
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 10-Q

(Mark one)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 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: 000-50307

FormFactor, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

13-3711155

(I.R.S. Employer
Identification No.)

7005 Southfront Road, Livermore, California 94551
(Address of principal executive offices, including zip code)

(925) 290-4000

(Registrant's telephone number, including area code)

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

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

Large Accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

Emerging growth company

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

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

As of August 1, 2018, 73,862,442 shares of the registrant's common stock, par value \$0.001 per share, were outstanding.

FORMFACTOR, INC.
FORM 10-Q FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2018
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PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

FORMFACTOR, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)
(Unaudited)

	June 30, 2018	December 30, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 95,624	\$ 91,184
Marketable securities	47,275	48,988
Accounts receivable, net of allowance for doubtful accounts of \$200 and \$200	84,779	81,515
Inventories, net	76,379	67,848
Restricted cash	116	372
Refundable income taxes	1,328	2,242
Prepaid expenses and other current assets	18,822	13,705
Total current assets	324,323	305,854
Restricted cash	1,075	1,170
Property, plant and equipment, net of accumulated depreciation of \$257,365 and \$255,755	49,161	46,754
Goodwill	189,531	189,920
Intangibles, net	82,861	97,484
Deferred tax assets	3,067	3,133
Other assets	1,203	2,259
Total assets	\$ 651,221	\$ 646,574
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 42,054	\$ 35,046
Accrued liabilities	29,860	33,694
Current portion of term loan, net of unamortized issuance cost of \$231 and \$307	33,519	18,443
Deferred revenue	4,927	4,978
Total current liabilities	110,360	92,161
Term loan, less current portion, net of unamortized issuance cost of \$113 and \$272	51,137	87,228
Deferred tax liabilities	3,312	3,379
Deferred rent and other liabilities	7,744	5,169
Total liabilities	172,553	187,937
Stockholders' equity:		
Preferred stock, \$0.001 par value:		
10,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, \$0.001 par value:		
250,000,000 shares authorized; 73,358,108 and 72,532,176 shares issued and outstanding	74	73
Additional paid-in capital	853,278	843,116
Accumulated other comprehensive income	1,691	3,021
Accumulated deficit	(376,375)	(387,573)
Total stockholders' equity	478,668	458,637
Total liabilities and stockholders' equity	\$ 651,221	\$ 646,574

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

FORMFACTOR, INC.
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Revenues	\$ 135,509	\$ 143,976	\$ 253,799	\$ 272,805
Cost of revenues	79,291	82,209	152,452	163,467
Gross profit	56,218	61,767	101,347	109,338
Operating expenses:				
Research and development	19,675	18,542	37,721	35,956
Selling, general and administrative	25,232	23,602	48,681	46,431
Restructuring	—	44	—	313
Total operating expenses	44,907	42,188	86,402	82,700
Operating income	11,311	19,579	14,945	26,638
Interest income	326	93	583	160
Interest expense	(910)	(1,162)	(1,877)	(2,337)
Other income (expense), net	50	107	(462)	(292)
Income before income taxes	10,777	18,617	13,189	24,169
Provision for income taxes	1,654	1,040	1,941	1,407
Net income	<u>\$ 9,123</u>	<u>\$ 17,577</u>	<u>\$ 11,248</u>	<u>\$ 22,762</u>
Net income per share:				
Basic	<u>\$ 0.12</u>	<u>\$ 0.24</u>	<u>\$ 0.15</u>	<u>\$ 0.32</u>
Diluted	<u>\$ 0.12</u>	<u>\$ 0.24</u>	<u>\$ 0.15</u>	<u>\$ 0.31</u>
Weighted-average number of shares used in per share calculations:				
Basic	73,157	72,200	72,991	71,821
Diluted	<u>74,533</u>	<u>73,539</u>	<u>74,427</u>	<u>73,185</u>

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

FORMFACTOR, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)
(Unaudited)

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Net income	\$ 9,123	\$ 17,577	\$ 11,248	\$ 22,762
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	(3,449)	2,782	(1,283)	4,229
Unrealized gains (losses) on available-for-sale marketable securities	40	(23)	(134)	(22)
Unrealized gains (losses) on derivative instruments	(85)	(117)	87	40
Other comprehensive income (loss), net of tax	(3,494)	2,642	(1,330)	4,247
Comprehensive income	<u>\$ 5,629</u>	<u>\$ 20,219</u>	<u>\$ 9,918</u>	<u>\$ 27,009</u>

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

FORMFACTOR, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Six Months Ended	
	June 30, 2018	July 1, 2017
Cash flows from operating activities:		
Net income	\$ 11,248	\$ 22,762
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	6,893	6,549
Amortization	14,364	15,994
Accretion of discount on investments	36	9
Stock-based compensation expense	7,884	6,692
Amortization of debt issuance costs	235	334
Deferred income tax provision	70	104
Provision for excess and obsolete inventories	4,593	4,597
Acquired inventory step-up amortization	—	479
Loss on disposal of long-lived assets	48	53
Gain on derivative instruments	—	(24)
Foreign currency transaction gains	(109)	(1,441)
Changes in assets and liabilities:		
Accounts receivable	(3,330)	(20,999)
Inventories	(13,687)	(8,847)
Prepaid expenses and other current assets	(4,760)	1,454
Refundable income taxes	925	303
Other assets	663	726
Accounts payable	6,239	7,322
Accrued liabilities	(3,541)	2,298
Income tax payable	(281)	(552)
Deferred rent and other liabilities	2,540	97
Deferred revenues	28	4,371
Net cash provided by operating activities	30,058	42,281
Cash flows from investing activities:		
Acquisition of property, plant and equipment	(8,545)	(7,759)
Proceeds from sale of a subsidiary	41	29
Purchases of marketable securities	(10,715)	(14,690)
Proceeds from maturities of marketable securities	12,257	—
Net cash used in investing activities	(6,962)	(22,420)
Cash flows from financing activities:		
Proceeds from issuances of common stock	4,754	14,485
Purchase and retirement of common stock	—	(10,132)
Tax withholdings related to net share settlements of equity awards	(2,453)	(4,461)
Principal repayments on term loan	(21,250)	(15,625)
Net cash used in financing activities	(18,949)	(15,733)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(58)	1,865
Net increase in cash, cash equivalents and restricted cash	4,089	5,993
Cash, cash equivalents and restricted cash, beginning of period	92,726	102,596
Cash, cash equivalents and restricted cash, end of period	\$ 96,815	\$ 108,589
Non-cash investing and financing activities:		
Change in accounts payable and accrued liabilities related to property, plant and equipment purchases	\$ 982	\$ 1,539
Supplemental disclosure of cash flow information:		
Cash paid for income taxes, net	\$ 1,182	\$ 1,523
Cash paid for interest	1,617	2,010

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

FORMFACTOR, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1 — Basis of Presentation and New Accounting Pronouncements

Basis of Presentation

The accompanying condensed consolidated financial information of FormFactor, Inc. is unaudited and has been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”) and pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”). However, such information reflects all adjustments, consisting only of normal recurring adjustments, which are, in the opinion of management, necessary for a fair presentation of the financial position, results of operations and cash flows for the interim periods. The financial information as of December 30, 2017 is derived from our 2017 Annual Report on Form 10-K. The condensed consolidated financial statements included herein should be read in conjunction with the consolidated financial statements and the notes thereto included in our 2017 Annual Report on Form 10-K. The results of operations for the interim periods presented are not necessarily indicative of the results to be expected for the full year.

Fiscal Year

We operate on a 52/53 week fiscal year, whereby the fiscal year ends on the last Saturday of December. Fiscal 2018 and 2017 each contain 52 weeks and the six months ended June 30, 2018 and July 1, 2017 each contained 26 weeks. Fiscal 2018 will end on December 29, 2018.

Reclassifications

Certain immaterial reclassifications were made to the prior period financial statements to conform to the current period presentation.

Critical Accounting Policies

Our critical accounting policies have not changed during the six months ended June 30, 2018 from those disclosed in our Annual Report on Form 10-K for the year ended December 30, 2017, except for:

Revenue Recognition

Revenue is recognized upon transferring control of products and services, and the amounts recognized reflect the consideration we expect to be entitled to receive in exchange for these products and services. Revenue is recognized net of any taxes collected from customers, which are subsequently remitted to governmental authorities. An arrangement may include some or all of the following products and services: probe cards, systems, accessories, installation services, service contracts and extended warranty contracts. We sell our products and services direct to customers and to partners in two distribution channels: global direct sales force and through a combination of manufacturers’ representatives and distributors.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. In contracts with multiple performance obligations, we identify each performance obligation and evaluate whether the performance obligation is distinct within the context of the contract at contract inception. Performance obligations that are not distinct at contract inception are combined and accounted for as one unit of account. Generally, the performance obligations in a contract are considered distinct within the context of the contract and are accounted for as separate units of account.

Our products may be customized to our customers’ specifications, however, control of our product is typically transferred to the customer at the point in time the product is either shipped or delivered, depending on the terms of the arrangement, as the criteria for overtime recognition is not met. In limited circumstances, substantive acceptance by the customer exists which results in the deferral of revenue until acceptance is formally received from the customer. Judgment may be required in determining if the acceptance clause is substantive.

Installation services are routinely provided to customers purchasing our systems. Installation services are a distinct performance obligation apart from the systems and recognized in the period they are performed. Service contracts, which include repair and maintenance service contracts, and extended warranty contracts are also distinct performance obligations and recognized as our performance obligations are satisfied. This is typically the contractual service period, which ranges from one to two years. For these service contracts recognized over time, we use an input measure, days elapsed, to measure progress.

A contract’s transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. In determining the transaction price, we evaluate whether the price is subject to refund or adjustment to determine the net consideration to which we expect to be entitled. We generally do not grant return privileges, except

for defective products during the warranty period. Sales incentives and other programs that we may make available to these customers are considered to be a form of variable consideration, which is estimated in determining the contract's transaction price to be allocated to the performance obligations. We have elected the practical expedient under Accounting Standards Codification ("ASC") 606-10-32-18 to not assess whether a contract has a significant financing component as our standard payment terms are less than one year.

For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation based on its relative standalone selling price. The stand-alone selling prices are determined based on the prices at which we separately sell these products. For items that are not sold separately, we estimate the stand-alone selling prices using our best estimate of selling price.

Transaction price allocated to the remaining performance obligations: On June 30, 2018, we had \$3.9 million of remaining performance obligations, which were comprised of deferred service contracts and extended warranty contracts not yet delivered. We expect to recognize approximately 34.7% of our remaining performance obligations as revenue in fiscal 2019, and additional 10.4% in fiscal 2020 and thereafter. The foregoing excludes the value of other remaining performance obligations as they have original durations of one year or less, and also excludes information about variable consideration allocated entirely to a wholly unsatisfied performance obligation.

Contract balances: The timing of revenue recognition may differ from the timing of invoicing to customers. Accounts receivable is recorded at the invoiced amount, net of an allowance for doubtful accounts. A receivable is recognized in the period we deliver goods or provide services or when our right to consideration is unconditional. A contract asset is recorded when we have performed under the contract but our right to consideration is conditional on something other than the passage of time. Contract assets as of June 30, 2018 and December 30, 2017 were \$3.0 million and \$1.6 million, respectively, and are reported on the Condensed Consolidated Balance Sheet as a component of Prepaid expenses and other current assets.

Contract liabilities include payments received in advance of performance under a contract and are satisfied as the associated revenue is recognized. Contract liabilities are reported on the Condensed Consolidated Balance Sheets on a contract-by-contract basis at the end of each reporting period as a component of Deferred revenue and Deferred rent and other liabilities. Contract liabilities as of June 30, 2018 and December 30, 2017 were \$5.7 million. During the three and six months ended June 30, 2018, we recognized \$1.3 million and \$3.7 million of revenue, respectively, that was included in contract liabilities as of December 30, 2017.

Costs to obtain a contract: We generally expense sales commissions when incurred as a component of Selling, general and administrative expense as the amortization period is typically less than one year.

Revenue by Category: Refer to Note 12 of Notes to Consolidated Financial Statements for further details.

New Accounting Pronouncements

ASU 2016-10, ASU 2015-14 and ASU 2014-09

In May 2014, the Financial Accounting Standard Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers," and, in August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date," which defers the effective date of ASU 2014-09 by one year. ASU 2014-09 requires an entity to recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which an entity expects to be entitled in exchange for those goods or services. The guidance also requires expanded disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Additionally, qualitative and quantitative disclosures are required about customer contracts, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract. The standard permits the use of either the retrospective or modified retrospective transition methods. In April 2016, the FASB issued ASU 2016-10, "Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing" which was issued to clarify ASC Topic 606, "Revenue from Contracts with Customers" related to (i) identifying performance obligations; and (ii) the licensing implementation guidance. We adopted ASC 606, *Revenue from Contracts with Customers* and all related amendments (collectively "ASC 606"), on December 31, 2017, the first day of fiscal 2018, using the modified retrospective method. We applied ASC 606 to all contracts not completed as of the date of adoption in order to determine any adjustment to the opening balance of retained earnings. Under the modified retrospective adoption method, the comparative financial information has not been restated and continues to be reported under the accounting standards in effect for those periods, ASC 605, "Revenue Recognition", which is also referred to herein as "legacy GAAP."

The adoption of ASC 606 did not have a material impact on our consolidated financial statements as of December 31, 2017. No adjustment was recorded to accumulated deficit as of the adoption date and reported revenue would not have been different under legacy GAAP. Additionally, we do not expect the adoption of the revenue standard to have a material impact to our net income on an ongoing basis.

ASU 2017-12

In August 2017, the FASB issued ASU 2017-12, "*Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*," which changes the recognition and presentation requirements of hedge accounting, including eliminating the requirement to separately measure and report hedge ineffectiveness and changing the presentation to include all items that affect earnings in the same income statement line item as the hedged item. ASU 2017-12 also provides new alternatives for applying hedge accounting to additional hedging strategies, measuring the hedged item in fair value hedges of interest rate risk, reducing the cost and complexity of applying hedge accounting and reducing the risk of material error correction if a company applies the shortcut method inappropriately. ASU 2017-12 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2018, on a prospective basis. We early adopted ASU 2017-12 on December 31, 2017, the first day of fiscal 2018, resulting in an immaterial adjustment in our accumulated deficit on December 30, 2017.

ASU 2017-09

In May 2017, the FASB issued ASU 2017-09, "*Compensation - Stock Compensation (Topic 718) - Scope of Modification Accounting*," which provides clarity and reduces both diversity in practice and the cost and complexity when accounting for a change to the terms of a stock-based award. ASU 2017-09 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2017, on a prospective basis. We adopted ASU 2017-09 on December 31, 2017, the first day of fiscal 2018. There were no modifications to any stock-based awards during the three or six months ended June 30, 2018.

ASU 2017-04

In January 2017, the FASB issued ASU 2017-04, "*Intangibles - Goodwill and Other (Topic 350) - Simplifying the Test for Goodwill Impairment*," which simplifies the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. An entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, if applicable. The loss recognized should not exceed the total amount of goodwill allocated to the reporting unit. The same impairment test also applies to any reporting unit with a zero or negative carrying amount. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. ASU 2017-04 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2019, on a prospective basis. Early adoption is permitted for interim or annual goodwill impairment tests performed after January 1, 2017. We do not expect the adoption of ASU 2017-04 to have a material effect on our financial position, results of operations or cash flows.

ASU 2016-18

In November 2016, the FASB issued ASU 2016-18, "*Statement of Cash Flows (Topic 230) - Restricted Cash*," which requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, an entity should include amounts generally described as restricted cash or restricted cash equivalents within cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. Prior to this ASU, there was no guidance to address how to classify and present changes in restricted cash or restricted cash equivalents. The updated guidance is effective for interim and annual periods beginning after December 15, 2017. We adopted ASU 2016-18 as of December 31, 2017, the first day of fiscal 2018 and retrospectively applied such guidance to our Condensed Consolidated Statements of Cash Flows.

The following table provides a reconciliation of Cash and cash equivalents as previously reported within the Condensed Consolidated Statements of Cash Flows to Cash, cash equivalents and restricted cash as currently reported in the Condensed Consolidated Statements of Cash Flows (in thousands):

	December 30, 2017	July 1, 2017	December 31, 2016
Cash, cash equivalents as previously reported in the Condensed Consolidated Statements of Cash Flows	\$ 91,184	\$ 107,817	\$ 101,408
Current assets - Restricted cash	372	4	106
Restricted cash	1,170	768	1,082
Cash, cash equivalents and restricted cash as currently reported in the Condensed Consolidated Statements of Cash Flows	<u>\$ 92,726</u>	<u>\$ 108,589</u>	<u>\$ 102,596</u>

As of June 30, 2018 and December 30, 2017, Restricted cash was comprised primarily of funds held by our foreign subsidiaries for employee obligations, office leases and customer deposits.

ASU 2016-02, ASU 2018-10 and ASU 2018-11

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)," which requires the recognition of right-of-use assets and lease liabilities for all long-term leases, including operating leases, on the balance sheet. ASU 2016-02 was amended in July 2018 by both ASU 2018-10, "Codification Improvements to Topic 842, Leases," and ASU 2018-11, "Leases (Topic 842): Targeted Improvements." ASU 2016-02 provides additional guidance on the measurement of the right-of-use assets and lease liabilities and will require enhanced disclosures about our leasing arrangements. Under current accounting standards, substantially all of our leases are considered operating leases and, as such, are not recognized on the Consolidated Balance Sheet. This new standard is effective for us beginning on January 1, 2019, with early adoption permitted. As initially issued, the standard required a "modified retrospective" adoption, meaning the standard is applied to leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. As amended, the standard allows an additional transition method that permits a company to use its effective date as the date of initial application, and therefore, not restate comparative prior period financial information. We have not yet determined a transition method. We are currently assessing the impact on our Consolidated Financial Statements and expect that the primary impact upon adoption will be the recognition, on a discounted basis, of our minimum commitments under noncancelable operating leases to our Consolidated Balance Sheets resulting in the recording of right-of-use assets and lease liabilities.

Note 2 — Concentration of Credit and Other Risks

Each of the following customers accounted for 10% or more of our revenues for the periods indicated:

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Intel	15.1%	24.9%	14.6%	25.8%
SK Hynix	11.5	*	10.9	*
Total revenues attributable to 10% or greater customers	26.6%	24.9%	25.5%	25.8%

*Represents less than 10% of total revenues.

At June 30, 2018, two customers accounted for 18.3% and 13.3% of gross accounts receivable, respectively. At December 30, 2017, two customers accounted for 24.1% and 13.6% of gross accounts receivable, respectively. No other customers accounted for 10% or more of gross accounts receivable at either of these fiscal period ends.

Note 3 — Inventories

Inventories are stated at the lower of cost (principally standard cost, which approximates actual cost on a first in, first out basis) or net realizable value.

Inventories consisted of the following (in thousands):

	June 30, 2018	December 30, 2017
Raw materials	\$ 39,255	\$ 33,101
Work-in-progress	21,332	20,134
Finished goods	15,792	14,613
	<u>\$ 76,379</u>	<u>\$ 67,848</u>

Note 4 — Goodwill and Intangible Assets

Goodwill by reportable segment was as follows (in thousands):

	Probe Cards	Systems	Total
Goodwill, gross, as of December 31, 2016	\$ 172,482	\$ 15,528	\$ 188,010
Foreign currency translation	—	1,910	1,910
Goodwill, gross, as of December 30, 2017	172,482	17,438	189,920
Foreign currency translation	—	(389)	(389)
Goodwill, gross, as of June 30, 2018	<u>\$ 172,482</u>	<u>\$ 17,049</u>	<u>\$ 189,531</u>

We have not recorded any goodwill impairments as of June 30, 2018.

Intangible assets were as follows (in thousands):

Other Intangible Assets	June 30, 2018			December 30, 2017		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Existing developed technologies	\$ 143,659	\$ 86,985	\$ 56,674	\$ 143,966	\$ 76,826	\$ 67,140
Trade name	12,051	7,094	4,957	12,086	5,735	6,351
Customer relationships	40,221	18,991	21,230	40,313	16,320	23,993
Backlog	—	—	—	15,811	15,811	—
	<u>\$ 195,931</u>	<u>\$ 113,070</u>	<u>\$ 82,861</u>	<u>\$ 212,176</u>	<u>\$ 114,692</u>	<u>\$ 97,484</u>

Amortization expense was included in our Condensed Consolidated Statements of Income as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Cost of revenues	\$ 5,138	\$ 5,613	\$ 10,295	\$ 11,938
Selling, general and administrative	2,032	2,031	4,069	4,056
	<u>\$ 7,170</u>	<u>\$ 7,644</u>	<u>\$ 14,364</u>	<u>\$ 15,994</u>

The estimated future amortization of intangible assets is as follows (in thousands):

Fiscal Year	Amount
Remainder of 2018	\$ 14,307
2019	25,950
2020	23,881
2021	13,107
2022	3,567
Thereafter	2,049
	<u>\$ 82,861</u>

Note 5 — Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	June 30, 2018	December 30, 2017
Accrued compensation and benefits	\$ 17,221	\$ 18,141
Accrued warranty	2,849	3,662
Accrued withholding for employee stock purchase plan	2,620	3,279
Accrued income and other taxes	2,636	3,965
Other accrued expenses	4,534	4,647
	<u>\$ 29,860</u>	<u>\$ 33,694</u>

Note 6 — Restructuring Charges

Restructuring charges are comprised of costs related to employee termination benefits as well as contract termination costs, and are included in Restructuring in the Consolidated Statements of Income.

Restructuring charges in the first two quarters of fiscal 2017 related to the consolidation of an acquired subsidiary into our operations.

There were no restructuring charges in the first two quarters of fiscal 2018. Changes to the restructuring accrual in the six months ended June 30, 2018 were as follows (in thousands):

	Accrual
December 30, 2017	\$ 399
Cash payments	(399)
June 30, 2018	<u>\$ —</u>

Note 7 — Fair Value and Derivative Instruments

Whenever possible, the fair values of our financial assets and liabilities are determined using quoted market prices of identical securities or quoted market prices of similar securities from active markets. The three levels of inputs that may be used to measure fair value are as follows:

- Level 1 valuations are obtained from real-time quotes for transactions in active exchange markets involving identical securities;
- Level 2 valuations utilize significant observable inputs, such as quoted prices for similar assets or liabilities, quoted prices near the reporting date in markets that are less 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; and
- Level 3 valuations utilize unobservable inputs to the valuation methodology and include our own data about assumptions market participants would use in pricing the asset or liability based on the best information available under the circumstances.

We did not have any transfers of assets or liabilities measured at fair value on a recurring basis to or from Level 1, Level 2 or Level 3 during the six months ended June 30, 2018 or the year ended December 30, 2017.

The carrying values of Cash, Accounts receivable, net, Restricted cash, Prepaid expenses and other current assets, Accounts payable and Accrued liabilities approximate fair value due to their short maturities.

No changes were made to our valuation techniques during the first six months of fiscal 2018.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Assets and liabilities measured at fair value on a recurring basis were as follows (in thousands):

June 30, 2018	Level 1	Level 2	Total
Assets:			
Cash equivalents:			
Money market funds	\$ 1,250	\$ —	\$ 1,250
Commercial paper	—	1,999	1,999
U.S. Treasuries	589	—	589
Total cash equivalents	1,839	1,999	3,838
Marketable securities:			
U.S. Treasuries	2,484	—	2,484
Certificates of deposit	—	1,195	1,195
Agency securities	—	9,902	9,902
Corporate bonds	—	31,700	31,700
Commercial paper	—	1,994	1,994
Total marketable securities	2,484	44,791	47,275
Foreign exchange derivative contracts	—	5	5
Interest rate swap derivative contracts	—	1,084	1,084
Total assets	\$ 4,323	\$ 47,879	\$ 52,202
Liabilities:			
Foreign exchange derivative contracts	\$ —	\$ (208)	\$ (208)

December 30, 2017	Level 1	Level 2	Total
Assets:			
Cash equivalents:			
Money market funds	\$ 1,064	\$ —	\$ 1,064
Corporate bonds	—	774	774
Total cash equivalents	1,064	774	1,838
Marketable securities:			
U.S. Treasuries	3,963	—	3,963
Certificates of deposit	—	957	957
Agency securities	—	10,432	10,432
Corporate bonds	—	30,636	30,636
Commercial paper	—	3,000	3,000
Total marketable securities	3,963	45,025	48,988
Foreign exchange derivative contracts	—	31	31
Interest rate swap derivative contracts	—	1,043	1,043
Total assets	\$ 5,027	\$ 46,873	\$ 51,900

We did not have any liabilities measured at fair value on a recurring basis at December 30, 2017.

Cash Equivalents

The fair value of our cash equivalents is determined based on quoted market prices for similar or identical securities.

Marketable Securities

We classify our marketable securities as available-for-sale and value them utilizing a market approach. Our investments are priced by pricing vendors who provide observable inputs for their pricing without applying significant judgment. Broker pricing is used mainly when a quoted price is not available, the investment is not priced by our pricing vendors or when a broker price is more

reflective of fair value. Our broker-priced investments are categorized as Level 2 investments because fair value is based on similar assets without applying significant judgments. In addition, all of our investments have a sufficient level of trading volume to demonstrate that the fair value is appropriate.

Unrealized gains and losses were immaterial and were recorded as a component of Accumulated other comprehensive income in our Condensed Consolidated Balance Sheets. We did not have any other-than-temporary unrealized gains or losses at either period end included in these financial statements.

Interest Rate Swaps

The fair value of our interest rate swap contracts is determined at the end of each reporting period based on valuation models that use interest rate yield curves as inputs. For accounting purposes, our interest rate swap contracts qualify for, and are designated as, cash flow hedges. The cash flows associated with the interest rate swaps are reported in Net cash provided by operating activities in our Condensed Consolidated Statements of Cash Flows and the fair value of the interest rate swap contracts are recorded within Prepaid expenses and other current assets and Other assets in our Condensed Consolidated Balance Sheets.

The impact of the interest rate swaps on our Condensed Consolidated Statements of Income was as follows (in thousands):

	Amount of Gain or (Loss) Recognized in OCI on Derivative	Location of Gain or (Loss) Reclassified from Accumulated OCI into Income	Amount of Gain or (Loss) Reclassified from Accumulated OCI into Income
Three Months Ended June 30, 2018	\$ 101	Interest expense	\$ 186
Three Months Ended July 1, 2017	\$ (111)	Interest expense	\$ 6
Six Months Ended June 30, 2018	\$ 356	Interest expense	\$ 318
Six Months Ended July 1, 2017	\$ 8	Interest expense	\$ (32)

Foreign Exchange Derivative Contracts

We operate and sell our products in various global markets. As a result, we are exposed to changes in foreign currency exchange rates. We utilize foreign currency forward contracts to hedge against future movements in foreign exchange rates that affect certain existing foreign currency denominated assets and liabilities and forecasted foreign currency revenue and expense transactions. Under this program, our strategy is to have increases or decreases in our foreign currency exposures mitigated by gains or losses on the foreign currency forward contracts in order to mitigate the risks and volatility associated with foreign currency transaction gains or losses.

We do not use derivative financial instruments for speculative or trading purposes. For accounting purposes, our foreign currency forward contracts are not designated as hedging instruments and, accordingly, we record the fair value of these contracts as of the end of our reporting period in our Condensed Consolidated Balance Sheets with changes in fair value recorded within Other income (expense), net in our Condensed Consolidated Statement of Income for both realized and unrealized gains and losses.

The fair value of our foreign exchange derivative contracts was determined based on current foreign currency exchange rates and forward points. All of our foreign exchange derivative contracts outstanding at June 30, 2018 will mature in the third quarter of fiscal 2018.

The following table provides information about our foreign currency forward contracts outstanding as of June 30, 2018 (in thousands):

Currency	Contract Position	Contract Amount (Local Currency)	Contract Amount (U.S. Dollars)
Japanese Yen	Sell	1,441,321	\$ 13,052
Taiwan Dollar	Buy	(22,821)	(749)
Korean Won	Buy	(2,408,331)	(2,165)
Euro Dollar	Sell	17,939	20,856
Total USD notional amount of outstanding foreign exchange contracts			\$ 30,994

Our foreign currency contracts are classified within Level 2 of the fair value hierarchy as they are valued using pricing models that utilize observable market inputs.

The location and amount of net income (loss) related to non-designated derivative instruments in the Condensed Consolidated Statements of Income were as follows (in thousands):

Derivatives Not Designated as Hedging Instruments	Location of Loss Recognized on Derivatives	Three Months Ended		Six Months Ended	
		June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Foreign exchange forward contracts	Other income (expense), net	\$ 1,079	\$ (922)	\$ 217	\$ (1,808)

Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

We measure and report goodwill and intangible assets at fair value on a non-recurring basis if we determine these assets to be impaired or in the period when we make a business acquisition. There were no assets or liabilities measured at fair value on a nonrecurring basis during the three or six months ended June 30, 2018 or July 1, 2017.

Note 8 — Warranty

We offer warranties on certain products and record a liability for the estimated future costs associated with warranty claims at the time revenue is recognized. The warranty liability is based upon historical experience and our estimate of the level of future costs. While we engage in product quality programs and processes, our warranty obligation is affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. We continuously monitor product returns for warranty and maintain a reserve for the related expenses based upon our historical experience and any specifically identified field failures. As we sell new products to our customers, we must exercise considerable judgment in estimating the expected failure rates. This estimating process is based on historical experience of similar products, as well as various other assumptions that we believe to be reasonable under the circumstances.

We provide for the estimated cost of product warranties at the time revenue is recognized as a component of Cost of revenues in our Condensed Consolidated Statement of Income.

Changes in our warranty liability were as follows (in thousands):

	Six Months Ended	
	June 30, 2018	July 1, 2017
Balance at beginning of period	\$ 3,662	\$ 2,972
Accruals	2,868	2,477
Settlements	(3,681)	(2,656)
Balance at end of period	<u>\$ 2,849</u>	<u>\$ 2,793</u>

Note 9 — Stockholders' Equity and Stock-Based Compensation

Common Stock Repurchase Program

In February 2017, our Board of Directors authorized a program to repurchase up to \$25 million of outstanding common stock to offset potential dilution from issuances of common stock under our employee stock purchase plan and equity incentive plan. The share repurchase program will expire on February 1, 2020. Repurchased shares are retired upon the settlement of the related transactions with the excess of cost over par value charged to additional paid-in capital. All repurchases are made in compliance with Rule 10b-18 under the Securities Exchange Act of 1934, as amended.

During the six months ended June 30, 2018, we did not repurchase any shares. As of June 30, 2018, \$6.0 million remained available for future repurchases.

Restricted Stock Units

Restricted stock unit ("RSU") activity under our equity incentive plan was as follows:

	Units	Weighted Average Grant Date Fair Value
RSUs at December 30, 2017	3,148,061	\$ 11.22
Awards granted	129,750	13.69
Awards vested	(560,192)	8.71
Awards forfeited	(264,024)	11.60
RSUs at June 30, 2018	<u>2,453,595</u>	<u>\$ 11.89</u>

The total fair value of RSUs vested during the six months ended June 30, 2018 was \$7.6 million.

Performance Restricted Stock Units

We may grant Performance RSUs ("PRSUs") to certain executives, which vest based upon us achieving certain market performance criteria. There were no PRSUs granted during the six months ended June 30, 2018.

Stock Options

Stock option activity under our equity incentive plan was as follows:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
Outstanding at December 30, 2017	659,334	\$ 8.12		
Options exercised	(105,610)	9.93		
Outstanding at June 30, 2018	<u>553,724</u>	<u>\$ 7.77</u>	3.81	\$ 3,059,754
Exercisable at June 30, 2018	<u>429,770</u>	<u>\$ 7.66</u>	3.79	\$ 2,425,253

Employee Stock Purchase Plan

Information related to activity under our Employee Stock Purchase Plan ("ESPP") was as follows:

	Six Months Ended June 30, 2018
Shares issued	341,670
Weighted average per share purchase price	\$ 10.84
Weighted average per share discount from the fair value of our common stock on the date of issuance	\$ 3.51

Stock-Based Compensation

Stock-based compensation was included in our Condensed Consolidated Statements of Income as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Cost of revenues	\$ 813	\$ 792	\$ 1,733	\$ 1,646
Research and development	1,256	1,249	2,558	2,331
Selling, general and administrative	2,059	1,349	3,593	2,715
Total stock-based compensation	<u>\$ 4,128</u>	<u>\$ 3,390</u>	<u>\$ 7,884</u>	<u>\$ 6,692</u>

Unrecognized Compensation Costs

At June 30, 2018, the unrecognized stock-based compensation was as follows (in thousands):

	Unrecognized Expense	Average Expected Recognition Period in Years
Stock options	\$ 282	0.61
Restricted stock units	19,083	1.77
Employee stock purchase plan	173	0.59
Total unrecognized stock-based compensation expense	<u>\$ 19,538</u>	1.75

Note 10 — Net Income per Share

The following table reconciles the shares used in calculating basic net income per share and diluted net income per share (in thousands):

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Weighted-average shares used in computing basic net income per share	73,157	72,200	72,991	71,821
Add potentially dilutive securities	1,376	1,339	1,436	1,364
Weighted-average shares used in computing diluted net income per share	<u>74,533</u>	<u>73,539</u>	<u>74,427</u>	<u>73,185</u>
Securities not included as they would have been antidilutive	<u>76</u>	<u>82</u>	<u>49</u>	<u>96</u>

Note 11 — Commitments and Contingencies

Contractual Commitments and Purchase Obligations

During the second quarter of 2018, we amended our lease for our Beaverton, Oregon facility, which extended the lease through 2027. Our purchase obligations and other contractual obligations have not materially changed as of June 30, 2018 from those disclosed in our Annual Report on Form 10-K for the year ended December 30, 2017. Future minimum payments under our non-cancelable operating leases were as follows as of June 30, 2018 (in thousands):

Fiscal Year	Amount
Remainder of 2018	\$ 3,650
2019	5,736
2020	5,867
2021	5,665
2022	4,786
Thereafter	21,885
Total	<u>\$ 47,589</u>

Legal Matters

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. As of June 30, 2018, and as of the filing of this Quarterly Report on Form 10-Q, we were not involved in any material legal proceedings.

Note 12 — Operating Segments and Enterprise-Wide Information

Our chief operating decision maker ("CODM") is our Chief Executive Officer, who reviews operating results to make decisions about allocating resources and assessing performance for the entire company. We operate in two reportable segments consisting of the Probe Cards segment and the Systems segment.

The following table summarizes the operating results by reportable segment (dollars in thousands):

	Three Months Ended							
	June 30, 2018				July 1, 2017			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Revenues	\$ 111,586	\$ 23,923	\$ —	\$ 135,509	\$121,624	\$ 22,352	\$ —	\$ 143,976
Gross profit	\$ 50,543	\$ 11,626	\$ (5,951)	\$ 56,218	\$ 56,946	\$ 11,515	\$ (6,694)	\$ 61,767
Gross margin	45.3%	48.6%	—%	41.5%	46.8%	51.5%	—%	42.9%
Operating income (loss)	\$ 26,835	\$ 4,175	\$ (19,699)	\$ 11,311	\$ 24,792	\$ 3,970	\$ (9,183)	\$ 19,579

	Six Months Ended							
	June 30, 2018				July 1, 2017			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Revenues	\$ 206,514	\$ 47,285	\$ —	\$ 253,799	\$228,120	\$ 44,685	\$ —	\$ 272,805
Gross profit	\$ 90,614	\$ 22,761	\$ (12,028)	\$ 101,347	\$ 99,766	\$ 23,605	\$ (14,033)	\$ 109,338
Gross margin	43.9%	48.1%	—%	39.9%	43.7%	52.8%	—%	40.1%
Operating income (loss)	\$ 45,667	\$ 8,458	\$ (39,180)	\$ 14,945	\$ 36,391	\$ 9,083	\$ (18,836)	\$ 26,638

Operating results provide useful information to our management for assessment of our performance and results of operations. Certain components of our operating results are utilized to determine executive compensation along with other measures.

Corporate and Other includes unallocated expenses relating to general and administrative costs, amortization of intangible assets, share-based compensation, acquisition-related costs, including charges related to inventory stepped up to fair value and other costs, which are not used in evaluating the results of, or in allocating resources to, our reportable segments. Acquisition-related costs include transaction costs and any costs directly related to the acquisition and integration of acquired businesses.

Certain revenue category information by reportable segment was as follows (in thousands):

	Three Months Ended					
	June 30, 2018			July 1, 2017		
	Probe Cards	Systems	Total	Probe Cards	Systems	Total
Type of good/ service:						
Foundry & Logic	\$ 62,111	\$ —	\$ 62,111	\$ 88,726	\$ —	\$ 88,726
DRAM	38,090	—	38,090	31,470	—	31,470
Flash	11,385	—	11,385	1,428	—	1,428
Systems	—	23,923	23,923	—	22,352	22,352
Total	<u>\$ 111,586</u>	<u>\$ 23,923</u>	<u>\$ 135,509</u>	<u>\$ 121,624</u>	<u>\$ 22,352</u>	<u>\$ 143,976</u>
Timing of revenue recognition:						
Products transferred at a point in time	\$ 111,041	\$ 22,966	\$ 134,007	\$ 121,146	\$ 21,587	\$ 142,733
Services transferred over time	545	957	1,502	478	765	1,243
Total	<u>\$ 111,586</u>	<u>\$ 23,923</u>	<u>\$ 135,509</u>	<u>\$ 121,624</u>	<u>\$ 22,352</u>	<u>\$ 143,976</u>
Geographical region:						
United States	\$ 29,005	\$ 4,756	\$ 33,761	\$ 44,828	\$ 5,519	\$ 50,347
Taiwan	26,499	3,152	29,651	27,464	2,338	29,802
South Korea	24,302	1,806	26,108	20,936	1,780	22,716
Asia-Pacific ¹	16,413	4,866	21,279	13,112	7,308	20,420
Europe	4,109	5,410	9,519	7,146	3,483	10,629
Japan	10,833	2,710	13,543	7,605	1,771	9,376
Rest of the world	425	1,223	1,648	533	153	686
Total	<u>\$ 111,586</u>	<u>\$ 23,923</u>	<u>\$ 135,509</u>	<u>\$ 121,624</u>	<u>\$ 22,352</u>	<u>\$ 143,976</u>

	Six Months Ended					
	June 30, 2018			July 1, 2017		
	Probe Cards	Systems	Total	Probe Cards	Systems	Total
Type of good/ service:						
Foundry & Logic	\$ 120,549	\$ —	\$ 120,549	\$ 163,036	\$ —	\$ 163,036
DRAM	68,357	—	68,357	60,426	—	60,426
Flash	17,608	—	17,608	4,658	—	4,658
Systems	—	47,285	47,285	—	44,685	44,685
Total	<u>\$ 206,514</u>	<u>\$ 47,285</u>	<u>\$ 253,799</u>	<u>\$ 228,120</u>	<u>\$ 44,685</u>	<u>\$ 272,805</u>
Timing of revenue recognition:						
Products transferred at a point in time	\$ 205,475	\$ 45,372	\$ 250,847	\$ 227,195	\$ 43,016	\$ 270,211
Services transferred over time	1,039	1,913	2,952	925	1,669	2,594
Total	<u>\$ 206,514</u>	<u>\$ 47,285</u>	<u>\$ 253,799</u>	<u>\$ 228,120</u>	<u>\$ 44,685</u>	<u>\$ 272,805</u>
Geographical region:						
United States	\$ 55,562	\$ 11,132	\$ 66,694	\$ 77,565	\$ 12,671	\$ 90,236
Taiwan	52,397	4,903	57,300	45,616	3,731	49,347
South Korea	38,586	2,880	41,466	39,089	2,364	41,453
Asia-Pacific ¹	28,567	9,438	38,005	34,483	11,943	46,426
Europe	9,682	11,340	21,022	11,649	7,729	19,378
Japan	20,965	6,250	27,215	18,800	5,810	24,610
Rest of the world	755	1,342	2,097	918	437	1,355
Total	<u>\$ 206,514</u>	<u>\$ 47,285</u>	<u>\$ 253,799</u>	<u>\$ 228,120</u>	<u>\$ 44,685</u>	<u>\$ 272,805</u>

¹ Asia-Pacific includes all countries in the region except Taiwan, South Korea, and Japan, which are disclosed separately.

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

Cautionary Statement Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Securities Exchange Act of 1934 and the Securities Act of 1933, which are subject to risks and uncertainties. The forward-looking statements include statements concerning, among other things, our business strategy, financial and operating results, gross margins, liquidity and capital expenditure requirements, impact of accounting standards and our share repurchase plan. In some cases, you can identify these statements by forward-looking words, such as "may," "might," "will," "could," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "intend" and "continue," the negative or plural of these words and other comparable terminology.

The forward-looking statements are only predictions based on our current expectations and our projections about future events. All forward-looking statements included in this Quarterly Report on Form 10-Q are based upon information available to us as of the filing date of this Quarterly Report on Form 10-Q. You should not place undue reliance on these forward-looking statements. We have no obligation to update any of these statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by these statements, including risks related to general market trends, our ability to execute our business strategy and other risks discussed in the section titled "Risk Factors" and elsewhere in our Annual Report on Form 10-K for the year ended December 30, 2017 and in this Quarterly Report on Form 10-Q. You should carefully consider the numerous risks and uncertainties described under these sections.

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and the accompanying notes contained in this Quarterly Report on Form 10-Q. Unless expressly stated or the context otherwise requires, the terms "we," "our," "us" and "FormFactor" refer to FormFactor, Inc. and its subsidiaries.

Overview

FormFactor, Inc., headquartered in Livermore, California, is a leading provider of test and measurement solutions. We provide a broad range of high-performance probe cards, analytical probes, probe stations and thermal sub-systems to both semiconductor companies and scientific institutions. Our products provide electrical information from a variety of semiconductor and electro-optical devices and integrated circuits (devices) from development to production. Customers use our products and services to lower production costs, improve yields, and enable development of complex next-generation devices.

We operate in two reportable segments consisting of the Probe Cards segment and the Systems segment. Sales of our probe cards and analytical probes are included in the Probe Cards segment, while sales of our probe stations and thermal sub-systems are included in the Systems segment.

We generated net income of \$11.2 million in the first six months of fiscal 2018 as compared to \$22.8 million in the first six months of fiscal 2017. The decrease in net income was primarily due to decreased revenue from our Probe Cards segment and increased operating expenses.

Critical Accounting Policies and the Use of Estimates

Management's Discussion and Analysis and Note 2 to the Consolidated Financial Statements in our 2017 Annual Report on Form 10-K describe the significant accounting estimates and critical accounting policies used in preparation of the Consolidated Financial Statements. Actual results in these areas could differ from management's estimates. During the six months ended June 30, 2018, other than the adoption of new revenue recognition guidance as described in Note 1, there were no significant changes in our critical accounting policies or estimates from those reported in our Annual Report on Form 10-K for the year ended December 30, 2017, which was filed with the Securities and Exchange Commission on February 27, 2018.

Results of Operations

The following table sets forth our operating results as a percentage of revenues for the periods indicated:

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Revenues	100.0 %	100.0 %	100.0 %	100.0 %
Cost of revenues	58.5	57.1	60.1	59.9
Gross profit	41.5	42.9	39.9	40.1
Operating expenses:				
Research and development	14.5	12.9	14.9	13.2
Selling, general and administrative	18.6	16.4	19.2	17.0
Restructuring	—	—	—	0.1
Total operating expenses	33.1	29.3	34.1	30.3
Operating income	8.4	13.6	5.8	9.8
Interest income	0.2	0.1	0.2	0.1
Interest expense	(0.7)	(0.8)	(0.7)	(0.9)
Other income (expense), net	0.1	0.1	(0.3)	(0.1)
Income before income taxes	8.0	13.0	5.0	8.9
Provision for income taxes	1.3	0.7	0.8	0.5
Net income	6.7 %	12.3 %	4.2 %	8.4 %

Revenues by Segment

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
	(In thousands)			
Probe Cards	\$ 111,586	\$ 121,624	\$ 206,514	\$ 228,120
Systems	23,923	22,352	47,285	44,685
	<u>\$ 135,509</u>	<u>\$ 143,976</u>	<u>\$ 253,799</u>	<u>\$ 272,805</u>

The decreases in Probe Cards segment revenue for the three and six months ended June 30, 2018, compared to the three and six months ended July 1, 2017, were primarily the result of decreased unit sales in the Foundry & Logic market, offset partially by increased unit sales in the DRAM and Flash markets.

The increases in Systems segment revenue for the three and six months ended June 30, 2018, compared to the three and six months ended July 1, 2017, were driven by increased unit sales of thermal sub-systems due to increased customer demand, offset partially by lower revenue from probe stations due to changes in product sales mix which decreased the average selling price of unit sold.

Revenues by Market

	Three Months Ended					
	June 30, 2018	% of Revenues	July 1, 2017	% of Revenues	\$ Change	% Change
(Dollars in thousands)						
Probe Cards Markets:						
Foundry & Logic	\$ 62,111	45.8%	\$ 88,726	61.6%	\$ (26,615)	(30.0)%
DRAM	38,090	28.1	31,470	21.9	6,620	21.0
Flash	11,385	8.4	1,428	1.0	9,957	697.3
Systems Market:						
Systems	23,923	17.7	22,352	15.5	1,571	7.0
Total revenues	\$ 135,509	100.0%	\$ 143,976	100.0%	\$ (8,467)	(5.9)%

	Six Months Ended					
	June 30, 2018	% of Revenues	July 1, 2017	% of Revenues	\$ Change	% Change
(Dollars in thousands)						
Probe Cards Markets:						
Foundry & Logic	\$ 120,549	47.5%	\$ 163,036	59.8%	\$ (42,487)	(26.1)%
DRAM	68,357	26.9	60,426	22.1	7,931	13.1
Flash	17,608	7.0	4,658	1.7	12,950	278.0
Systems Market:						
Systems	47,285	18.6	44,685	16.4	2,600	5.8
Total revenues	\$ 253,799	100.0%	\$ 272,805	100.0%	\$ (19,006)	(7.0)%

The decreases in Foundry & Logic product revenue for the three and six months ended June 30, 2018, compared to the three and six months ended July 1, 2017, were primarily the result of lower demand from one major customer. This major customer accounted for 15.1% and 14.6% of total revenues for the three and six months ended June 30, 2018, compared to 24.9% and 25.8% of total revenues for the three and six months ended July 1, 2017.

The increases in DRAM and Flash product revenue for the three and six months ended June 30, 2018, compared to the three and six months ended July 1, 2017, were the result of increased customer demand.

The increases in Systems product revenue for the three and six months ended June 30, 2018, compared to the three and six months ended July 1, 2017, were driven by increased unit sales of thermal sub-systems due to increased customer demand, offset partially by lower revenue from probe stations due to changes in product sales mix, which decreased the average selling price of units sold.

Revenues by Geographic Region

	Three Months Ended				Six Months Ended			
	June 30, 2018	% of Revenue	July 1, 2017	% of Revenue	June 30, 2018	% of Revenue	July 1, 2017	% of Revenue
(Dollars in thousands)								
United States	\$ 33,761	24.9%	\$ 50,347	35.0%	\$ 66,694	26.3%	\$ 90,236	33.1%
Taiwan	29,651	21.9	29,802	20.7	57,300	22.6	49,347	18.1
South Korea	26,108	19.3	22,716	15.8	41,466	16.3	41,453	15.2
Asia-Pacific ⁽¹⁾	21,279	15.7	20,420	14.2	38,005	15.0	46,426	17.0
Europe	9,519	7.0	10,629	7.4	21,022	8.3	19,378	7.1
Japan	13,543	10.0	9,376	6.5	27,215	10.7	24,610	9.0
Rest of the world	1,648	1.2	686	0.5	2,097	0.8	1,355	0.5
Total revenues	\$ 135,509	100.0%	\$ 143,976	100.0%	\$ 253,799	100.0%	\$ 272,805	100.0%

⁽¹⁾ Asia-Pacific includes all countries in the region except Taiwan, South Korea and Japan, which are disclosed separately.

Geographic revenue information is based on the location to which we ship the product. For example, if a certain South Korean customer purchases through their U.S. subsidiary and requests the products to be shipped to an address in South Korea, this sale will be reflected in the revenue for South Korea rather than U.S.

Changes in revenue by geographic region for the three and six months ended June 30, 2018 compared to the three and six months ended July 1, 2017 were primarily attributable to changes in customer demand and product sales mix.

Cost of Revenues and Gross Margins

Cost of revenues consists primarily of manufacturing materials, compensation and benefits, shipping and handling costs, manufacturing-related overhead and amortization of certain intangible assets. Our manufacturing operations rely on a limited number of suppliers to provide key components and materials for our products, some of which are a sole source. We order materials and supplies based on backlog and forecasted customer orders. Tooling and setup costs related to changing manufacturing lots at our suppliers are also included in the cost of revenues. We expense all warranty costs, inventory provisions and amortization of certain intangible assets as cost of revenues.

Our gross profit and gross margin were as follows (dollars in thousands):

	Three Months Ended			
	June 30, 2018	July 1, 2017	\$ Change	% Change
Gross profit	\$ 56,218	\$ 61,767	\$ (5,549)	(9.0)%
Gross margin	41.5%	42.9%		

	Six Months Ended			
	June 30, 2018	July 1, 2017	\$ Change	% Change
Gross profit	\$ 101,347	\$ 109,338	\$ (7,991)	(7.3)%
Gross margin	39.9%	40.1%		

Our gross profit and gross margin by segment were as follows (dollars in thousands):

	Three Months Ended							
	June 30, 2018				July 1, 2017			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Gross profit	\$ 50,543	\$ 11,626	\$ (5,951)	\$ 56,218	\$ 56,946	\$ 11,515	\$ (6,694)	\$ 61,767
Gross margin	45.3%	48.6%	—%	41.5%	46.8%	51.5%	—%	42.9%

	Six Months Ended							
	June 30, 2018				July 1, 2017			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Gross profit	\$90,614	\$ 22,761	\$ (12,028)	\$ 101,347	\$99,766	\$ 23,605	\$ (14,033)	\$ 109,338
Gross margin	43.9%	48.1%	—%	39.9%	43.7%	52.8%	—%	40.1%

Probe Cards

For the three and six months ended June 30, 2018, gross profit in the Probe Cards segment decreased due to decreased sales, while gross margins decreased for the three months ended and increased for the six months ended. These fluctuations were driven by changes in product mix and factory utilization.

Systems

For the three and six months ended June 30, 2018, gross profit and gross margin in the Systems segment fluctuated due to changes in product mix and changes in foreign currency exchange rates.

Corporate and Other includes unallocated expenses relating to amortization of intangible assets, share-based compensation expense, acquisition-related costs, including charges related to inventory stepped up to fair value, and other costs, which are not used in evaluating the results of, or in allocating resources to, our reportable segments.

Overall

Gross profit and gross margin fluctuate with revenue levels, product mix, selling prices, factory loading and material costs. For the three and six months ended June 30, 2018, compared to the three and six months ended July 1, 2017, gross profit decreased due to lower revenue, and gross margins decreased due to unfavorable product mix and lower factory utilization, offset by lower amortization.

Cost of revenues included stock-based compensation expense as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Stock-based compensation	\$ 813	\$ 792	\$ 1,733	\$ 1,646

Future gross margins may be adversely impacted by lower revenues, unfavorable product mix and lower factory utilization even though we have taken significant steps to reduce our operating cost structure. Our gross margins may also be adversely affected if we are required to record additional inventory write-downs for estimated average selling prices that are below cost.

Research and Development

	Three Months Ended			
	June 30, 2018	July 1, 2017	\$ Change	% Change
(Dollars in thousands)				
Research and development	\$ 19,675	\$ 18,542	\$ 1,133	6.1%
% of revenues	14.5%	12.9%		

	Six Months Ended			
	June 30, 2018	July 1, 2017	\$ Change	% Change
(Dollars in thousands)				
Research and development	\$ 37,721	\$ 35,956	\$ 1,765	4.9%
% of revenues	14.9%	13.2%		

The increases in research and development expenses in the three and six months ended June 30, 2018 when compared to corresponding periods in the prior year were primarily due to increases in project material costs to support research and development within our Probe Card segment and personnel-related costs due to an increase in headcount that was mainly offset by a decrease in incentive compensation.

A detail of the changes is as follows (in thousands):

	Three Months Ended June 30, 2018 compared to Three Months Ended July 1, 2017	Six Months Ended June 30, 2018 compared to Six Months Ended July 1, 2017
Stock-based compensation	\$ 7	\$ 227
Project material costs	869	1,102
Depreciation	109	202
Employee compensation and other general operations	148	234
	\$ 1,133	\$ 1,765

Research and development included stock-based compensation expense as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Stock-based compensation	\$ 1,256	\$ 1,249	\$ 2,558	\$ 2,331

Selling, General and Administrative

	Three Months Ended			
	June 30, 2018	July 1, 2017	\$ Change	% Change
(Dollars in thousands)				
Selling, general and administrative	\$ 25,232	\$ 23,602	\$ 1,630	6.9%
% of revenues	18.6%	16.4%		

	Six Months Ended			
	June 30, 2018	July 1, 2017	\$ Change	% Change
(Dollars in thousands)				
Selling, general and administrative	\$ 48,681	\$ 46,431	\$ 2,250	4.8%
% of revenues	19.2%	17.0%		

The increases in the three and six months ended June 30, 2018 when compared to the corresponding periods in the prior year were primarily due to increases in consulting fees related to information systems, and stock-based compensation, offset partially by reduction in integration costs. A detail of the changes is as follows (in thousands):

	Three Months Ended June 30, 2018 compared to Three Months Ended July 1, 2017	Six Months Ended June 30, 2018 compared to Six Months Ended July 1, 2017
Integration related	\$ (418)	\$ (1,008)
Consulting fees	728	1,597
Stock-based compensation	710	878
Travel related costs	303	35
Employee compensation and other general operating costs	307	748
	<u>\$ 1,630</u>	<u>\$ 2,250</u>

Selling, general and administrative included stock-based compensation expense as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Stock-based compensation	\$ 2,059	\$ 1,349	\$ 3,593	\$ 2,715

Restructuring Charges, net

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
Restructuring charges, net	\$ —	\$ 44	\$ —	\$ 313
% of revenues	—%	—%	—%	0.1%

Restructuring charges in the first and second quarters of fiscal 2017 were related to the consolidation of Cascade Microtech into our operations and included costs related to employee termination benefits and contract termination costs.

Interest Income and Interest Expense

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
	(Dollars in thousands)			
Interest income	\$ 326	\$ 93	\$ 583	\$ 160
Weighted average balance of cash and investments	\$ 142,807	\$ 122,556	\$ 138,221	\$ 116,926
Weighted average yield on cash and investments	1.34%	0.75%	1.42%	0.61%
Interest expense	\$ (910)	\$ (1,162)	\$ (1,877)	\$ (2,337)
Average term loan outstanding	\$ 97,225	\$ 132,500	\$ 101,641	\$ 135,918
Weighted average interest rate on term loan	3.93%	2.92%	3.77%	2.82%

Interest income is earned on our cash, cash equivalents, restricted cash and marketable securities. The increase in interest income for the three and six months ended June 30, 2018 compared with corresponding periods of prior year is attributable to higher investment yields, as well as higher average investment balances.

Interest expense primarily includes interest on our term loan, interest-rate swap derivative contracts and term loan issuance costs amortization charges. The decreases in interest expense for the three and six months ended June 30, 2018 compared to the three and six months ended July 1, 2017 were primarily due to lower outstanding debt balances as a result of principal payments made.

Other Income (Expense), Net

Other income (expense), net, primarily includes the effects of foreign currency impact and various other gains and losses.

Provision for Income Taxes

	Three Months Ended		Six Months Ended	
	June 30, 2018	July 1, 2017	June 30, 2018	July 1, 2017
	(Dollars in thousands)			
Provision for income taxes	\$ 1,654	\$ 1,040	\$ 1,941	\$ 1,407
Effective income tax rate	15.3%	5.6%	14.7%	5.8%

Provision for income taxes reflects the tax provision on our operations in foreign and U.S. jurisdictions, offset by tax benefits from lapsing of statute of limitations related to uncertain tax positions in foreign jurisdictions. We continue to maintain a full valuation allowance against our U.S. Federal and State deferred tax assets. The change in provision for income taxes was driven by higher profits in foreign jurisdictions for the three and six months ended June 30, 2018, compared to the three and six months ended June 30, 2017.

New tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), was enacted on December 22, 2017. In connection with our initial analysis of the impact of the Tax Act, the Tax Act did not have a material impact on the fiscal 2017 tax provision. With the reduction in the U.S. corporate income tax rate, we revalued our ending U.S. deferred tax assets at December 30, 2017, which was offset by a corresponding change in the U.S. valuation allowance. We also released the valuation allowance against \$0.8 million of AMT tax credits at December 30, 2017 which became fully refundable under the Tax Act. These provisional amounts may be impacted by the need for further analysis and future clarification and guidance regarding available tax accounting methods and elections, earnings and profits computations, foreign tax credit calculations, and state tax conformity to federal tax changes. We have not completed the accounting for the tax effects of the Tax Act described above and there have been no material changes to estimated amounts.

Liquidity and Capital Resources

Capital Resources

Our working capital was \$214.0 million at June 30, 2018, which did not change significantly compared to \$213.7 million at December 30, 2017.

Cash and cash equivalents primarily consist of deposits held at banks and money market funds. Marketable securities primarily consist of U.S. agency securities and corporate bonds. We typically invest in highly-rated securities with low probabilities of default. Our investment policy requires investments to be rated single A or better, and limits the types of acceptable investments, issuer concentration and duration of the investment.

Our cash, cash equivalents and marketable securities totaled approximately \$142.9 million at June 30, 2018, compared to \$140.2 million at December 30, 2017. We believe that we will be able to satisfy our working capital requirements and scheduled term loan repayments for at least the next twelve months with the liquidity provided by our existing cash, cash equivalents, marketable securities and cash provided by operations. To the extent necessary, we may consider entering into short and long-term debt obligations, raising cash through a stock issuance, or obtaining new financing facilities, which may not be available on terms favorable to us. Our future capital requirements may vary materially from those now planned.

If we are unsuccessful in maintaining or growing our revenues, maintaining or reducing our cost structure (in response to an industry demand downturn or other event), or increasing our available cash through debt or equity financings, our cash, cash equivalents and marketable securities may decline in fiscal 2018.

We utilize a variety of tax planning and financing strategies in an effort to manage our worldwide cash and deploy funds to locations where they are needed. As part of these strategies, we indefinitely reinvest a significant portion of our foreign earnings. During the six months ended June 30, 2018, we repatriated \$13M of foreign earnings. Should we require additional capital in the United States, we may elect to repatriate indefinitely-reinvested foreign funds or raise capital in the United States.

Cash Flows

The following table sets forth our net cash flows from operating, investing and financing activities:

	Six Months Ended	
	June 30, 2018	July 1, 2017
	(In thousands)	
Net cash provided by operating activities	\$ 30,058	\$ 42,281
Net cash used in investing activities	(6,962)	(22,420)
Net cash used in financing activities	(18,949)	(15,733)

Operating Activities

Net cash provided by operating activities for the six months ended June 30, 2018 was primarily attributable to net income of \$11.2 million and \$34.0 million of net non-cash expenses, offset by operating assets and liabilities using \$15.2 million of cash as discussed in more detail below.

Accounts receivable, net, increased \$3.3 million to \$84.8 million at June 30, 2018, compared to \$81.5 million at December 30, 2017, as a result of increased revenues in the second quarter of 2018 compared to the fourth quarter 2017, and timing of customer shipments.

Inventories, net, increased \$8.5 million to \$76.4 million at June 30, 2018, compared to \$67.8 million at December 30, 2017, as a result of increased inventory purchases in anticipation of higher customer demand.

Prepaid expenses and other current assets increased \$5.1 million to \$18.8 million at June 30, 2018, compared to \$13.7 million at December 30, 2017, as a result of increases in unrealized gains on forward contracts, prepaid insurance and other services, contract assets, and sales tax receivables due to timing of receipts.

Accounts payable increased \$7.0 million to \$42.1 million at June 30, 2018, compared to \$35.0 million at December 30, 2017, as a result of increased inventory purchases, and timing of vendor payments.

Accrued liabilities decreased \$3.8 million to \$29.9 million at June 30, 2018, compared to \$33.7 million at December 30, 2017, as a result of decreases in accrued warranty, decreases in employee stock purchase plan withholdings, timing of tax payments, and timing of employee benefits.

Investing Activities

Net cash used in investing activities for the six months ended June 30, 2018 was primarily related to \$8.5 million of cash used in the acquisition of property, plant and equipment, partially offset by \$1.5 million of net maturities of marketable securities.

Financing Activities

Net cash used in financing activities for the six months ended June 30, 2018 primarily related to \$21.3 million of principal payments made towards the repayment of our term loan and \$2.5 million related to tax withholdings associated with the net share settlements of our equity awards, partially offset by \$4.8 million of proceeds received from issuances of common stock under our employee stock purchase plan and exercise of stock options.

Debt Facility

On June 24, 2016, we entered into a credit agreement (the "Credit Agreement") with HSBC Bank USA, National Association ("HSBC"). Pursuant to the Credit Agreement, the lenders provided us with a senior secured term loan facility of \$150 million (the "Term Loan"). The proceeds of the Term Loan were used to finance a portion of the purchase price paid in connection with the acquisition of Cascade Microtech.

The Term Loan bears interest at a rate equal to, at our option, (i) the applicable London Interbank Offered Rate ("LIBOR") rate plus 2.00% per annum or (ii) Base Rate (as defined in the Credit Agreement) plus 1.00% per annum. We have currently elected to pay interest at 2.00% over the one-month LIBOR rate. Interest payments are payable in quarterly installments over a five-year period. The Term Loan amortizes in equal quarterly installments, which began June 30, 2016, in annual amounts equal to 5% for year one, 10% for year two, 20% for year three, 30% for year four and 35% for year five.

The obligations under the Term Loan are guaranteed by substantially all of our assets and the assets of our domestic subsidiaries, subject to certain customary exceptions.

The Credit Agreement contains negative covenants customary for financing of this type, as well as certain financial maintenance covenants. As of June 30, 2018, the balance outstanding pursuant to the Term Loan was \$85.0 million at an interest rate of 4.1% and we were in compliance with all covenants under the Credit Agreement.

The Credit Agreement allows voluntary prepayment to be made at any time to prepay the Term Loan in whole or in part without penalty or premium. As of June 30, 2018, we have made prepayments of \$35.0 million in addition to scheduled installments per the Credit Agreement. For the three and six months ended June 30, 2018, we made prepayments of \$5.0 million and \$10.0 million, respectively, in addition to scheduled installments.

Stock Repurchase Program

In February 2017, our Board of Directors authorized a program to repurchase up to \$25 million of outstanding common stock to offset potential dilution from issuances of common stock under our stock-based compensation plans. The share repurchase program will expire on February 1, 2020. During the six months ended June 30, 2018, we did not repurchase any shares of common stock. As of June 30, 2018, \$6.0 million remained available for future repurchases.

Repurchased shares are retired upon the settlement of the related trade transactions with the excess of cost over par value charged to additional paid-in capital. All repurchases were made in compliance with Rule 10b-18 under the Securities Exchange Act of 1934, as amended.

Contractual Obligations and Commitments

Other than our operating lease commitments as disclosed in Note 11 of Notes to Condensed Consolidated Financial Statements, our contractual obligations and commitments have not materially changed as of June 30, 2018 from those disclosed in our Annual Report on Form 10-K for the year ended December 30, 2017.

Off-Balance Sheet Arrangements

Historically, we have not participated in transactions that have generated relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As of June 30, 2018, we were not involved in any such off-balance sheet arrangements.

Recent Accounting Pronouncements

See Note 1 of Notes to Condensed Consolidated Financial Statements.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

For financial market risks related to changes in interest rates and foreign currency exchange rates, reference is made to Item 7A “Quantitative and Qualitative Disclosures about Market Risk” contained in Part II of our Annual Report on Form 10-K for the fiscal year ended December 30, 2017. Our exposure to market risk has not changed materially since December 30, 2017.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Based on our management’s evaluation (with the participation of our principal executive officer and principal financial officer), as of the end of the period covered by this report, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, (the “Exchange Act”)) are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the period covered by this Quarterly Report on Form 10-Q that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls

Control systems, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control systems’ objectives are being met. Further, the design of any control systems must reflect the fact that there are resource constraints, and the benefits of all controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our company have been detected. These inherent limitations include the realities that judgments in decision making can be faulty and that breakdowns can occur because of simple error or mistake. Control systems can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based, in part, on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

CEO and CFO Certifications

We have attached as exhibits to this Quarterly Report on Form 10-Q the certifications of our Chief Executive Officer and Chief Financial Officer, which are required in accordance with the Exchange Act. We recommend that this Item 4 be read in conjunction with the certifications for a more complete understanding of the subject matter presented.

PART II - OTHER INFORMATION

Item 1A. Risk Factors

There have been no material changes during the six months ended June 30, 2018 to the risk factors discussed in our Annual Report on Form 10-K for the year ended December 30, 2017. If any of the identified risks actually occur, our business, financial condition and results of operations could suffer. The trading price of our common stock could decline and you may lose all or part of your investment in our common stock. The risks and uncertainties described in our Annual Report on Form 10-K for the year ended December 30, 2017 are not the only ones we face. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business operations.

Item 6. Exhibits

The following exhibits are filed herewith and this list constitutes the exhibit index.

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed
		Form	Date	Number	Herewith
10.01	Seventh Amendment, dated June 5, 2018, between FormFactor, Inc. and Nimbus Center LLC, to Lease dated April 2, 1999, by and between Nimbus Center LLC (as successor in interest to Spieker Properties, L.P.) and Cascade Microtech, Inc.	8-K	June 15, 2018	10.1	
31.01	Certification of Chief Executive Officer pursuant to 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
31.02	Certification of Chief Financial Officer pursuant to 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
32.01	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				*
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X

* This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any filings.

SIGNATURE

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.

FormFactor, Inc.

Date: August 7, 2018

By: /s/ SHAI SHAHAR

Shai Shahar

Chief Financial Officer

*(Duly Authorized Officer, Principal Financial Officer,
and Principal Accounting Officer)*

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 15 U.S.C. SECTION 7241, AS
ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael D. Slessor, certify that:

1. I have reviewed the quarterly report on Form 10-Q of FormFactor, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in the quarterly report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2018

/s/ MICHAEL D. SLESSOR

Michael D. Slessor
Chief Executive Officer
(Principal Executive Officer and Director)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 15 U.S.C. SECTION 7241,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Shai Shahar, certify that:

1. I have reviewed the quarterly report on Form 10-Q of FormFactor, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in the quarterly report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2018

/s/ SHAI SHAHAR

Shai Shahar

Chief Financial Officer

(Principal Financial Officer and Principal Accounting Officer)

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

In connection with the Quarterly Report on Form 10-Q of FormFactor, Inc., a Delaware corporation, for the period ended June 30, 2018, as filed with the Securities and Exchange Commission, each of the undersigned officers of FormFactor, Inc. certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his respective knowledge:

1. The quarterly 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 quarterly report fairly presents, in all material respects, the financial condition and results of operations of FormFactor, Inc. for the periods presented therein.

Date: August 7, 2018

/s/ MICHAEL D. SLESSOR

Michael D. Slessor
Chief Executive Officer
(Principal Executive Officer and Director)

Date: August 7, 2018

/s/ SHAI SHAHAR

Shai Shahar
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)