitors could have, substantial competitive advantages such as:

- greater name recognition and longer operating histories;

- larger sales and marketing budgets and resources;

- broader distribution and established relationships with distribution partners and end-customers;

- greater customer support resources;

- greater resources to make strategic acquisitions or enter into strategic partnerships;
- lower labor and development costs;
- larger and more mature intellectual property portfolios; and
- substantially greater financial, technical, and other resources.

In addition, some of our larger competitors have substantially broader and more diverse product and services offerings, which may make them less susceptible to downturns in a particular market and allow them to leverage their relationships based on other products or incorporate functionality into existing products to gain business in a manner that discourages users from purchasing our products and subscriptions, including through selling at zero or negative margins, offering concessions, product bundling, or closed technology platforms. Many of our smaller competitors that specialize in providing protection from a single type of security threat are often able to deliver these specialized security products to the market more quickly than we can.

Organizations that use legacy products and services may believe that these products and services are sufficient to meet their security needs or that our platform only serves the needs of a portion of the enterprise security market. Accordingly, these organizations may continue allocating their information technology budgets for legacy products and services and may not adopt our security platform. Further, many organizations have invested substantial personnel and financial resources to design and operate their networks and have established deep relationships with other providers of networking and security products. As a result, these organizations may prefer to purchase from their existing suppliers rather than add or switch to a new supplier such as us regardless of product performance, features, or greater services offerings or may be more willing to incrementally add solutions to their existing security infrastructure from existing suppliers than to replace it wholesale with our solutions.

Conditions in our market could change rapidly and significantly as a result of technological advancements, partnering or acquisitions by our competitors, or continuing market consolidation. New start-up companies that innovate and large competitors that are making significant investments in research and development may invent similar or superior products and technologies that compete with our products and subscriptions. Some of our competitors have made or could make acquisitions of businesses that may allow them to offer more directly competitive and comprehensive solutions than they had previously offered and adapt more quickly to new technologies and end-customer needs. Our current and potential competitors may also establish cooperative relationships among themselves or with third parties that may further enhance their resources.

These competitive pressures in our market or our failure to compete effectively may result in price reductions, fewer orders, reduced revenue and gross margins, and loss of market share. Any failure to meet and address these factors could seriously harm our business and operating results.

A network or data security incident may allow unauthorized access to our network or data, harm our reputation, create additional liability and adversely impact our financial results.

Increasingly, companies are subject to a wide variety of attacks on their networks on an ongoing basis. In addition to traditional computer “hackers,” malicious code (such as viruses and worms), phishing attempts, employee theft or misuse, and denial of service attacks, sophisticated nation-state and nation-state supported actors engage in intrusions and attacks (including advanced persistent threat intrusions) and add to the risks to our internal networks, cloud deployed enterprise and customer facing environments and the information they store and process. Despite significant efforts to create security barriers to such threats, it is virtually impossible for us to entirely mitigate these risks. We and our third-party service providers may face security threats and attacks from a variety of sources. Our data, corporate systems, third-party systems and security measures may be breached due to the actions of outside parties, employee error, malfeasance, a combination of these, or otherwise, and, as a result, an unauthorized party may obtain access to our data. Furthermore, as a well-known provider of security solutions, we may be a more attractive target for such attacks. A breach in our data security or an attack against our service availability, or that of our third-party service providers, could impact our networks or networks secured by our products and subscriptions, creating system disruptions or slowdowns and exploiting security vulnerabilities of our products, and the information stored on our networks or those of our third-party service providers could be accessed, publicly disclosed, altered, lost, or stolen, which could subject us to liability and cause us financial harm. Although we have not yet experienced significant damages from unauthorized access by a third party of our internal network, any actual or perceived breach of network security in our systems or networks, or any other actual or perceived data security incident we or our third-party service providers suffer, could result in damage to our reputation, negative publicity, loss of channel partners, end-customers and sales, loss of competitive advantages over our competitors, increased costs to remedy any problems and otherwise respond to any incident, regulatory investigations and enforcement actions, costly litigation, and other liability. In addition, we may incur significant costs and operational consequences of investigating, remediating, eliminating and putting in place additional tools and devices designed to prevent actual or perceived security incidents, as well as the costs to comply with any notification obligations resulting from any security incidents. While we maintain cybersecurity insurance, our insurance may be insufficient to cover all liabilities incurred by these incidents, and any incidents may result in loss of, or increased costs of, our cybersecurity insurance. Any of these negative outcomes could adversely impact the market perception of our products and subscriptions and end-customer and investor confidence in our company and could seriously harm our business or operating results.

Reliance on shipments at the end of the quarter could cause our revenue for the applicable period to fall below expected levels.

As a result of end-customer buying patterns and the efforts of our sales force and channel partners to meet or exceed their sales objectives, we have historically received a substantial portion of sales orders and generated a substantial portion of revenue during the last few weeks of each fiscal quarter. If expected revenue at the end of any fiscal quarter is delayed for any reason, including the failure of anticipated purchase orders to materialize (particularly for large enterprise end-customers with lengthy sales cycles), our logistics partners' inability to ship products prior to fiscal quarter-end to fulfill purchase orders received near the end of the fiscal quarter, our failure to manage inventory to meet demand, any failure of our systems related to order review and processing, or any delays in shipments based on trade compliance requirements (including new compliance requirements imposed by new or renegotiated trade agreements), revenue could fall below our expectations and the estimates of analysts for that quarter, which could adversely impact our business and operating results and cause a decline in the market price of our common stock.

Seasonality may cause fluctuations in our revenue.

We believe there are significant seasonal factors that may cause our second and fourth fiscal quarters to record greater revenue sequentially than our first and third fiscal quarters. We believe that this seasonality results from a number of factors, including:

- end-customers with a December 31 fiscal year-end choosing to spend remaining unused portions of their discretionary budgets before their fiscal year-end, which potentially results in a positive impact on our revenue in our second fiscal quarter;
- our sales compensation plans, which are typically structured around annual quotas and commission rate accelerators, which potentially results in a positive impact on our revenue in our fourth fiscal quarter;
- seasonal reductions in business activity during August in the United States, Europe and certain other regions, which potentially results in a negative impact on our first fiscal quarter revenue; and
- the timing of end-customer budget planning at the beginning of the calendar year, which can result in a delay in spending at the beginning of the calendar year potentially resulting in a negative impact on our revenue in our third fiscal quarter.

As we continue to grow, seasonal or cyclical variations in our operations may become more pronounced, and our business, operating results and financial position may be adversely affected.

If we are unable to hire, integrate, train, retain, and motivate qualified personnel and senior management, our business could suffer.

Our future success depends, in part, on our ability to continue to hire, integrate, train, and retain qualified and highly skilled personnel. We are substantially dependent on the continued service of our existing engineering personnel because of the complexity of our platform. Additionally, any failure to hire, integrate, train, and adequately incentivize our sales personnel or the inability of our recently hired sales personnel to effectively ramp to target productivity levels could negatively impact our growth and operating margins. Competition for highly skilled personnel, particularly in engineering, is often intense, especially in the San Francisco Bay Area, where we have a substantial presence and need for such personnel. Additionally, potential changes in U.S. immigration and work authorization laws and regulations may make it difficult to renew or obtain visas for any highly skilled personnel that we have hired or are actively recruiting.

In addition, the industry in which we operate generally experiences high employee attrition. Although we have entered into employment offer letters with our key personnel, these agreements have no specific duration and constitute at-will employment. We do not maintain key person life insurance policies on any of our employees. The loss of one or more of our key employees, and any failure to have in place and execute an effective succession plan for key executives, could seriously harm our business. If we are unable to hire, integrate, train, or retain the qualified and highly skilled personnel required to fulfill our current or future needs, our business, financial condition, and operating results could be harmed.

Our future performance also depends on the continued services and continuing contributions of our senior management to execute on our business plan and to identify and pursue new opportunities and product innovations. The loss of services of senior management or the ineffective management of any leadership transitions, especially within our sales organization, could significantly delay or prevent the achievement of our development and strategic objectives, which could adversely affect our business, financial condition, and operating results.

Further, we believe that a critical contributor to our success and our ability to retain highly skilled personnel has been our corporate culture, which we believe fosters innovation, teamwork, passion for end-customers, focus on execution, and the facilitation of critical knowledge transfer and knowledge sharing. As we grow and change, we may find it difficult to maintain these important aspects of our corporate culture. Any failure to preserve our culture as we grow could limit our ability to innovate and could negatively affect our ability to retain and recruit personnel, continue to perform at current levels or execute on our business strategy.

If we are not successful in executing our strategy to increase sales of our products and subscriptions to new and existing medium and large enterprise end-customers, our operating results may suffer.

Our growth strategy is dependent, in part, upon increasing sales of our products to new and existing medium and large enterprise end-customers. Sales to these end-customers involve risks that may not be present, or that are present to a lesser extent, with sales to smaller entities. These risks include:

- competition from larger competitors, such as Cisco , Check Point , and Juniper , that traditionally target larger enterprises, service providers, and government entities and that may have pre-existing relationships or purchase commitments from those end-customers;
- increased purchasing power and leverage held by large end-customers in negotiating contractual arrangements with us;
- more stringent requirements in our worldwide support contracts, including stricter support response times and penalties for any failure to meet support requirements; and
- longer sales cycles, in some cases over 12 months, and the associated risk that substantial time and resources may be spent on a potential end-customer that elects not to purchase our products and subscriptions.

In addition, product purchases by large enterprises are frequently subject to budget constraints, multiple approvals, and unplanned administrative, processing, and other delays. Finally, large enterprises typically have longer implementation cycles, require greater product functionality and scalability and a broader range of services, demand that vendors take on a larger share of risks, sometimes require acceptance provisions that can lead to a delay in revenue recognition, and expect greater payment flexibility from vendors. All of these factors can add further risk to business conducted with these end-customers. If we fail to realize an expected sale from a large end-customer in a particular quarter or at all, our business, operating results, and financial condition could be materially and adversely affected.

We rely on revenue from subscription and support offerings, and because we recognize revenue from subscription and support over the term of the relevant service period, downturns or upturns in sales of these subscription and support offerings are not immediately reflected in full in our operating results.

Subscription and support revenue accounts for a significant portion of our revenue, comprising 62.2% of total revenue in the nine months ended April 30, 2019 and 62.4% of total revenue in the nine months ended April 30, 2018 . Sales of new or renewal subscription and support contracts may decline and fluctuate as a result of a number of factors, including end-customers' level of satisfaction with our products and subscriptions (including newly integrated products and services), the prices of our products and subscriptions, the prices of products and services offered by our competitors, and reductions in our end-customers' spending levels. If our sales of new or renewal subscription and support contracts decline, our total revenue and revenue growth rate may decline and our business will suffer. In addition, we recognize subscription and support revenue monthly over the term of the relevant service period, which is typically one to five years. As a result, much of the subscription and support revenue we report each fiscal quarter is the recognition of deferred revenue from subscription and support contracts entered into during previous fiscal quarters. Consequently, a decline in new or renewed subscription or support contracts in any one fiscal quarter will not be fully or immediately reflected in revenue in that fiscal quarter but will negatively affect our revenue in future fiscal quarters. Also, it is difficult for us to rapidly increase our subscription and support revenue through additional subscription and support sales in any period, as revenue from new and renewal subscription and support contracts must be recognized over the applicable service period.

Defects, errors, or vulnerabilities in our products, subscriptions, or support offerings, the failure of our products or subscriptions to block a virus or prevent a security breach, misuse of our products, or risks of product liability claims could harm our reputation and adversely impact our operating results.

Because our products and subscriptions are complex, they have contained and may contain design or manufacturing defects or errors that are not detected until after their commercial release and deployment by our end-customers. For example, from time to time, certain of our end-customers have reported defects in our products related to performance, scalability, and compatibility. Additionally, defects may cause our products or subscriptions to be vulnerable to security attacks, cause them to fail to help secure networks, or temporarily interrupt end-customers' networking traffic. Because the techniques used by computer hackers to access or sabotage networks change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques and provide a solution in time to protect our end-customers' networks. Furthermore, as a well-known provider of security solutions, our networks, products, including cloud-based technology, and subscriptions could be targeted by attacks specifically designed to disrupt our business and harm our reputation. In addition, defects or errors in our subscription updates or our products could result in a failure of our subscriptions to effectively update end-customers' hardware and cloud-based products. Our data centers and networks may experience technical failures and downtime, may fail to distribute appropriate updates, or may fail to meet the increased requirements of a growing installed end-customer base, any of which could temporarily or permanently expose our end-customers' networks, leaving their networks unprotected against the latest security threats. Moreover, our products must interoperate with our end-customers' existing infrastructure, which often have different specifications, utilize multiple protocol standards, deploy products from multiple vendors, and contain multiple generations of products that have been added over time. As a result, when problems occur in a network, it may be difficult to identify the sources of these problems.

The occurrence of any such problem in our products and subscriptions, whether real or perceived, could result in:

- expenditure of significant financial and product development resources in efforts to analyze, correct, eliminate, or work-around errors or defects or to address and eliminate vulnerabilities;
- loss of existing or potential end-customers or channel partners;
- delayed or lost revenue;
- delay or failure to attain market acceptance;
- an increase in warranty claims compared with our historical experience, or an increased cost of servicing warranty claims, either of which would adversely affect our gross margins; and
- litigation, regulatory inquiries, or investigations, each of which may be costly and harm our reputation.

Further, our products and subscriptions may be misused by end-customers or third parties that obtain access to our products and subscriptions. For example, our products and subscriptions could be used to censor private access to certain information on the Internet. Such use of our products and subscriptions for censorship could result in negative press coverage and negatively affect our reputation.

The limitation of liability provisions in our standard terms and conditions of sale may not fully or effectively protect us from claims as a result of federal, state, or local laws or ordinances, or unfavorable judicial decisions in the United States or other countries. The sale and support of our products and subscriptions also entails the risk of product liability claims. Although we may be indemnified by our third-party manufacturers for product liability claims arising out of manufacturing defects, because we control the design of our products and subscriptions, we may not be indemnified for product liability claims arising out of design defects. We maintain insurance to protect against certain claims associated with the use of our products and subscriptions, but our insurance coverage may not adequately cover any claim asserted against us. In addition, even claims that ultimately are unsuccessful could result in our expenditure of funds in litigation, divert management's time and other resources, and harm our reputation.

False detection of applications, viruses, spyware, vulnerability exploits, data patterns, or URL categories could adversely affect our business.

Our classifications of application type, virus, spyware, vulnerability exploits, data, or uniform resource locator ("URL") categories may falsely detect, report and act on applications, content, or threats that do not actually exist. This risk is heightened by the inclusion of a "heuristics" feature in our products and subscriptions, which attempts to identify applications and other threats not based on any known signatures but based on characteristics or anomalies which indicate that a particular item may be a threat. These false positives may impair the perceived reliability of our products and subscriptions and may therefore adversely impact market acceptance of our products and subscriptions. If our products and subscriptions restrict important files or applications based on falsely identifying them as malware or some other item that should be restricted, this could adversely affect end-customers' systems and cause material system failures. Any such false identification of important files or applications could result in damage to our reputation, negative publicity, loss of channel partners, end-customers and sales, increased costs to remedy any problem, and costly litigation.

We rely on our channel partners to sell substantially all of our products, including subscriptions and support, and if these channel partners fail to perform, our ability to sell and distribute our products and subscriptions will be limited, and our operating results will be harmed.

Substantially all of our revenue is generated by sales through our channel partners, including distributors and resellers. We provide our channel partners with specific training and programs to assist them in selling our products, including subscriptions and support offerings, but there can be no assurance that these steps will be utilized or effective. In addition, our channel partners may be unsuccessful in marketing, selling, and supporting our products and subscriptions. We may not be able to incentivize these channel partners to sell our products and subscriptions to end-customers and, in particular, to large enterprises. These channel partners may also have incentives to promote our competitors' products and may devote more resources to the marketing, sales, and support of competitive products. Our agreements with our channel partners may generally be terminated for any reason by either party with advance notice prior to each annual renewal date. We cannot be certain that we will retain these channel partners or that we will be able to secure additional or replacement channel partners. In addition, any new channel partner requires extensive training and may take several months or more to achieve productivity. Our channel partner sales structure could subject us to lawsuits, potential liability, and reputational harm if, for example, any of our channel partners misrepresent the functionality of our products or subscriptions to end-customers or violate laws or our corporate policies. If we fail to effectively manage our sales channels or channel partners, our ability to sell our products and subscriptions and operating results will be harmed.

If we do not accurately predict, prepare for, and respond promptly to rapidly evolving technological and market developments and successfully manage product and subscription introductions and transitions to meet changing end-customer needs in the enterprise security market, our competitive position and prospects will be harmed.

The enterprise security market has grown quickly and is expected to continue to evolve rapidly. Moreover, many of our end-customers operate in markets characterized by rapidly changing technologies and business plans, which require them to add numerous network access points and adapt increasingly complex enterprise networks, incorporating a variety of hardware, software applications, operating systems, and networking protocols. If we fail to accurately predict end-customers' changing needs and emerging technological trends in the enterprise security industry, including in the areas of mobility, virtualization, cloud computing, and software defined networks ("SDN") , our business could be harmed. The technology in our platform is especially complex because it needs to effectively identify and respond to new and increasingly sophisticated methods of attack, while minimizing the impact on network performance. Additionally, some of our new platform features and related platform enhancements may require us to develop new hardware architectures that involve complex, expensive, and time-consuming research and development processes. The development of our platform is difficult and the timetable for commercial release and availability is uncertain as there can be long time periods between releases and availability of new platform features. If we experience unanticipated delays in the availability of new products, platform features, and subscriptions, and fail to meet customer expectations for such availability, our competitive position and business prospects will be harmed.

Additionally, we must commit significant resources to developing new platform features before knowing whether our investments will result in products, subscriptions, and platform features the market will accept. The success of new platform features depends on several factors, including appropriate new product definition, differentiation of new products, subscriptions, and platform features from those of our competitors, and market acceptance of these products, services and platform features. Moreover, successful new product introduction and transition depends on a number of factors including, our ability to manage the risks associated with new product production ramp-up issues, the availability of application software for new products, the effective management of purchase commitments and inventory, the availability of products in appropriate quantities and costs to meet anticipated demand, and the risk that new products may have quality or other defects or deficiencies, especially in the early stages of introduction. There can be no assurance that we will successfully identify opportunities for new products and subscriptions, develop and bring new products and subscriptions to market in a timely manner, or achieve market acceptance of our products and subscriptions, or that products, subscriptions, and technologies developed by others will not render our products, subscriptions, or technologies obsolete or noncompetitive.

Our current research and development efforts may not produce successful products, subscriptions, or platform features that result in significant revenue, cost savings or other benefits in the near future, if at all.

Developing our products, subscriptions, platform features, and related enhancements is expensive. Our investments in research and development may not result in significant design improvements, marketable products, subscriptions, or platform features, or may result in products, subscriptions, or platform features that are more expensive than anticipated. Additionally, we may not achieve the cost savings or the anticipated performance improvements we expect, and we may take longer to generate revenue, or generate less revenue, than we anticipate. Our future plans include significant investments in research and development and related product and subscription opportunities. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain our competitive position. However, we may not receive significant revenue from these investments in the near future, if at all, or these investments may not yield the expected benefits, either of which could adversely affect our business and operating results.

Because we depend on manufacturing partners to build and ship our products, we are susceptible to manufacturing and logistics delays and pricing fluctuations that could prevent us from shipping customer orders on time, if at all, or on a cost-effective basis, which may result in the loss of sales and end-customers.

We depend on manufacturing partners, primarily Flextronics International, Ltd. ("Flex") , our electronics manufacturing service provider ("EMS provider") , as sole source manufacturers for our product lines. Our reliance on these manufacturing partners reduces our control over the manufacturing process and exposes us to risks, including reduced control over quality assurance, product costs, product supply, timing and transportation risk. Our products are manufactured by our manufacturing partners at facilities located in the United States. Some of the components in our products are sourced either through Flex or directly by us from component suppliers outside the United States. The portion of our products that are sourced outside the United States may subject us to additional logistical risks or risks associated with complying with local rules and regulations in foreign countries. Significant changes to existing international trade agreements could lead to sourcing or logistics disruption resulting from import delays or the imposition of increased tariffs on our sourcing partners. For example, the United States and Chinese governments have each enacted, and discussed potential, import tariffs. These tariffs, depending on their ultimate scope and how they are implemented, could negatively impact our business by increasing our costs. Each of these factors could severely impair our ability to fulfill orders.

In addition, we are subject to requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act") to diligence, disclose, and report whether or not our products contain minerals originating from the Democratic

Republic of the Congo and adjoining countries, or conflict minerals. Although the SEC has provided guidance with respect to a portion of the conflict minerals filing requirements that may somewhat reduce our reporting practices, we have incurred and expect to incur additional costs to comply with these disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products. These requirements could adversely affect the sourcing, availability, and pricing of minerals used in the manufacture of semiconductor devices or other components used in our products. We may also encounter end-customers who require that all of the components of our products be certified as conflict free. If we are not able to meet this requirement, such end-customers may choose not to purchase our products.

Our manufacturing partners typically fulfill our supply requirements on the basis of individual purchase orders. We do not have long-term contracts with these manufacturers that guarantee capacity, the continuation of particular pricing terms, or the extension of credit limits. Accordingly, they are not obligated to continue to fulfill our supply requirements and the prices we pay for manufacturing services could be increased on short notice. Our contract with Flex permits them to terminate the agreement for their convenience, subject to prior notice requirements. If we are required to change manufacturing partners, our ability to meet our scheduled product deliveries to our end-customers could be adversely affected, which could cause the loss of sales to existing or potential end-customers, delayed revenue or an increase in our costs which could adversely affect our gross margins. Any production interruptions for any reason, such as a natural disaster, epidemic, capacity shortages, or quality problems, at one of our manufacturing partners would negatively affect sales of our product lines manufactured by that manufacturing partner and adversely affect our business and operating results.

Managing the supply of our products and product components is complex. Insufficient supply and inventory may result in lost sales opportunities or delayed revenue, while excess inventory may harm our gross margins.

Our manufacturing partners procure components and build our products based on our forecasts, and we generally do not hold inventory for a prolonged period of time. These forecasts are based on estimates of future demand for our products, which are in turn based on historical trends and analyses from our sales and product management organizations, adjusted for overall market conditions. In order to reduce manufacturing lead times and plan for adequate component supply, from time to time we may issue forecasts for components and products that are non-cancelable and non-returnable.

Our inventory management systems and related supply chain visibility tools may be inadequate to enable us to forecast accurately and effectively manage supply of our products and product components. If we ultimately determine that we have excess supply, we may have to reduce our prices and write-down inventory, which in turn could result in lower gross margins. If our actual component usage and product demand are lower than the forecast we provide to our manufacturing partners, we accrue for losses on manufacturing commitments in excess of forecasted demand. Alternatively, insufficient supply levels may lead to shortages that result in delayed product revenue or loss of sales opportunities altogether as potential end-customers turn to competitors’ products that are readily available. If we are unable to effectively manage our supply and inventory, our operating results could be adversely affected.

Because some of the key components in our products come from limited sources of supply, we are susceptible to supply shortages or supply changes, which could disrupt or delay our scheduled product deliveries to our end-customers and may result in the loss of sales and end-customers.

Our products rely on key components, including integrated circuit components, which our manufacturing partners purchase on our behalf from a limited number of component suppliers, including sole source providers. The manufacturing operations of some of our component suppliers are geographically concentrated in Asia and elsewhere, which makes our supply chain vulnerable to regional disruptions, such as natural disasters, fire, political instability, civil unrest, a power outage, or a localized health risk, and as a result could impair the volume of components that we are able to obtain.

Further, we do not have volume purchase contracts with any of our component suppliers, and they could cease selling to us at any time. If we are unable to obtain a sufficient quantity of these components in a timely manner for any reason, sales of our products could be delayed or halted or we could be forced to expedite shipment of such components or our products at dramatically increased costs. Our component suppliers also change their selling prices frequently in response to market trends, including industry-wide increases in demand, and because we do not have volume purchase contracts with these component suppliers, we are susceptible to price fluctuations related to raw materials and components and may not be able to adjust our prices accordingly. Additionally, poor quality in any of the sole-sourced components in our products could result in lost sales or sales opportunities.

If we are unable to obtain a sufficient volume of the necessary components for our products on commercially reasonable terms or the quality of the components do not meet our requirements, we could also be forced to redesign our products and qualify new components from alternate component suppliers. The resulting stoppage or delay in selling our products and the expense of redesigning our products could result in lost sales opportunities and damage to customer relationships, which would adversely affect our business and operating results.

The sales prices of our products and subscriptions may decrease, which may reduce our gross profits and adversely impact our financial results.

The sales prices for our products and subscriptions may decline for a variety of reasons, including competitive pricing pressures, discounts, a change in our mix of products and subscriptions, anticipation of the introduction of new products or subscriptions, or promotional programs. Competition continues to increase in the market segments in which we participate, and we expect competition to further increase in the future, thereby leading to increased pricing pressures. Larger competitors with more diverse product and service offerings may reduce the price of products or subscriptions that compete with ours or may bundle them with other products and subscriptions. Additionally, although we price our products and subscriptions worldwide in U.S. dollars, currency fluctuations in certain countries and regions may negatively impact actual prices that channel partners and end-customers are willing to pay in those countries and regions. Furthermore, we anticipate that the sales prices and gross profits for our products will decrease over product life cycles. We cannot guarantee that we will be successful in developing and introducing new offerings with enhanced functionality on a timely basis, or that our product and subscription offerings, if introduced, will enable us to maintain our prices and gross profits at levels that will allow us to achieve and maintain profitability.

We generate a significant amount of revenue from sales to distributors, resellers, and end-customers outside of the United States, and we are therefore subject to a number of risks associated with international sales and operations.

We have a limited history of marketing, selling, and supporting our products and subscriptions internationally. We may experience difficulties in recruiting, training, managing, and retaining an international staff, and specifically staff related to sales management and sales personnel. We also may not be able to maintain successful strategic distributor relationships internationally or recruit additional companies to enter into strategic distributor relationships. Business practices in the international markets that we serve may differ from those in the United States and may require us in the future to include terms other than our standard terms related to payment, warranties, or performance obligations in end-customer contracts.

Additionally, our international sales and operations are subject to a number of risks, including the following:

- political, economic and social uncertainty around the world, macroeconomic challenges in Europe, terrorist activities, and continued hostilities in the Middle East;
- greater difficulty in enforcing contracts and accounts receivable collection and longer collection periods;
- the uncertainty of protection for intellectual property rights in some countries;
- greater risk of unexpected changes in foreign and domestic regulatory practices, tariffs, and tax laws and treaties, including regulatory and trade policy changes adopted by the current administration or foreign countries in response to regulatory changes adopted by the current administration;
- risks associated with trade restrictions and foreign legal requirements, including the importation, certification, and localization of our products required in foreign countries;
- greater risk of a failure of foreign employees, channel partners, distributors, and resellers to comply with both U.S. and foreign laws, including antitrust regulations, the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, U.S. or foreign sanctions regimes and export or import control laws, and any trade regulations ensuring fair trade practices, which non-compliance could include increased costs;
- heightened risk of unfair or corrupt business practices in certain geographies and of improper or fraudulent sales arrangements;
- increased expenses incurred in establishing and maintaining office space and equipment for our international operations;
- management communication and integration problems resulting from cultural and geographic dispersion; and
- fluctuations in exchange rates between the U.S. dollar and foreign currencies in markets where we do business and related impact on sales cycles.

These and other factors could harm our future international revenues and, consequently, materially impact our business, operating results, and financial condition. The expansion of our existing international operations and entry into additional international markets will require significant management attention and financial resources. Our failure to successfully manage our international operations and the associated risks effectively could limit the future growth of our business.

Further, we are subject to risks associated with changes in economic and political conditions in countries in which we operate or sell our products and subscriptions. For instance, the U.K.'s notification of its intention to leave the E.U. creates an uncertain political and economic environment in the U.K. and potentially across other E.U. member states for the foreseeable future, including during any period while the terms of any U.K. exit from the E.U. are being negotiated and/or during any transitional period connected to the U.K.'s eventual withdrawal from the E.U. Any agreements arising out of negotiations which the U.K. government makes to retain access to E.U. markets either during a transitional period or more permanently may lead to greater restrictions on the free movement of goods, services, people and capital between the U.K. and the remaining E.U. member states. Our financial condition and operating results in the U.K. and the E.U. may be impacted by such uncertainty with potential disruptions to our relationships with existing and future customers, suppliers and employees all possibly having a material adverse impact on our business, prospects, financial condition and/or operating results.

We are exposed to fluctuations in currency exchange rates, which could negatively affect our financial condition and operating results.

Our sales contracts are primarily denominated in U.S. dollars, and therefore, substantially all of our revenue is not subject to foreign currency risk. However, including as a result of concerns regarding the impact of Brexit, there has been, and may continue to be, significant volatility in global stock markets and foreign currency exchange rates that result in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. The strengthening of the U.S. dollar increases the real cost of our platform to our end-customers outside of the United States and may lead to delays in the purchase of our products, subscriptions, and support, and the lengthening of our sales cycle. If the U.S. dollar continues to strengthen, this could adversely affect our financial condition and operating results. In addition, increased international sales in the future, including through our channel partners and other partnerships, may result in greater foreign currency denominated sales, increasing our foreign currency risk.

Our operating expenses incurred outside the United States and denominated in foreign currencies are increasing and are subject to fluctuations due to changes in foreign currency exchange rates. If we are not able to successfully hedge against the risks associated with foreign currency fluctuations, our financial condition and operating results could be adversely affected. We have entered into forward contracts in an effort to reduce our foreign currency exchange exposure related to our foreign currency denominated expenditures. As of April 30, 2019 , the total notional amount of our outstanding foreign currency forward contracts was $142.8 million . For more information on our hedging transactions, refer to Note 5 . Derivative Instruments in Part I, Item 1 of this Quarterly Report on Form 10-Q. The effectiveness of our existing hedging transactions and the availability and effectiveness of any hedging transactions we may decide to enter into in the future may be limited and we may not be able to successfully hedge our exposure, which could adversely affect our financial condition and operating results.

A small number of channel partners represent a large percentage of our revenue and gross accounts receivable. We are exposed to the credit and liquidity risk of some of our channel partners and to credit exposure in weakened markets, which could result in material losses.

For the nine months ended April 30, 2019 , three distributors represented 65.1% of our total revenue, and as of April 30, 2019 , three distributors represented 51.9% of our gross accounts receivable. Most of our sales to our channel partners are made on an open credit basis. Although we have programs in place that are designed to monitor and mitigate these risks, we cannot guarantee these programs will be effective in reducing our credit risks, especially as we expand our business internationally. If we are unable to adequately control these risks, our business, operating results, and financial condition could be harmed.

A portion of our revenue is generated by sales to government entities, which are subject to a number of challenges and risks.

Sales to government entities are subject to a number of risks. Selling to government entities can be highly competitive, expensive, and time-consuming, often requiring significant upfront time and expense without any assurance that these efforts will generate a sale. The substantial majority of our sales to date to government entities have been made indirectly through our channel partners. Government certification requirements for products and subscriptions like ours may change, thereby restricting our ability to sell into the federal government sector until we have attained the revised certification. If our products and subscriptions are late in achieving or fail to achieve compliance with these certifications and standards, or our competitors achieve compliance with these certifications and standards, we may be disqualified from selling our products and subscriptions to such governmental entity, or be at a competitive disadvantage, which would harm our business, operating results, and financial condition. Government demand and payment for our products and subscriptions may be impacted by government shutdowns, public sector budgetary cycles, contracting requirements, and funding authorizations, with funding reductions or delays adversely affecting public sector demand for our products and subscriptions. Government entities may have statutory, contractual, or other legal rights to terminate contracts with our distributors and resellers for convenience or due to a default, and any such termination may adversely impact our future operating results. Governments routinely investigate and audit government contractors' administrative processes, and any unfavorable audit could result in the government refusing to continue buying our products and subscriptions, a reduction of revenue, or fines or civil or criminal liability if the audit uncovers improper or illegal activities, which could adversely impact our operating results in a material way. Additionally, the U.S. government may require certain of the products that it purchases to be manufactured in the United States and other relatively high cost manufacturing locations, and we may not manufacture all products in locations that meet such requirements, affecting our ability to sell these products and subscriptions to the U.S. government.

Our ability to sell our products and subscriptions is dependent on the quality of our technical support services and those of our channel partners, and the failure to offer high-quality technical support services could have a material adverse effect on our end-customers' satisfaction with our products and subscriptions, our sales, and our operating results.

After our products and subscriptions are deployed within our end-customers' networks, our end-customers depend on our technical support services, as well as the support of our channel partners, to resolve any issues relating to our products. Our channel partners often provide similar technical support for third parties' products and may therefore have fewer resources to dedicate to the support of our products and subscriptions. If we or our channel partners do not effectively assist our end-customers in deploying our products and subscriptions, succeed in helping our end-customers quickly resolve post-deployment issues, or provide effective ongoing support, our ability to sell additional products and subscriptions to existing end-customers would be adversely affected and our reputation with potential end-customers could be damaged. Many larger enterprise, service provider, and government entity end-customers have more complex networks and require higher levels of support than smaller end-customers. If we or our channel partners fail to meet the requirements of these larger end-customers, it may be more difficult to execute on our strategy to increase our coverage with larger end-customers. Additionally, if our channel partners do not effectively provide support to the satisfaction of our end-customers, we may be required to provide direct support to such end-customers, which would require us to hire additional personnel and to invest in additional resources. It can take several months to recruit, hire, and train qualified technical support employees. We may not be able to hire such resources fast enough to keep up with unexpected demand, particularly if the sales of our products exceed our internal forecasts. As a result, our ability, and the ability of our channel partners to provide adequate and timely support to our end-customers will be negatively impacted, and our end-customers' satisfaction with our products and subscriptions will be adversely affected. Additionally, to the extent that we may need to rely on our sales engineers to provide post-sales support while we are ramping our support resources, our sales productivity will be negatively impacted, which would harm our revenues. Our failure or our channel partners' failure to provide and maintain high-quality support services could have a material adverse effect on our business, financial condition, and operating results.

We may acquire other businesses, which could require significant management attention, disrupt our business, dilute stockholder value, and adversely affect our operating results.

As part of our business strategy, we may acquire or make investments in complementary companies, products, or technologies. For example, in April 2014, we acquired Cyvera Ltd. ("Cyvera") , in May 2015, we acquired CirroSecure, Inc. , in February 2017, we acquired LightCyber Ltd. ("LightCyber") , in March 2018, we acquired Evident.io, Inc., in April 2018, we acquired Cyber Secdo Ltd. ("Secdo") , in October 2018, we acquired RedLock Inc., and in March 2019, we acquired Demisto, Inc. The identification of suitable acquisition candidates is difficult, and we may not be able to complete such acquisitions on favorable terms, if at all. If we do complete future acquisitions, we may not ultimately strengthen our competitive position or achieve our goals and business strategy; we may be subject to claims or liabilities assumed from an acquired company, product, or technology; acquisitions we complete could be viewed negatively by our end-customers, investors, and securities analysts; and we may incur costs and expenses necessary to address an acquired company's failure to comply with laws and governmental rules and regulations. Additionally, we may be subject to litigation or other claims in connection with the acquired company, including claims from terminated employees, customers, former stockholders or other third parties, which may differ from or be more significant than the risks our business faces. If we are unsuccessful at integrating past or future acquisitions in a timely manner, or the technologies and operations associated with such acquisitions, into our company, the revenue and operating results of the combined company could be adversely affected. Any integration process may require significant time and resources, which may disrupt our ongoing business and divert management's attention, and we may not be able to manage the integration process successfully or in a timely manner. We may not successfully evaluate or utilize the acquired technology or personnel, realize anticipated synergies from the acquisition, or accurately forecast the financial impact of an acquisition transaction and integration of such acquisition, including accounting charges and any potential impairment of goodwill and intangible assets recognized in connection with such acquisitions. We may have to pay cash, incur debt, or issue equity or equity-linked securities to pay for any future acquisitions, each of which could adversely affect our financial condition or the market price of our common stock. Furthermore, the sale of equity or issuance of equity-linked debt to finance any future acquisitions could result in dilution to our stockholders. See the risk factors entitled "Our failure to raise additional capital or generate the significant capital necessary to expand our operations and invest in new products and subscriptions could reduce our ability to compete and could harm our business" and "The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, the conversion of our Notes or exercise of the related Warrants, or otherwise will dilute all other stockholders." The occurrence of any of these risks could harm our business, operating results, and financial condition.

Claims by others that we infringe their proprietary technology or other rights could harm our business.

Companies in the enterprise security industry own large numbers of patents, copyrights, trademarks, domain names, and trade secrets and frequently enter into litigation based on allegations of infringement, misappropriation, or other violations of intellectual property or other rights. Third parties have asserted and may in the future assert claims of infringement of intellectual property rights against us. For example, in December 2011, Juniper , one of our competitors, filed a lawsuit against us alleging patent infringement. In September 2013, we filed a lawsuit against Juniper alleging patent infringement. In May 2014, we entered into a Settlement, Release and Cross-License Agreement with Juniper to resolve all pending disputes between Juniper and us, including dismissal of all pending litigation.

Third parties may also assert such claims against our end-customers or channel partners, whom our standard license and other agreements obligate us to indemnify against claims that our products and subscriptions infringe the intellectual property rights of third parties. In addition, to the extent we hire personnel from competitors, we may be subject to allegations that they have been improperly solicited, that they have divulged proprietary or other confidential information, or that their former employers own their inventions or other work product. Furthermore, we may be unaware of the intellectual property rights of others that may cover some or all of our technology or products and subscriptions. As the number of products and competitors in our market increases and overlaps occur, infringement claims may increase. While we intend to increase the size of our patent portfolio, our competitors and others may now and in the future have significantly larger and more mature patent portfolios than we have. In addition, litigation may involve patent holding companies or other adverse patent owners who have no relevant product revenue and against whom our own patents may therefore provide little or no deterrence or protection. In addition, we have not registered our trademarks in all of our geographic markets and failure to secure those registrations could adversely affect our ability to enforce and defend our trademark rights. Any claim of infringement by a third party, even those without merit, could cause us to incur substantial costs defending against the claim, could distract our management from our business, and could require us to cease use of such intellectual property. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. A successful claimant could secure a judgment or we may agree to a settlement that prevents us from distributing certain products or performing certain services or that requires us to pay substantial damages, royalties, or other fees. Any of these events could seriously harm our business, financial condition, and operating results.

Our proprietary rights may be difficult to enforce or protect, which could enable others to copy or use aspects of our products or subscriptions without compensating us.

We rely and expect to continue to rely on a combination of confidentiality and license agreements with our employees, consultants, and third parties with whom we have relationships, as well as trademark, copyright, patent, and trade secret protection laws, to protect our proprietary rights. We have filed various applications for certain aspects of our intellectual property. Valid patents may not issue from our pending applications, and the claims eventually allowed on any patents may not be sufficiently broad to protect our technology or products and subscriptions. We cannot be certain that we were the first to make the inventions claimed in our pending patent applications or that we were the first to file for patent protection, which could prevent our patent applications from issuing as patents or invalidate our patents following issuance. Additionally, the process of obtaining patent protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. Any issued patents may be challenged, invalidated or circumvented, and any rights granted under these patents may not actually provide adequate defensive protection or competitive advantages to us. Additional uncertainty may result from changes to patent-related laws and court rulings in the United States and other jurisdictions. As a result, we may not be able to obtain adequate patent protection or effectively enforce any issued patents.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or subscriptions or obtain and use information that we regard as proprietary. We generally enter into confidentiality or license agreements with our employees, consultants, vendors, and end-customers, and generally limit access to and distribution of our proprietary information. However, we cannot be certain that we have entered into such agreements with all parties who may have or have had access to our confidential information or that the agreements we have entered into will not be breached. We cannot guarantee that any of the measures we have taken will prevent misappropriation of our technology. Because we may be an attractive target for computer hackers, we may have a greater risk of unauthorized access to, and misappropriation of, our proprietary information. In addition, the laws of some foreign countries do not protect our proprietary rights to as great an extent as the laws of the United States, and many foreign countries do not enforce these laws as diligently as government agencies and private parties in the United States. From time to time, we may need to take legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively affect our business, operating results, and financial condition. Attempts to enforce our rights against third parties could also provoke these third parties to assert their own intellectual property or other rights against us, or result in a holding that invalidates or narrows the scope of our rights, in whole or in part. If we are unable to protect our proprietary rights (including aspects of our software and products protected other than by patent rights), we may find ourselves at a competitive disadvantage to others who need not incur the additional expense, time, and effort required to create the innovative products that have enabled us to be successful to date. Any of these events would have a material adverse effect on our business, financial condition, and operating results.

Our use of open source software in our products and subscriptions could negatively affect our ability to sell our products and subscriptions and subject us to possible litigation.

Our products and subscriptions contain software modules licensed to us by third-party authors under “open source” licenses. Some open source licenses contain requirements that we make available applicable source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors to create similar products or subscriptions with lower development effort and time and ultimately could result in a loss of product sales for us.

Although we monitor our use of open source software to avoid subjecting our products and subscriptions to conditions we do not intend, the terms of many open source licenses have not been interpreted by United States courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our products and subscriptions. From time to time, there have been claims against companies that distribute or use open source software in their products and subscriptions, asserting that open source software infringes the claimants' intellectual property rights. We could be subject to suits by parties claiming infringement of intellectual property rights in what we believe to be licensed open source software. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue offering our products and subscriptions on terms that are not economically feasible, to reengineer our products and subscriptions, to discontinue the sale of our products and subscriptions if reengineering could not be accomplished on a timely basis, or to make generally available, in source code form, our proprietary code, any of which could adversely affect our business, operating results, and financial condition.

In addition to risks related to license requirements, usage of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or assurance of title or controls on origin of the software. In addition, many of the risks associated with usage of open source software, such as the lack of warranties or assurances of title, cannot be eliminated, and could, if not properly addressed, negatively affect our business. We have established processes to help alleviate these risks, including a review process for screening requests from our development organizations for the use of open source software, but we cannot be sure that our processes for controlling our use of open source software in our products and subscriptions will be effective.

We license technology from third parties, and our inability to maintain those licenses could harm our business.

We incorporate technology that we license from third parties, including software, into our products and subscriptions. We cannot be certain that our licensors are not infringing the intellectual property rights of third parties or that our licensors have sufficient rights to the licensed intellectual property in all jurisdictions in which we may sell our products and subscriptions. In addition, some licenses may be non-exclusive, and therefore our competitors may have access to the same technology licensed to us. Some of our agreements with our licensors may be terminated for convenience by them. We may also be subject to additional fees or be required to obtain new licenses if any of our licensors allege that we have not properly paid for such licenses or that we have improperly used the technologies under such licenses, and such licenses may not be available on terms acceptable to us or at all. If we are unable to continue to license any of this technology because of intellectual property infringement claims brought by third parties against our licensors or against us, or claims against us by our licensors, or if we are unable to continue our license agreements or enter into new licenses on commercially reasonable terms, our ability to develop and sell products and subscriptions containing such technology would be severely limited, and our business could be harmed. Additionally, if we are unable to license necessary technology from third parties, we may be forced to acquire or develop alternative technology, which we may be unable to do in a commercially feasible manner or at all, and we may be required to use alternative technology of lower quality or performance standards. This would limit and delay our ability to offer new or competitive products and subscriptions and increase our costs of production. As a result, our margins, market share, and operating results could be significantly harmed.

We face risks associated with having operations and employees located in Israel.

As a result of our acquisitions of Cyvera , LightCyber , and Secdo , we have an office and employees located in Israel. Accordingly, political, economic, and military conditions in Israel directly affect our operations. The future of peace efforts between Israel and its Arab neighbors remains uncertain. There has been a significant increase in hostilities and political unrest between Hamas and Israel in the past few years. The effects of these hostilities and violence on the Israeli economy and our operations in Israel are unclear, and we cannot predict the effect on us of further increases in these hostilities or future armed conflict, political instability or violence in the region. Current or future tensions and conflicts in the Middle East could adversely affect our business, operating results, financial condition and cash flows.

In addition, many of our employees in Israel are obligated to perform annual reserve duty in the Israeli military and are subject to being called for active duty under emergency circumstances. We cannot predict the full impact of these conditions on us in the future, particularly if emergency circumstances or an escalation in the political situation occurs. If many of our employees in Israel are called for active duty for a significant period of time, our operations and our business could be disrupted and may not be able to function at full capacity. Any disruption in our operations in Israel could adversely affect our business.

Our failure to adequately protect personal information could have a material adverse effect on our business.

A wide variety of provincial, state, national, and international laws and regulations apply to the collection, use, retention, protection, disclosure, transfer, and other processing of personal data. These data protection and privacy-related laws and regulations are evolving and being tested in courts and may result in ever-increasing regulatory and public scrutiny as well as escalating levels of enforcement and sanctions. Further, the interpretation and application of foreign laws and regulations in many cases is uncertain, and our legal and regulatory obligations in foreign jurisdictions are subject to frequent and unexpected changes, including the potential for various regulatory or other governmental bodies to enact new or additional laws or regulations, to issue rulings that invalidate prior laws or regulations, or to increase penalties significantly.

For example, the E.U. General Data Protection Regulation (“GDPR”), which became effective in May 2018, imposes more stringent data protection requirements, and provides for greater penalties for noncompliance, than E.U. laws that previously applied. In the U.K., a Data Protection Bill that substantially implements the GDPR also became law in May 2018. Additionally, California recently enacted legislation, the California Consumer Privacy Act (“CCPA”), that will, among other things, require covered companies to provide new disclosures to California consumers, and afford such consumers new abilities to opt-out of certain sales of personal information, when it goes into effect on January 1, 2020. Legislators have stated that they intend to propose amendments to the CCPA before it goes into effect, and it remains unclear what, if any, modifications will be made to this legislation or how it will be interpreted. The effects of the CCPA potentially are significant, however, and may require us to modify our data processing practices and policies and to incur substantial costs and expenses in an effort to comply. We may also from time to time be subject to, or face assertions that we are subject to, additional obligations relating to personal data by contract or due to assertions that self-regulatory obligations or industry standards apply to our practices.

Our actual or perceived failure to comply with applicable laws and regulations or other obligations to which we may be subject relating to personal data, or to protect personal data from unauthorized acquisition, use or other processing, could result in consequences such as enforcement actions and regulatory investigations against us, fines, public censure, claims for damages by end-customers and other affected individuals, damage to our reputation and loss of goodwill (both in relation to existing end-customers and prospective end-customers), any of which could have a material adverse effect on our operations, financial performance, and business. Evolving and changing definitions of personal data and personal information, within the E.U. , the United States, and elsewhere, especially relating to classification of Internet Protocol (“IP”) addresses, machine identification, location data, and other information, may limit or inhibit our ability to operate or expand our business, including limiting strategic partnerships that may involve the sharing or uses of data, and may require significant expenditures and efforts in order to comply. Even the perception of privacy, data protection or information security concerns, whether or not valid, may harm our reputation and inhibit adoption of our products and subscriptions by current and future end-customers.

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

Because we incorporate encryption technology into our products, certain of our products are subject to U.S. export controls and may be exported outside the United States only with the required export license or through an export license exception. If we were to fail to comply with U.S. export licensing requirements, U.S. customs regulations, U.S. economic sanctions, or other laws, we could be subject to substantial civil and criminal penalties, including fines, incarceration for responsible employees and managers, and the possible loss of export or import privileges. Obtaining the necessary export license for a particular sale may be time-consuming and may result in the delay or loss of sales opportunities. Furthermore, U.S. export control laws and economic sanctions prohibit the shipment of certain products to U.S. embargoed or sanctioned countries, governments, and persons. Even though we take precautions to ensure that our channel partners comply with all relevant regulations, any failure by our channel partners to comply with such regulations could have negative consequences for us, including reputational harm, government investigations, and penalties.

In addition, various countries regulate the import of certain encryption technology, including through import permit and license requirements, and have enacted laws that could limit our ability to distribute our products or could limit our end-customers’ ability to implement our products in those countries. Changes in our products or changes in export and import regulations may create delays in the introduction of our products into international markets, prevent our end-customers with international operations from deploying our products globally or, in some cases, prevent or delay the export or import of our products to certain countries, governments, or persons altogether. Any change in export or import regulations, economic sanctions or related legislation, shift in the enforcement or scope of existing regulations, or change in the countries, governments, persons, or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential end-customers with international operations. Any decreased use of our products or limitation on our ability to export to or sell our products in international markets would likely adversely affect our business, financial condition, and operating results.

Our failure to raise additional capital or generate the significant capital necessary to expand our operations and invest in new products and subscriptions could reduce our ability to compete and could harm our business.

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 features to enhance our platform, 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 or equity-linked financing, our stockholders may experience significant dilution of their ownership interests and the market price of our common stock could decline. For example, in June 2014, we issued 0.0% Convertible

Senior Notes due 2019 (the "2019 Notes") and in July 2018, we issued 0.75% Convertible Senior Notes due 2023 (the "2023 Notes" and, together with the 2019 Notes, the "Notes"); any conversion of some or all of either series of Notes into common stock will dilute the ownership interests of existing stockholders to the extent we deliver shares upon conversion of such Notes . See the risk factor entitled "The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, the conversion of our Notes , or otherwise will dilute all other stockholders." The holders of the Notes have priority over holders of our common stock, and if we engage in future debt financings, the holders of such additional debt would also have priority over the holders of our common stock. Current and future indebtedness may also contain terms that, among other things, 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 would require us to maintain specified liquidity or other ratios, any of which could harm our business, operating results, and financial condition. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business may be adversely affected.

We have a corporate structure aligned with the international nature of our business activities, and if we do not achieve increased tax benefits as a result of our corporate structure, our financial condition and operating results could be adversely affected.

We have reorganized our corporate structure and intercompany relationships to more closely align with the international nature of our business activities. This corporate structure may allow us to reduce our overall effective tax rate through changes in how we use our intellectual property, international procurement, and sales operations. This corporate structure may also allow us to obtain financial and operational efficiencies. These efforts require us to incur expenses in the near term for which we may not realize related benefits. If the structure is not accepted by the applicable tax authorities, if there are any changes in, or interpretations of, domestic and international tax laws that negatively impact the structure, including, but not limited to, the TCJA and guidance regarding base erosion and profit shifting ("BEPS") provided by the Organisation for Economic Co-operation and Development, or if we do not operate our business consistent with the structure and applicable tax provisions, we may fail to achieve the reduction in our overall effective tax rate and the other financial and operational efficiencies that we anticipate as a result of the structure and our future financial condition and operating results may be negatively impacted. In addition, we continue to evaluate our corporate structure in light of current and pending tax legislation, and any changes to our corporate structure may require us to incur additional expenses and may impact our overall effective tax rate.

We may have exposure to greater than anticipated tax liabilities.

Our income tax obligations are based in part on our corporate structure and intercompany arrangements, including the manner in which we develop, value, and use our intellectual property and the valuations of our intercompany transactions. The tax laws applicable to our business, including the laws of the United States and other jurisdictions, are subject to interpretation and certain jurisdictions may aggressively interpret their laws in an effort to raise additional tax revenue. The tax authorities of the jurisdictions in which we operate may challenge our methodologies for valuing developed technology or intercompany arrangements, which could increase our worldwide effective tax rate and harm our financial position and operating results. It is possible that tax authorities may disagree with certain positions we have taken and any adverse outcome of such a review or audit could have a negative effect on our financial position and operating results. Further, the determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment by management, and there are transactions where the ultimate tax determination is uncertain. Although we believe that our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our condensed consolidated financial statements and may materially affect our financial results in the period or periods for which such determination is made.

In addition, our future income tax obligations could be adversely affected by changes in, or interpretations of, tax laws in the United States or in other jurisdictions in which we operate. In the United States, the TCJA contains many significant changes to the U.S. federal income tax laws, the consequences of which, to us, could have a material impact on the value of our deferred tax assets and could increase our future U.S. income tax expense. Furthermore, changes to the taxation of undistributed foreign earnings, if any, could change our future intentions regarding reinvestment of such earnings. The foregoing items could have a material adverse effect on our business, cash flows, operating results, or financial condition.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in our condensed consolidated financial statements and accompanying notes. 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, liabilities, equity, revenue, and expenses that are not readily apparent from other sources. For more information, refer to the section entitled "Critical Accounting Estimates" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part I, Item 2 of this Quarterly Report on Form 10-Q. Additionally, as we have worked toward adopting and implementing the new revenue accounting standard, management has made judgments and assumptions based on our interpretation of the new standard. The new revenue standard is principle based and interpretation of those principles may vary from company to company based on their unique circumstances. In general, if our estimates, judgments or assumptions relating to our critical accounting policies change or if actual circumstances differ from our estimates, judgments or assumptions, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

Failure to comply with governmental laws and regulations could harm our business.

Our business is subject to regulation by various federal, state, local, and foreign governmental agencies, including agencies responsible for monitoring and enforcing employment and labor laws, workplace safety, product safety, environmental laws, consumer protection laws, anti-bribery laws (including the U.S. Foreign Corrupt Practices Act and the U.K. Anti-Bribery Act), import/export controls, federal securities laws, and tax laws and regulations. In certain jurisdictions, these regulatory requirements may be more stringent than those in the United States. Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, or injunctions. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation resulting from any alleged noncompliance, our business, operating results, and financial condition could be materially adversely affected. In addition, responding to any action will likely result in a significant diversion of management's attention and resources and an increase in professional fees. Enforcement actions, litigation, and sanctions could harm our business, operating results, and financial condition.

If we fail to comply with environmental requirements, our business, financial condition, operating results, and reputation could be adversely affected.

We are subject to various environmental laws and regulations including laws governing the hazardous material content of our products and laws relating to the collection of and recycling of electrical and electronic equipment. Examples of these laws and regulations include the E.U. Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive ("RoHS") and the E.U. Waste Electrical and Electronic Equipment Directive ("WEEE Directive") , as well as the implementing legislation of the E.U. member states. Similar laws and regulations have been passed or are pending in China, South Korea, Norway, and Japan and may be enacted in other regions, including in the United States, and we are, or may in the future be, subject to these laws and regulations.

The E.U. RoHS and the similar laws of other jurisdictions limit the content of certain hazardous materials such as lead, mercury, and cadmium in the manufacture of electrical equipment, including our products. Our current products comply with the E.U. RoHS requirements. However, if there are changes to this or other laws (or their interpretation) or if new similar laws are passed in other jurisdictions, we may be required to reengineer our products to use components compatible with these regulations. This reengineering and component substitution could result in additional costs to us or disrupt our operations or logistics.

The WEEE Directive requires electronic goods producers to be responsible for the collection, recycling, and treatment of such products. Changes in interpretation of the directive may cause us to incur costs or have additional regulatory requirements to meet in the future in order to comply with this directive, or with any similar laws adopted in other jurisdictions.

We are also subject to environmental laws and regulations governing the management of hazardous materials, which we use in small quantities in our engineering labs. Our failure to comply with past, present, and future similar laws could result in reduced sales of our products, substantial product inventory write-offs, reputational damage, penalties, and other sanctions, any of which could harm our business and financial condition. We also expect that our products will be affected by new environmental laws and regulations on an ongoing basis. To date, our expenditures for environmental compliance have not had a material impact on our operating results or cash flows, and although we cannot predict the future impact of such laws or regulations, they will likely result in additional costs and may increase penalties associated with violations or require us to change the content of our products or how they are manufactured, which could have a material adverse effect on our business, operating results, and financial condition.

Our business is subject to the risks of earthquakes, fire, power outages, floods, and other catastrophic events, and to interruption by man-made problems such as terrorism.

Both our corporate headquarters and the location where our products are manufactured are located in the San Francisco Bay Area, a region known for seismic activity. In addition, other natural disasters, such as fire or floods, a significant power outage, telecommunications failure, terrorism, an armed conflict, cyberattacks, or other geo-political unrest could affect our supply chain, manufacturers, logistics providers, channel partners, or end-customers or the economy as a whole and such disruption could impact our shipments and sales. These risks may be further increased if the disaster recovery plans for us and our suppliers prove to be inadequate. To the extent that any of the above should result in delays or cancellations of customer orders, the loss of customers, or the delay in the manufacture, deployment, or shipment of our products, our business, financial condition, and operating results would be adversely affected.

Risks Related to Our Notes

We may not have the ability to raise the funds necessary to settle conversions of the Notes , repurchase the Notes upon a fundamental change or repay the Notes in cash at their maturity, and our future debt may contain limitations on our ability to pay cash upon conversion or repurchase of the Notes .

Holders of the Notes of either series will have the right under the applicable indenture governing the Notes to require us to repurchase all or a portion of their Notes of such series upon the occurrence of a fundamental change before the applicable maturity date at a repurchase price equal to 100% of the principal amount of such Notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the applicable fundamental change repurchase date. In addition, upon conversion of the Notes of either series, we will be required to make cash payments for each $1,000 in principal amount of such Notes converted of at least the lesser of $1,000 and the sum of the daily conversion values for such series of Notes. Moreover, we will be required to repay the Notes in cash at their respective maturity, unless earlier converted or repurchased. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of such Notes surrendered or pay cash with respect to such Notes being converted.

In addition, our ability to repurchase or to pay cash upon conversion of either series of Notes may be limited by law, regulatory authority or agreements governing our future indebtedness. Our failure to repurchase the Notes at a time when the repurchase is required by the relevant indenture governing such Notes or to pay cash upon conversion of such Notes as required by the relevant indenture would constitute a default under such indenture. A default under the relevant indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the payment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Notes or to pay cash upon conversion of the Notes .

We may still incur substantially more debt or take other actions that would diminish our ability to make payments on the Notes when due.

We and our subsidiaries may be able to incur substantial additional debt in the future, subject to the restrictions contained in our debt instruments, some of which may be secured debt. We are not restricted under the terms of the applicable indenture governing such series of Notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of such indenture governing such Notes that could have the effect of diminishing our ability to make payments on such Notes when due. While the terms of any future indebtedness we may incur could restrict our ability to incur additional indebtedness, any such restrictions will indirectly benefit holders of the applicable series of Notes only to the extent any such indebtedness or credit facility is not repaid or does not mature while such Notes are outstanding.

Risks Related to Our Common Stock

Our actual operating results may differ significantly from our guidance.

From time to time, we have released, and may continue to release, guidance in our quarterly earnings releases, quarterly earnings conference calls, or otherwise, regarding our future performance that represents our management’s estimates as of the date of release. This guidance, which includes forward-looking statements, has been and will be based on projections prepared by our management. These projections are not prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, and neither our registered public accountants nor any other independent expert or outside party compiles or examines the projections. Accordingly, no such person expresses any opinion or any other form of assurance with respect to the projections.

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. The rapidly evolving market in which we operate may make it difficult to evaluate our current business and our future prospects, including our ability to plan for and model future growth. We intend to state possible outcomes as high and low ranges which are intended to provide a sensitivity analysis as variables are changed. However, actual results will vary from our guidance and the variations may be material. The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook as of the date of release with analysts and investors. We do not accept any responsibility for any projections or reports published by any such persons. Investors are urged not to rely upon our guidance in making an investment decision regarding our common stock.

Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in this “Risk Factors” section in this Quarterly Report on Form 10-Q could result in our actual operating results being different from our guidance, and the differences may be adverse and material.

The market price of our common stock historically has been volatile and the value of your investment could decline.

The market price of our common stock has been volatile since our initial public offering (“IPO”) in July 2012. The reported high and low sales prices of our common stock during the last 12 months have ranged from $160.08 to $260.63, as measured through May 16, 2019 . The market price of our common stock may fluctuate widely in response to various factors, some of which are beyond our control. These factors include:

- announcements of new products, subscriptions or technologies, commercial relationships, strategic partnerships, acquisitions or other events by us or our competitors;
- price and volume fluctuations in the overall stock market from time to time;
- news announcements that affect investor perception of our industry, including reports related to the discovery of significant cyberattacks;
- significant volatility in the market price and trading volume of technology companies in general and of companies in our industry;
- fluctuations in the trading volume of our shares or the size of our public float;
- actual or anticipated changes in our operating results or fluctuations in our operating results;
- whether our operating results meet the expectations of securities analysts or investors;
- actual or anticipated changes in the expectations of securities analysts or investors, whether as a result of our forward- looking statements, our failure to meet such expectations or otherwise;
- inaccurate or unfavorable research reports about our business and industry published by securities analysts or reduced coverage of our company by securities analysts;
- litigation involving us, our industry, or both;
- actions instituted by activist shareholders or others;
- regulatory developments in the United States, foreign countries or both;
- major catastrophic events;
- sales or repurchases of large blocks of our common stock or substantial future sales by our directors, executive officers, employees and significant stockholders;
- sales of our common stock by investors who view the Notes as a more attractive means of equity participation in us;
- hedging or arbitrage trading activity involving our common stock as a result of the existence of the Notes ;
- departures of key personnel; or
- economic uncertainty around the world, in particular, macroeconomic challenges in Europe.

The market price of our common stock could decline for reasons unrelated to our business, operating results, or financial condition and as a result of events that 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. 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, operating results, and financial condition.

The convertible note hedge and warrant transactions may affect the value of our common stock.

In connection with the sale of each series of Notes, we entered into convertible note hedge transactions (the “Note Hedges”) with certain counterparties. In connection with each such sale of the Notes, we also entered into warrant transactions with the counterparties pursuant to which we sold warrants (the “Warrants”) for the purchase of our common stock. The Note Hedges are expected generally to reduce the potential dilution to our common stock upon any conversion of either series of Notes and/or offset any cash payments we are required to make in excess of the principal amount of any such converted Notes of the applicable series. The Warrants could separately have a dilutive effect to the extent that the market price per share of our common stock exceeds the applicable strike price of the Warrants unless, subject to certain conditions, we elect to cash settle such Warrants.

The applicable counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the applicable series of Notes (and are likely to do so during any applicable observation period related to a conversion of such Notes). This activity could also cause or avoid an increase or a decrease in the market price of our common stock or the Notes of a series, which could affect a Note holder’s ability to convert its Notes of such series and, to the extent the activity occurs during any observation period related to a conversion of such Notes, it could affect the amount and value of the consideration that such Note holder will receive upon conversion of such Notes of such series.

We do not make any representation or prediction as to the direction or magnitude of any potential effect that the transactions described above may have on the price of either series of Notes or our common stock. In addition, we do not make any representation that the counterparties or their respective affiliates will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, the conversion of our Notes or exercise of the related Warrants, or otherwise will dilute all other stockholders.

Our amended and restated certificate of incorporation authorizes us to issue up to 1.0 billion shares of common stock and up to 100.0 million shares of preferred stock with such rights and preferences as may be determined by our board of directors. Subject to compliance with applicable rules and regulations, we may issue shares of common stock or securities convertible into shares of our common stock from time to time in connection with a financing, acquisition, investment, our stock incentive plans, the conversion of our Notes , the settlement of our Warrants, or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and cause the market price of our common stock to decline.

We cannot guarantee that our recently announced share repurchase program will be fully consummated or that it will enhance shareholder value, and share repurchases could affect the price of our common stock.

In February 2019, our board of directors authorized a $1.0 billion share repurchase program which will be funded from available working capital. The repurchase authorization will expire on December 31, 2020. Although our board of directors has authorized a share repurchase program, the share repurchase program does not obligate us to repurchase any specific dollar amount or to acquire any specific number of shares. The share repurchase program could affect the price of our common stock, increase volatility and diminish our cash reserves. In addition, it may be suspended or terminated at any time, which may result in a decrease in the price of our common stock.

We are subject to risks associated with our strategic investments. Impairments in the value of our investments could negatively impact our financial results.

In June 2017, we announced our plans to form the $20.0 million Palo Alto Networks Venture Fund. The fund is aimed at seed-, early-, and growth-stage security companies with a cloud-based application approach. We may not realize a return on our capital investments. Many such private companies generate net losses and the market for their products, services or technologies may be slow to develop, and, therefore, are dependent on the availability of later rounds of financing from banks or investors on favorable terms to continue their operations. The financial success of our investment in any company is typically dependent on a liquidity event, such as a public offering, acquisition or other favorable market event reflecting appreciation to the cost of our initial investment. The capital markets for public offerings and acquisitions are dynamic and the likelihood of liquidity events for the companies we have and intend to invest in could significantly change. Further, valuations of privately-held companies are inherently complex due to the lack of readily available market data and as such, the basis for these valuations is subject to the timing and accuracy of the data received from these companies. If we determine that any of our investments in such companies have experienced a decline in value, we may be required to record an impairment, which could be material and negatively impact our financial results. All of our investments are subject to a risk of a partial or total loss of investment capital.

We do not intend to pay dividends for the foreseeable future.

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 future. 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.

The requirements of being a public company may strain our resources, divert management's attention, and affect our ability to attract and retain qualified board members.

As a public company, we are subject to the reporting requirements of the Exchange Act , the Sarbanes-Oxley Act, the Dodd-Frank Act , the listing requirements of the New York Stock Exchange ("NYSE") , and other applicable securities rules and regulations. Compliance with these rules and regulations have increased our legal and financial compliance costs, made some activities more difficult, time-consuming or costly, and increased demand on our systems and resources. Among other things, the Exchange Act requires that we file annual, quarterly, and current reports with respect to our business and operating results. In addition, the Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to meet the requirements of 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 operating results. Although we have already hired additional employees to comply with these requirements, we may need to hire even more employees in the future, which will increase our costs and expenses.

In addition, changing laws, regulations, and standards related 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 may result in increased general and administrative expense and 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 differ from the activities intended by regulatory or governing bodies, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

We are obligated to maintain proper and effective internal control over financial reporting. We may not complete our analysis of our internal control over financial reporting in a timely manner, or this internal control may not be determined to be effective, which may adversely affect investor confidence in our company and, as a result, the value of our common stock.

While we were able to determine in our management's report for fiscal 2018 that our internal control over financial reporting is effective, as well as provide an unqualified attestation report from our independent registered public accounting firm to that effect, we may not be able to complete our evaluation, testing, and any required remediation in a timely fashion, may be unable to assert that our internal controls are effective, or our independent registered public accounting firm may not be able to formally attest to the effectiveness of our internal control over financial reporting in the future. In the event that our chief executive officer, chief financial officer, or independent registered public accounting firm determines in the future that our internal control over financial reporting is not effective as defined under Section 404, we could be subject to one or more investigations or enforcement actions by state or federal regulatory agencies, stockholder lawsuits or other adverse actions requiring us to incur defense costs, pay fines, settlements or judgments and causing investor perceptions to be adversely affected and potentially resulting in a decline in the market price of our stock.

Our charter documents and Delaware law, as well as certain provisions contained in the indentures governing the Notes , could discourage takeover attempts and lead to management entrenchment, which could also reduce the market price of our common stock.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a change in control of our company or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws include provisions that:

- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with three-year staggered terms;
- authorize 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;
- provide our board of directors with the exclusive right 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;
- prohibit our stockholders from taking action by written consent;
- specify that special meetings of our stockholders may be called only by the chairman of our board of directors, our president, our secretary, or a majority vote of our board of directors;
- require 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 issuance of preferred stock and management of our business or our amended and restated bylaws;
- authorize our board of directors to amend our bylaws by majority vote; and
- establish advance notice procedures with which our stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for our stockholders to replace members of our board of directors, which is responsible for appointing the members of management. In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time. Additionally, certain provisions contained in the applicable indenture governing each series of Notes could make it more difficult or more expensive for a third party to acquire us. The application of Section 203 or certain provisions contained in the applicable indenture governing each series of Notes also could have the effect of delaying or preventing a change in control of us. Any of these provisions could, under certain circumstances, depress the market price of our common stock.

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

Unregistered Sales of Equity Securities

There were no sales of unregistered securities during the three months ended April 30, 2019, other than those transactions previously reported on our Current Reports on Form 8-K filed on February 19, 2019, and amended on March 28, 2019.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

On February 26, 2019, we announced that our board of directors authorized a $1.0 billion share repurchase program which will be funded from available working capital. Repurchases may be made at management’s discretion from time to time on the open market, through privately negotiated transactions, transactions structured through investment banking institutions, block purchase techniques, 10b5-1 trading plans, or a combination of the foregoing. The repurchase authorization will expire on December 31, 2020, and may be suspended or discontinued at any time. There were no shares repurchased under our share repurchase program during the three months ended April 30, 2019 .

Between February 1, 2019 and February 28, 2019 and between April 1, 2019 and April 30, 2019, shares of restricted common stock were delivered by certain employees upon vesting of equity awards to satisfy tax withholding requirements. The average value of shares delivered to satisfy tax withholding requirements during these periods were $226.64 per share and $235.46 per share, respectively. The number of shares delivered to satisfy tax withholding requirements during these periods were not significant.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.1 **	Amended and Restated Flextronics Manufacturing Services Agreement, by and between the Registrant and Flextronics Telecom Systems Ltd., dated April 1, 2019.				
10.2 *	Demisto, Inc. 2015 Stock Option Plan, as amended.	S-8	333-230663	99.1	April 1, 2019
10.3 *	Offer Letter between the Registrant and Lorraine Twohill, dated April 10, 2019.	8-K	001-35594	10.1	April 15, 2019
10.4 *	Offer Letter between the Registrant and Rt Hon Sir John Key, dated April 10, 2019.	8-K	001-35594	10.2	April 15, 2019
31.1	Certification of the Chief Executive Officer pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.				
31.2	Certification of the Chief Financial Officer pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.				
32.1 †	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2 †	Certification of 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 Schema Linkbase Document.				
101.CAL	XBRL Taxonomy Calculation Linkbase Document.				
101.DEF	XBRL Taxonomy Definition Linkbase Document.				
101.LAB	XBRL Taxonomy Labels Linkbase Document.				
101.PRE	XBRL Taxonomy Presentation Linkbase Document.				

* Indicates a management contract or compensatory plan or arrangement.

** Certain portions of this exhibit have been omitted as the Registrant has determined (i) the omitted information is not material and (ii) the omitted information would likely cause harm to the Registrant if publicly disclosed.

† The certifications attached as Exhibit 32.1 and 32.2 that accompany this Quarterly Report on Form 10-Q are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Palo Alto Networks, 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 the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: May 29, 2019

PALO ALTO NETWORKS, INC.

By: /s/ KATHLEEN BONANNO

Kathleen Bonanno
Chief Financial Officer
(Duly Authorized Officer and Principal Financial Officer)

Date: May 29, 2019

PALO ALTO NETWORKS, INC.

By: /s/ JEAN COMPEAU

Jean Compeau
Chief Accounting Officer
(Duly Authorized Officer and Principal Accounting Officer)

Exhibit 10.1

[***] Certain identified information has been excluded from this exhibit because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

Amended and Restated Flextronics Manufacturing Services Agreement

This Amended and Restated Flextronics Manufacturing Services Agreement ("Agreement") is entered into this day of April 1, 2019 ("Effective Date') by and between Palo Alto Networks, Inc., having its place of business at 3000 Tannery Way, Santa Clara, CA 95035 ("Customer") and Flextronics Telecom Systems Ltd., having its registered office at Suite 402, St. James Court, St. Denis Street, Port Louis, Mauritius, Mauritius ("Flextronics"), and as of the Effective Date replaces in its entirety the existing Amended and Restated Flextronics Manufacturing Services Agreement dated December 8, 2015 between the same parties.

Customer desires to engage Flextronics to perform manufacturing services as further set forth in this Agreement. The parties agree as follows:

1. DEFINITIONS

Flextronics and Customer agree that capitalized terms shall have the meanings set forth in this Agreement and Exhibit 1 attached hereto and incorporated herein by reference.

2. MANUFACTURING SERVICES

2.1. **Work** . Customer hereby engages Flextronics to perform the work (hereinafter "Work"). "Work" shall mean to procure Materials and to manufacture, assemble, and test products (hereinafter "Product(s)") pursuant to detailed written Specifications. Except as otherwise agreed to in writing by Customer, all Work will be performed at the Flextronics facility identified in Exhibit 2. The "Specifications" for each Product or revision thereof, shall include but are not limited to bill of materials, designs, schematics, assembly drawings, process documentation, test specifications, current revision number, and Approved Vendor List. The Specifications as provided by Customer through Customer's product lifecycle management system, Arena Solutions, and included in Flextronics's production document management system and maintained in accordance with the terms of this Agreement. This Agreement does not include any new product introduction (NPI) or product prototype services related to the Products. In the event that Customer requires any such services, the parties will enter into a separate agreement. In case of any conflict between the Specifications and this Agreement, this Agreement shall prevail. This Agreement also includes ODM (original design manufacture)-type products. The Products set forth in Exhibit 3 constitute the sole ODM Products supplied by Flextronics to Customer as of the Effective Date.

2.2. **Engineering Changes .** Customer may request that Flextronics incorporate engineering changes into the Product (including, but not limited to, any changes to the Flextronics-Supplied Critical Component) by providing Flextronics with a description of the proposed engineering change sufficient to permit Flextronics to evaluate its feasibility and cost. Flextronics will proceed with engineering changes when the parties have agreed upon the changes to the Specifications, delivery schedule and Product pricing and Customer has agreed to the implementation costs. All engineering changes shall be submitted through Customer's product lifecycle management system (Arena Solutions), which Flextronics has been granted access to in order to manage such changes and route them for approval by both parties.

2.3. **Tooling; Non-Recurring Expenses; Software** . Customer shall pay for or obtain and consign to Flextronics any Customer Product specific tooling, equipment or software necessary for the manufacture of its products. Such tooling, equipment or software may consist of, but not be limited to: test servers and software, test fixtures unique to each product, ICT test fixtures, PCBA specific solder masks, board level test fixtures, system level test fixtures, debugging fixtures and tools, loopback connectors, etc.

[***] shall, at its own expense obtain, and maintain any tooling, tools, equipment or software necessary for the manufacture of Customer Products that are considered industry common equipment that can readily be utilized for the manufacture of any industry common customer equipment in the work cells. Such industry common equipment including tooling, tools, equipment or software may consist of, but not be limited to: common hand tools, common power tools, common equipment racks, general network cabling, carts, barcode scanners (2D and 3D), printers (up to 600 DPI) and printing software, printer toner and/or ink, inventory management racks/systems and software etc. Flextronics shall be responsible for the ongoing maintenance and calibration of such industry common equipment and shall maintain records of maintenance and calibration where required. [***] does not include [***]. The parties agree that any single expenditure for over $[***] ("High Dollar Spend") will be subject to separate and negotiation and written agreement about which party pays all or what portion of the cost of the High Dollar Spend.

2.4. **Customer Affiliate** . Customer's affiliate, Palo Alto Networks (Netherlands) B.V. ("PANBV") shall also be a party to this Agreement. Customer hereby guarantees the payment and performance of any obligation of PANBV arising out of or relating to this Agreement. Flextronics shall be entitled to enforce directly against Customer any obligation of PANBV.

2.5 **Repair Services** . The parties agree to have certain repair related services governed by the Repair Services Addendum found in Exhibit 4.

3. BUILD FORECASTS; ORDERS; FEES; PAYMENT

3.1. **Build Forecast** . Customer shall provide Flextronics, on a monthly basis, a rolling twelve (12) month build forecast (which may be also referred to as a "supply plan") indicating Customer's monthly Product requirements (each, a "Forecast"). The first three (3) months of each Forecast will constitute Customer's written purchase order for all Work to be completed within the first three (3) month period. Pur chase orders will be issued in accordance with Section 3.2 below.

3.2. **Purchase Orders; Precedence .** Customer may use its standard purchase order form for any notice provided for hereunder; provided that all purchase orders must reference this Agreement and the applicable Specifications. The parties agree that the terms and conditions contained in this Agreement shall prevail over any terms and conditions of any such purchase order, acknowledgment form or other instrument.

3.3. **Purchase Order Acceptance** . Purchase orders shall be deemed accepted upon receipt by Flextronics unless Flextronics provides Customer with written notice of rejection, including specific reasons for such rejection, within five (5) days of receipt of any purchase order, provided however that Flextronics may reject any purchase order: (a) that is an amended order in accordance with Section 5.2; (b) if the fees reflected in the purchase order are inconsistent with the parties' agreement with respect to the fees; (c) if the purchase order represents a significant deviation from the Forecast for the same period; or (d) if a purchase order would extend Flextronics's liability beyond Customer's approved credit line.

3.4. **Materials Buffer Stock .** Flextronics shall establish a buffer stock for certain Materials in order to increase Customer's sourcing flexibility ("Materials Buffer Stock"). Customer and Flextronics shall agree quarterly on the Materials and quantities to be purchased and held by Flextronics in the Materials Buffer Stock ("Materials Buffer Stock Requirement"). Customer shall pay Flextronics a carrying charge [***] for all Materials in the Materials Buffer Stock according to the following process: During the first week of each [***], Flextronics shall provide Customer with a report on the current on-hand Materials in the Materials Buffer Stock. The parties shall then subtract from the on-hand Materials [***] of Materials based upon Customer's current Forecast as of the date of the report. If after the calculation the on-hand Materials quantity is greater than the Materials Buffer Stock Requirement, then Customer shall pay Flextronics [***] carrying charge for the value of the Materials Buffer Stock Requirement (but not the excess amount). If after the calculation the on-hand Materials amount is less than the Materials Buffer Stock Requirement, then Customer shall only pay Flextronics [***] carrying charge for those on-hand Materials.

Section 5.3 d (i) shall not apply to Materials in the Materials Buffer Stock. The parties agree to manage the Materials in the Materials Buffer Stock Requirement according to the process above which may be amended by the parties from time to time.

3.5. **Fees; Changes; Taxes** .

(a) The fees will be agreed by the parties and will be indicated on the purchase orders issued by Customer and accepted by Flextronics. The initial fees shall be as set forth on the Fee List attached hereto and incorporated herein as Exhibit 5(the "Fee List"). If a Fee List is not attached or completed, then the initial fees shall be as set forth in purchase orders issued by Customer and accepted by Flextronics in accordance with the terms of this Agreement.

(b) Customer is responsible for additional fees and costs due to: (a) changes to the Specifications; (b) failure of Customer or its subcontractor to timely provide sufficient quantities or a reasonable quality level of Customer Controlled Materials where applicable to sustain the production schedule; and (c) any pre-approved expediting charges reasonably necessary because of a change in Customer's requirements.

(c) The fees will be reviewed periodically by the parties. Any changes and timing of changes shall be agreed by the parties, such agreement not to be unreasonably withheld or delayed. By way of example only, the fees may be increased if the market price of fuels, Materials, equipment, labor and other production costs increase beyond normal variations in pricing.

(d) All fees are exclusive of federal, state and local excise, sales, use, VAT, and similar transfer taxes, and any duties, and Customer shall be responsible for all such items. This subsection (d) does not apply to taxes on Flextronics's net income.

3.6. **Payment** . Customer agrees to pay all properly and accurately prepared invoices in U.S. Dollars within thirty (30) days of the date of the invoice. Notwithstanding the foregoing, upon written notice to Flextronics, Customer may withhold payment for any invoice (or portion thereof) that Customer disputes in good faith. Pending settlement or resolution of the invoice (or portion thereof), Customer's non-payment of such an invoice (or portion thereof) shall not be considered late, shall not constitute a default by Customer, and shall not entitle Flextronics to suspend or delay any Work.

3.7. **Late Payment** . Customer agrees to pay interest calculated at the rate of one and one-half percent (1.5%) per month or the maximum rate permitted by law; whichever is less, on all late payments. Furthermore, if Customer is late with payments, or Flextronics has reasonable cause to believe Customer may not be able to pay, Flextronics may (a) stop all Work under this Agreement until assurances of payment satisfactory to Flextronics are received or payment is received; (b) demand prepayment for purchase orders; (c) delay shipments; and (d) to the extent that Flextronics's personnel cannot be reassigned to other billable work during such stoppage and/or in the event restart cost are incurred, invoice Customer for additional fees before the Work can resume. Customer agrees to provide all necessary financial information required by Flextronics from time to time in order to make a proper assessment of the creditworthiness of Customer.

4. MATERIALS PROCUREMENT; CUSTOMER RESPONSIBLITY FOR MATERIALS

4.1. **Authorization to Procure Materials, Inventory and Special Inventory** . Customer's accepted purchase orders and Forecast will constitute authorization for Flextronics to procure, without Customer's prior approval, (a) Inventory to manufacture the Products covered by such purchase orders based on the Lead Time and (b) certain Special Inventory based on Customer's purchase orders and Forecast as follows: Long Lead-Time Materials as required based on the Lead Time when such purchase orders are placed and Minimum Order Inventory as required by the supplier . Flextronics will only purchase Economic Order Inventory with the prior approval of Customer .

4.2. **Customer Controlled Materials** . Customer may direct Flextronics to purchase Customer Controlled Materials in accordance with the Customer Controlled Materials Terms. Customer acknowledges that the Customer Controlled Materials Terms will directly impact Flextronics's ability to perform under this Agreement and to provide Customer with the flexibility Customer is requiring pursuant to the terms of this Agreement. In the event that Flextronics reasonably believes that Customer Controlled Materials Terms will create an additional cost that is not covered by this Agreement, then Flextronics will notify Customer and the parties will agree to either (a) compensate Flextronics for such additional costs , (b) amend this Agreement to conform to the Customer Controlled Materials Terms or (c) amend the Customer Controlled Materials Terms to conform to this Agreement, in each case at no additional charge to Flextronics. Customer agrees to provide copies to Flextronics of all Customer Controlled Materials Terms upon the execution of this Agreement and promptly upon execution of any new agreements with suppliers . Customer agrees not to make any modifications or additions to the Customer Controlled Materials Terms or enter into new Customer Controlled Materials Terms with suppliers that will negatively impact Flextronics's procurement activities.

4.3. **Preferred Supplier** . Customer shall provide to Flextronics and maintain an Approved Vendor List. Flextronics shall purchase from vendors on a current AVL the Materials required to manufacture the Product. Customer shall give Flextronics every reasonable opportunity to be included on AVL's for Materials that Flextronics can supply, and, if Flextronics is competitive with other vendors with respect to reasonable and unbiased criteria for acceptance established by Customer, Flextronics shall be included on such AVL's . If Flextronics is on such an AVL and its terms of sale, including without limitation, prices, quality, ordering terms, lead time, delivery terms and warranty are competitive with other vendors on an AVL for the same Materials, Customer will raise no objection to Flextronics sourcing such Materials from itself For purposes of this Section 4.3 only, the term "Flextronics" includes any Affiliate (defined herein) of Flextronics. "Affiliate" means, with respect to a party, any entity that controls, or is controlled by, or is under common control with a party. For the purposes of this definition, 'control' shall mean direct or indirect ownership of greater than fifty percent (50%) of the voting power, capital or other securities.

4.4. **Customer Responsibility for Inventory and Special Inventory** . Customer is responsible under the conditions provided in this Agreement for all Materials, Inventory and Special Inventory purchased by Flextronics pursuant to Flextronics's performance of this Agreement in accordance with its terms.

4.5. **Materials Warranties** . Flextronics shall endeavor to obtain and pass through to Customer all vendors' and manufacturers' warranties with regard to the Materials (other than the Production Materials) to the extent that they are transferable, including without limitation: (i) conformance of the Materials with the vendors' or manufacturers' specifications and/or with the Specifications ; (ii) that the Materials will be free from defects in workmanship; (iii) that the Materials will comply with Environmental Regulations; (iv) that the Materials will not infringe the intellectual property rights of third parties; and (v) that the Materials shall comply with all applicable laws. For the avoidance of doubt, the foregoing applies to any Materials that Flextronics sources from itself pursuant to Section 4.3 .

4.6 **Flextronics-Supplied Critical Component** . Prior to any proposed end of life (EOL) for any Flextronics-Supplied Critical Component, Flextronics shall notify Customer in writing at least [***] months beforehand ("EOL Notice Period"). During the EOL Notice Period, Customer may issue purchase orders with normal lead-time until the last day of the EOL Notice Period. Flextronics shall use best commercial efforts to make the Flextronics-Supplied Critical Component, including any sub-components thereof, available for purchase by Customer with last time-buy option (with normal lead times) for a period of no less than [***] years ("Availability Period") from the EOL Notice Period, provided Flextronics provides limited support for [***] years commencing from the end of such Availability Period, subject to section 4.7 below. Customer shall work in good faith with Flextronics to qualify the EOL situation within [***] months after it receives the EOL notice from Flextronics.

4.7 Flextronics shall notify Customer as soon as possible if it intends to revise or withdraw a Flextronics-Supplied Critical Component for which there is not a commercially-reasonable substitute. If, as a result of the unavailability of such Flextronics-Supplied Critical Component, Flextronics must end the life of a Product hereunder, and if Customer is required to make a last time purchase of such component, Flextronics and Customer shall work together to determine the quantity of Customer's final purchase of such component.

4.8 Any costs incurred for warehousing Flextronics-Supplied Critical Component, as necessary to meet the commitments set forth in sections 4.6 and 4.7 above, shall be Customer's responsibility.

5. SHIPMENTS, SCHEDULE CHANGE, CANCELLATION, STORAGE

5.1. **Shipments** .

(a) All Products delivered pursuant to the terms of this Agreement shall be suitably packed for shipment in accordance with the Specifications and marked for shipment to Customer (or its customer's) destination as specified in the applicable purchase order . Shipments will be made EXW (Ex works, Incoterms 2010) Flextronics's facility, at which time risk of loss and title will pass to Customer. All freight, insurance and other shipping expenses, as well as any special packing expenses not included in the original quotation for the Products, will be paid by Customer. Customer shall designate a freight carrier to be utilized by Flextronics, Customer shall designate only freight carriers that are currently in compliance with all applicable laws relating to anti-terrorism security measures and to adhere to the C-TPAT (Customs-Trade Partnership Against Terrorism) security recommendations and guidelines as outlined by the United States Bureau of Customs and Border Protection and to prohibit the freight carriage to be sub contracted to any carrier that is not in compliance with the C-TPAT guidelines. Flextronics shall use commercially reasonable efforts to deliver the Products on the agreed-upon delivery dates and notify Customer of any anticipated delays . For the avoidance of doubt, Customer will be responsible for any Products that Flextronics manufactures under the then-current purchase orders and Forecast and ships to Customer in accordance with the provisions of this Section 5.1(a), whether or not Customer (or its designated freight carrier) actually takes physical possession of such Products. Customer's responsibility will include reimbursing Flextronics for any reasonable costs or fees that Flextronics necessarily occurs to protect such Products from loss, theft or damage. In performing its obligations under this Agreement, Flextronics will comply with all relevant laws and regulations including but not limited to laws governing import and export of Products supplied and Materials purchased (ie. samples, prototypes, first articles, technology and technical data, and other similar materials of the manufacturing process other than the final Product) under this Agreement.

(b) If any Products are delivered subject to liens, encumbrances, claims from secured creditors or the like, and such are attributable to claims arising from Flextronics's (not Customer's) failure to pay vendors, suppliers, contractors, creditors or tax authorities ("Flextronics Liens"), then, provided that Customer is materially in compliance with its payment of all amounts due and owing to Flextronics hereunder, Flextronics will be responsible for clearing such Flextronics Liens.

(c) Notwithstanding anything to the contrary in this Agreement, Customer will be the Principal Party of Interest for all Products exported from Flextronics sites. Customer is responsible for restricted party screening for all parties to both domestic and international transactions under this Agreement and for license determination for export transactions. Customer will inform Flextronics of the export authorizations applicable to export transactions from Flextronics sites under this Agreement. Unless otherwise agreed and stated in this Agreement Flextronics will not undertake export compliance activities on behalf of Customer.

5.2. **Quantity Increases and Shipment Schedule Changes** .

(a) For any accepted purchase order, Customer may (i) increase the quantity of Products subject to Section 5.2(c) or (ii) decrease the quantity of Products subject to Section 5.3 or as otherwise agreed to by the parties in writing.

(b) Notwithstanding anything herein to the contrary, to the extent Flextronics requires any Inventory and/or Special Inventory to manufacture Products for Customer, Flextronics agrees to use reasonable efforts to repurchase its requirements of such Inventory and/or Special Inventory from Customer prior to purchasing such Inventory and/or Special Inventory from any vendor or supplier thereof.

(c) Flextronics will use reasonable commercial efforts to meet any quantity increases, which are subject to Materials and capacity availability. All reschedules or quantity increases require Flextronics's approval, which, in its sole discretion, may or may not be granted. If Flextronics agrees to accept a reschedule to pull in a delivery date or a quantity increase and if Flextronics would incur additional costs to meet such reschedule or quantity increase, Flextronics will inform Customer and obtain its acceptance and approval in advance.

(d) Any delays in the normal production or interruption in the workflow process caused by Customer's changes to the Specifications or failure to provide sufficient quantities or a reasonable quality level of Customer Controlled Materials where applicable to sustain the production schedule, will be considered a reschedule of any affected purchase orders for purposes of this Section 5.2 for the period of such delay.

5.3. **Cancellation of Orders and Customer Responsibility for Inventory** .

(a) Customer may not cancel all or any portion of Product quantity of an accepted purchase order without Flextronics's prior written approval, which, in its sole discretion, may or may not be granted. No reschedule, even if approved by Flextronics, shall relieve Customer from any obligations for any Excess Inventory, Obsolete Inventory or Aged Inventory in accordance with this Section 5.3. Unless expressly indicated otherwise in this Agreement, In no event shall Flextronics have any obligation to hold any Inventory after it becomes either (or any combination of) Excess Inventory, Obsolete Inventory or Aged Inventory that Customer is required to purchase pursuant to any provisions of Section 5.3(d) below, and Customer shall purchase such Inventory in accordance with the applicable provisions of such section.

(b) If the Forecast provided by Customer for any period is less than the previous Forecast supplied by Customer that covers the same period, that amount will be considered canceled and Customer will be responsible for any Special Inventory purchased or ordered by Flextronics to support the previous Forecast.

(c) For purposes of calculating the amount of Inventory and Special Inventory subject to subsection (a), the "Lead Time" shall be calculated as the Lead Time at the time of(i) procurement of the Inventory and Special Inventory; (ii) cancellation of the purchase order or (iii) termination of this Agreement, whichever is longer.

(d) Notwithstanding anything to the contrary in this Agreement Customer shall be responsible for the following:

(i) *Excess Inventory* .

A. *Carrying Charges.* At the end of every calendar month, Flextronics shall report all Inventory and Special Inventory possessed or owned by Flextronics that is not required for consumption to satisfy the next [***] days of demand for Products under the then-current purchase order(s) and Forecast to Customer. After a validation period, which shall not exceed 15 days, Customer shall pay Flextronics Monthly Charges for such Inventory.

B. *Purchase of Excess.* On a monthly basis, Customer shall purchase Excess Inventory, as identified by Flextronics in each monthly report, at a price equal to the Affected Inventory Costs.

(ii) *Obsolete Inventory* . At the end of every calendar month, Flextronics shall report the Obsolete Inventory to Customer. After a validation period, which shall not exceed 15 days, Customer shall purchase the Obsolete Inventory at a price equal to the Affected Inventory Costs.

(iii) *Aged Inventory* . At the end of every calendar month, Flextronics shall report the Aged Inventory to Customer. After a validation period, which shall not exceed 15 days, Customer shall purchase the Aged Inventory at a price equal to the Affected Inventory Costs.

(iv) *Finished Products Inventory* . [***] for finished Products. Customer's responsibility for finished Products shall be as follows:

Flextronics shall hold finished Products at [***] to Customer for up to [***] days. Any finished Products held by Flextronics in excess of [***] days shall be either, 1) purchased by Customer and Flextronics shall invoice Customer accordingly or 2) Customer can pay Flextronics [***]. On the first Business Day of each month, both parties will review a specified inventory report to determine which finished Products will be subject to [***]. If Customer pays [***], the title of the finished Products shall remain with Flextronics. By paying a [***], the identified finished Products will be held by Flextronics as part of its active finished Products inventory which will help minimize the incurrence of additional expenses for specialized treatment of such Products (e.g. segregated warehousing, unique part numbering, cycle count, etc.). Flextronics shall store the Customer owned finished Products (those that were purchased after [***] days) and finished Products with [***] in its possession at no cost for up to [***] days ("Maximum Storage Period"). Unless the parties otherwise agree in writing, after the finished Products with [***] has been held in Flextronics's possession for the Maximum Storage Period, Customer shall place a Purchase Order for such Products at which point Flextronics shall invoice Customer accordingly and [***]. For the avoidance of doubt, the aggregate duration of Flextronics holding and storing such finished Products is [***] days ([***] days of holding + [***] days of storage after [***]). After the Maximum Storage Period Flextronics shall ship the Customer owned finished Products to the location designated by Customer at Customer's cost. In the event Customer does not designate a ship-to location within [***] days after the Maximum Storage Period, Flextronics will be entitled to dispose of such Customer owned finished Products in a commercially reasonable manner and credit to Customer any monies received from third parties.

5.4. **Mitigation of Inventory and Special Inventory** . Prior to invoicing Customer for the amounts due pursuant to Sections 5.2 or 5.3, Flextronics will use reasonable commercial efforts for a period of thirty (30) days to return unused Inventory and Special Inventory and to cancel pending orders for such inventory, and to otherwise mitigate the amounts payable by Customer. Customer shall pay amounts due under this Section 5 within thirty (30) days of receipt of an invoice . Flextronics will ship the Inventory, Special Inventory, Excess Inventory, Obsolete Inventory and/or Aged Inventory purchased by Customer pursuant to this Section 5 to Customer promptly upon said payment by Customer. In the event Customer does not pay within thirty (30) days, Flextronics will be entitled to dispose of such Inventory, Special Inventory, Excess Inventory, Obsolete Inventory and/or Aged Inventory in a commercially reasonable manner and credit to Customer any monies received from third parties. Flextronics shall then submit an invoice for the balance amount due and Customer agrees to pay said amount within ten (1 0) days of its receipt of the invoice.

5.5. **No Waiver** . For the avoidance of doubt, Flextronics's failure to invoice Customer for any of the charges set forth in this Section 5 does not constitute a waiver of Flextronics's right to charge Customer for the same event or other similar events in the future.

6. PRODUCT ACCEPTANCE AND EXPRESS LIMITED WARRANTY

6.1 . **Product Acceptance** . The Products delivered by Flextronics will be inspected and tested as required by Customer within thirty (30) days of receipt at the "ship to" location on the applicable purchase order . If Products do not comply with the express limited warranties set forth in Section 6.2 below, Customer has the right to reject such Products during such thirty (30) day period. Products not rejected during such thirty (30) day period will be deemed accepted; provided, that acceptance of the Products does not diminish in any way Customer's rights or remedies under Section 6.2. Customer may return Products that do not comply with the express limited warranties, freight collect, after obtaining a return material authorization number from Flextronics to be displayed on the shipping container and completing a failure report. Rejected Products will be promptly repaired or replaced, at Flextronics's option, and returned freight prepaid and export fees, including but not limited to duties/taxes, Clearance fees, international and local shipping freight costs will either be paid or prepaid by Flextronics. Customer shall bear the risk of loss or damage to, as well as apply a credit to Flextronics for shipping costs and expenses and export fees, including but not limited to duties/taxes, Clearance fees, international and local shipping freight costs, associated with, rejected Products that have been returned to Flextronics, but for which there hasn't been a breach of Flextronics's warranties. Flextronics shall bear the risk of loss or damage to, as well as all shipping costs and expenses associated with, rejected Products that have been returned to Flextronics, and where the rejected Products are found to be in breach of Flextronics's warranties under this Agreement.

6 . 2. **Express Limited Warranties** .

(a) Flextronics represents and warrants to Customer that:

(i) it will perform the Work in a good, professional and workmanlike manner;

(ii) the Production Materials are in compliance with Environmental Regulations; and

(b) Flextronics represents and warrants to Customer that the Products will have been manufactured in compliance with the applicable Specifications and will be free from defects in workmanship for a period of 1 year from the date of shipment (such 1-year period, the "Warranty Period"). For ODM Products only (but not for any EMS or other Products), the immediately preceding representation and warranty shall be read as follows: "Flextronics represents and warrants to Customer that the ODM Products will have been manufactured in compliance with the applicable Specifications and will be free from defects in workmanship and Flextronics Controlled Materials for a period of [***] from the date of shipment ("Warranty Period") Flextronics's sole obligation with respect to Materials other than Flextronics Controlled Materials ("Customer Controlled Materials") is as set forth in Section 4.5".

Upon any failure of a Product to comply with this express limited warranty, Flextronics's sole obligation, and Customer's sole remedy, is for Flextronics, at its option, to promptly repair or replace such Product and return it to Customer freight prepaid. Customer shall return Products covered by this warranty freight prepaid after completing a failure report and obtaining a return material authorization number from Flextronics to be displayed on the shipping container. Repaired or replaced Products supplied by Flextronics under this Section will be warranted for the period of time remaining in the original Warranty Period for the Product, but not less than [***] days. Customer shall bear the risk of loss or damage to, as well as all shipping costs and expenses associated with, Products that have been returned to Flextronics under warranty, but for which no defect is found.

(c) Notwithstanding anything else in this Agreement, this express limited warranty does not apply to, and, except as otherwise set forth in this Agreement, Flextronics makes no representations or warranties whatsoever with respect to: (i) Materials and/or Customer Controlled Materials; (ii) defects resulting from the Specifications (including the design of the Products); (iii) Products that have been abused, damaged, altered or misused by any person or entity other than Flextronics or its subcontractors or agents; (iv) first articles, prototypes, pre-production units, test units or other products not intended for commercial resale; (v) defects resulting from tooling, designs or written instructions produced or supplied by Customer, or (vi) the compliance of Materials or Products with any Environmental Regulations. Customer shall be liable for costs or expenses incurred by Flextronics related to the foregoing exclusions to Flextronics's express limited warranty; provided that, to the extent reasonably feasible, Flextronics provides Customer with prior written notice of any costs, expenses or other amounts that Flextronics (or any Flextronics Affiliate) intends to incur and receives Customer's prior written approval of such costs, expenses or other amounts. In no event shall Customer be responsible for any costs, expenses or other amounts that Flextronics (or any Flextronics Affiliate) incurs pursuant to this Section 6.2(c) if Flextronics (or any Flextronics Affiliate) does not comply with the foregoing conditions as to notice and approval.

(d) Customer will provide its own warranties (if any) directly to any of its end users or other third parties. Customer will not pass through to end users or other third parties the warranties made by Flextronics under this Agreement. Furthermore, Customer will not make any representations to end users or other third parties on behalf of Flextronics, and Customer will expressly disclaim any liability by its suppliers for any warranty claim or other liability concerning the Product.

6.3. **No Representations or Other Warranties** . FLEXTRONICS MAKES NO REPRESENTATIONS AND NO OTHER WARRANTIES OR CONDITIONS ON THE PERFORMANCE OF THE WORK, OR THE PRODUCTS, EXPRESS, IMPLIED, STATUTORY, OR IN ANY OTHER PROVISION OF THIS AGREEMENT OR COMMUNICATION WITH CUSTOMER, AND FLEXTRONICS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT .

6.4. **Epidemic Failure** .

(a) For the purposes of this Agreement, "Epidemic Failure" will be deemed to have occurred if during a period of [***] from the date of shipment (the "Epidemic Period"), more than [***] of any lot, batch or other separately distinguishable manufacturing run of Products manufactured by Flextronics hereunder fail in a manner attributable to the same "root cause".

(b) Upon the occurrence of an Epidemic Failure, Customer shall, with Flextronics's assistance if deemed necessary by Customer, determine in an expeditious manner if such defect can be proven to arise from the same root cause and identify the nature and origin of the root cause . The parties shall cooperate and work together to determine the "root cause". As reasonably required in connection with such analysis, Customer shall: (i) promptly notify Flextronics and provide, if known and as may then exist, a description of the failure, and the suspected lot numbers, serial numbers or other identifiers, and delivery dates of the affected Products; and (ii) deliver or make available to Flextronics samples of the affected Products for testing and analysis .

(c) To the extent an Epidemic Failure is determined by the parties in good faith to be directly attributable to a breach of Flextronics's express warranties as set forth in this Section that would have been detected by the applicable of the test procedures provided by Customer in the Specifications (a "Flextronics Root Cause"), then Flextronics shall, with Customer's reasonable assistance, advice and consent: (i) promptly develop a plan to eliminate the root cause of the Epidemic Defect in all continuing production (a "Corrective Plan"), and (ii) if deemed commercially reasonable and necessary by the parties, promptly develop a plan (the "Response Plan") to correct the problem in all units of the specific Product line that were previously sold and delivered to Customer by Flextronics during the Epidemic Period (the "Covered Units"). Flextronics shall submit the proposed Corrective Plan and (if applicable) Response Plan to Customer for Customer's acceptance. The Response Plan may include, without limitation, a mutually-agreed upon logistics process for the return of, repair or replacement of, and return delivery of the Covered Units, which may include, without limitation, conducting the repair and/or replacement activity at or nearby the location of the affected Product, as well as a proposed allocation of costs for the undertakings associated with the Response Plan. Upon receiving Customer's approval of the Corrective Plan and (if applicable) Response Plan, Flextronics shall implement the corrective action(s) described in the Corrective Plan or Response Plan, as applicable.

(d) The parties shall bear the costs and expenses of the Corrective Plan and Response plan, as applicable, as allocated to each party respective in such Corrective Plan and Response Plan. Notwithstanding the foregoing, Customer shall bear all costs and expenses of the Corrective Plan and Response Plan if the Epidemic Failure is not attributable to a Flextronics Root Cause.

7. INTELLECTUAL PROPERTY LICENSES

7.1 . **Licenses** . Customer hereby grants Flextronics and its Affiliates a non-exclusive, non-transferable license, during the term of this Agreement, without right to sublicense, to Customer's patents, trade secrets and other intellectual property, solely for the purpose of performing its obligations pursuant to this Agreement for Customer and solely to the extent necessary for such purpose. Flextronics is granted no rights under Customer's patents, trade secrets or other intellectual property rights for any other purpose. Except to the extent Flextronics specifically advises Customer that it is required to license any Flextronics's intellectual property, Flextronics hereby grants Customer and its Affiliates a perpetual, non-exclusive, non-transferable license to Flextronics's patents, trade secrets and other intellectual property, solely for the purpose contemplated by this Agreement (which the parties specifically agree includes only the manufacture and testing of the Products by Flextronics and does not extend to anything else, including (i) the manufacture and testing of the Products by a party other than Flextronics and (ii) any design work provided by Flextronics, which work shall be the subject of a separate design agreement) and solely to the extent necessary for such purpose. Customer is granted no rights under Flextronics' patents, trade secrets or other intellectual property rights for any other purpose, and the licenses hereby granted extend solely to products manufactured by Flextronics.

7.2. **No Other Licenses** . Except as otherwise specifically provided in this Agreement, each party acknowledges and agrees that no licenses or rights under any of the intellectual property rights of the other party are granted or intended to be granted to such other party.

8. TERM AND TERMINATION

8.1. **Term** . The term of this Agreement shall commence on the date hereof above and shall continue for an initial term of three (3) years thereafter unless earlier terminated as provided in Section 8.2 (Termination) or Section 15.8 (Force Majeure) . After the expiration of the initial term hereunder, this Agreement shall be automatically renewed for separate but successive one-year terms unless either party provides written notice to the other party that it does not intend to renew this Agreement 180 days or more prior to the end of any term.

8.2. **Termination** . This Agreement may be terminated by either party (a) for convenience upon 180 days written notice to the other party, or (b) if the other party defaults in any payment to the terminating party and such default continues without a cure for a period of fifteen (15) days after the delivery of written notice thereof by the terminating party to the other party, (c) if the other party defaults in the performance of any other material term or condition of this Agreement and such default continues remedied for a period of thirty (30) days after the delivery of written notice thereof by the terminating party to the other party, or (d) pursuant to Section 15.8 (Force Majeure).

8.3. **Effect of Expiration or Termination** . Expiration or termination of this Agreement under any of the foregoing provisions: (a) shall not affect the amounts due under this Agreement by either party that exist as of the date of expiration or termination, and (b) as of such date, the provisions of Sections 5.2, 5.3, and 5.4 shall apply with respect to payment and shipment to Customer of finished Products, Inventory, and Special Inventory in existence as of such date, and (c) shall not affect Flextronics's express limited warranty in Section 6.2 above. Termination of this Agreement, settling of accounts in the manner set forth in the foregoing sentence shall be the exclusive remedy of the parties for breach of this Agreement, except for obligations under Sections 6.2, 9.1, 9.2, 12.3, 13or 15.l and where expressly stated. Sections 1, 3.5, 3.6, 3.7, 4.4, 4.5, 5.3, 5.4, 6.2, 6.3, 6.4, 7.2, 8.3, 9, 11.3 and 15 shall be the only terms that shall survive any termination or expiration of this Agreement.

9. INDEMNIFICATION; LIABILITY LIMITATION

9 .1. **Indemnification by Flextronics .** Flextronics agrees to defend, indemnify and hold harmless, Customer and its affiliates, and all directors, officers, employees, and agents (each, a " **Customer Indemnitee** ") from and against all claims, actions, losses, expenses, damages or other liabilities, including reasonable attorneys' fees (collectively, " **Damages** ") incurred by or assessed against any of the foregoing, but solely to the extent the same arise out of, are in connection with, are caused by or are related to a third-party claim relating to:

(a) any actual or threatened injury to any person (or death) or damage to property caused, or alleged to be caused, by a Product sold by Flextronics to Customer hereunder, but solely to the extent such injury or damage has been caused by the breach by Flextronics of its express limited warranties related to Flextronics's workmanship and manufacture in accordance with the Specifications only as further set forth in Section 6.2;

(b) any actual or alleged infringement or misappropriation of any patent, copyright, mask work, trade secret or other intellectual property rights of any third party but solely to the extent that such infringement is caused by a process that Flextronics uses to manufacture, assemble and/or test the Products; provided that, Flextronics shall not have any obligation to indemnify Customer if such claim would not have arisen but for Flextronics's manufacture, assembly or test of the Product in accordance with the Specifications; or

(c) noncompliance with any Environmental Regulations but solely to the extent that such non-compliance is caused by a process or Production Materials that Flextronics uses to manufacture the Products; provided that, Flextronics shall not have any obligation to indemnify Customer under this Section 9.1(c) if such claim would not have arisen but for Flextronics's manufacture, assembly or test of the Product in accordance with the Specifications.

9.2. **Indemnification by Customer** . Customer agrees to defend, indemnify and hold harmless, Flextronics and its affiliates, and all directors, officers, employees and agents (each, a " **Flextronics Indemnitee** ") from and against all Damages incurred by or assessed against any of the foregoing, but solely to the extent the same arise out of, are in connection with, are caused by or are related to a third-party claim relating to:

(a) the noncompliance of any Product (and Materials contained therein) sold by Flextronics hereunder to comply with any safety standards and/or Environmental Regulations, except to the extent any such claim is the responsibility of Flextronics under Section 9.1(c) above;

(b) any actual or threatened injury to any person (or death) or damage to any property caused, or alleged to be caused, by any Product manufactured by Flextronics under this Agreement, except to the extent any such Claim is the responsibility of Flextronics under Section 9.l(a) above; or

(c) any actual or alleged infringement or misappropriation of any patent, copyright, mask work, trade secret or other intellectual property rights of any third party by any Product, except to the extent any such claim is the responsibility of Flextronics pursuant to Section 9.1(b) above.

9.3. **Procedures for Indemnification .** With respect to any third-party claims, either party shall give the other party prompt notice of any third-party claim and cooperate with the indemnifying party at its expense. The indemnifying party shall have the right to assume the defense (at its own expense) of any such claim through counsel of its own choosing by so notifying the party seeking indemnification within thirty (30) calendar days of the first receipt of such notice. The party seeking indemnification shall have the right to participate in the defense thereof and to employ counsel, at its own expense, separate from the counsel employed by the indemnifying party. The indemnifying party shall not, without the prior written consent of the indemnified party, agree to the settlement, compromise or discharge of such third-party claim.

9.4. **Sale of Products Enjoined** . Should the use of any Products be enjoined for a cause stated in Section 9.1(b) or 9.2(c) above, or in the event the indemnifying party desires to minimize its liabilities under this Section 9, in addition to its indemnification obligations set forth in this Section 9, the indemnifying party's sole responsibility is to either substitute a fully equivalent Product or process (as applicable) not subject to such injunction, modify such Product or process (as applicable) so that it no longer is subject to such injunction, or obtain the right to continue using the enjoined Product or process (as applicable). In the event that any of the foregoing remedies cannot be effected on commercially reasonable terms, then, all accepted purchase orders and the current Forecast will be considered cancelled and Customer shall purchase all Products, Inventory and Special Inventory as provided in Sections 5.3 and 5.4 hereof Any changes to any Products or process must be made in accordance with Section 2.2 above. Notwithstanding the foregoing, in the event that a third party makes an infringement claim, but does not obtain an injunction, the indemnifying party shall not be required to substitute a fully equivalent Product or process (as applicable) or modify the Product or process (as applicable) if the indemnifying party obtains an opinion from competent patent counsel reasonably acceptable to the other party, or otherwise provides reasonable assurance to the other party, that such Product or process is not infringing or that the patents alleged to have been infringed are invalid.

9.5. **No Other Liability** . EXCEPT WITH REGARD TO A PARTY'S OBLIGATIONS UNDER SECTION 9.1 OR 9.2 ABOVE, AS APPLICABLE, OR A PARTY'S BREACH OF SECTION 15.1 BELOW, IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY "COVER" DAMAGES (INCLUDING INTERNAL COVER DAMAGES WHICH THE PARTIES AGREE MAY NOT BE CONSIDERED "DIRECT" DAMAGES), OR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE ARISING OUT OF THIS AGREEMENT OR THE SALE OF PRODUCTS, WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT (INCLUDING THE POSSIBILITY OF NEGLIGENCE OR STRICT LIABILITY), OR OTHERWISE, EVEN IF THE PARTY HAS BEEN WARNED OF THE POSSIBILITY OF ANY SUCH LOSS OR DAMAGE, AND EVEN IF ANY OF THE LIMITED REMEDIES IN THIS AGREEMENT FAIL OF THEIR ESSENTIAL PURPOSE.

THE FOREGOING SECTION 9 STATES THE ENTIRE LIABILITY OF THE PARTIES TO EACH OTHER CONCERNING INFRINGEMENT OF PATENT, COPYRIGHT, TRADE SECRET OR OTHER INTELLECTUAL PROPERTY RIGHTS.

10. DIRECT ORDER FULFILLMENT

Order commit dates for finished Products designated by Customer for direct order fulfillment (“DOF”) should be provided within 1 business day of receipt of purchase orders from Customer at time of day mutually agreed in writing by the parties. Flextronics shall have the right to reject such orders if the fees reflected in the purchase order are inconsistent with the parties' agreement with respect to the fees or if a purchase order would extend Flextronics's liability beyond Customer's approved credit line.

Flextronics shall provide shipment commit dates within one (1) business day of receipt of purchase orders from Customer as stated in the parties service level current agreement (Ex. purchase order is received on Thursday and commit date is provided on Friday. For the avoidance of doubt, the one (1) business day commit is not requiring “same day” commit). If there are no material constraints, such shipment commit dates shall be [***] business day(s) from receipt of purchase order. If an order must be committed beyond [***] business days due to material constraints, the extended commit date shall be the next available ship date once the material clears which shall be no later than the [***] business day from receipt of purchase order (the “Customer Required Date”). If there are material constraints, Customer will prioritize the orders for Flextronics to ship if required to meet Customer Required Dates. Orders should be committed on a FIFO basis unless otherwise instructed by Customer. (Examples would be during month and quarter end when internal orders would be de-prioritized). [***]. If Flextronics abuses [***] pursuant to this Section 10, it shall be considered a breach of this Agreement.

11 SUPPLY CHAIN TRANSPARENCY AND RISK MANAGEMENT.

11.1 **Risk Assessment and Mitigation** .

Flextronics shall participate in Customer’s risk assessment and mitigation programs including but not limited to providing Customer with supply chain information such as Flextronics’ sub-tier suppliers, manufacturing locations and recovery times for the Flextronics Supplied Critical Components listed in Exhibit 3 and shall make commercially reasonable efforts to provide the same for the Critical Components listed in Exhibit 6.

Flextronics will make commercially reasonable efforts to reduce recovery times and other Customer identified high risk factors in all Flextronics locations that impact Customer's manufacturing process.

Flextronics will participate in a Customer crisis management program which shall include but not be limited to including providing points of contact, participating in strategy sessions and providing critical data in a timely manner to allow Customer to assess business impact during a crisis.

Flextronics shall provide to Customer visibility into the Materials supply chain via Kinaxis or other systems with comparable functionalities. Such visibility shall address crisis management and risk assessment data including but not limited to Flextronics' suppliers contact information, on hand Inventory, as well as future demand and spend.

11.2 **Business Continuity .**

Flextronics will assure that business continuity plan ("BCP") is developed, implemented, and maintained so as to address strategies for response to, and recovery from, potential disasters that could disrupt business operation and timely delivery of Products or performance of Services. At a minimum, the BCP will contain the following elements: (i) a documented process to restore critical operations; (ii) a documented process to manage critical backup IT processes; (iii) an identified administrator responsible for the creation, maintenance and testing of the BCP; and (iv) a documented communication plan for advising Customer in the event of any disruption to manufacturing or Service capabilities. The BCP will be updated as business exposures change. The written BCP may be audited annually be Customer or its designated representative.

The below matrix identifies, by site, the secondary location where Customer products will be transferred if the primary site experiences a major disaster. Both parties agree the secondary site location can be "reset" if any changes are made to the primary site.

Primary Sites	Business Type	Secondary Sites
[***]	Production	[***]
	NPI	
	Service	[***]
	Mechanicals	[***]
[***]	Production	[***]
	NPI	
[***]	Mechanicals	[***]
[***]	Service	[***]

11.3 General Compliance

a) Codes of Conduct

Flextronics will perform its obligations under this Agreement in conformance to its published code of conduct policies, including but not limited to its Procurement Practices Guidebook, Supplier Manual, and Supplier Practices Guidelines ("Codes of Conduct"). Flextronics may update and amend such Codes of Conduct, however, in no manner shall the conduct standards in such Codes of Conduct materially degrade from the standards in place at the Effective Date.

b) Conflict Minerals

The parties acknowledge and agree that in connection with the manufacturing of the Products under this Agreement, they shall cooperate with each other and using reasonable commercial efforts shall, for an agreed fee, supply relevant and necessary information to each other order for the parties to comply with legislation surrounding conflict minerals originating in the Democratic Republic of Congo and adjoining countries. For clarification, recent US legislation (i.e.:; the Dodd-Frank act) imposes additional disclosure obligations on publicly-traded companies that use conflict minerals in their products. A party may be required to obtain source data from the other party in order to fulfill its obligations under such legislation. [In addition, in the event that the relevant information is not determinable then such designation shall be provided to the other party and if due diligence to obtain such information was done in good faith, then the provision of the designation "conflict undeterminable" shall be deemed to be considered compliance with this Section 11.3(b). Flextronics will endeavor to achieve a “conflict free” filing status for its own filing requirements.

c) WEEE Directive and RoHS

Flextronics shall ensure that ODM-Products meet the requirements of the Waste Electrical and Electronic Equipment Directive and the Restriction of Hazardous Substances Directive of 2002/95/EC, and Flextronics shall provide certificates of such compliance upon request.

d) Legal Compliance

Both parties will comply with the US Foreign Corrupt Practices Act and the Bribery Act 2010 of the United Kingdom. In the event any such laws, rules, or regulations allows for different levels of compliance, Flextronics shall make good faith efforts towards achieving a level of compliance that is either specifically desired by Customer or in accordance with industry best practices for complying with such laws, rules and regulations, as applicable.

e) Self-Regulation and Voluntary Compliance

In the event Flextronics or the manufacturing process used by Flextronics is or becomes applicable for adhering to industrywide self-regulation and voluntary compliance standards and initiatives such as corporate social responsibility standards and sustainability initiatives, Flextronics shall make good faith efforts towards achieving a level of compliance that is either specifically desired by Customer or in accordance with industry standard practices.

12. CONFIG AS BUILT; GLOBAL SYSTEMS & INTERRUPTION

12.1 **Config as Built:** Flextronics shall provide to Customer “Config as Built” data according to Customer’s current document [***] which may be amended in writing by the parties from time-to-time. Config as Built data is defined for each specific Product family and/or model, by serial number, including parent/child relationship of specific sub-assemblies, components, and field replaceable units, PANOS SW version, etc. Flextronics shall transmit Config as Built data to Customer through EDI feed as a Product is moved into “Finished Goods Inventory”. The [***] document shall be maintained by Customer and updated as new Products are introduced to this Agreement for manufacturing. As of the Effective date of this Agreement the latest revision of [***] applies.

12.2 **Global Systems & Tools** . Supplier will provide Customer with Global System access to generate manufacturing activity reports on an as needed basis (example LeanTaas). Global Systems are defined as the software Supplier decides to make available to Customer and which Customers used to monitor and manage manufacturing activities conducted by Supplier for Customer. Supplier shall make commercially reasonable efforts to provide access to the same Global Systems and reports and data for Customer’s use for activities at any new or any additional Supplier manufacturing facilities used to manufacture products for Customer. In the event that a Global System that is being utilized currently by Supplier and Customer becomes no longer available to Customer, Supplier shall make commercially reasonable efforts to notify Customer at least [***] prior to the removal and Supplier shall provide an alternative Global System solution such that there will be no interruption in the information available to Customer to monitor and manage Supplier’s activities . Supplier shall ensure that any Global System provided to

Customer will allow Customer to generate the same or substantially the same type of activity reports as the LeanTaas system does as of the Effective Date.

12.3 **System Interruption** . Flextronics will make commercially reasonable efforts to provide continuous uptime of its Flextronics systems or Flextronics provided systems, which have impact on Flextronics' ability to provide Customer with Products (example: FlexFlow, EDI, Baan). To the extent that Flextronics systems or Flextronics provided systems prevents Flextronics from shipping committed orders for Products by the last business day of any Customer fiscal quarter, then Flextronics [***].

The parties agree and acknowledge that Customer must use commercially reasonable efforts to mitigate any such [***] to the extent that Customer is able to deliver requests for orders for shipment by means and methods other than use of Flextronics provided systems or Flextronics systems such as, for example, by delivering purchase orders by fax or as an email attachment. [***].

13. PRICING

13.1. **Product Quotes** . Flextronics agrees to utilize, at a minimum, the request for quote ("RFQ") format as agreed to between the parties to respond to Product requests for quotation or for any other pricing submittals made to Flextronics. (e.g., Product revision pricing submittals). Customer may request, and Flextronics will provide, additional cost model details. Customer utilizes a semi-annual RFQ process, which will begin five weeks prior to Customer's fiscal quarter 1 (August 1) and fiscal quarter 3 (February 1). There will be no formal RFQ process during Customer's fiscal quarter 2 (November 1) and fiscal quarter 4 (May 1), unless there is a significant price change during the current quarter and both parties agree in writing to such price changes. All quotations by Flextronics are considered the confidential property of Flextronics and will be treated as Flextronics Proprietary Information, to be distributed to Customer's employees Customer on a need-to-know basis in accordance with Section 15.1 (Confidentiality) or as otherwise agreed in writing by the parties.

13.2. **Pricing Review Methodology** . At or about one month prior to the start of Customer's fiscal quarter 1 (August 1) and 3 (February 1), Customer's designee will send Flextronics an RFQ for each Product. Flextronics will complete each RFQ providing relevant product and services costs as may be agreed by the Parties. Flextronics will return the completed RFQ to Customer or Customer's designee within the time line identified in the RFQ. The Parties shall make commercially reasonable efforts to negotiate and reach an agreement about the pricing in such RFQ by the end of that month. Unless the Parties agree on the pricing contained in RFQ by the end of such month, the Product and Services pricing agreed in writing by the parties in the previous fiscal quarter shall apply to the next quarter.

13.3. **Pricing Adjustments .** During the term of this Agreement Product pricing, will be reviewed on a semiannual basis. Changes in price will be agreed in advanced in writing by the parties. Unscheduled reviews can occur where; (i) such changes results from a Customer initiated and implemented change, or (ii) Customer Controlled Materials pricing has changed. In those cases, Product pricing will be adjusted (increased or decreased) but only by the amount such change caused and only with shipment of Products containing such change.

Customer and Flextronics will agree on [***] cost reduction targets for the Flextronics Controlled Components and Services. Customer expects Flextronics agrees to use commercially reasonable efforts to achieve a minimum cost reduction target of [***] per quarter [***] on the Flextronics Controlled Components and Services.

In addition, Flextronics will make commercially reasonable efforts to reduce the Value Added Mark Up (VAM) each year based on mutually agreed targets established in writing and such targets will factor in increased sales to Customer.

13.4. **Equitable Reduction** . In addition to the quarterly Flextronics cost reductions described above, Flextronics will make equitable adjustments to Customer's prices for Products and Services if costs are decreased due to productivity or process improvements or as a result of design changes initiated by Customer. Such cost reductions will generate price reductions for all applicable Products ordered by Customer after implementation. For the above, "implementation" will be defined as the date on which Flextronics ships the Product containing the designed changed Products Unless otherwise noted in this Agreement or in a separate agreement signed by the parties, the unit price includes all charges for the Products(s), any related deliverable items and Services, and packaging.

13.5. **Unfavorable Purchase Price Variation (UPPV**). Unfavorable Purchase price variances (UPPV's) will be invoiced to Customer on a monthly basis.

Unfavorable price variances when compared to the agreed costed BOM price will only be invoiced to Customer in cases where the unfavorable price variance was caused by un-forecasted demand from Customer, or in cases where the unfavorable cost variance affects components purchased by Flextronics. Approval for such unfavorable price variances will require written authorization from Customer prior to Flextronics placing a PO.

13.6. **Favorable Purchase Price Variation (FPPV) .** Flextronics agrees that if a lower component price is obtained compared to the agreed costed BOM price Flextronics will use such FPPV as part of its ongoing efforts to achieve the cost reduction target described in Section 13.3. After the first [***], Flextronics agrees to share [***] of the FPPV with Customer. After the initial [***], [***] of the FPPV will be granted to Customer.

13.7. **Inventory Buy-Up / Buy-Down** . The inventory Buy-Up/Buy-Down reconciliation between Customer and Flextronics shall be completed after the bi annual cost pricing review as set forth in Section 13.2 (Pricing Review Methodology) has been finalized. The standard material cost established for the next six months is compared to the standard material cost from the previous six months. For those Products that have a different material standard BOM Cost than the material inventory on hand at Flextronics, the material inventory is to be revalued to the next six months ~~standard~~ material BOM cost. The new revaluation difference is either paid by Flextronics or Customer based on this assessment. For the avoidance of doubt, if the new standard material cost is less than previous standard material cost, Customer will owe Flextronics the difference between the old and new standard material cost multiplied by the quantity of inventory on hand at Flextronics. In such case where the new standard material BOM cost has increased, Flextronics will owe Customer a credit for the difference between the old and new standard material BOM cost multiplied by the quantity on hand at Flextronics. The effect of this Buy-Up/Buy-Down is to bring all inventory available for sale to a current standard BOM cost, including inventory in WIP and FGI.

13.8. **Early Invoice Payment Discount** . If Customer agrees to pays Supplier within ten (10) business days of receipt of invoice, then in return Supplier shall permit [***] discount based on the value of the invoice. Invoices qualifying for the early invoice payment discount will include all "Production", "Miscellaneous", and, "NPI". However, Service & Repair" invoices do not qualify for the early invoice payment discount.

13.9. **Direct Order Fulfillment (DOF) Charges, Fees** . Flextronics agrees to invoice Customer using the negotiated DOF charges/fees in Exhibit 5 each month when submitting monthly OCOGS report. The DOF charges/fees will be submitted within the first week of each new month. Flextronics and Customer agree to reevaluate the DOF charges/Fees each year and make changes based on business growth and forecast.

14 QUALITY AND SAFETY

14.1 **Quality Assurance**

(a) Flextronics will maintain quality assurance systems for the control of material quality, processing, assembly, testing, packaging and shipping in accordance with leading industry practices. Flextronics confirms that all facilities in which Customer's Products are manufactured under the terms hereof are and shall remain ISO 9001 (or the most current successor standard) registered and compliant and that all facilities owned or leased by Flextronics in which Customer's Products are manufactured are ISO 14001 (or the most current successor standard) registered and compliant. The workmanship standard to be used in manufacturing the Products is and shall remain IPC A-610 C, or equivalent as published by the Institute for Interconnecting and Packaging Electronic Circuits (or the most current successor standard). In addition Flextronics confirms that it is and shall remain TL 9000 (or the most current successor standard) certified in the facilities in which Customer's Products will be manufactured. In the event Customer requires Flextronics to obtain other industry standard certifications or registrations, Flextronics agrees to use commercially reasonable efforts to obtain such registrations and Customer shall pay the costs related thereto.

(b) Flextronics is responsible for performing, in accordance with good industry practice, all inspections and tests required in order to ensure full compliance of Products with the requirements of this Agreement, including performing:

(i) general inspections or equivalent for visual inspection for cosmetic defects;

(ii) dimensional inspections or equivalent;

(iii) finished goods electrical testing to ensure a fully working Product; and

(iv) functional and system tests using test equipment, procedures, methods and software provided by Customer.

14.2 **Service Standard**

Flextronics will perform the services under this Agreement using careful, efficient, and qualified workers, and in a professional and workmanlike manner in accordance with the requirements of this Agreement including the applicable Statement of Work.

14.3 **Returns Process and Reporting**

Flextronics shall implement and maintain a fully documented corrective action and returns handling and reporting system that satisfies Customer's requirements set out in Customer's form [***] the Flextronics Corrective Action Request attached hereto and incorporated herein. Customer shall notify Flextronics in writing of the non-conformance through a Flextronics Corrective Action Request ("SCAR"). Flextronics shall provide to Customer a written response to the SCAR within five (5) Business Days of receipt of same, or as agreed in writing between the parties.

14.4 **Audits and Inspections**

Customer and its auditors/inspectors may during normal business hours, but no more than once per calendar year and following reasonable written notice and subject to Flextronics's normal security requirements, review the Flextronics's facilities, manufacturing processes and quality and environmental management system control procedures and associated documentation as reasonably necessary for Customer and its auditors/inspectors to satisfy themselves about Flextronics's quality management and environmental management systems, that its manufacturing processes are capable of consistently providing the Products in accordance with Flextronics's warranties and compliance with Section11.3(b) (Conflict Minerals). Customer may perform quality and environmental management system audits of Flextronics's production lines for the Products, upon five (5) days advanced written notice to Flextronics. If any deficiencies, including process defects, which may materially adversely affect Flextronics's performance of its applicable obligations as set forth in this Agreement are identified by any such auditor or inspector, the parties will confer about such deficiencies and defects and a plan will be generated and agreed upon pursuant to which Flextronics shall promptly correct any such deficiencies at Flextronics's cost.

14.5 **Record Keeping and Recording**

Flextronics shall record and maintain quality records of Products through the manufacturing, quality inspections, and test processes by serial number for the entire Product life cycle (engineering prototype, new product introduction, on-going production, and repair). Quality records shall include, but not be limited to Product, serial number traceability, work order numbers, component level traceability on specific parts or components as agreed upon in writing by the Flextronics and Customer, pass/fail test records, ship date, return and repair date as applicable. Quality records shall be maintained for a period of five years after the "end of support" (EOS) as determined by parties in writing. Quality records shall be made available for any single Product serial number within one business day of request by Customer, and any range of serial numbers in a time frame as deemed reasonable between the parties and at no charge to Customer.

14.6 Safety of ODM Products

(a) Safety and Regulatory Certifications. Flextronics shall, at its own expense, obtain and maintain all relevant product safety agency and regulatory agency certifications, current and planned worldwide, which are applicable for the ODM Products and Flextronics' common hardware for which the ODM Product is derived from, including but not limited to: product safety agency certifications (through an internationally recognized NRTL approved test organization such as UL, CSA or TUV), industry common and relevant safety reports and certificates (safety test report and certificate to the CB scheme, including listing of all safety critical components; UL, CSA or TUV certificate as applicable), EMC test reports to the relevant country requirements.

(b) Extended Requirements. If Customer requires extended world-wide and/or country specific safety or regulatory agency certifications (including testing, reports and certificates) for the ODM Product beyond those that Flextronics shall obtain and maintain as described in (a), above, ("Extended Requirements") Customer shall define such Extended Requirements in a product requirements document ("PRD"). Flextronics shall work with Customer to obtain and maintain such Extended Requirements in accordance to the timeline designated in the PRD. The parties shall negotiate in good faith about the costs for such Extended Requirements, taking into account whether the Extended Requirements are common to other Flextronics customers or unique to Customer.

15. MISCELLANEOUS

15.1. **Confidentiality** . Each party shall refrain from using any and all Confidential Information of the other party for any purposes or activities other than those specifically authorized in this Agreement. Except as otherwise specifically permitted herein or pursuant to written permission of the other party, neither party shall disclose or facilitate the disclosure of any Confidential Information of the other party to anyone, except to its employees and consultants and employees and consultants of its Affiliates who need to know such information for the performance of this Agreement and who have agreed in writing to confidentiality terms that are no less restrictive than the requirements of this Section. Each party shall use all reasonable efforts to maintain the confidentiality of all of the other party's Confidential Information in its possession or control, but in no event less than the efforts that it ordinarily uses with respect to its own confidential information of similar nature and importance. Notwithstanding the foregoing, the receiving party may disclose Confidential Information of the other party or the existence and/or the terms and conditions of this Agreement pursuant to a subpoena or other court process only (i) after having given the disclosing party prompt notice of the receiving party's receipt of such subpoena or other process and (ii) after the receiving party has given the disclosing party a reasonable opportunity to oppose such subpoena or other process or to obtain a protective order. Confidential Information of the disclosing party in the custody or control of the receiving party shall be promptly returned or destroyed upon the earlier of (i) the disclosing party's written request or (ii) termination of this Agreement. Notwithstanding the foregoing, either party may disclose the existence and/or the terms and conditions of this Agreement: (i) on a confidential basis to its legal or financial advisors; (ii) as required under applicable securities regulations; or (iii) on a confidential basis to present or future providers of venture capital and/or potential private investors in or acquirers of such party. The terms and conditions of this Section 15.1 shall apply during the term of this Agreement and for three (3) years after the expiration of any termination of this Agreement.

15.2. **Use of Flextronics Name is Prohibited** . Customer may not use Flextronics's name or identity or any other Confidential information in any advertising, promotion or other public announcement without the prior express written consent of Flextronics .

15.3 . **Entire Agreement; Severability** . This Agreement constitutes the entire agreement between the Parties with respect to the transactions contemplated hereby and supersedes a prior agreements and understandings between the parties relating to such transactions. If for any reason a court of competent jurisdiction finds any provision of this Agreement invalid or unenforceable, that provision of the Agreement will be enforced to the maximum extent permissible and the other provisions of this Agreement will remain in full force and effect.

15.4. **Amendments; Waiver** . This Agreement may be amended only by written consent of both parties. The failure by either party to enforce any provision of this Agreement will not constitute a waiver of future enforcement of that or any other provision . Neither party will be deemed to have waived any rights or remedies hereunder unless such waiver is in writing and signed by a duly authorized representative of the party against which such waiver is asserted.

15.5. **Independent Contractor, Applicable Laws** . Neither party shall, for any purpose, be deemed to be an agent of the other party , and the relationship between the parties shall only be that of independent contractors . Neither party shall have any right or authority to assume or create any obligations or to make any representations or warranties on behalf of any other party, whether express or implied, or to bind the other party in any respect whatsoever. Both parties are independently responsible for compliance with all applicable laws, rules, and regulations in connection with its respective obligations under this Agreement including but not limited to, anti-bribery and anti-corrupt practices regulations.

15.6. **Expenses** . Each party shall pay their own expenses in connection with the negotiation of this Agreement. All fees and expenses incurred in connection with the resolution of Disputes shall be allocated as further provided in Section15.11 below .

15.7. **Insurance** . Flextronics and Customer agree to maintain appropriate insurance to cover their respective risks under this Agreement with coverage amounts commensurate with levels in their respective markets.

15.8. **Force Majeure** . In the event that either party is prevented from performing or is unable to perform any of its obligations under this Agreement (other than a payment obligation) due to any act of God , acts or decrees of governmental or military bodies, fire , casualty , flood , earthquake, war , strike , lockout, epidemic , destruction of production facilities, riot, insurrec t ion, Materials unavailability, o r any other cau s e beyond the reasonable control of the party invoking this section (collectively, a "Force Majeure "), and if such party shall have used its commercially r easonable efforts to mitigate its effects, such party shall give prompt written notice to the other party, its performance shall be excused, and the time for the performance shall be extended for the period of delay or inability to perform due to such occurrences. Regardless of the excuse of Force Majeure, if such party is not able to perform within ninety (90) days after such event, the other party may terminate the Agreement

15.9. **Successors, Assignment** . This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, assigns and legal representatives . Neither party shall have the right to assign or otherwise transfer its rights or obligations under this Agreement except with the prior written consent of the other party , not to be unreasonably withheld . Notwithstanding the foregoing , Flextronics may assign some or all of its rights and obligations under this Agreement to an Affiliate of Flextronics .

15.10 . **Notices** . All notices required or permitted under this Agreement will be in writing and will be deemed received (a) when delivered personally; (b) when sent by confirmed facsimile ; (c) five (5) days after having been sent by registered or certified mail, return receipt requested , postage prepaid; or (d) one (1) day after deposit with a commercial overnight carrier. All communications will be sent to the addresses set forth above or to such other address as may be designated by a party by giving written notice to the other party pursuant to this section.

15.11. **Disputes Resolution; Waiver of Jury Trial** .

(a) Except as expressly set forth in this Agreement, the exercise by either party of any of its remedies under this Agreement will be without prejudice to its other remedies under this Agreement or otherwise.

(b) The parties acknowledge agree that it is their mutual desire to resolve all Disputes through processes that minimize the impact of Disputes (the resolution thereof) on the successful performance of this Agreement as well as the time, cost and resources (financial and otherwise) that each party may be required to allocate to resolve Disputes. Accordingly, notwithstanding anything contained in this Section 15.11 to the contrary, in the event of a Dispute, prior to referring such Dispute to arbitration pursuant to Subsection (d) of this Section 15.11, Customer and Flextronics shall attempt in good faith to resolve any and all controversies or claims relating to such Dispute promptly by negotiation commencing within ten (I 0) calendar days of the written notice of such Dispute by either party, including referring such matter to Customer's then-current President and Flextronics's then current executive in charge of manufacturing operations in the region in which the primary activities of this Agreement are performed by Flextronics. The representatives of the parties shall meet at a mutually acceptable time and place and thereafter as often as they reasonably deem necessary to exchange relevant information and to attempt to resolve the Dispute for a period of four (4) weeks. In the event that the parties are unable to resolve such Dispute pursuant to this Subsection (b), then, subject to the provisions of Subsection (c) of this Section 15.11, the provisions of Subsections (d) through (p) of this Section 15.11, inclusive, shall apply.

(c) Except as otherwise provided in this Agreement, the following binding dispute resolution procedures shall be the exclusive means used by the parties to resolve Disputes. Either party may, by written notice to the other party, refer any Disputes for resolution in the manner set forth below.

(d) Any and all Disputes shall be referred to arbitration under the rules and procedures of the American Arbitration Association ("AAA"), which shall act as the arbitration administrator (the " **Arbitration Administrator** ").

(e) The parties shall agree on a single arbitrator (the " **Arbitrator** "). The Arbitrator shall be a retired judge selected by the parties from a roster of arbitrators provided by the Arbitration Administrator; provided, that the roster will be limited to judges who have had a minimum often (10) years of experience either negotiating or serving as an arbitrator to resolve disputes regarding contract manufacturing services agreements or similar agreements. If the parties cannot agree on an Arbitrator within seven (7) days of delivery of the demand for arbitration (" **Demand** ") (or such other time period as the parties may agree), the Arbitration Administrator will select an independent Arbitrator in accordance with its rules, but subject to the qualification requirements specified herein.

(f) Unless otherwise mutually agreed to by the parties, the place of arbitration shall be San Jose, California, although, for the avoidance of doubt, the arbitrators may be selected from any rosters maintained by the Arbitration Administrator.

(g) The Federal Arbitration Act shall govern the arbitrability of all Disputes. The Federal Rules of Civil Procedure and the Federal Rules of Evidence (the " **Federal Rules** "), to the extent not inconsistent with this Agreement, govern the conduct of the arbitration. To the extent that the Federal Arbitration Act and Federal Rules do not provide an applicable procedure, New York law shall govern the procedures for arbitration and enforcement of an award, and then only to the extent not inconsistent with the terms of this Section. Disputes between the parties shall be subject to arbitration notwithstanding that a party to this Agreement is also a party to a pending court action or special proceeding with a third party, arising out of the same transaction or series of related transactions and there is a possibility of conflicting rulings on a common issue of law or fact.

(h) Unless otherwise mutually agreed to by the parties, each party shall allow and participate in discovery as follows:

(i) Non-Expert Discovery . Each party may (1) conduct three (3) non-expert depositions of no more than five (5) hours of testimony each, with any deponents employed by any party to appear for deposition in New York City; (2) propound a single set of requests for production of documents containing no more than twenty (20) individual requests; (3) propound up to twenty written interrogatories; and (4) propound up to ten (10) requests for admission.

(ii) Expert Discovery . Each party may select a witness who is retained or specially employed to provide expert testimony and an additional expert witness to testify with respect to damages issues, if any. The parties shall exchange expert reports and documents under the same requirements as Federal Rules of Civil Procedure 26(a)(2)&(4).

(iii) Additional Discovery . The Arbitrator may, on application by either party, authorize additional discovery only if deemed essential to avoid injustice. In the event that remote witnesses might otherwise be unable to attend the arbitration, arrangements shall be made to allow their live testimony by videoconference during the arbitration hearing.

(i) The Arbitrator shall render an award within six (6) months after the date of appointment, unless the parties agree to extend such time. The award shall be accompanied by a written opinion setting forth the findings of fact and conclusions of law. The Arbitrator shall have authority to award compensatory damages only, and shall not award any punitive, exemplary, or multiple damages. The award (subject to clarification or correction by the arbitrator as allowed by statute and/or the Federal Rules) shall be final and binding upon the parties, subject solely to the review procedures provided in this Section.

(j) Either party may seek arbitral review of the award. Arbitral review may be had as to any element of the award.

(k) Any judicial proceeding arising out of or relating to this Agreement or the relationship of the parties, including without limitation any proceeding to enforce this Section, to review or confirm the award in arbitration, or for preliminary injunctive relief, shall be brought exclusively in a court of competent jurisdiction in the city of New York, New York (the **"Enforcing Court").** By execution and delivery of this Agreement, each party accepts the jurisdiction of the Enforcing Court.

(l) Each party shall pay their own expenses in connection with the resolution of Disputes pursuant to this Section. The prevailing party in a Dispute will be entitled to recover all reasonable attorneys' fees, costs and expenses that it incurs in connection with such Dispute in proportion to the amount of recovery of the total claims by both parties that were awarded in the prevailing party's favor.

(m) The parties agree that the existence, conduct and content of any arbitration pursuant to this Section 15.11 sha ll be kept confidential and no party shall disclose to any person any information about such arbitration, except: (i) as may be required by law or by any governmental authority or for financial reporting purposes in each party's financial statements; (ii) as required under applicable securities regulations; or (iii) on a confidential basis to present or future providers of venture capital and/or potential private investors in or acquirers of such party.

(n) IN THE EVENT OF ANY DISPUTE BETWEEN THE PARTIES, WHETHER IT RESULTS IN PROCEEDINGS IN ANY COURT IN ANY JURISDICTION OR IN ARBITRATION, THE PARTIES HEREBY KNOWINGLY AND VOLUNTARILY, AND HAVING HAD AN OPPORTUNITY TO CONSULT WITH COUNSEL, WANE ALL RIGHTS TO TRIAL BY JURY, AND AGREE THAT ANY AND ALL MATTERS SHALL BE DECIDED BY A JUDGE OR ARBITRATOR WITHOUT A JURY TO THE FULLEST EXTENT PERMISSIBLE UNDER APPLICABLE LAW.

(o) In the event of any lawsuit between the parties arising out of or related to this Agreement, the parties agree to prepare and to timely file in the applicable court a mutual consent to waive any statutory or other requirements for a trial by jury.

(p) Notwithstanding the foregoing provisions of this Section 15.11 , each party reserves the right to seek injunctive or other equitable relief in a court of competent jurisdiction with respect to any Dispute related to the actual or threatened infringement, misappropriation or violation of a party's intellectual property rights or breach of Section 15.l (Confidentiality) hereof.

15.12. **Even-Handed Construction .** The terms and conditions as set forth in this Agreement have been arrived at after mutual negotiation, and it is the intention of the parties that its terms and conditions not be construed against any party merely because it was prepared by one of the parties.

15.13. **Controlling Language .** This Agreement is in English only, which language shall be controlling in all respects. All documents exchanged under this Agreement shall be in English.

15.14. **Controlling Law .** This Agreement shall be governed and construed in all respects in accordance with the domestic laws and regulations of the State of New York without regard to its conflicts of laws provisions; except to the extent there maybe any conflict between the law of the State of New York and the Incoterms of the International Chamber of Commerce, 2000 edition, in which case the Incoterms shall be controlling. The parties specifically agree that the 1980 United Nations Convention on Contracts for the International Sale of Goods, as may be amended from time to time, shall not apply to this Agreement.

15.15. **Data Protection Agreement.** The Parties shall negotiate in good faith a Data Protection Agreement to address the requirements of applicable data protection law.

1 5.16. **Counterparts .** This Agreement may be executed in counterparts.

IN WITNESS WHEREOF, the parties have caused this Manufacturing Services Agreement to be duly executed by their duly authorized representatives as of the Effective Date.

PALO ALTO NETWORKS, INC. :		**FLEXTRONICS TELECOM SYSTEMS LTD.** :	
Signed:	[***]	Signed:	[***]
Print Name:	[***]	Print Name:	[***]
Title:	[***]	Title:	[***]

Exhibit 1
Definitions

"Affected Inventory Costs"	shall mean: (i) 110% of the Cost of all affected Inventory and Special Inventory in Flextronics's possession and not returnable to the vendor or reasonably usable for other customers, whether in raw form or work in process, less the salvage value thereof, (ii) 105% of the Cost of all affected Inventory and Special Inventory on order and not cancelable, (iii) any vendor cancellation charges incurred with respect to the affected Inventory and Special Inventory accepted for cancellation or return by the vendor, (iv) the then current fees for any affected Product, and (v) expenses incurred by Flextronics related to labor and equipment specifically put in place to support the purchase orders and Forecasts that are affected by such reschedule or cancellation (as applicable).
"Affiliate"	shall have the meaning set forth in Section 4.3
"Aged Inventory"	shall mean any Inventory and/or Special Inventory for which there has been zero or insignificant consumption for such Inventory and/or Special Inventory during the prior 180 days.
"Approved Vendor List" or "AVL"	shall mean the list of suppliers currently approved to provide the Materials specified in the bill of materials for a Product
"Confidential Information"	shall mean (a) the existence and terms of this Agreement and all information concerning the unit number and fees for Products and Inventory/Special Inventory; (b) the Specifications; and (c) any other information that is marked "Confidential" or the like or, if delivered verbally, confirmed in writing to be "Confidential" within 30 days of the initial disclosure. Confidential Information does not include information that (i) the receiving party can prove it already rightfully knew at the time of receipt from the disclosing party without restrictions on use or disclosure; (ii) has come into the public domain without breach of this Agreement by or other fault of the receiving party; (iii) was received by the receiving party from a third party that had the right to disclose such information and discloses it without restrictions on its use of disclosure; (iv) the receiving party can prove it independently developed without use of or reference to the disclosing party's Confidential Information; or (v) is disclosed with the prior written consent of the disclosing party.
"Cost"	shall mean the cost represented on the bill of materials supporting the most current fees for Products at the time of cancellation, expiration or termination, as applicable.
"Customer Controlled Materials"	shall mean those Materials provided by Customer or by suppliers with whom Customer has a commercial contractual or non-contractual relationship.
"Customer Controlled Materials Terms"	shall mean the terms and conditions that Customer has negotiated with its suppliers for the purchase of Customer Controlled Materials.
"Customer indemnities"	shall have the meaning set forth in Section 9.1.
"Damages"	shall have the meaning set forth in Section 9.1.
"Disputes"	shall mean any disputes, differences, controversies and claims arising out of or relating to the Agreement

"Economic Order Inventory"	shall mean Materials purchased in quantities, above the required amount for purchase orders, in order to achieve price targets for such Materials.
"Excess Inventory"	shall mean all Inventory and Special Inventory possessed or owned by Flextronics that is not required for consumption to satisfy the next 180 days of demand for Products under the then-current purchase order(s) and Forecast.
"Environmental Regulations"	shall mean any hazardous substance content laws and regulations including, without limitation, those related to the EU Directive 2002195/EC about the Restriction of Use of Hazardous Substances (RoHS).
"Fee List"	shall have the meaning set forth in Section 3.5.
"Flextronics Controlled Materials"	shall mean those Materials designated as "Flextronics Controlled" in a bill of materials agreed to by the parties.
"Flextronics-Supplied Critical Component"	shall mean the custom Materials required by Customer and supplied by Flextronics, as set forth in Exhibit 3 and as revised through mutual agreement between the parties from time to time.
"Flextronics Indemnities"	shall have the meaning set forth in Section 9.2.
"Force Majeure"	shall have the meaning set forth in Section 15.8.
"Inventory"	shall mean any Materials that are used to manufacture Products that are ordered pursuant to a purchase order from Customer.
"Lead Time(s)"	shall mean the Materials Procurement Lead Time plus the manufacturing cycle time required from the delivery of the Materials at Flextronics's facility to the completion of the manufacture, assembly and test processes.
"Long Lead Time Materials"	shall mean Materials with Lead Times exceeding the period covered by the accepted purchase orders for the Products.
"Materials"	shall mean components, parts and subassemblies that comprise the Product and that appear on the bill of materials for the Product
"Materials Procurement Lead Time"	shall mean with respect to any particular item of Materials, the longer of(a) lead time to obtain such Materials as recorded on Flextronics's MRP system or (b) the actual lead time, if a supplier has increased the lead time but Flextronics has not yet updated its MRP system.
"Minimum Order Inventory"	shall mean Materials purchased in excess of requirements for purchase orders because of minimum lot sizes available from the supplier.
"Monthly Charges"	shall mean a total aggregate 1.0% monthly charge for finance carrying costs and storage and handling charges, in each case measured as a percentage of the Cost of the Inventory and/or Special Inventory and/or of the fees for the Product affected subject to the charge per month until such Inventory and/or Special Inventory and/or Product is returned to the vendor, used to manufacture Product or is otherwise purchased by Customer.
"Obsolete Inventory"	shall mean Inventory or Special Inventory that is any of the following: (a) removed from the bill of materials for a Product by an engineering change; (b) no longer on an active bill of material for any of Customer's Products; or (c) on-hand Inventory and Special Inventory that are not required for consumption to satisfy the next 180 days of demand for Products under the then-current purchase order(s) and Forecast.
"ODM Products"	shall mean those Products designated as "ODM Products" by the parties (as opposed to those Products designed as EMS or "Other" Products). The parties agree that the [***] Products and the [***] Products are at the time of the Effective Date the only ODM Products, as set forth on Exhibit 3.
"Product"	shall have the meaning set forth in Section 2.1.
"Production Materials"	shall mean Materials that are consumed in the production processes to manufacture Products including without limitation, solder, epoxy, cleaner solvent, labels, flux, and glue. Production Materials do not include any such production materials that have been specified by Customer or any Customer Controlled Materials.
"Special Inventory"	shall mean any Long Lead Time Materials and/or Minimum Order Inventory and/or Economic Order Inventory.
"Specifications"	shall have the meaning set forth in Section 2.1.
"Work"	shall have the meaning set forth in Section 2.1.

Exhibit 2

FLEXTRONIC FACILITIES

[***]

Exhibit 3

ODM Products and Flextronics-Supplied Critical Component List for ODM Products

ODM Products: [***]

Flextronics-Supplied Critical Component List for ODM Products:

item_number	item_name	revision	quantity	manufacturer_1	manufacturer_item_number_1
[***]	[***]	1	1	[***]	[***]
[***]	[***]	1	8	[***]	[***]
[***]	[***]	00A	1	[***]	[***]
[***]	[***]	1	4	[***]	[***]
[***]	[***]	1	1	[***]	[***]
[***]	[***]	00A	1	[***]	[***]
[***]	[***]	00A	1	[***]	[***]
[***]	[***]	00A	1	[***]	[***]
[***]	[***]	00A	1	[***]	[***]
[***]	[***]	00A	1	[***]	[***]
[***]	[***]	00A	1	[***]	[***]

Exhibit 4

RSA ADDENDUM

To be attached or incorporated by reference

EXHIBIT 4
RSA ADDENDUM TO THE
Flextronics Manufacturing Services Agreement

This Repair Services Addendum (" **RSA Addendum** ") is governed by the Flextronics Manufacturing Services Agreement dated December 8, 2015 (" **MSA** "), between Palo Alto Networks, Inc. ("PANW" or " **Customer** ") and Flextronics Telecom Systems Ltd., (" **Flextronics** "). The MSA and addenda including this RSA Addendum shall be collectively referred to herein as the " **Agreement** ".

RECITALS

WHEREAS, Customer and Flextronics have entered into the MSA, and the parties desire to add repair and repair related services to be performed by Flextronics (the " **Services** ") pursuant to terms as similar as possible to the terms agreed to in the MSA; and

WHEREAS, the Customer has entered into an ongoing sales agreement with its customers (the " **Purchaser** ") for the sale by Customer of certain goods. Flextronics has developed processes and practices for the receipt, storage, screening, testing, repair, refurbishment, RMA management and movement (including the management of reverse logistics of goods and the provision of visibility into the status of the movement of such goods through electronic communications and otherwise) of goods; and

WHEREAS, Customer acknowledges that Flextronics's expertise is in providing these Services and that Flextronics's responsibility related to the Customer's goods is limited to this extent.

NOW THEREFORE, in consideration of these premises and the mutual promises contained herein, the parties agree to add the following to the Agreement:

1. **SERVICES**

1.1. **Responsibilities of Flextronics .**

a **Generally .** Flextronics will perform the Services pursuant to a mutually agreed upon written statement of work (" **Statement of Work** ") set forth in Exhibit A. The Services shall also constitute "Work" as such term is used in the MSA. Each Statement of Work is subject to the terms of this RSA Addendum and includes all product manufactured by Flextronics, applicable pricing and the repair specifications for the Services (the Repair **Specifications** ") and other details applicable to the Services for Products (hereafter Products serviced under this RSA Addendum shall be referred to as " **Good(s)** ") or group of Goods. Any Services related to the management, repair and storage of Goods will be provided at those facilities of Flextronics and/or its subcontractor(s) situated at the locations identified in the Statement of Work (each a " **Flextronics Facility** "). In case of any conflict between the Statement of Work and this RSA Addendum, this RSA Addendum shall prevail. Flextronics shall perform the Services in a professional manner in accordance with the Customer's instructions, using a commercially reasonable degree of diligence, care and skill.

b **Manufacturing Warranty .** Upon receipt of a returned Good, Flextronics shall determine if (i) the returned Good was originally manufactured by Flextronics and (ii) the defects exhibited by the returned Good are covered by the manufacturing workmanship warranty given by Flextronics in the MSA (the " **Manufacturing Warranty** "). If the returned Good meets the criteria set forth in subsections (i) and (ii) in the immediately preceding sentence, then Flextronics shall identify the returned Good as covered by the Manufacturing Warranty and Flextronics shall repair the nonconformance pursuant to the terms and conditions of the MSA (the " **Warranty Service** "). A returned Good shall not be covered by the Manufacturing Warranty if: (A) Flextronics was not the original manufacturer of the returned Good; (B) the Good is returned to Flextronics after the expiration of the applicable warranty period for the Manufacturing Warranty; or (C) any exception set forth in the MSA to the Manufacturing Warranty applies to such Good. Any Service (other than Warranty Service) performed with respect to any returned Good (which such Service may include without limitation out of warranty repair service, upgrading the Good to the most current specifications for the Good or other refurbishment service) shall be performed by Flextronics at the charges set forth in the Statement of Work.

c. Upon return of a defective Good, Flextronics shall determine whether the Good is repairable. If so, Flextronics shall repair the Goods in accordance with the specifications provided by Customer (the " **Repair Specifications** "). If not, Flextronics shall notify Customer of its belief that the Good is not repairable and request disposition from **C** ustomer. Any charges associated with the disposition must be identified by Flextronics and approved by Customer prior to being incurred.

1.2. **Responsibilities of Customer .** Customer shall provide, at no charge, such training as reasonably required by Flextronics to enable it to perform the Services. Customer shall ensure the delivery of defective Goods to the Flextronics repair facility.

Customer shall provide Flextronics with the necessary Repair Specifications as set forth in Exhibit A hereto and incorporated herein by reference.
Unless otherwise agreed in a local Scope of Services, Customer shall be responsible to co-ordinate and organise the:

(i) inbound transportation of faulty Goods from the collection point to the Flextronics repair centre, and
(ii) outbound transportation of the repaired Goods to the designated return delivery point.

Customer will provide Flextronics on a consigned basis with the special tools and other equipment needed to repair the Goods (meaning that such tools and equipment shall remain the property of Customer).

Customer shall provide Flextronics with technical information, manuals, parts lists, firmware and (adjustments of) software programs necessary to perform the Repair Services as Flextronics may reasonably request from time to time.

2. **TERM AND TERMINATION**

2.1. **Term** . The term of this RSA Addendum shall commence on the RSA Addendum Effective Date and shall be coterminous with the MSA as amended unless (a) either party provides ninety (90) days prior written notice of its intent to terminate this RSA Addendum for convenience, or (b) a party provides written notice of its intent to terminate this RSA Addendum for cause to the other party, if such other party defaults in the performance of any material term of this RSA Addendum (including defaulting in any payment due) and such default continues unremedied for a period of thirty (30) days after the delivery of written notice. Expiration or termination of the MSA as amended or this RSA Addendum shall not affect the amounts due under the Agreement by either party that exist as of the date of expiration or termination. Termination of this RSA Addendum and settling of accounts as described herein shall be the exclusive remedy of the parties for breach of this RSA Addendum. Upon payment of all sums due, the Customer shall remove the Goods from the Flextronics Facility within five (5) business days of the date of termination.

3. **CHARGES AND PAYMENT TERMS**

3.1. **Charges** . In consideration for the Services, Customer will pay Flextronics the charges set forth in the applicable Statement of Work. In the event that the market price of materials "Materials", equipment, labor or other costs related to the provision of the Services change beyond normal variations in pricing, either party may request that the parties meet and review the charges. Any changes to the charges, including the effective date of such changes, shall not be effective unless agreed to in writing by both parties in their absolute discretion. For the avoidance of doubt, neither party shall be obliged to agree to a change in pricing.

4. **TITLE TO GOODS, RISK OF LOSS AND SHIPMENT**

Unless otherwise mutually agreed to by the parties in the applicable Statement of Work, Customer will hold title to the Goods and any Consigned Materials (as defined in Section 6 below) at all times. Unless otherwise mutually agreed to by the parties in the applicable Statement of Work, Flextronics shall never take title to the Goods or to any Consigned Materials. During the time that Goods and Consigned Materials are in the care, custody and control of Flextronics, Flextronics agrees to assume risk of loss for such Goods and Consigned Materials. Flextronics's sole liability for risk of loss is as set forth in this Section 4. For all repaired Goods shipped by Flextronics, shipment will be made by EXW (Ex Works, Incoterms 2010) the Flextronics Facility, at which time the [risk of loss for the repaired Good and any Materials shipped will pass to Customer. Flextronics shall be liable for any loss or damage to the Goods (including any inventory shortage or unexplained or mysterious disappearance of Goods while they are under the care, custody and control of Flextronics to the extent such loss or damage arises as a result of Flextronics's negligence or willful misconduct.

Flextronics' liability for loss or damage shall be limited to the cost to replace the Good with a Good of like kind and value in the same condition as existed at the time of such loss or damage, inventory shortage, disappearance, theft or destruction. Customer will insure the full value of the Goods and any Consigned Materials against all risks while they are under Flextronics' care, control and custody.

5. **MATERIALS**

5.1. **Supersedes MSA Materials Liability Terms** . This Section 5.1 shall apply to the Services to be performed under this RSA Addendum in lieu of any terms or conditions set forth in the MSA with respect to materials liability for cancellation or rescheduling of purchase orders.

5.2. **Materials Planning .**

a Quarterly . On or prior to the Effective Date, Customer will provide Flextronics with all information and data regarding historical defect rates for the Goods, *estimated* repair forecasts based on history, forward looking production forecasts and any other information reasonably requested by Flextronics that is relevant to Flextronics's Materials planning. Customer will update such information on a quarterly basis. Customer acknowledges that Flextronics will rely on such data and Flextronics's own repair history in creating its forecasts and managing Materials inventory levels.

b New Product. Within ten business days of Customer's notice that a new Product will be introduced to the Services performed under this RSA Addendum and receipt of estimated repair forecasts, forward looking production forecasts and any other information reasonably requested by Flextronics that is relevant to Flextronics's Materials planning, Flextronics shall create and provide to Customer a bill of Materials for the planned repair of such Product as well as applicable documentation for Materials management with appropriate planning and procurement inspection to support the Services to be performed on such Product (collectively "Repair Planning BOM"). Upon providing Customer with the Repair Planning BOM, Flextronics will allow one week for Customer to review and provide changes to such documentation. After the completion of such review period, Flextronics shall proceed with planning and purchasing such Materials based on Customer's historical repair data and Customer's updated Repair Planning BOM, as applicable.

5.3. **Consigned Materials .** Customer shall pay for or obtain and consign to Flextronics certain Materials for use in the Services as required by the Statement of Work that will be owned by Customer (the " **Consigned Materials** "). As mutually agreed, Flextronics shall buy all material to support product repair in accordance with PANW provided data, except those materials that PANW has available for consignment PANW agrees to provide Flextronics repair sites with a stock status report of materials available for consignment on a regular basis. Customer shall provide the Consigned Materials in quantities, quality and at times sufficient for Flextronics to efficiently perform the Services.

5.4. **Inventory .** Flextronics is authorized to purchase all Materials other than Consigned Materials needed to complete the Services, including without limitation any repairs of Goods and/or component level repair of certified repair parts. Flextronics and Customer shall work together to determine Materials inventory levels in order to maintain a working stock of Materials and to minimize any excess of Materials.

5.5. **Return of Materials .** Customer shall assist Flextronics in establishing procedures to return Materials that are under warranty to the supplier/original equipment manufacturer to obtain a credit, a repaired Material or a replacement Material. Customer will pass on to Flextronics any credits received for any Materials returned to a supplier under this arrangement.

5.6. Excess Inventory:

"Excess Inventory" is defined as Materials on hand balance in excess of 180 days anticipated demand, is subject to the following:

(a) In the event there is no forecast (or insufficient data to reasonably create a forecast) 180 days anticipated demand is assumed to be the same as the previous 180 days usage.

(b) Flextronics will use reasonable procurement and inventory planning practices to prevent and reduce Excess Inventory from accumulating.

(c) Excess Inventory will be reviewed on a quarterly basis. This does not include Consigned Materials or FGI/DGI/WIP of the Good itself.

(d) Customer to purchase material on order or material on hand rendered obsolete or excess through a Customer engineering change order.

(e) Flextronics will perform Excess Inventory analysis every three months and will provide to Customer by the end of the first week of Customer's 1 st and 3 rd quarter.

(f) Materials deemed as Excess Inventory or obsolete will be sold to Customer on a quarterly basis at [***]. Cost is defined as the Flextronics MAUC (Moving Average Unit Cost) as calculated in BaaN at the time the quarterly Excess Inventory Report was generated.

(g) Customer's review of the quarterly Excess Inventory report and any subsequent transfer of inventory and/or payments will occur within 30 days of Flextronics' submission of the quarterly analysis to Customer. Any line of the Excess Inventory report not challenged reasonably and in good faith for identified reasons by the end of the thirty (30) Calendar days from receipt of the Excess Inventory report will be understood as confirmed by Customer.

(h) For a reasonable period of time not to exceed thirty (30) days after Flextronics notifies Customer of the Excess Inventory, Flextronics shall use commercially reasonable efforts to return the Excess Inventory to Customer vendors and to allocate the Excess Inventory to alternate programs if applicable.

(i) Once Flextronics has exhausted commercially reasonable efforts to return the Excess Inventory to Customer Vendors and to allocate applicable Excess Inventory to alternate programs, Customer shall buy back any remaining Excess Inventory at that time.

(j) Payment terms associated with excess and obsolete inventory will be the same as those established elsewhere in this agreement.

(k) Customer may elect to have Flextronics physically retain excess or obsolete inventory even after sale to Customer for the possibility that there may be future demand for this inventory.

(l) Flextronics will hold said inventory free of charge as a consigned inventory so long as the sum of such inventory remains physically reasonable in size and not to exceed one third of the total space allocated to Customer's inventory.

(m) In the event that consigned excess or obsolete inventory exceeds these limitations Flextronics may elect to charge a reasonable storage fee, with 30 days advance notification to Customer.

(n) Upon termination of this agreement Flextronics shall be entitled to sell to Customer all turnkey component inventory at Flextronics [***].

(o) The following part purchase categories will be excluded from the before-mentioned " **Excess Inventory"** calculations:

(ii) Last time buy (LTB): Purchases to support forecast requirements through the end of a product's service contract made in direct response to notification from a supplier or Customer that a part's EOL date has been identified.

(iii) New product introduction (NPI): Purchases of unforecasted material defined by Customer to support the launch of repair services for a new product.

5.7 LTB Process

The Last Time Buy process is part of the turnkey concept by which expenses are recovered via quarterly recovery process. In the LTB Process Flex tronics will purchase LTB components as directed from PANW.

Purchase of a LTB Component

All LTB purchase approvals will follow the existing processes for approval by PANW, namely the projections and associated quantities.

LTB Cost Recovery Period

The cost of the LTB purchase will be recovered via invoicing over a time period of no longer than a maximum of [***] regardless of the LTB usage projection.

LTB Cost Recovery

Provided that Flextronics has disclosed and separated the below as individual line items in their quote for LTB product, the cost recovery will include:

- The cost of [***]
- The [***]
- The cost of [***]during the recovery period (maximum of [***] years) ([***]% /[***])

Cost Reconciliation

During the [***] period of cost recovery a rate of recovery check point will occur

- Within [***] of purchase
- Every [***] thereafter
- [***] prior to the end of the [***] period to insure full recovery
- These reconciliations will be the responsibility of the local program manager and global program manager. Reconciliations will determine if the cost recovery is adequate or if a modification of the adder(s) is required.

Methods for Determining Inventory Value on Hand

The linear method below will be used to determine Inventory Value on Hand.

[***]

[***]

5.8 Consumables:

1. Flextronics is responsible for procuring standard packaging materials in accordance with Customer's specifications to enable it to ship the Goods. Flextronics will drive demand with vendors and keep three weeks of stock according to historical data provided by the Customer.

2. Flextronics will invoice Customer on a monthly basis for the actual use of these materials for all devices that were shipped or scrapped in the given period. If Customer switches materials to be used, then obsolete stock will be refunded by Customer at cost price.

6. **WARRANTIES**

Repair Warranty . Flextronics warrants that each Good that is repaired by Flextronics pursuant to this RSA Addendum will be repaired in accordance with the Repair Specifications and shall be free from defects in repair workmanship for a period of [***] from the date of shipment of the repaired Good. (The " **Repair Warranty** "). In the event of a breach of the Repair Warranty during the Repair Warranty Period, Customer shall return the Good to Flextronics and Flextronics shall repair the Good as set forth in Exhibit A to this RSA Addendum. The Repair Warranty shall not in any way diminish or enlarge the scope of the original manufacturing warranties applicable to any Good manufactured by Flextronics. Notwithstanding anything else in this RSA Addendum, this Repair Warranty does not apply to, and Flextronics makes no representations or warranties whatsoever with respect to: (i) Materials (including components); (ii) defects resulting from the Repair Specifications or the design of the Goods; (iii) Goods that have been abused, damaged, altered or misused by any person or entity after such Goods have been shipped from the Flextronics Facility; or (iv) defects resulting from tooling, test equipment, designs or instructions produced or supplied by Customer. Customer shall bear all of the risk, and all costs and expenses (including without limitation any standard charges by Flextronics for diagnostics and testing) associated with Goods that have been returned to Flextronics for which there is no defect found or for which a warranty exception set forth in this Section 7.1 applies. Customer will provide its own warranties directly to any of its Purchasers or other third parties. Customer will not pass through to Purchasers or other third parties the warranties made by Flextronics under this RSA Addendum. Upon any failure of a Good to comply with this limited Repair Warranty, Flextronics's sole obligation, and Customer's sole remedy, is for Flextronics to promptly re-repair the Good and return it to Customer freight prepaid or, in the event the Good cannot be repaired, to refund to Customer the repair charge. Customer shall return Goods covered by this warranty freight prepaid after completing a failure report and obtaining a return material authorization number from Flextronics to be displayed on the shipping container. FLEXTRONICS MAKES NO REPRESENTATIONS AND NO OTHER WARRANTIES OR CONDITIONS ON THE PERFORMANCE OF THE REPAIR SERVICES, OR THE GOODS, EXPRESS, IMPLIED, STATUTORY, OR IN ANY OTHER PROVISION OF THIS AGREEMENT OR COMMUNICATION WITH CUSTOMER, AND FLEXTRONICS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Customer Warranties . The Customer warrants that it is either the owner or the authorized agent of the owner of the Goods and that it is accepting the terms and conditions of this RSA Addendum for itself and as agent for and on behalf of the owner. The Customer warrants that before presentation of the Goods and Consigned Materials to Flextronics (or its subcontractor) for storage or repair, the Customer will inform Flextronics in writing of any special precautions necessitated by the nature, weight or condition of the Goods and Consigned Materials and of any statutory duties specific to the Goods and Consigned Materials with which Flextronics may need to comply. In addition, the Customer warrants that unless prior to receipt of the Goods and Consigned Materials by Flextronics, Flextronics receives written notice containing all appropriate information, none of the Goods or Consigned Materials are or contain substances the storage of which would require the obtaining of any consent or license or which, if they escaped from their packaging, would or may cause pollution of the environment or harm to human health.

7. **LIABILITY AND INDEMNIFICATION** The indemnities at Section 9 of the MSA shall apply to the Services performed under this Repair Services Addendum mutatis mutandis.

LIMITED LIABILITY. NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THE MSA OR THIS RSA ADDENDUM, FLEXTRONICS'S TOTAL MAXIMUM AGGREGATE LIABILITY EACH QUARTER TO CUSTOMER UNDER THIS RSA ADDENDUM SHALL IN NO EVENT EXCEED AN AMOUNT EQUAL TO [***] OF THE TOTAL GROSS AMOUNTS ACTUALLY PAID TO FLEXTRONICS BY CUSTOMER FOR THE SERVICES PERFORMED PURSUANT TO THIS RSA ADDENDUM DURING THE IMMEDIATELY PRECEDING CUSTOMER [***]. THE LIABILITY CAP WILL BE RE-SET EVERY [***] ALLOWING CUSTOMER TO PURSUE CLAIMS EACH [***] UP TO THE MAXIMUM AGREED CAP AS STATED HEREIN.

8. MISCELLANEOUS

8.6. **Entire Agreement.** Capitalized terms not otherwise defined herein shall have the same meaning ascribed to such terms in the MSA. This RSA Addendum as incorporated into the Agreement constitutes the entire agreement between the parties with respect to the transactions contemplated hereby and supersedes all prior agreements and understandings between the parties relating to such transactions. Each party shall hold the existence and terms of this RSA Addendum confidential, unless it obtains the other party's express written consent otherwise. In all respects, this RSA Addendum shall govern, and any other documents including, without limitation, preprinted terms and conditions on Customer's purchase orders shall be of no effect. In the event of any conflict or ambiguity that arises between the terms and conditions of this RSA Addendum and the terms and conditions of the MSA, the terms and conditions of this RSA Addendum shall control with respect to the Services to be provided under this RSA Addendum. This RSA Addendum will be deemed to have been drafted by both parties.

8.7. **Amendments.** This RSA Addendum may be amended only by written consent of both parties.

8.8. **Intellectual Property** . Nothing in this RSA Addendum grants either party any rights to use the other party's trademarks, trade or corporate names, patents or other intellectual property rights, directly or indirectly, in connection with any product, service, promotion or publication without the prior written approval of the intellectual property rights owner or, in the case of corporate names, of an authorized officer of the other party.

8.9. **Data .** Customer represents and warrants that, all personal data (if any) transferred to Flextronics under this Repair Services Addendum has been processed and transferred to Flextronics in compliance with all applicable data protection/privacy laws -Flextronics disclaims and Customer accepts all liability with respect to loss of data in Goods.

8.10. **Compliance .** If any legislation is compulsorily applicable to any business undertaken, this RSA Addendum shall be read as subject to such legislation and nothing in this RSA Addendum shall be construed as a surrender by Flextronics of any of its rights or immunities or as an increase of any of its responsibilities or liabilities under such legislation and if any provision of this RSA Addendum is inconsistent with a provision of any statute or rule of law having compulsorily application to the RSA Addendum then to the extent only of such inconsistency such statute or rule of law shall prevail.

9. Except as specifically provided herein, the terms and conditions of the MSA shall apply to the Repair Services.

EXHIBIT A
SCOPE OF SERVICES

General Program Scope:

E2E Reverse Logistics and Repair services will be delivered from Flextronics **[***]** and **[***]** service centers.

The Scope of the program will include:

a. Adherence to a **[***]** business day TAT SLA from receipt of defective goods to completion of functional finished goods and notification to Customer that the device is complete through pack out and ready for pick up.
b. Third party ODM RMA and RTV process management and timely warranty credit tracking (for example **[***]**)
c. Flextronics **[***]** product line to be repaired by the service centers, as of a mutually agreed upon date.
d. PCBA repair
e. Elimination of Flextronics warranty credit recovery by PANW / current repair *vendor*-
f. Reduced transportation, consolidation and warehousing process costs through elimination inbound **[***]** into **[***]**
g. Regular reporting in accordance with section J (Reporting) below
h. Single point of contact program management to reduce partner management complexity
i. Option to integrate comprehensive demo pool program management at an additional cost
j. Option to integrate service parts logistics support at an additional cost
k. Adherence to **[***]** .

A. Operation and space

1) Flextronics will provide material handling equipment and trained manpower to provide the services described from Flextronics [***] and [***] facilities.

2) The Flextronics Facilities will include appropriate security conditions.

3) Upon reasonable advanced notice, Flextronics will permit Palo Alto Networks, Inc. (PANW) during normal business hours on business days to enter the Flextronics Facility, for stock counting and inventory purposes only, provided that PANW complies with Flextronics's and/or its subcontractor's security policies and is at all times escorted by a representative of Flextronics.

4) The hours of operation for each Flextronics Facility shall be established locally in accordance with PANW's requirements, excluding holidays. After hours support will be provided as required by PANW, upon reasonable advanced notice given to Flextronics and at an additional cost to be agreed on in writing by the parties.

5) All Product shall be stored in accordance with industry standard.

B. Information System

(a) Electronic Data Interchange (EDI): **(Development of EDI signals is not included in this scope of services)**

Flextronics's information system provides specific supply chain management solutions to provide PANW with visibility of its Goods in the Flextronics Facility [actual inventory] and Goods in transit [virtual inventory] where the freight movement is arranged by Flextronics.

Flextronics and PANW will be responsible for providing any necessary systems, hardware and/or software required to support EDI communications.

(b) **Computerized Warehouse Management System:**

Flextronics's System will allow for at least the following:

(i) Inventory tracking by Customer and Purchaser part number, serial number, case number, piece quantity, pallet quantity, receipt date, ship date;

(ii) Goods pull on a First in First out (FIFO) basis (based on receiving date), except as specifically requested by the Customer.

(iii) Weekly Customer reports summarizing receipts, shipments, inventory balances, WIP and raw materials for the prior week;

(iv) Inventory categories for inventory "on hold", "damaged", and "available". Inventory in the "on hold" or "damaged" category will be tracked and reported separately from "available" inventory and will be blocked from pull and shipment while in these categories;

(v) Ability to move inventory from one category to another while retaining original receipt information.

C. In-bound transportation services

1. PANW may use the services of Flextronics or its sub-contractors to transport the Goods from their Depots to Flextronics Facility.

2. In the event that PANW does not use Flextronics or its sub-contractors to transport the Goods **,** PANW will provide shipment information regarding the transportation directly into Flextronics Facility. Customs documents must be provided by the carrier.

D. Repair and Refurbishment

Flextronics shall perform the following services on the all product manufactured by Flextronics Production from [***] and [***] as part of the scope of this RSA:

(a) Screening

(b) Testing, Customer symptom duplication

(c) Bulk repair and/or refurbishment

(d) Return repaired units to designated PANW depots in [***] and [***]

(e) Repair of customer owned devices, as needed.

Add: Weekly repair report in accordance with section J sub-section 3, below

E. Warehouse Services

1. If Flextronics does not provide the "in-bound freight forwarding service", PANW shall ensure that Flextronics receives a minimum of twelve (12) hours advanced notice of shipments scheduled for delivery to the Flextronics Facility.

2. Within 24 hours of physical receipt, Flextronics will provide email notification of devices received into the repair centers. Such notification shall include the following information

(a) Stock receipt note;

(b) Date received;

(c) Part numbers and quantity received;

(d) In-bound serial number capture

3. Flextronics will check the Goods against shipping documents and report any discrepancies in quantity of the Goods within 24 hours of delivery of defective goods.

F. Handling out

1. A packing slip, prepared by Flextronics will accompany the shipment and it will provide the following information:

(a) Part number and Model number;

(b) Quantity disbursed;

(b) Number of pallets/boxes;

(c) Location in the Flextronics Facility; and

(d) Date disbursed

(e) Serial number

Additionally, Flex will provide same information to the destination site by way of an Advance Shipping Notification (ASN) per customer provided template, on same day of shipment.

G. Out-bound transportation services

Customer may use the services of Flextronics or its sub-contractors to transport the Goods from Flextronics Facility to the Depot.

H. Inventory Management (raw material or finished goods)

1. Flextronics agrees to maintain Goods and Materials at the Flextronics Facility within an orderly and organized system, drawing from available stock on First in First out (FIFO) basis, based on receipt date into the inventory location.

2. The inventory levels will be reported to Customer via on-line access EDI, e-mail or auto-fax as agreed between parties and locations will be noted in Flextronics's computerized inventory system.

3. Flextronics will perform routine cycle counting and reconciliation of Finished Goods inventory on a weekly basis and will report the following: stock balances, stock movement and stock held in quarantine.

4. Flextronics will report monthly cycle counting metrics to Palo Alto Networks. Flextronics shall increase cycle count activities by [***]% at the deficient facility(s) when Flextronics fails to meet cycle count accuracy Key Performance Indicators, as defined in the paragraph following this, for [***] consecutive months. The increase activity shall continue through a "Cure" period defined as one month or until KPI is met for a period of [***] days.

5. Inventory accuracy cycle count Key Performance Indicator. Flextronics will be held to a Key Performance Indicator for cycle counts to an accuracy of [***]% by count.

6. Occasionally, but only during Standard Business Hours, Palo Alto Networks shall have the right to require physical stock (part) checks of Goods and Material. Additionally, Palo Alto Networks (or representative) reserves the right to observe Flextronics cycle counting activities.

7. Flextronics will provide the full visibility of Goods movement and stock situation (inventory in transit and stock in hub), from the time of receipt at the Flextronics Facility until Goods are delivered to the Depot, provided that Flextronics has been provided appropriate information from Customer to perform every service from the time of receipt at the Flextronics Facility until Goods are delivered to the Depot.

I. Value Added Services

Flextronics may be requested from time to time to provide certain additional value added services on terms to be agreed on by the parties. If such changes result in a material change in Flextronics's costs, Flextronics and Customer shall negotiate in good faith such adjustments.

J. Reporting

1. Flextronics shall provide a weekly report with the following information

Goods receipt
Goods Shipments
Work-in-Process (WIP)
Inventory Aging with details of delay for any device more than 10 business days old

2. Monthly liability report listing all turnkey and consigned raw materials on hand and on order with associated cost to Customer (consigned materials at [***]).

3. Weekly submission to Palo Alto Networks Quality Dept. detailed repair data for each device repaired in accordance with [***], or other formally approved means.

4. Real time notification of shipments, via customer provided ASN template and receipts, via email

Implementation and Repair Turnaround Time .

The parties anticipate an implementation period for the Services of approximately [***] weeks from the date the first shipment of Goods is received by Flextronics. After such start-up period, Flextronics shall use commercially reasonable efforts to complete Services for Goods within a turnaround time of [***] business days, which such turnaround time shall be measured from the time that Flextronics receives the Good at the Flextronics Facility until the time that the Flextronics makes the Good available for pick up or shipment by the carrier (" **TAT** "). TAT shall be calculated on a monthly, averaged basis on the last business day of each month. Flextronics will not be required to meet the TAT set forth herein if: (i) Customer fails to perform its obligations set forth herein; (ii) changes to the Repair Specifications adversely affect the time required to perform the Services; or (iii) Customer institutes engineering holds. In the event that TAT is not met for any particular month, Flextronics and Customer will agree to a reasonable plan to address the underlying causes of the failure to meet the TAT.

EXHIBIT B

PAN RMA PROCESS FLOW

To be attached or incorporated by reference

EXHIBIT C

Program Assumptions

- Transport charges to and from Flextronics Facilities will be borne by PANW
- Quarterly Business Reviews shall include review of services, pricing, changes to business, goals and objectives, etc.
- PANW will provide a matrix that will identify a threshold for maximum material costs by model / SKU. When material costs will exceed that threshold, Flextronics will notify PANW and provide the necessary details and await direction from customer.
- Disposition decision should be provided within 48 hours, and the volume of units that require a disposition decisions are less than [***]% of a current month's returns.
- Parts installed on the unit BEFORE it exceeded the repair limit threshold will be billed to PANW. Also, the charges associated with the repair activity as defined by the pricing matrix for Simple or Complex Repairs will be billed even though a decision to scrap the unit is made by PANW
- Certificates of destruction will be provided from each repair facility at no cost. The certificate must provide a serial number for all finished goods and drives.
- Customs clearance and trade compliance support will be provided by Flextronics [***] service center and will be billed at a rate of [***] per shipment by origin, if requested by the customer.
- [***]
- Flextronics will provide Hi-Pot testers at [***]
- Pricing shall be based on volume of Goods successfully repaired and shipped from the corresponding Service Center location in a given month in accordance with the Standard Repair Services Pricing Matrix agreed upon between the parties and as amended from time-to-time upon written agreement. As of the Effective Date, the current Standard Repair Services Pricing Matrix is below for illustrative purposes. All pricing contained in this agreement is in USD. Both Flextronics repair sites will invoice Palo Alto Networks in USD

Standard Repair Services Pricing Matrix:

[***] and [***]

Service Center Location	Fixed Monthly [***] Fee	Activity Based Per Unit Fees (Applied as Required)
[***]	[***]	
Complex Repairs – Requiring diagnostic times for trouble shooting and PCBA R&R	[***]	$ [***]
PCBA Repair To include up to 1 BGA		$ [***]
ECO Upgrade < 1hr labor		$ [***]
[***]	[***]	
Complex Repairs – Requiring diagnostic times for trouble shooting and PCBA R&R	[***]	$ [***]
PCBA Repair To include up to 1 BGA		$ [***]
ECO Upgrade < 1hr labor		$ [***]
Combined Fixed Fee Monthly Totals:	$ [***]	

EXCLUDED CHARGES:

- Warehouse/transit insurance and product liability insurance outside the terms of this RSA Addendum.
- Transport charges to and from Flextronics Facilities.
- Customs Import or Export charges, clearance charges, duty and taxes.
- Provision of pallets, if required.
- Packing materials including cartons, pallets, tape, foil and labels (such charges will be billed separately in monthly invoice with reference to the serial numbers and type of special repair).
- Screening or technical support staff.
- Quality audits outside of normal repair
- Customer work areas and offices.
- Service outside normal business hours (Monday-Friday 8 hour shifts).
- EDI development.
- Raw materials required for repair.

Exhibit 5

FEES LIST

To be attached or incorporated by reference

Exhibit 6

CRITICAL COMPONENT LIST

Chassis

Hard Drive

Power Supply

Power Module

Fans

Midplane/

Backplane

Motherboard

CPU

Memory

Controller Cards

Network Adapter

Battery/BBU Modules

Exhibit 31.1

**CERTIFICATION PURSUANT TO SECTION 302(a)
OF THE SARBANES-OXLEY ACT OF 2002**

I, Nikesh Arora, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Palo Alto Networks, 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.

/s/ NIKESH ARORA

Nikesh Arora
Chief Executive Officer and Director

Date: May 29, 2019

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302(a)
OF THE SARBANES-OXLEY ACT OF 2002

I, Kathleen Bonanno, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Palo Alto Networks, 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.

/s/ KATHLEEN BONANNO

Kathleen Bonanno
Chief Financial Officer

Date: May 29, 2019

Exhibit 32.1

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

I, Nikesh Arora, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Palo Alto Networks, Inc. for the quarterly period ended April 30, 2019 , fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, 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 Palo Alto Networks, Inc.

/s/ NIKESH ARORA
Nikesh Arora
Chief Executive Officer and Director

Date: May 29, 2019

Exhibit 32.2

CERTIFICATION OF 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, Kathleen Bonanno, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Palo Alto Networks, Inc. for the quarterly period ended April 30, 2019 , fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, 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 Palo Alto Networks, Inc.

/s/ KATHLEEN BONANNO

Kathleen Bonanno
Chief Financial Officer

Date: May 29, 2019