

ANALOGIC CORP

FORM 10-Q (Quarterly Report)

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-Q

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

For the quarterly period ended January 31, 2018

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 0-6715



ANALOGIC CORPORATION

(Exact name of registrant as specified in its charter)

Massachusetts
(State or other jurisdiction of
incorporation or organization)
8 Centennial Drive, Peabody, Massachusetts
(Address of principal executive offices)

04-2454372
(I.R.S. Employer
Identification No.)
01960
(Zip Code)

(978) 326-4000

(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report.)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities

Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

As of February 27, 2018, there were 12,501,116 shares of common stock outstanding.

ANALOGIC CORPORATION
Form 10Q – Quarterly Report
For the Quarterly Period Ended January 31, 2018
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Part I. FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

ANALOGIC CORPORATION
CONSOLIDATED BALANCE SHEETS
(Unaudited in thousands, except share and per share data)

	January 31, 2018	July 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	\$ 101,863	\$ 129,298
Short-term marketable securities	63,772	18,797
Accounts receivable, net of allowance for doubtful accounts of \$507 and \$752 as of January 31, 2018 and July 31, 2017, respectively	84,555	77,587
Inventory	127,395	130,575
Income tax receivable	4,192	4,686
Prepaid expenses and other current assets	9,316	9,762
Total current assets	391,093	370,705
Long-term marketable securities	36,625	26,171
Property, plant, and equipment, net	100,399	102,676
Intangible assets, net	23,287	25,925
Goodwill	2,344	2,344
Deferred income taxes	2,558	5,168
Other assets	5,806	5,094
Total assets	\$ 562,112	\$ 538,083
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 28,431	\$ 27,179
Accrued employee compensation and benefits	16,838	18,171
Accrued income tax	2,092	708
Accrued warranty	5,223	5,306
Accrued restructuring charges	1,093	2,786
Deferred revenue	5,830	4,774
Customer deposits	3,127	3,538
Other current liabilities	4,462	4,648
Total current liabilities	67,096	67,110
Long-term liabilities:		
Accrued income taxes, net of current portion	7,093	734
Other long-term liabilities	10,582	9,745
Total long-term liabilities	17,675	10,479
Guarantees, commitments and contingencies (Note 15)		
Stockholders' Equity:		
Common stock, \$0.05 par value; 30,000,000 shares authorized and 12,493,837 shares issued and outstanding as of January 31, 2018; 30,000,000 shares authorized and 12,467,824 shares issued and outstanding as of July 31, 2017	623	622
Capital in excess of par value	160,428	157,907
Retained earnings	316,836	307,104
Accumulated other comprehensive loss	(546)	(5,139)
Total stockholders' equity	477,341	460,494
Total liabilities and stockholders' equity	\$ 562,112	\$ 538,083

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

ANALOGIC CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in thousands, except per share data)

	<u>Three Months Ended January 31,</u>		<u>Six Months Ended January 31,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Net revenue:				
Product	\$ 126,691	\$ 130,330	\$ 232,444	\$ 250,582
Engineering	2,481	1,204	3,604	2,077
Total net revenue	129,172	131,534	236,048	252,659
Cost of sales:				
Product	70,356	72,721	128,329	141,482
Engineering	1,952	1,123	3,088	1,846
Total cost of sales	72,308	73,844	131,417	143,328
Gross profit	56,864	57,690	104,631	109,331
Operating expenses:				
Research and product development	15,631	16,213	30,642	32,063
Selling and marketing	13,195	17,358	25,601	35,538
General and administrative	12,098	3,979	24,039	17,600
Restructuring	197	267	731	299
Asset impairment charges	-	10,423	-	10,423
Total operating expenses	41,121	48,240	81,013	95,923
Income from operations	15,743	9,450	23,618	13,408
Other income (expense), net	939	28	1,175	(414)
Income before income taxes	16,682	9,478	24,793	12,994
Provision for income taxes	10,133	1,968	12,586	2,948
Net income	\$ 6,549	\$ 7,510	\$ 12,207	\$ 10,046
Net income per common share:				
Basic	\$ 0.52	\$ 0.60	\$ 0.98	\$ 0.81
Diluted	\$ 0.52	\$ 0.59	\$ 0.97	\$ 0.79
Weighted average shares outstanding:				
Basic	12,490	12,466	12,482	12,442
Diluted	12,601	12,680	12,606	12,712
Dividends declared and paid per share	\$ 0.10	\$ 0.10	\$ 0.20	\$ 0.20

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

ANALOGIC CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited, in thousands)

	<u>Three Months Ended January 31,</u>		<u>Six Months Ended January 31,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Net income	\$ 6,549	\$ 7,510	\$ 12,207	\$ 10,046
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustment, net of tax	4,963	(1,019)	4,741	(2,593)
Unrecognized gain on pension benefits, net of tax	31	52	73	110
Unrealized gain (loss) on foreign currency forward contracts, net of tax	305	385	(104)	171
Unrealized loss on available-for-sale securities, net of tax	(66)	-	(118)	-
Total other comprehensive income (loss), net of tax	5,233	(582)	4,592	(2,312)
Total comprehensive income	\$ 11,782	\$ 6,928	\$ 16,799	\$ 7,734

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

ANALOGIC CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	Six Months Ended January 31,	
	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	\$ 12,207	\$ 10,046
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for (benefit from) deferred income taxes	3,285	(194)
Depreciation and amortization	10,913	12,871
Asset impairment charges	-	10,423
Share-based compensation expense	3,881	4,255
Amortization of demo equipment	1,768	969
Provision for excess and obsolescence inventory	658	1,329
Excess tax benefit from share-based compensation	-	(158)
Change in fair value of contingent consideration	-	(8,103)
(Benefit from) provision for doubtful accounts, net of recovery	(245)	20
Loss on sale of property, plant and equipment	66	36
Net changes in operating assets and liabilities:		
Accounts receivable	(5,681)	20,223
Inventory	2,794	(4,180)
Prepaid expenses and other assets	(87)	641
Accounts payable	1,013	1,207
Accrued liabilities	(3,899)	(5,699)
Deferred revenue	986	(977)
Customer deposits	(415)	720
Accrued income taxes and income taxes receivable	7,552	(1,120)
Other liabilities	836	(1,552)
NET CASH PROVIDED BY OPERATING ACTIVITIES	35,632	40,757
CASH FLOWS FROM INVESTING ACTIVITIES:		
Additions to property, plant, and equipment	(3,811)	(5,743)
Purchases of marketable securities	(73,906)	-
Proceeds from maturities of marketable securities	15,826	-
Proceeds from sales of marketable securities	2,294	-
Proceeds from the sale of property, plant, and equipment	16	18
NET CASH USED IN INVESTING ACTIVITIES	(59,581)	(5,725)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Issuance of stock pursuant to exercise of stock options, employee stock purchase plan, restricted stock plans, and non-employee director stock plan	832	3,090
Repurchase of common stock	(952)	-
Shares repurchased for taxes for vested employee restricted stock grants	(1,061)	(1,039)
Excess tax benefit from share-based compensation	-	158
Dividends paid to shareholders	(2,497)	(2,501)
NET CASH USED IN FINANCING ACTIVITIES	(3,678)	(292)
EFFECT OF EXCHANGE RATE CHANGES ON CASH	192	(447)
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(27,435)	34,293
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	129,298	118,697
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 101,863	\$ 152,990
Supplemental disclosures of cash flow information:		
Non-cash transfer of demonstration inventory to fixed asset	1,669	1,764

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

ANALOGIC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited, in millions, except share and per share data)

1. Basis of presentation

Throughout this Quarterly Report on Form 10-Q, unless the context states otherwise, the words “we,” “us,” “our,” “the Company” and “Analogic” refer to Analogic Corporation and all of its subsidiaries taken as a whole, and “our board of directors” refers to the board of directors of Analogic Corporation.

Our unaudited consolidated financial statements presented herein have been prepared pursuant to the rules of the United States Securities and Exchange Commission, or SEC, for quarterly reports on Form 10-Q. Preparing financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. We report our financial condition and results of operations on a fiscal year basis ending on July 31st of each year. The three months ended January 31, 2018 and 2017 represent the second quarters of fiscal years 2018 and 2017, respectively.

In our opinion, the accompanying unaudited consolidated financial statements contain all adjustments necessary for a fair statement of the results for all interim periods presented. The results of operations for the three months ended January 31, 2018 are not necessarily indicative of the operating results for the full year. These statements should be read in conjunction with the consolidated financial statements and notes thereto for the fiscal year ended July 31, 2017, or fiscal year 2017, included in our Annual Report on Form 10-K as filed with the SEC on September 26, 2017. The year-end balance sheet data was derived from audited financial statements, but does not include all disclosures required by generally accepted accounting principles, or GAAP, in the United States of America.

Consolidation

The unaudited consolidated financial statements presented herein include our accounts and those of our subsidiaries, all of which are wholly owned. All intercompany accounts and transactions have been eliminated in consolidation.

In determining whether we are the primary beneficiary of an entity and therefore required to consolidate, we apply a qualitative approach that determines whether we have both (1) the power to direct the economically significant activities of the entity and (2) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to that entity. We have not been required to consolidate the activity of any entity due to these considerations.

2. Recent accounting pronouncements

Accounting pronouncements issued and recently adopted

None .

Accounting pronouncements issued and not yet effective

Targeted Improvements to Accounting for Hedging Activities

In August 2017, the FASB issued ASU No. 2017-12, “*Derivatives and Hedging (Topic 815)*”. The standard better aligns hedge accounting with an entity’s risk management activities and simplifies the requirement to qualify for hedge accounting. ASU 2017-12 is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The standard will be effective for us in the first quarter of our fiscal year ending July 31, 2020. We are currently evaluating the impact of the adoption of this update on our consolidated financial statements.

Scope of Modification Accounting

In May 2017, the FASB issued ASU No. 2017-09, “*Compensation – Stock Compensation (Topic 718)*”. The standard provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting. ASU 2017-09 is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years, and should be applied prospectively to an award modified on or after the adoption date. Early adoption is permitted. The standard will be effective for us in the first quarter of our fiscal year ending July 31, 2019. We are currently evaluating the impact of the adoption of this update on our consolidated financial statements.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, “*Compensation — Retirement Benefits (Topic 715)*”. The standard improves the presentation of net periodic pension cost and net periodic postretirement benefit cost by requiring that an employer that offers to its employees defined benefit pension or other postretirement benefit plans report the service cost component

in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. The standard is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. The standard will be effective for us in the fiscal year beginning August 1, 2018. We are currently evaluating the impact of the adoption of this update on our consolidated financial statements.

Clarifying the Definition of a Business

In January 2017, the FASB issued ASU No. 2017-01, “*Business Combinations (Topic 805): Clarifying the Definition of a Business.*” The amendments provide the requirements needed for a set of transferred assets and activities to be a business and establish a practical way to determine when a set of transferred assets and activities is not a business. To be considered a business, an acquisition would have to include an input and a substantive process that together significantly contribute to the ability to create outputs. An output is the result of inputs and substantive processes that provide goods or services to customers, other revenue, or investment income, such as dividends and interest. The amendments narrow the definition of outputs and align it with how outputs are described in Topic 606 “Revenue from Contracts with Customers”. The amendments are effective for annual periods beginning after December 15, 2017, including interim periods within those periods. Early adoption is permitted. The standard will be effective for us in the fiscal year beginning August 1, 2018. We are currently evaluating the impact of the adoption of this update on our consolidated financial statements.

Intra-Entity Transfers of Assets Other than Inventory

In October 2016, the FASB issued ASU No. 2016-16, “*Income Taxes (Topic 740)*”. The standard requires the recognition of the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. Two common examples of assets included in the scope of this amendment are intellectual property and property, plant, and equipment. The amendments are effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within those annual reporting periods. Early adoption is permitted. The standard will be effective for us in the fiscal year beginning August 1, 2018. We are currently evaluating the impact of the adoption of this update on our consolidated financial statements.

Classification of Certain Cash Receipts and Cash Payments

In August 2016, the FASB issued ASU No. 2016-15, “*Statement of Cash Flows (Topic 230)*.” The amendments provide guidance on the eight specific cash flow statement presentation and classification issues as follows: (1) debt prepayment or debt extinguishment costs; (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (3) contingent consideration payments made after a business combination; (4) proceeds from the settlement of insurance claims; (5) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (6) distributions received from equity method investees; (7) beneficial interests in securitization transactions; and (8) separately identifiable cash flows and application of the predominance principle. The amendments are effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. The standard will be effective for us in the first quarter of our fiscal year ending July 31, 2019. We are currently evaluating the impact of the adoption of this update on our consolidated financial statements.

Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued ASU No. 2016-13, “*Financial Instruments – Credit Losses (Topic 326)*” The amendment modifies the measurement of expected credit losses of certain financial instruments. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. Available-for-sale accounting recognizes that value may be realized either through collection of contractual cash flows or through sale of the security. Therefore, the amendments limit the amount of the allowance for credit losses to the amount by which fair value is below amortized cost because the classification as available for sale is premised on an investment strategy that recognizes that the investment could be sold at fair value, if cash collection would result in the realization of an amount less than fair value. The allowance for credit losses for purchased available-for-sale securities with a more-than-insignificant amount of credit deterioration since origination is determined in a similar manner to other available-for-sale debt securities; however, the initial allowance for credit losses is added to the purchase price rather than reported as a credit loss expense. Only subsequent changes in the allowance for credit losses are recorded in credit loss expense. Interest income should be recognized based on the effective interest rate, excluding the discount embedded in the purchase price that is attributable to the acquirer’s assessment of credit losses at acquisition. The amendments are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The standard will be effective for us in the fiscal year beginning after August 01, 2020. We are currently evaluating the impact of the adoption of this update on our consolidated financial statements.

Leases

In February 2016, the FASB issued ASU No. 2016-02, “*Leases (Topic 842)*”. The standard requires lessees to recognize assets and liabilities for most leases on the balance sheet. For income statement purposes, the standard requires leases to be classified as either operating or finance. The standard is effective for annual and interim periods beginning after December 15, 2018. Early adoption is permitted. The standard will be effective for us in the first quarter of our fiscal year ending July 31, 2020. Adoption requires application of the new guidance for all periods presented. We are currently evaluating the impact of the adoption of this standard on our consolidated financial statements.

Revenue from contracts with customers

In May 2014, the FASB issued ASU No. 2014-09, “*Revenue from Contracts with Customers (Topic 606)*”. This update affects any entity that either enters into contracts with customers to transfer goods or services or enters into contracts for the transfer of nonfinancial assets. This update will supersede existing revenue recognition requirements and most industry-specific guidance. This update also supersedes some cost guidance, including revenue recognition guidance for construction-type and production-type contracts. The update’s core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In doing so, companies will need to use more judgment and make more estimates than under today’s guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. This update should be applied either on a retrospective or modified retrospective basis. This update was originally effective for us in the first quarter of our fiscal year ending July 31, 2018. Early adoption was not permitted. In August 2015, the FASB approved a one year delay of the effective date of the new revenue standard for public entities. Therefore, this update would be effective for us in the first quarter of our fiscal year ending July 31, 2019. The standard permits entities to early adopt, but only as of the original effective date (i.e. one year earlier). We are expected to adopt the new standard in the first quarter of our fiscal year 2019 effective August 1, 2018, and anticipate using the modified retrospective method, which would result in a cumulative effect adjustment as of August 1, 2018. The comparative information would not be restated and continues to be reported under the accounting standards in effect for those periods. We established a project plan and an implementation team. Scoping and preliminary testing has been completed, with detail contract review underway for each revenue stream within each of the Company’s operating segments. A revenue stream likely to be impacted will be the timing of revenue recognition for certain project-based orders within our engineering revenue stream for which the Company currently applies the percentage-of-completion model. Under the new guidance, there are specific criteria to determine if a performance obligation should be recognized over time or at a point in time. The Company expects that in some cases the revenue recognition timing under the new guidance will change from the current practice based on applying the specific criteria under the new guidance. We are unable to quantify the impact the adoption of ASU No. 2014-09 will have on the consolidated financial statements. The implementation team is continuing to assess potential impacts on the amount and timing of the revenue recognized in the Company’s consolidated financial statements and to apprise both management and the Audit Committee of project status on a recurring basis.

3. Accounts receivable, net

Our accounts receivable arise primarily from products sold and services provided in North America, Europe and Asia. The balance in accounts receivable represents the amount due from our domestic and foreign original equipment manufacturers, or OEM, customers, distributors and end users. We perform ongoing credit evaluations of our customers’ financial condition and continuously monitor collections and payments from our customers and maintain a provision for estimated credit losses based upon specific customer collection issues that have been identified. We accrue reserves against trade receivables for estimated losses that may result from a customer’s inability to pay. Amounts determined to be uncollectible are charged or written off against the reserve. To date, our historical bad debts charged against the reserve have been minimal.

Our top ten customers combined accounted for approximately 55% and 63% of our total net revenue for each of the three months ended January 31, 2018 and 2017, respectively and 54% and 63% of our total net revenue for the six months ended January 31, 2018 and 2017, respectively. Set forth in the table below are customers that individually accounted for 10% or more of our net revenue.

	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Koninklijke Philips Electronics N.V., or Philips	13%	14%	13%	13%
Siemens AG	11%	11%	11%	12%
L-3 Communications Corporation, or L-3	*	10%	*	10%
Toshiba Corporation or Toshiba	*	11%	*	10%

Note (*): Total net revenue was less than 10% in this period.

The following table summarizes our customers with net accounts receivable balances greater than or equal to 10% of our total net accounts receivable balance:

	As of January 31, 2018	As of July 31, 2017
Philips	16%	14%
Smiths Detection	10%	*
GE	*	11%

Note (*): Total net accounts receivable balance was less than 10% in this period.

4. Inventory

The components of inventory, net of allowance for obsolete, unmarketable or slow-moving inventories, are summarized as follows:

(in millions)	As of January 31, 2018	As of July 31, 2017
Raw materials	\$ 60.9	\$ 62.8
Work in process	42.7	41.8
Finished goods	23.8	26.0
Total inventory	\$ 127.4	\$ 130.6

5. Intangible assets and goodwill

Intangible assets

Intangible assets include the value assigned to intellectual property and other technology, patents, customer contracts and relationships, and trade names. The estimated useful lives for all of these intangible assets, excluding a trade name determined to have an indefinite life, range between 1 to 14 years. Indefinite-lived intangible assets consist of trade names acquired in business combinations. The carrying values of our indefinite-lived intangible assets were \$7.6 million at both January 31, 2018 and July 31, 2017.

Finite-lived intangible assets are summarized as follows:

(in millions)	Weighted Average Amortization Period	As of January 31, 2018			As of July 31, 2017		
		Cost	Accumulated Amortization/ Write-Offs	Net	Cost	Accumulated Amortization	Net
Developed technologies	10 years	\$ 17.7	\$ 15.2	\$ 2.5	\$ 17.7	\$ 14.4	\$ 3.3
Customer relationships	13 years	43.7	30.5	13.2	43.7	28.7	15.0
Trade names	3 years	0.9	0.9	-	0.9	0.9	-
Total finite-lived intangible assets		\$ 62.3	\$ 46.6	\$ 15.7	\$ 62.3	\$ 44.0	\$ 18.3

Amortization expense related to acquired intangible assets was \$1.3 million and \$2.6 million for the three and six months ended January 31, 2018, respectively. Amortization expense related to acquired intangible assets was \$2.0 million and \$4.0 million for the three and six months ended January 31, 2017, respectively.

Goodwill

We had goodwill balances of \$2.3 million at January 31, 2018 and July 31, 2017. We review periodically or more frequently if indicators are present or changes in circumstances suggest that it is more likely than not that impairment may exist and we perform a formal goodwill impairment test in the second quarter of each fiscal year.

The goodwill balance by reportable segments and reporting units at January 31, 2018 and July 31, 2017 are as follows:

(in millions)	Medical Imaging	Ultrasound		Security and Detection	Total Goodwill
	(Medical Imaging Reporting Unit)	(Ultrasound Reporting Unit)	(Oncura Reporting Unit)	(Security and Detection Reporting Unit)	
Balance as of July 31, 2017	\$ 1.8	\$ -	\$ -	\$ 0.5	\$ 2.3
Balance as of January 31, 2018	\$ 1.8	\$ -	\$ -	\$ 0.5	\$ 2.3

The following is a rollforward of accumulated goodwill impairment losses by reportable segment and reporting unit:

(in millions)	Medical Imaging	Ultrasound		Security and Detection	Total
	(Medical Imaging Reporting Unit)	(Ultrasound Reporting Unit)	(Oncura Reporting Unit)	(Security and Detection Reporting Unit)	
Accumulated impairment losses as of July 31, 2017	\$ -	\$ (55.2)	\$ (16.4)	\$ -	\$ (71.6)
Accumulated impairment losses as of January 31, 2018	\$ -	\$ (55.2)	\$ (16.4)	\$ -	\$ (71.6)

We have two reporting units with goodwill—Medical Imaging and Security and Detection and three reportable segments—Medical Imaging, Ultrasound, and Security and Detection. We performed the annual impairment test for our goodwill and other intangible assets with indefinite lives as of December 31, 2017. We first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value and as a basis for determining whether it is necessary to perform the quantitative impairment test. Alternatively, we may elect to bypass the qualitative assessment and proceed to the two-step quantitative impairment test. If we choose to perform a qualitative assessment and determine it is more likely than not that the carrying value of the net assets is more than the fair value of the related operations, the two-step impairment process is then performed; otherwise, no further testing is required. We performed a qualitative assessment on our Medical Imaging and Security and Detection reporting units, and concluded that there was no impairment.

We compared the fair value of a tradename that has an indefinite life using the relief from royalty approach to its carrying value as of December 31, 2017. The relief from royalty approach utilized an after-tax royalty rate and a discount rate. The after-tax royalty rate was determined based on royalty research and margin analysis, while the discount rate was determined after consideration of market rates of return on debt and equity capital, the weighted average return on invested capital, and the risk associated with achieving forecasted sales for the tradename. We determined that the fair value of the tradename was in excess of its carrying value.

The current economic environment and the uncertainties regarding its impact on our business and our estimates for forecasted revenue and spending levels made for purposes of our goodwill and trade name impairment testing may not be accurate predictions of the future. If our assumptions regarding forecasted revenue or margin growth rates of each reporting unit and trade name are not achieved, we may be required to record an impairment charge for the goodwill and trade name in future periods, whether in connection with our next annual impairment testing in the second quarter of the fiscal year ending July 31, 2019, or prior to that if any such change constitutes a triggering event outside of the quarter from when the annual goodwill and trade name impairment test is performed. Changes in our forecasts, or decreases in the value of our common stock could cause book values of certain operations to exceed their fair values which may result in goodwill impairment charges in future periods. It is not possible at this time to determine if any such future impairment charge would result or, if it does, whether such charge would be material.

6. Fair value measurements

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or the most advantageous market for the asset transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. We use a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:

- Level 1 – Quoted prices in active markets for identical assets or liabilities.
- Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following tables provide the assets and liabilities carried at fair value and measured on a recurring basis at January 31, 2018 and July 31, 2017:

Fair Value Measurement as of January 31, 2018							
(in millions)	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities	
Cash	\$ 53.5	\$ -	\$ -	\$ 53.5	\$ 53.5	\$ -	
Level 1:							
Money market funds	34.2	-	-	34.2	34.2	-	
Subtotal	\$ 87.7	\$ -	\$ -	\$ 87.7	\$ 87.7	\$ -	
Level 2:							
U.S. agency securities	\$ 4.0	\$ -	\$ -	\$ 4.0	\$ -	\$ 4.0	
Non-U.S. government securities	11.5	-	-	11.5	-	11.5	
Commercial paper	23.6	-	-	23.6	13.2	10.4	
Corporate securities	47.3	-	-	47.3	-	47.3	
Asset-backed securities	28.3	-	(0.1)	28.2	1.0	27.2	
Subtotal	\$ 114.7	\$ -	\$ (0.1)	\$ 114.6	\$ 14.2	\$ 100.4	
Total	\$ 202.4	\$ -	\$ (0.1)	\$ 202.3	\$ 101.9	\$ 100.4	

Fair Value Measurement as of July 31, 2017							
(in millions)	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Marketable Securities	
Cash	\$ 46.7	\$ -	\$ -	\$ 46.7	\$ 46.7	\$ -	
Level 1:							
Money market funds	38.4	-	-	38.4	38.4	-	
Subtotal	\$ 85.1	\$ -	\$ -	\$ 85.1	\$ 85.1	\$ -	
Level 2:							
U.S. Treasury securities	\$ 10.0	\$ -	\$ -	\$ 10.0	\$ 10.0	\$ -	
U.S. agency securities	7.0	-	-	7.0	7.0	-	
Non-U.S. government securities	3.9	-	-	3.9	-	3.9	
Commercial paper	30.1	-	-	30.1	27.2	2.9	
Corporate securities	28.0	-	(0.01)	28.0	-	28.0	
Asset-backed securities	10.2	-	-	10.2	-	10.2	
Subtotal	\$ 89.2	\$ -	\$ (0.01)	\$ 89.2	\$ 44.2	\$ 45.0	
Total	\$ 174.3	\$ -	\$ (0.01)	\$ 174.3	\$ 129.3	\$ 45.0	

Plan assets for deferred compensation	As of January 31, 2018	As of July 31, 2017
(in millions)		
<u>Level 1:</u>		
Plan assets for deferred compensation	5.1	4.7
Total	\$ 5.1	\$ 4.7

Assets held in the deferred compensation plan will be used to pay benefits under our non-qualified deferred compensation plan. The investments primarily consist of mutual funds that are publicly traded on stock exchanges. Accordingly, the fair value of these assets is categorized as Level 1 within the fair value hierarchy.

Foreign currency forward contracts	As of January 31, 2018	As of July 31, 2017
(in millions)		
<u>Level 2:</u>		
Foreign currency forward contracts asset	0.5	0.6
Total	\$ 0.5	\$ 0.6

The fair value of the liabilities arising from our foreign currency forward contracts is determined by valuation models based on market observable inputs, including forward and spot prices for currencies. Accordingly, the fair value of these liabilities is categorized as Level 2 within the fair value hierarchy.

7. Derivative instruments

Certain of our foreign operations have revenue and expenses transacted in currencies other than the U.S. dollar. In order to mitigate foreign currency exchange risk, we use forward contracts to lock in exchange rates associated with a portion of our forecasted international expenses.

As of January 31, 2018, we have forward contracts outstanding with notional amounts totaling \$11.7 million. These contracts are designated as cash flow hedges, and the unrealized gain of \$0.4 million, net of tax, on these contracts are reported in Accumulated other comprehensive income as of January 31, 2018. Assets and liability derivatives designated as hedging instruments are presented in other current assets and other current liabilities, respectively, on our Consolidated Balance Sheets. At January 31, 2018 we had a derivative asset of \$0.5 million included in other current assets on our Consolidated Balance Sheet.

As of July 31, 2017, we had forward contracts outstanding with notional amounts totaling \$10.9 million. These contracts are designated as cash flow hedges, and the unrealized gain of \$0.5 million, net of tax, on these contracts are reported in Accumulated other comprehensive income as of July 31, 2017. At July 31, 2017 we had a derivative asset of \$0.6 million included in other current assets on our Consolidated Balance Sheet.

Realized gains and (losses) on the cash flow hedges are recognized in income in the period when the payment of expenses is recognized. During the three and six months ended January 31, 2018, we recorded approximately \$0.1 million and \$0.2 million of realized gain, respectively, included in our Consolidated Statements of Operations. During the three and six months ended January 31, 2017 we recorded (\$0.2) million and (\$0.3) million of realized loss, respectively.

8. Common stock repurchases

On May 26, 2016, our board of directors authorized the repurchase of up to \$15.0 million of our common stock. Purchases under this repurchase program will be made from time to time depending on market conditions and other factors. The repurchase program has no expiration date. The Board's authorization does not obligate the Company to acquire any particular amount of common stock, and the programs may be suspended or discontinued at any time at the Company's discretion.

During the three months ended January 31, 2018, no shares of common stock were repurchased and retired. During the six months ended January 31, 2018, we repurchased and retired 13,489 shares of common stock under this repurchase program for \$1.0 million, at an average purchase price of \$70.52 per share. The cumulative shares that were repurchased and retired under the program were 61,197 shares of common stock for \$4.4 million at an average purchase price of \$71.07 per share.

9. Accumulated other comprehensive income

Components of comprehensive (loss) income include net income and certain transactions that have generally been reported in the Consolidated Statements of Changes in Stockholders' Equity. Other comprehensive (loss) income consists of reported foreign currency translation gains and losses (net of taxes), actuarial gains and losses on pension plan assets (net of taxes), changes in the unrealized value on foreign currency forward contracts (net of taxes), and changes in the unrealized value on available-for-sale securities (net of taxes). Deferred taxes are not provided on cumulative translation adjustments where we expect earnings of a foreign subsidiary to be indefinitely reinvested. The income tax effect of currency translation adjustments related to foreign subsidiaries that are not considered indefinitely reinvested is recorded as a component of deferred taxes with an offset to other comprehensive (loss) income.

The following table summarizes components of Accumulated other comprehensive (loss) income for the six months ended January 31, 2018:

(in millions)	Unrealized Losses on Available For Sale Securities	Unrealized Gain on Foreign Currency Forward Contracts	Unrealized Losses on Pension Plan	Currency Translation Adjustment	Accumulated Other Comprehensive Income
Balance as of July 31, 2017	\$ (0.01)	\$ 0.5	\$ (3.5)	\$ (2.1)	\$ (5.1)
Pre-tax change before reclassification to earnings	(0.1)	-	0.1	5.0	5.0
Amount reclassified to earnings	-	(0.2)	-	-	(0.2)
Income tax benefit (provision)	-	0.1	(0.1)	(0.2)	(0.2)
Balance as of January 31, 2018	\$ (0.1)	\$ 0.4	\$ (3.5)	\$ 2.7	\$ (0.5)

The ineffective portion of the unrealized losses on foreign currency forward contracts and unrealized gains or losses on currency translation adjustment are included in other expense, net on our Consolidated Statements of Operations.

10. Share-based compensation

The following table presents share-based compensation expense included in our Consolidated Statements of Operations:

(in millions)	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Cost of product sales	\$ 0.1	\$ 0.1	\$ 0.2	\$ 0.2
Cost of engineering sales	0.1	0.1	0.1	0.1
Research and product development	0.4	0.5	0.9	0.9
Selling and marketing	0.2	0.5	0.4	0.9
General and administrative	1.1	1.4	2.3	2.2
Total share-based compensation expense before tax	1.9	2.6	3.9	4.2
Income tax effect	(0.4)	(0.8)	(0.5)	(1.3)
Share-based compensation expense included in net income	\$ 1.5	\$ 1.8	\$ 3.4	\$ 2.9

Stock options

We estimate the fair value of stock options using the Black-Scholes valuation model. Key input assumptions used to estimate the fair value of stock options include the exercise price of the award, the expected option term, the expected volatility of our stock over the option's expected term, the risk-free interest rate over the option's expected term, and our expected annual dividend yield. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by persons who receive equity awards.

No stock options were granted during the three and six months ended January 31, 2018 and January 31, 2017, respectively.

The total intrinsic value of options exercised during the three and six months ended January 31, 2018 was \$0.1 million and \$0.1 million, respectively.

Restricted stock and restricted stock units

We estimate the fair value of time based restricted stock units, or RSU's, that vest based on service conditions using the quoted closing price of our common stock on the date of grant. Share-based compensation expense is amortized over each award's vesting period on a straight-line basis for all awards with service and performance conditions that vest at the end of the performance cycle, while the accelerated method applies to other awards with both service and performance conditions.

For our non-GAAP earnings per share, or EPS, awards, the compensation cost is amortized over the performance period on a straight-line basis, net of forfeitures as they occur, because such awards vest only at the end of the performance period. The compensation cost is based on the number of shares that are deemed probable of vesting at the end of the three-year performance cycle. This probability assessment is done each quarter and changes in estimates can result in significant expense fluctuations due to the cumulative catch-up adjustment. We estimate the fair value of the non-GAAP EPS awards using the quoted closing price of our common stock on the date of grant.

For our total shareholder return, or TSR, awards, the compensation cost is amortized over the performance period on a straight-line basis net of forfeitures as they occur, because the awards vest only at the end of the measurement period and the probability of actual shares expected to be earned is considered in the grant date valuation. As a result, the expense is not adjusted to reflect the actual shares earned. We estimate the fair value of the TSR awards using the Monte-Carlo simulation model.

We granted 0 and 22,080 TSR awards and 0 and 21,896 non-GAAP EPS awards during the three and six months ended January 31, 2018, respectively. We granted 0 and 28,148 TSR awards and 0 and 62,032 non-GAAP EPS awards during the three and six months ended January 31, 2017, respectively. The fair value of our TSR performance-based awards at the date of grant was estimated using the Monte-Carlo simulation model with the following assumptions:

	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Stock price (1)	\$ -	\$ -	\$ 77.15	\$ 90.23
Expected volatility (2)	0.00%	0.00%	26.88%	27.0%
Risk-free interest rate (3)	0.00%	0.00%	1.48%	0.85%
Expected annual dividend yield (4)	0.00%	0.00%	0.00%	0.00%
Weighted average grant date fair value of time-based restricted stock awards	\$ 82.71	\$ 92.30	\$ 77.19	\$ 89.48
Weighted average grant date fair value of performance based restricted stock awards	\$ 0.00	\$ -	\$ 79.87	\$ 87.05

- (1) The stock price is the closing price of our common stock on the date of grant.
- (2) The expected volatility for each grant is determined based on the historical volatility for the peer group companies and our common stock over a period equal to the remaining term of the performance period from the date of grant for all awards.
- (3) The risk-free interest rate is determined based on the yield of zero-coupon U.S. Treasury securities for a period that is commensurate with the performance period.
- (4) Dividends are considered reinvested when calculating TSR. The dividend yield is therefore considered to be 0%.

The total fair value of RSUs that vested during the three and six months ended January 31, 2018 was \$0.1 million and \$3.1 million, respectively.

The total fair value of RSUs that vested during the three and six months ended January 31, 2017 was \$0.6 million and \$3.2 million, respectively. As of January 31, 2018, the unrecognized compensation cost, related to unvested stock options and restricted stock was \$12.6 million. This cost will be recognized over an estimated weighted average amortization period of 1.6 years and assumes target performance for the non-GAAP EPS awards.

11. Restructuring charges

Fiscal Year 2017 Restructuring Plan

On March 6, 2017, the Company announced the 2017 Restructuring Plan, which primarily focused on the restructuring of the Ultrasound business, designed to improve profitability and provide consistent long term growth. As part of the 2017 Restructuring Plan, the Company consolidated the activities conducted in Vancouver, British Columbia with the existing operations in Copenhagen, Denmark and Peabody, Massachusetts and the Company substantially exited the Vancouver facility at the end fiscal 2017. The Company re-sized its U.S. sales, global marketing as well as general and administration organizations in-line with its objectives within primarily its Ultrasound business, but also its Medical Imaging and Security and Detection businesses. We incurred pre-tax charges of \$0.2 million and \$0.7 million during the three and six months ended January 31, 2018. These costs consisted of facility exit costs and

adjustments to the severance and personnel related costs, which are recognized in our Consolidated Statement of Operations under restructuring. We expect that the 2017 Restructuring Plan will be substantially completed during fiscal year 2018.

Current Period Activity

The following table summarizes accrued restructuring activities for the three months ended January 31, 2018:

(in millions)	Employee Severance and Benefits (A)	Facility Exit Costs (A)	Total
Balance at October 31, 2017	\$ 1.1	\$ 0.3	\$ 1.4
Restructuring charge	0.2	-	0.2
Cash payments	(0.8)	-	(0.8)
Non-cash adjustments	0.3	-	0.3
Balance at January 31, 2018	\$ 0.8	\$ 0.3	\$ 1.1

(A) Restructuring charges in fiscal year 2018 relate to the Fiscal Year 2017 Restructuring Plan.

The following table summarizes accrued restructuring activities for the six months ended January 31, 2018:

(in millions)	Employee Severance and Benefits (A)	Facility Exit Costs (A)	Total
Balance at July 31, 2017	\$ 2.7	\$ 0.1	\$ 2.8
Restructuring charge	0.6	0.3	0.9
Adjustments	(0.2)	-	(0.2)
Cash payments	(2.6)	-	(2.6)
Non-cash adjustments	0.3	(0.1)	0.2
Balance at January 31, 2018	\$ 0.8	\$ 0.3	\$ 1.1

(A) Restructuring charges in fiscal year 2018 relate to the Fiscal Year 2017 Restructuring Plan.

Restructuring and related charges, including actions associated with acquisitions, by segment are as follows:

(in millions)	For Three Months Ended January 31,		For Six Months Ended January 31,	
	2018	2017	2018	2017
Medical Imaging	\$ -	\$ 0.1	\$ 0.1	\$ 0.1
Ultrasound	0.2	0.2	0.6	0.2
Security and Detection	-	-	-	-
Total restructuring and related charges	\$ 0.2	\$ 0.3	\$ 0.7	\$ 0.3

Accrued restructuring charges are classified on the Consolidated Balance Sheets in the Current Liabilities section.

12. Net income per common share

Basic net income per share is computed using the weighted average number of common shares outstanding during the period. Diluted net income per share is computed using the sum of the weighted average number of common shares outstanding during the period and, if dilutive, the weighted average number of potential shares of common stock, including unvested restricted stock and the assumed exercise of stock options using the treasury stock method.

Basic and diluted net income per share are calculated as follows:

(in millions, except per share data and share data in thousands)	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Net income	\$ 6.5	\$ 7.5	\$ 12.2	\$ 10.0
Weighted average number of common shares outstanding-basic	12,490	12,466	12,482	12,442
Effect of dilutive securities:				
Stock options and restricted stock units	111	214	124	270
Weighted average number of common shares outstanding-diluted	12,601	12,680	12,606	12,712
Basic net income per share	\$ 0.52	\$ 0.60	\$ 0.98	\$ 0.81
Diluted net income per share	\$ 0.52	\$ 0.59	\$ 0.97	\$ 0.79
Anti-dilutive shares related to outstanding stock options and unvested restricted stock (A)	-	372	-	372

(A) These shares related to outstanding stock options and unvested restricted stock were not included in our calculations of diluted earnings per share, as the effect of including them would be anti-dilutive.

13. Income taxes

The following table presents the provision for income taxes and our effective tax rate for the three and six months ended January 31, 2018 and 2017:

(in millions except percentages)	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Provision for income taxes	\$ 10.1	\$ 2.0	\$ 12.6	\$ 2.9
Effective tax rate	61%	21%	51%	23%

The effective income tax rate on operations is based upon the estimated income for the year, the composition of the income in different countries, and adjustments, if any, in the applicable quarterly periods for the potential tax consequences, benefits, resolutions of tax audits or other tax contingencies.

The Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%, as of January 1, 2018, requires companies to pay a one-time transition tax on earnings of foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings. We are required to calculate our statutory rate based on the number of days in our fiscal year in which the 35% and 21% rates applied. We have calculated that our statutory rate for the year is 27%.

As of January 31, 2018, we have not completed our accounting for the tax effects of enactment of the Act; however, in certain cases, as described below, we have made a reasonable estimate of the effects of the Act, including the effects on our existing deferred tax balances and the one-time transition tax as permitted by the SEC Staff Accounting Bulletin No. 118, *Income Tax Accounting Implications of the Tax Cuts and Jobs Act* (SAB 118). For the items for which we were able to determine a reasonable estimate, we recognized a provisional amount of \$6.5 million for the one-time transition tax, which is included as a component of income tax expense from continuing operations.

Our effective tax rate for the three and six months ended January 31, 2018 is higher than the statutory rate of 27% primarily due to tax effects of the Act. Our statutory U.S. federal tax rate in fiscal 2018 is 27% since the 21% tax is effective January 1, 2018, resulting in a blended tax rate for our fiscal year. With the exception of the one-time transition tax, our effective tax rate was lower than the statutory rate of 27% primarily due to income generated outside the United States in countries with lower tax rates, and due to tax credits in the United States and Canada, offset by certain discrete tax expense. The tax provision for the three and six months ended January 31, 2018 includes discrete tax expense totaling \$7.0 million, of which \$6.5 million is considered a provisional estimate of one-time transition tax on our accumulated earnings of foreign subsidiaries under SAB 118 and \$0.5 tax expense for a net shortfall on exercise of stock compensation. The Company's provisional estimate of \$6.5 million includes approximately \$6.5 million of one-time transition tax. The provisional amount recorded related to the remeasurement of our deferred tax balance was tax expense of \$3.0 million, which was fully offset by a corresponding remeasurement of the valuation allowance we have recorded against our net U.S. deferred tax assets.

Provisional amounts

Deferred tax assets and liabilities: We remeasured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future. However, we are still analyzing certain aspects of the Act and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of our deferred tax balance was tax expense of \$3.0 million, which was fully offset by a corresponding remeasurement of the valuation allowance we have recorded against our net U.S. deferred tax assets.

Foreign tax effects: The one-time transition tax is based on our total post-1986 earnings and profits (E&P) in all foreign subsidiaries which we have previously deferred from US income taxes. We recorded a provisional amount for our one-time transition tax liability for all of our foreign subsidiaries, resulting in an increase in income tax expense of \$6.5 million, which will be paid over the next eight years. We are refining our calculation of the total post-1986 foreign E&P for these foreign subsidiaries. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when we finalize the calculation of post-1986 foreign E&P previously deferred from US federal taxation and finalize the amounts held in cash or other specified assets. No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, specifically earnings of the foreign subsidiaries earned after December 31, 2017 and before July 31, 2018, and any additional outside basis difference inherent in these entities as these amounts continue to be indefinitely reinvested in foreign operations.

Our effective tax rate for the three and six months ended January 31, 2017 was lower than the statutory rate of 35% primarily due to income generated outside the United States in countries with lower tax rates, tax credits in the United States and Canada, and the manufacturing deduction in the United States. The tax provision for the three and six months ended January 31, 2017 includes discrete tax benefits totaling less than \$0.4 million.

We are subject to US Federal income tax as well as the income tax of multiple state and foreign jurisdictions. As of January 31, 2018, we have concluded all US Federal income tax matters through the year ended July 31, 2013. We are currently under income tax audits in the U.S., Canada, and Denmark.

We accrue interest and, if applicable, penalties for any uncertain tax positions. This interest and penalty expense is treated as a component of income tax expense. At January 31, 2018 and July 31, 2017, we had approximately \$0.2 million and \$0.1 million accrued for interest and penalties on unrecognized tax benefits, respectively.

At January 31, 2018, we had \$4.5 million of unrecognized tax benefits for uncertain tax positions and \$0.2 million of related accrued interest and penalties. We are unable to reasonably estimate the amount and period in which these liabilities might be paid.

We do not provide for US Federal income taxes on undistributed earnings of consolidated foreign subsidiaries, as such earnings are intended to be indefinitely reinvested in those operations. Determination of the potential deferred income tax liability on these undistributed earnings is not practicable because such liability, if any, is dependent on circumstances that exist if and when remittance occurs. The circumstances that would affect the calculations would be the source location and amount of the distribution, the underlying tax rate already paid on the earnings, foreign withholding taxes and the opportunity to use foreign tax credits.

14. Segment information

Our business is strategically aligned into three segments: Medical Imaging, Ultrasound, and Security and Detection. Our business segments are described as follows:

- *Medical Imaging* primarily includes systems and subsystems for CT and MRI medical imaging equipment as well as state-of-the-art, selenium-based detectors for screening of breast cancer and other diagnostic applications in mammography.
- *Ultrasound* includes ultrasound systems and transducers primarily in the urology, surgery, and Anesthesia markets.
- *Security and Detection* includes advanced threat detecting CT systems utilizing our expertise in advanced imaging technology, primarily used in the checked baggage screening at airports worldwide.

The tables below present information about our reportable segments:

(in millions)	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Product revenue:				
Medical Imaging	\$ 62.0	\$ 71.2	\$ 114.1	\$ 137.7
Ultrasound	43.4	40.3	80.7	75.9
Security and Detection	21.3	18.8	37.6	37.0
Total product revenue	\$ 126.7	\$ 130.3	\$ 232.4	\$ 250.6
Engineering revenue:				
Medical Imaging	\$ 1.4	\$ 1.2	\$ 2.4	\$ 1.9
Ultrasound	0.1	-	0.1	0.2
Security and Detection	1.0	-	1.1	-
Total engineering revenue	\$ 2.5	\$ 1.2	\$ 3.6	\$ 2.1
Net revenue:				
Medical Imaging	\$ 63.4	\$ 72.4	\$ 116.5	\$ 139.6
Ultrasound	43.5	40.3	80.8	76.1
Security and Detection	22.3	18.8	38.7	37.0
Total net revenue	\$ 129.2	\$ 131.5	\$ 236.0	\$ 252.7
Income (loss) from operations:				
Medical Imaging (A)	\$ 7.4	\$ 12.2	\$ 12.2	\$ 18.9
Ultrasound (B)	4.3	(4.5)	5.6	(10.3)
Security and Detection	4.0	1.8	5.8	4.8
Total income from operations	15.7	9.5	23.6	13.4
Total other income (loss), net	1.0	0.0	1.2	(0.4)
Income before income taxes	\$ 16.7	\$ 9.5	\$ 24.8	\$ 13.0

(in millions)	As of January 31, 2018	As of July 31, 2017
Identifiable total assets by segment:		
Medical Imaging	\$ 161.8	\$ 169.1
Ultrasound	134.9	133.6
Security and Detection	41.7	36.0
Total reportable segment assets	338.4	338.7
Corporate assets (C)	221.4	197.0
Total identifiable assets	\$ 559.8	\$ 535.7

- (A) Includes restructuring charges of \$0.0 million and \$0.1 million for the three months ended January 31, 2018 and January 31, 2017, respectively, and \$0.1 million for each of the six months ended January 31, 2018 and January 31, 2017, respectively.
- (B) Includes restructuring charges of \$0.2 million for each of the three months ended January 31, 2018 and January 31, 2017, respectively, and \$0.6 million and \$0.2 million for the six months ended January 31, 2018 and January 31, 2017, respectively.
- (C) Includes cash, cash equivalents, and short-term marketable securities of \$149.7 million and \$135.2 million as of January 31, 2018 and July 31, 2017, respectively.

15. Guarantees, commitments and contingencies

Guarantees and Indemnification Obligations

Our standard OEM and supply agreements entered into in the ordinary course of business typically contain an indemnification provision pursuant to which we indemnify, hold harmless, and agree to reimburse the indemnified party for losses suffered or incurred by the indemnified party in connection with patent, copyright or other intellectual property infringement claims by any third party with respect to our products. Such provisions generally survive termination or expiration of the agreements. The potential amount of future payments we could be required to make under these indemnification provisions is, in some instances, unlimited. Our costs to defend lawsuits or settle claims related to these indemnification agreements have been insignificant to date. As a result, we believe that our estimated exposure on these agreements is currently minimal. Accordingly, we have no liabilities recorded for these agreements as of January 31, 2018.

Generally, we warrant that our products will perform in all material respects in accordance with our standard published specifications in effect at the time of delivery of the products to the customer for a period ranging from 12 to 60 months from the date of delivery. We provide for the estimated cost of product and service warranties based on specific warranty claims, claim history, and engineering estimates, where applicable.

The following table presents our product warranty liability as of January 31, 2018:

(in millions)		As of January 31, 2018
Beginning balance	\$	5.3
Provision		3.1
Warranty activity during the period		(3.2)
Ending balance	\$	5.2

At January 31, 2018 and July 31, 2017, we had deferred revenue for extended product warranty contracts of \$0.5 million and \$0.4 million, respectively.

Revolving Credit Agreements

On November 23, 2015, we entered into a five-year revolving credit agreement, or Credit Agreement, with the financial institutions identified therein as lenders, which included JPMorgan Chase Bank, N.A., TD Bank, N.A., Wells Fargo Bank, N.A., HSBC Bank, N.A., and People's United Bank, N.A. Effective August 25, 2017, HSBC exited the Credit Agreement, and was replaced with Citibank. The Credit Agreement provides \$100.0 million in available credit and expires on November 23, 2020, when all outstanding borrowings must be paid in full. The credit facility does not require amortization of principal and may be reduced before maturity in whole or in part at our option without penalty. Upon entry into the Credit Agreement, we terminated without penalty a \$100.0 million five-year, revolving credit agreement entered into on October 11, 2011 and previously paid in full in accordance with its terms. Borrowings under the Credit Agreement may be used for general corporate purposes, including permitted acquisitions. The amount of available credit can be increased under specified circumstances up to \$200.0 million in aggregate. We are the sole borrower under the Credit Agreement. The obligations under the credit facility are guaranteed as required to be by our material domestic subsidiaries as designated by us from time to time or as required under the Credit Agreement. There are no pledges of the capital stock or assets of our international subsidiaries.

Interest rates on borrowings outstanding under the credit facility range from 1.25% to 1.75% above the LIBOR rate, or, at our option range from 0.00% to 1.00% above a defined base rate, the amount in each case varying based upon our leverage ratio. A quarterly commitment fee ranging from 0.20% to 0.35% per annum is applicable on the undrawn portion of the credit facility, based upon our leverage ratio.

The Credit Agreement limits our and our subsidiaries' ability to, among other things: incur additional indebtedness; incur liens or guarantee obligations; pay dividends or make other distributions; make investments; dispose of assets; and engage in transactions with affiliates except on an arms-length basis. In addition, the Credit Agreement requires us to maintain the following financial ratios:

- A leverage ratio, defined as consolidated funded indebtedness to consolidated trailing four quarters earnings before interest, taxes, depreciation and amortization, or EBITDA, with the adjustments as stipulated in the Credit Agreement, of no greater than 2.75:1.00 (with a temporary step-up in the event of certain acquisitions); and
- An interest coverage ratio, defined as the ratio of consolidated trailing four quarters adjusted EBITDA to consolidated interest charges of no less than 3.00:1.00 at any time.

As of January 31, 2018, our leverage ratio was 0.009:1.00 and our interest coverage ratio was not applicable as we had no attributable interest expense. As of January 31, 2018, we were in full compliance with all financial and operating covenants contained in the Credit Agreement.

Any failure to comply with the financial or operating covenants of the credit facility would prevent us from being able to borrow and would also constitute a default, permitting the lenders to, among other things, accelerate repayment of outstanding borrowings, including all accrued interest and fees, and to terminate the credit facility. A change in control, as defined in the Credit Agreement, would also constitute an event of default, permitting the lenders to accelerate repayment and terminate the Credit Agreement.

In connection with entering into the Credit Agreement, we incurred approximately \$0.5 million of transaction costs, which are being amortized over the five-year life of the credit facility.

As of January 31, 2018 and July 31, 2017, we had approximately \$1.2 million in other revolving credit facilities with banks available for direct borrowings.

We did not have any borrowing outstanding under any of our credit facilities at January 31, 2018 and July 31, 2017, respectively.

Legal Claims

We are subject to litigation, claims, investigations and audits arising from time to time in the ordinary course of our business. Although legal proceedings are inherently unpredictable, we believe that we have valid defenses with respect to those matters currently pending against us and intend to defend ourselves vigorously. The outcome of these matters, individually and in the aggregate, is not expected to have a material impact on our cash flows, results of operations, or financial position. We record losses when estimable and probable in accordance with U.S. GAAP.

On July 31, 2017, twenty-four former interest-holders of Oncura Partners Diagnostics, LLC (“Plaintiffs”) filed suit in the District Court of Travis County, Texas against Analogic Corporation (“Analogic”) and Oncura Partners Diagnostics, LLC (“Oncura”) (together “Defendants”) alleging claims arising out of Analogic’s acquisition of Oncura from Plaintiffs in 2016. In connection with the litigation, Plaintiffs have asserted claims for breach of contract, anticipatory repudiation, fraud, negligent misrepresentation, breach of implied duty of good faith and fair dealing, unjust enrichment, and declaratory judgment; they seek unspecified damages in excess of \$1.0 million. On August 25, 2017, Defendants timely removed the action to federal court in Texas and the case was subsequently transferred to the United States District Court for the Southern District of New York. We believe that the claims asserted by Plaintiffs are without merit and intend to defend the matter vigorously. We cannot reasonably estimate any loss or range of such loss that may arise from this matter at this time.

16. Subsequent events

We declared a dividend of \$0.10 per share of common stock on March 1, 2018, which will be paid on March 26, 2018 to stockholders of record on March 15, 2018.

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

The following discussion provides an analysis of our financial condition and results of operations and should be read in conjunction with the unaudited consolidated financial statements and notes thereto included elsewhere in this report. The discussion contains statements, which, to the extent that they are not a recitation of historical facts, constitute "forward-looking statements" pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical fact, including, statements about product development, market and industry trends, strategic initiatives, regulatory approvals, sales, profits, expenses, price trends, research and development expenses and trends, and capital expenditures, we make in this document or in any document incorporated by reference are forward-looking. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," "seeks," "estimates," and similar expressions are intended to identify forward looking statements. Such forward-looking statements involve known and unknown risks, uncertainties, and other factors, which may cause our actual results, performance, or achievements to differ materially from the projected results. See *Part I, Item 1A. Risk Factors* of our Annual Report on Form 10-K for fiscal year 2017 as filed with the U.S. Securities and Exchange Commission, or SEC on September 26, 2017 for a discussion of the primary risks and uncertainties known to us.

In addition, any forward-looking statements represent management's views only as of the date this Quarterly Report on Form 10-Q was filed with the SEC and should not be relied upon as representing management's views as of any subsequent date. While management may elect to update forward-looking statements at some point in the future, it specifically disclaims any obligation to do so, even if its views change, except as required by law.

We report our financial condition and results of operations on a fiscal year basis ending July 31. The three months ended January 31, 2018 and 2017 represent the second quarters of fiscal years 2018 and 2017, respectively.

Our Management's Discussion and Analysis is presented in six sections as follows:

- Executive Summary
- Results of Operations
- Liquidity and Capital Resources
- Commitments, Contractual Obligations, and Off-Balance Sheet Arrangements
- Recent Accounting Pronouncements
- Critical Accounting Policies

Executive Summary

Introduction

Analogic Corporation designs, manufactures, and commercializes innovative real-time guidance, diagnostic imaging and threat detection technologies to advance the practice of medicine and save lives. We design, manufacture and sell advanced medical imaging, ultrasound and security systems and subsystems to original equipment manufacturers, or OEMs, and end users primarily for the healthcare and airport security markets.

Our business is strategically aligned into three segments: Medical Imaging, Ultrasound, and Security and Detection. Our business segments are described as follows:

- *Medical Imaging* primarily includes systems and subsystems for Computed Tomography, subsystems for MRI equipment as well as state-of-the-art, selenium-based detectors for screening of breast cancer and other diagnostic applications in mammography.
- *Ultrasound* includes ultrasound systems and transducers primarily used in the urology, surgery, and Anesthesia markets.
- *Security and Detection* includes advanced threat detection CT systems utilizing our expertise in advanced medical imaging technology, primarily used in the checked baggage screening at airports worldwide.

Financial Results

The following table summarizes our financial results:

(in millions, except per share amounts and percentages)	Three Months Ended January 31,		Percentage Change	Six Months Ended January 31,		Percentage Change
	2018	2017		2018	2017	
Total net revenues	\$ 129.2	\$ 131.5	-2%	\$ 236.0	\$ 252.7	-7%
Gross profit	\$ 56.9	\$ 57.7	-1%	\$ 104.6	\$ 109.3	-4%
Gross margin	44.0%	43.9%		44.3%	43.3%	
Income from operations	\$ 15.7	\$ 9.5	65%	\$ 23.6	\$ 13.4	76%
Operating margin	12.2%	7.2%		10.0%	5.3%	
Net income	\$ 6.5	\$ 7.5	-13%	\$ 12.2	\$ 10.0	22%
Diluted net income per share	\$ 0.52	\$ 0.59	-12%	\$ 0.97	\$ 0.79	23%

For a discussion of seasonal aspects of our business please refer to *Part I, Item 1. Business* of our Annual Report on Form 10-K for fiscal year 2017, as filed with the SEC on September 26, 2017.

Results of Operations

Three and six months ended January 31, 2018 compared to the three and six months ended January 31, 2017

Net revenue

Product revenue

Product revenue by segment is summarized as follows:

(in millions except percentages)	Three Months Ended January 31,		Percentage Change	Six Months Ended January 31,		Percentage Change
	2018	2017		2018	2017	
Medical Imaging	\$ 62.0	\$ 71.2	-13%	\$ 114.1	\$ 137.7	-17%
Ultrasound	43.4	40.3	8%	80.7	75.9	6%
Security and Detection	21.3	18.8	13%	37.6	37.0	2%
Total product revenue	\$ 126.7	\$ 130.3	-3%	\$ 232.4	\$ 250.6	-7%

Medical Imaging

During the three months ended January 31, 2018 compared to the same period in 2017, our Medical Imaging revenue decreased by 13%, primarily due to reductions in CT and MRI, partially offset by increases in Motion due to additions of new customers.

During the six months ended January 31, 2018 compared to the same period in 2017, our Medical Imaging revenue decreased by 17%, primarily due to reductions in CT, MRI, and digital Mammography, partially offset by increases in Motion due to additions of new customers.

Ultrasound

During the three and six months ended January 31, 2018 compared to the same periods in 2017, our Ultrasound revenue increased by 8% and 6%, respectively, primarily due to strong growth in sales of Ultrasound systems in North America and in Europe.

Security and Detection

During the three months ended January 31, 2018 compared to the same period in 2017, our Security and Detection revenue increased by 13%, primarily driven by increases in high speed systems and higher revenue in Rapid DNA.

During the six months ended January 31, 2018 compared to the same period in 2017, our Security and Detection revenue increased by 2%, primarily driven by increases in high speed systems and higher revenue in Rapid DNA, partially offset by decreased volume in medium speed airport screening systems.

Engineering revenue

Engineering revenue by segment is summarized as follows:

(in millions except percentages)	Three Months Ended			Percentage Change	Six Months Ended		
	January 31,		2017		January 31,		2017
	2018	2017			2018	2017	
Medical Imaging	\$ 1.4	\$ 1.2	17%	2.4	\$ 1.9	26%	
Ultrasound	0.1	-	100%	0.1	0.2	-50%	
Security and Detection	1.0	-	100%	1.1	-	100%	
Total engineering revenue	\$ 2.5	\$ 1.2	108%	\$ 3.6	\$ 2.1	71%	

The change in engineering revenue for the three and six months ended January 31, 2018 compared to the same periods in 2017 was primarily due to timing of work done on customer-funded engineering projects in the Medical Imaging segment and additions of new engineering projects in the Security and Detection segment.

Customer-funded engineering projects in each of the segments can vary substantially from period to period in terms of resource requirements, type, size, length of project, and profitability.

Gross margin

Product gross margin

Product gross margin is summarized as follows:

(in millions except percentages)	Three Months Ended			Percentage Change	Six Months Ended		
	January 31,		2017		January 31,		2017
	2018	2017			2018	2017	
Product gross profit	\$ 56.3	\$ 57.6	-2%	\$ 104.1	\$ 109.1	-5%	
Product gross margin	44.5%	44.2%		44.8%	43.5%		

Product gross margin increased by 0.3 points and 1.3 points during the three and six months ended January 31, 2018 compared to the same periods in 2017, respectively, primarily due to product/segment mix as well as ongoing cost control efforts.

Engineering gross margin

Engineering gross margin is summarized as follows:

(in millions except percentages)	Three Months Ended			Percentage Change	Six Months Ended		
	January 31,		2017		January 31,		2017
	2018	2017			2018	2017	
Engineering gross profit	\$ 0.5	\$ 0.1	400%	\$ 0.5	\$ 0.2	150%	
Engineering gross margin	21.3%	6.7%		14.3%	11.1%	29%	

The change in the engineering gross margin during the three and six months ended January 31, 2018 compared to the same periods in 2017, was due to the mix of engineering projects.

Operating expenses

Operating expenses are summarized as follows:

(in millions except percentages)	Three Months Ended			Percentage Change	Percentage of Net Revenue	
	January 31,		2017		2018	2017
	2018	2017			2018	2017
Research and product development	\$ 15.6	\$ 16.2	-4%	12%	12%	
Selling and marketing	13.2	17.3	-24%	10%	13%	
General and administrative	12.1	4.0	203%	9%	3%	
Restructuring	0.2	0.3	-33%	0%	0%	
Asset impairment charges	-	10.4	-100%	0%	8%	
Total operating expenses	\$ 41.1	\$ 48.2	-15%	32%	37%	

(in millions except percentages)	Six Months Ended January 31,		Percentage Change	Percentage of Net Revenue	
	2018	2017		2018	2017
Research and product development	\$ 30.7	\$ 32.1	-4.4%	13%	13%
Selling and marketing	25.6	35.5	-27.9%	11%	14%
General and administrative	24.0	17.6	36.4%	10%	7%
Restructuring	0.7	0.3	133.3%	0%	0%
Asset impairment charges	-	10.4	-100%	0%	4%
Total operating expenses	\$ 81.0	\$ 95.9	-15.5%	34%	38%

Operating expenses for the three and six months ended January 31, 2018 decreased by \$7.1 million, or 15%, and \$14.9 million, or 15.5%, compared to the same periods in 2017, respectively.

Research and product development expenses for the three and six months ended January 31, 2018 decreased by \$0.6 million, or 4%, and \$1.4 million, or 4.4%, compared to the same periods in 2017, respectively, due to headcount related savings and lower material spending.

Selling and marketing expenses for the three and six months ended January 31, 2018 decreased by \$4.1 million, or 24%, and \$9.9 million, or 27.9%, compared to the same periods in 2017, respectively, primarily due to headcount reductions, travel and lower other related costs.

General and administrative expenses for the three months ended January 31, 2018 increased by \$8.1 million, or 203% compared to the same period in 2017, primarily due to a gain recorded in 2017 for the decrease in contingent consideration of \$8.2 million related to the Oncura business. General and administrative expenses for the six months ended January 31, 2018 increased by \$6.4 million, or 36.4% compared to the same period in 2017, primarily due to a gain recorded in 2017 for the decrease in contingent consideration of \$8.1 million related to the Oncura business, an increase in expenses of \$1.0 million, primarily due to strategic transaction and legal expenses, partially offset by \$1.4 million in CEO transition related costs in 2017, and \$1.3 million in headcount reductions and lower consulting costs. For more information on adjustments to the contingent consideration liability related to the Oncura business, please refer to *Note 8. Fair value* in our Annual Report on Form 10-K for fiscal year 2017, as filed with the SEC on September 26, 2017.

Restructuring expenses for the three and six months ended January 31, 2018 were \$0.2 million and \$0.7 million, respectively, due to costs incurred associated with the Fiscal Year 2017 Restructuring Plan.

Other income (expense), net

Other income (expense), net is summarized as follows:

(in millions)	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Interest income, net	\$ 0.5	\$ 0.1	\$ 1.0	\$ 0.2
Other, net	0.4	(0.1)	0.2	(0.6)
Total other income (expense), net	\$ 0.9	\$ -	\$ 1.2	\$ (0.4)

The increases in the total other income (expense), net during the three and six months ended January 31, 2018 compared to the same periods in 2017, was due to interest income in connection with our marketable securities and change in foreign currency.

Provision for income taxes

The following table presents the provision for income taxes and our effective tax rate for the three and six months ended January 31, 2018 and 2017:

(in millions except percentages)	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Provision for income taxes	\$ 10.1	\$ 2.0	\$ 12.6	\$ 2.9
Effective tax rate	61%	21%	51%	23%

The effective income tax rate on operations is based upon the estimated income for the year, the composition of the income in different countries, and adjustments, if any, in the applicable quarterly periods for the potential tax consequences, benefits, resolutions of tax audits or other tax contingencies.

The Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%, as of January 1, 2018, requires companies to pay a one-time transition tax on earnings of foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings. We are required to calculate our statutory rate based on the number of days in our fiscal year in which the 35% and 21% rates applied. We have calculated that our statutory rate for the year is 27%.

As of January 31, 2018, we have not completed our accounting for the tax effects of enactment of the Act; however, in certain cases, as described below, we have made a reasonable estimate of the effects of the Act, including the effects on our existing deferred tax balances and the one-time transition tax as permitted by the SEC staff Accounting Bulletin No. 118, *Income Tax Accounting Implications of the Tax Cuts and Jobs Act* (SAB 118). For the items for which we were able to determine a reasonable estimate, we recognized a provisional amount of \$6.5 million for the one-time transition tax, which is included as a component of income tax expense from continuing operations.

Our effective tax rate for the three and six months ended January 31, 2018 is higher than the statutory rate of 27% primarily due to tax effects of the Act. Our statutory U.S. federal tax rate in fiscal 2018 is 27% since the 21% tax is effective January 1, 2018, resulting in a blended tax rate for our fiscal year. With the exception of the one-time transition tax, our effective tax rate was lower than the statutory rate of 27% primarily due to income generated outside the United States in countries with lower tax rates, and due to tax credits in the United States and Canada, offset by certain discrete tax expense. The tax provision for the three and six months ended January 31, 2018 includes discrete tax expense totaling \$7.0 million, of which \$6.5 million is considered a provisional estimate of one-time transition tax on our accumulated earnings of foreign subsidiaries under SAB 118 and \$0.5 tax expense for a net shortfall on exercise of stock compensation. The Company's provisional estimate of \$6.5 million includes approximately \$6.5 million of one-time transition tax. The provisional amount recorded related to the remeasurement of our deferred tax balance was tax expense of \$3.0 million, which was fully offset by a corresponding remeasurement of the valuation allowance we have recorded against our net U.S. deferred tax assets.

Provisional amounts

Deferred tax assets and liabilities: We remeasured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future. However, we are still analyzing certain aspects of the Act and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of our deferred tax balance was tax expense of \$3.0 million, which was fully offset by a corresponding remeasurement of the valuation allowance we have recorded against our net U.S. deferred tax assets.

Foreign tax effects: The one-time transition tax is based on our total post-1986 earnings and profits (E&P) in all foreign subsidiaries which we have previously deferred from US income taxes. We recorded a provisional amount for our one-time transition tax liability for all of our foreign subsidiaries, resulting in an increase in income tax expense of \$6.5 million, which will be paid over the next eight years. We are refining our calculation of the total post-1986 foreign E&P for these foreign subsidiaries. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when we finalize the calculation of post-1986 foreign E&P previously deferred from US federal taxation and finalize the amounts held in cash or other specified assets. No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, specifically earnings of the foreign subsidiaries earned after December 31, 2017 and before July 31, 2018, and any additional outside basis difference inherent in these entities as these amounts continue to be indefinitely reinvested in foreign operations.

Our effective tax rate for the three and six months ended January 31, 2017 was lower than the statutory rate of 35% primarily due to income generated outside the United States in countries with lower tax rates, tax credits in the United States and Canada, and the manufacturing deduction in the United States. The tax provision for the three and six months ended January 31, 2017 includes discrete tax benefits totaling less than \$0.4 million.

We are subject to U.S. Federal income tax as well as the income tax of multiple state and foreign jurisdictions. As of January 31, 2018, we have concluded all U.S. Federal income tax matters through the year ended July 31, 2013. We are currently under income tax audits in the U.S., Canada, and Denmark.

We accrue interest and, if applicable, penalties for any uncertain tax positions. This interest and penalty expense is treated as a component of income tax expense. At January 31, 2018 and July 31, 2017, we had approximately \$0.2 million and \$0.1 million accrued for interest and penalties on unrecognized tax benefits, respectively.

At January 31, 2018, we had \$4.5 million of unrecognized tax benefits for uncertain tax positions and \$0.2 million of related accrued interest and penalties. We are unable to reasonably estimate the amount and period in which these liabilities might be paid.

We do not provide for U.S. Federal income taxes on undistributed earnings of consolidated foreign subsidiaries, as such earnings are intended to be indefinitely reinvested in those operations. Determination of the potential deferred income tax liability on these undistributed earnings is not practicable because such liability, if any, is dependent on circumstances that exist if and when remittance occurs. The circumstances that would affect the calculations would be the source location and amount of the distribution, the underlying tax rate already paid on the earnings, foreign withholding taxes and the opportunity to use foreign tax credits.

Net income and diluted net income per share

Net income and diluted net income per share are summarized as follows:

(in millions except percentages)	Three Months Ended January 31,		Six Months Ended January 31,	
	2018	2017	2018	2017
Net income	\$ 6.5	\$ 7.5	\$ 12.2	\$ 10.0
% of net revenue	5%	6%	5%	4%
Diluted net income per share from operations	\$ 0.52	\$ 0.59	\$ 0.97	\$ 0.79

Liquidity and Capital Resources

Key liquidity and capital resource information are summarized as follows:

(in millions)	As of January 31, 2018	As of July 31, 2017	Percentage Change
Cash and cash equivalents (A)	\$ 101.9	\$ 129.3	-21%
Marketable securities	100.4	45.0	123%
Working capital	\$ 324.0	\$ 303.6	7%

(A) Includes approximately \$47.2 million and \$47.7 million of cash and cash equivalents held outside the U.S. at January 31, 2018 and July 31, 2017, respectively.

Our principal sources of liquidity are our cash and cash equivalents, marketable securities, and cash generated from operations. As of January 31, 2018, we had cash and cash equivalents, and marketable securities of \$202.3 million, a \$28.0 million increase from July 31, 2017, as we generated \$35.6 million in cash from operations, and \$0.8 million from the issuance of stock. This was offset by \$3.8 million paid for additions to property and equipment, \$2.5 million cash payment to shareholders for dividends, \$1.1 million for the shares surrendered for taxes for vested employee restricted stock grants, and \$1.0 million for the repurchase of common stock.

The increase in working capital from July 31, 2017 to January 31, 2018 was primarily attributable to an increase of \$17.6 million in cash and cash equivalents and short-term marketable securities, net, and an increase in accounts receivable of \$7.0 million, partially offset by a decrease of \$3.2 million in inventory.

Cash and cash equivalents at January 31, 2018 and July 31, 2017 primarily consisted of demand deposits at highly rated banks and financial institutions. We periodically review our investment portfolio to determine if any investments are impaired due to changes in credit risk or other potential valuation concerns. We believe that our cash equivalents were appropriately valued at January 31, 2018 and July 31, 2017 and we are not aware of any market events that would impact their valuation. This could change in the future should new developments arise in the credit markets.

Cash flows

Sources and uses of cash flows are summarized as follows:

(in millions, except percentages)	Six Months Ended January 31,		Percentage Change
	2018	2017	
Net cash provided by operating activities	\$ 35.6	\$ 40.7	-13%
Net cash used in investing activities	(59.5)	(5.7)	944%
Net cash used in financing activities	(3.7)	(0.3)	1133%
Effect of exchange rate changes on cash	0.2	(0.4)	-150%
Net (decrease) increase in cash and cash equivalents	\$ (27.4)	\$ 34.3	-180%

Operating activities

Net cash provided by operating activities during the six months ended January 31, 2018 primarily reflects our net income of \$12.2 million, \$10.9 million related to depreciation and amortization, \$7.6 million related to accrued income taxes and income taxes receivable, primarily due to a provision of an estimated amount of \$6.5 million for the one-time transition tax on accumulated earnings of foreign subsidiaries that were previously tax deferred, as permitted by SAB 118 due to the enactment of the Act in 2017, \$3.9 million related to share-based compensation expense, \$3.3 million related to provision for deferred income taxes, \$2.8 million related to decrease of inventory, and \$1.8 million related to amortization of demo equipment, partially offset by \$5.7 million related to increase of accounts receivable, and \$3.9 million related to decrease of accrued liabilities.

Net cash provided by operating activities during the six months ended January 31, 2017 primarily reflects our net income of \$10.0 million, \$20.0 million related to the collection of accounts receivable, \$12.9 million related to depreciation and amortization, and asset impairment charges of \$10.4 million. This increase was partially offset by a decrease in fair value of contingent consideration of \$8.1 million as well as a decrease in accrued liability of \$5.7 million, primarily due to timing of payments to accrued restructuring charges.

Investing activities

Net cash used in investing activities during the six months ended January 31, 2018 was driven by \$73.9 million of purchases of marketable securities, purchases of property, plant and equipment of \$3.8 million, and partially offset by \$15.8 million proceeds from maturities of marketable securities and \$2.3 million proceeds from sales of marketable securities.

The net cash used in investing activities during the six months ended January 31, 2017 was driven by purchases of property, plant and equipment of \$5.7 million.

Financing activities

Net cash used in financing activities during the six months ended January 31, 2018 primarily reflected \$2.5 million of dividends paid to stockholders, \$1.1 million used for shares surrendered for taxes paid related to vested employee restricted stock, \$1.0 million for repurchase of common stock, partially offset by proceeds from the issuance of common stock amounting to \$0.8 million associated with share-based compensation.

Net cash used in financing activities during the six months ended January 31, 2017 primarily reflected \$2.5 million of dividends paid to stockholders and \$1.0 million used for shares surrendered for taxes paid related to vested employee restricted stock, partially offset by proceeds from the issuance of common stock amounting to \$3.1 million associated with share-based compensation and CEO transition related exercise of stock options.

We believe that our balances of cash and cash equivalents and cash flows expected to be generated by future operating activities will be sufficient to meet our cash requirements for at least the next 12 months.

Commitments, Contractual Obligations, and Off-Balance Sheet Arrangements

Our contractual obligations at January 31, 2018 related to our operating leases, purchase obligations, pension, and contingent consideration affect our liquidity and cash flows in future periods.

Operating Leases – Certain of our subsidiaries lease manufacturing and office space under non-cancelable operating leases. These leases contain renewal options. We lease certain other real property and equipment under operating leases which, in the aggregate, are not significant. At January 31, 2018 and July 31, 2017, total commitments related to our operating leases were \$5.7 million and \$4.4 million, respectively.

Purchase Obligations – We enter into certain long-term agreements with customers, which obligate us to purchase goods or services. At January 31, 2018 and July 31, 2017, total purchase obligations were \$42.7 million and \$23.2 million, respectively.

Pension – Our Canadian subsidiary, Analogic Canada Corporation, formerly known as ANRAD Corporation, sponsors a defined benefit retirement plan called the Analogic Canada Corporation Retirement Plan, or the “Analogic Canada Plan”. The Analogic Canada Plan was frozen to new accruals during fiscal year 2015. The Analogic Canada Plan provides benefits to employees based on a formula recognizing length of service and final average earnings. Please refer to *Note 14. Retirement Plans* in our Annual Report on Form 10-K for the fiscal year ending 2017 for details. The benefit obligation at January 31, 2018 and July 31, 2017 totaled \$4.6 million and \$4.8 million, respectively.

Financing Arrangements

On November 23, 2015, we entered into a five-year revolving credit agreement, or Credit Agreement, with the financial institutions identified therein as lenders, which included JPMorgan Chase Bank, N.A., TD Bank, N.A., Wells Fargo Bank, N.A., HSBC Bank, N.A., and People's United Bank, N.A. Effective August 25, 2017, HSBC exited the Credit Agreement, and was replaced with Citibank. The Credit Agreement provides \$100.0 million in available credit and expires on November 23, 2020, when all outstanding borrowings must be paid in full. The credit facility does not require amortization of principal and may be reduced before maturity in whole or in part at our option without penalty. We did not have any borrowings outstanding under this Credit Agreement as of January 31, 2018. Please refer to *Note 15. Guarantees, commitments and contingencies* for more information on the Credit Agreement.

As of January 31, 2018, we also have approximately \$1.2 million in other revolving credit facilities with banks available for direct borrowings.

Tax Related Obligations

At January 31, 2018, we had \$4.5 million of unrecognized tax benefits for uncertain tax positions and \$0.2 million of related accrued interest and penalties. We are unable to reasonably estimate the amount and period in which these liabilities might be paid. Please refer to *Note 13. Income taxes* to our consolidated financial statements for additional information regarding matters relating to income taxes, including unrecognized tax benefits.

Legal Claims

We are subject to litigation, claims, investigations and audits arising from time to time in the ordinary course of our business. Although legal proceedings are inherently unpredictable, we believe that we have valid defenses with respect to those matters currently pending against us and intend to defend ourselves vigorously. The outcome of these matters, individually and in the aggregate, is not expected to have a material impact on our cash flows, results of operations, or financial position. We record losses when estimable and probable in accordance with U.S. GAAP.

On July 31, 2017, twenty-four former interest-holders of Oncura Partners Diagnostics, LLC ("Plaintiffs") filed suit in the District Court of Travis County, Texas against Analogic Corporation ("Analogic") and Oncura Partners Diagnostics, LLC ("Oncura") (together "Defendants") alleging claims arising out of Analogic's acquisition of Oncura from Plaintiffs in 2016. In connection with the litigation, Plaintiffs have asserted claims for breach of contract, anticipatory repudiation, fraud, negligent misrepresentation, breach of implied duty of good faith and fair dealing, unjust enrichment, and declaratory judgment; they seek unspecified damages in excess of \$1.0 million. On August 25, 2017, Defendants timely removed the action to federal court in Texas and the case was subsequently transferred to the United States District Court for the Southern District of New York. We believe that the claims asserted by Plaintiffs are without merit and intend to defend the matter vigorously. We cannot reasonably estimate any loss or range of such loss that may arise from this matter at this time.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as defined under SEC rules, during the periods presented.

Recent Accounting Pronouncements

For a discussion of new accounting standards please refer to *Note 2. Recent accounting pronouncements* to our consolidated financial statements included within this report.

Critical Accounting Policies

The accompanying discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP. Our most critical accounting policies have a significant impact on the preparation of these consolidated financial statements. These policies include estimates and significant judgments that affect the reported amounts of assets, liabilities, revenue, and expenses, and related disclosures of contingent assets and liabilities.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Our market risks and the ways we manage them were summarized in Item 7A. Quantitative and Qualitative Disclosures about Market Risk of our Annual Report on Form 10-K for fiscal year 2017, as filed with the SEC on September 26, 2017. There has been no material changes during the six months ended January 31, 2018 to our market risks or to our management of such risks.

Item 4. Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of January 31, 2018. The term “disclosure controls and procedures”, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized, and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company’s management, including its principal executive officer and principal financial officer, as appropriate, to allow timely decisions to be made regarding required disclosure. It should be noted that any system of controls and procedures, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system are met and that management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of January 31, 2018, our principal executive officer and principal financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended January 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Part II. OTHER INFORMATION

Item 1. Legal Proceedings

For a discussion of legal matters as of January 31, 2018, please refer to *Note 15. Guarantees, commitments and contingencies* to our consolidated financial statements included in this report.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the factors discussed in Part I, Item 1A. “Risk Factors” in our Annual Report on Form 10-K for fiscal year 2017, as filed with the SEC on September 26, 2017, which could materially affect our business, financial condition, and future operating results. The risks described in our Annual Report on Form 10-K for fiscal year 2017, as filed with the SEC on September 26, 2017, are not the only risks that we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, and operating results. There have been no material changes to the risk factors set forth in our Annual Report on Form 10-K for fiscal year 2017, as filed with the SEC on September 26, 2017.

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

The following table contains information about purchases by us of our equity securities during the three months ended January 31, 2018:

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1) (2)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (000's)
11/1/2017-11/30/2017	-	\$ -	36	\$ 10,649
12/1/2017-12/31/2017	-	\$ -	74	\$ 10,649
1/1/2018-1/31/2018	-	\$ -	-	\$ 10,649
Total	-	\$ -	110	\$ 10,649

- (1) During the second quarter of fiscal year 2018 we did not repurchase shares of our common stock in open-market transactions. No shares were purchased in Q2 FY18 pursuant to a repurchase program authorized by our board of directors that was announced on May 26, 2016 to repurchase up to \$15 million of our common stock. The repurchase program does not have a fixed expiration date.
- (2) Includes 110 shares, consisting of 36 shares and 74 shares of our common stock surrendered by employees in order to meet tax withholding obligations in connection with the vesting of restricted stock in November 2017 and December 2017, respectively.

Item 6. Exhibits

- 31.1 [Certification of Principal Executive Officer pursuant to Rule 13a-14\(a\)/Rule 15d-14\(a\) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002](#)
- 31.2 [Certification of Principal Financial Officer pursuant to Rule 13a-14\(a\)/Rule 15d-14\(a\) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002](#)
- 32.1 [Certification of Principal 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 Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- 101 The following materials from Analogic Corporation’s Quarterly Report on Form 10-Q for the quarter ended January 31, 2018 are formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets as of January 31, 2018 and July 31, 2017, (ii) Consolidated Statements of Operations for the Three and Six Months Ended January 31, 2018 and 2017, (iii) Consolidated Statements of Comprehensive Income for the Three and Six Months Ended January 31, 2018 and 2017, (iv) Consolidated Statements of Cash Flows for the Six Months Ended January 31, 2018 and 2017 and (v) Notes to Consolidated Financial Statements.

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.

ANALOGIC CORPORATION

Date: March 7, 2018

/s/ Fred B. Parks

Fred B. Parks

President and Chief Executive Officer
(Principal Executive Officer)

Date: March 7, 2018

/s/ Michael J. Bourque

Michael J. Bourque

Senior Vice President, Chief Financial Officer, and Treasurer
(Principal Financial and Accounting Officer)

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO RULE 13a-14(a)/RULE 15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED**

I, Fred B. Parks, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Analogic Corporation;
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(s) 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(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 7, 2018

/s/ Fred B. Parks

Fred B. Parks
President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO RULE 13a-14(a)/RULE 15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED**

I, Michael J. Bourque, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Analogic Corporation;
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(s) 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(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 7, 2018

/s/ Michael J. Bourque

Michael J. Bourque
Senior Vice President, Chief Financial Officer, and
Treasurer
(Principal Financial and Accounting Officer)

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

In connection with the Quarterly Report on Form 10-Q of Analogic Corporation (the "Company") for the quarter ended January 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Fred B. Parks, President and Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that, to the best of his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 7, 2018

/s/ Fred B. Parks

Fred B. Parks
President and Chief Executive Officer
(Principal Executive Officer)

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

In connection with the Quarterly Report on Form 10-Q of Analogic Corporation (the "Company") for the quarter ended January 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Michael J. Bourque, Senior Vice President, Chief Financial and Accounting Officer, and Treasurer, of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that, to the best of his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 7, 2018

/s/ Michael J. Bourque

Michael J. Bourque
Senior Vice President, Chief Financial Officer, and Treasurer
(Principal Financial and Accounting Officer)