FORMFACTOR INC
Form 10-Q
November 06, 2018

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

(Mark one)
ý QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 29, 2018

Or

o 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	13-3711155
(State or other jurisdiction of incorporation or organization)	(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 ý No o

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 ý No o

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 x	Accelerated filer o
Non-accelerated filer o	Smaller reporting company o

(Do not check if a smaller reporting company)
Emerging growth company o

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. o

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

As of October 31, 2018, 74,102,335 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 SEPTEMBER 29, 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)

	September 29, 2018	December 30, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 91,990	$ 91,184
Marketable securities	50,109	48,988
Accounts receivable, net of allowance for doubtful accounts of $200 and $200	88,869	81,515
Inventories, net	81,538	67,848
Restricted cash	129	372
Refundable income taxes	1,320	2,242
Prepaid expenses and other current assets	15,716	13,705
Total current assets	329,671	305,854
Restricted cash	1,034	1,170
Property, plant and equipment, net of accumulated depreciation of $260,607 and $255,755	52,857	46,754
Goodwill	189,427	189,920
Intangibles, net	75,278	97,484
Deferred tax assets	3,042	3,133
Other assets	1,163	2,259
Total assets	$ 652,472	$ 646,574
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 49,668	$ 35,046
Accrued liabilities	24,877	33,694
Current portion of term loan, net of unamortized issuance cost of $189 and $307	26,061	18,443
Deferred revenue	4,795	4,978
Total current liabilities	105,401	92,161
Term loan, less current portion, net of unamortized issuance cost of $57 and $272	46,193	87,228
Deferred tax liabilities	3,290	3,379
Deferred rent and other liabilities	7,537	5,169
Total liabilities	162,421	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; 74,101,623 and 72,532,176 shares issued and outstanding	75	73
Additional paid-in capital	857,505	843,116
Accumulated other comprehensive income	1,158	3,021
Accumulated deficit	(368,687)	(387,573)

Total stockholders' equity	490,051	458,637
Total liabilities and stockholders' equity	$ 652,472	$ 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		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Revenues	$134,989	$ 143,735	$388,788	$ 416,540
Cost of revenues	82,019	86,105	234,471	249,572
Gross profit	52,970	57,630	154,317	166,968
Operating expenses:				
Research and development	18,857	19,338	56,578	55,294
Selling, general and administrative	24,745	24,010	73,426	70,441
Restructuring	—	16	—	329
Total operating expenses	43,602	43,364	130,004	126,064
Operating income	9,368	14,266	24,313	40,904
Interest income	369	123	952	283
Interest expense	(777)	(1,109)	(2,654)	(3,446)
Other income (expense), net	121	311	(341)	19
Income before income taxes	9,081	13,591	22,270	37,760
Provision for income taxes	1,393	1,028	3,334	2,435
Net income	$7,688	$ 12,563	$18,936	$ 35,325
Net income per share:				
Basic	$0.10	$ 0.17	$0.26	$ 0.49
Diluted	$0.10	$ 0.17	$0.25	$ 0.48
Weighted-average number of shares used in per share calculations:				
Basic	73,837	72,651	73,273	72,103
Diluted	74,962	73,885	74,628	73,540

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		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Net income	$7,688	$ 12,563	$18,936	$ 35,325
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	(449)	1,540	(1,732)	5,769
Unrealized gains (losses) on available-for-sale marketable securities	50	(15)	(84)	(37)
Unrealized gains (losses) on derivative instruments	(134)	(36)	(47)	4
Other comprehensive income (loss), net of tax	(533)	1,489	(1,863)	5,736
Comprehensive income	$7,155	$ 14,052	$17,073	$ 41,061

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

FORMFACTOR, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)
(Unaudited)

	Nine-Month Period Ended September 29, 2018					
	Shares	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
Balances, December 30, 2017	72,532,176	73	843,116	3,021	(387,573)	458,637
Issuance of common stock under the Employee Stock Purchase Plan	610,297	1	6,661	—	—	6,662
Issuance of common stock pursuant to exercise of options for cash	105,610	—	1,049	—	—	1,049
Issuance of common stock pursuant to vesting of restricted stock units	853,540	1	(5,694)	—	—	(5,693)
Stock-based compensation	—	—	12,373	—	—	12,373
ASU2017-12 Adoption	—	—	—	—	(50)	(50)
Components of other comprehensive income (loss):						
Unrealized loss on marketable securities, net of tax	—	—	—	(84)	—	(84)
Currency translation adjustments	—	—	—	(1,732)		(1,732)
Unrealized gain on derivative instruments, net of tax	—	—	—	(47)	—	(47)
Net income	—	—	—	—	18,936	18,936
Balances, September 29, 2018	74,101,623	75	857,505	1,158	(368,687)	490,051

	Three-Month Period Ended September 29, 2018					
	Shares	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
Balances, June 30, 2018	73,358,108	74	853,278	1,691	(376,375)	478,668
Issuance of common stock under the Employee Stock Purchase Plan	268,627	—	2,957	—	—	2,957
Issuance of common stock pursuant to vesting of restricted stock units	474,888	1	(3,241)	—	—	(3,240)
Stock-based compensation	—	—	4,511	—	—	4,511
Components of other comprehensive income (loss):						
Unrealized gain on marketable securities, net of tax	—	—	—	50	—	50
Currency translation adjustments	—	—	—	(449)	—	(449)
Unrealized loss on derivative instruments, net of tax	—	—	—	(134)	—	(134)
Net income	—	—	—	—	7,688	7,688

Balances, September 29, 2018	74,101,623	$ 75	$857,505	$ 1,158		$(368,687)	$490,051

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FORMFACTOR, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)
(Unaudited)

	Nine-Month Period Ended September 30, 2017					
	Shares	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
Balances, December 31, 2016	70,907,847	71	833,341	(3,740)	(428,616)	401,056
Issuance of common stock under the Employee Stock Purchase Plan	655,961	1	5,694	—	—	5,695
Issuance of common stock pursuant to exercise of options for cash	1,431,767	1	13,412	—	—	13,413
Issuance of common stock pursuant to vesting of restricted stock units	845,063	1	(6,619)	—	—	(6,618)
Purchase and retirement of common stock	(867,620)	(1)	(10,963)	—	—	(10,964)
Stock-based compensation	—	—	11,207	—	—	11,207
ASU2016-09 Adoption	—	—	(130)	—	130	—
Components of other comprehensive income (loss):						
Unrealized loss on marketable securities, net of tax	—	—	—	(37)	—	(37)
Currency translation adjustments	—	—	—	5,769		5,769
Unrealized gain on derivative instruments, net of tax	—	—	—	4	—	4
Net income	—	—	—	—	35,325	35,325
Balances, September 30, 2017	72,973,018	73	845,942	1,996	(393,161)	454,850

	Three-Month Period Ended September 30, 2017					
	Shares	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
Balances, July 1, 2017	72,346,116	73	839,751	507	(405,724)	434,607
Issuance of common stock under the Employee Stock Purchase Plan	258,937	—	2,795	—	—	2,795
Issuance of common stock pursuant to exercise of options for cash	178,250	—	1,827	—	—	1,827
Issuance of common stock pursuant to vesting of restricted stock units	257,015	—	(2,156)	—	—	(2,156)
Purchase and retirement of common stock	(67,300)	—	(831)	—	—	(831)
Stock-based compensation	—	—	4,556	—	—	4,556
Components of other comprehensive income (loss):						
Unrealized loss on marketable securities, net of tax	—	—	—	(15)	—	(15)

Currency translation adjustments	—	—	—	1,540	—	1,540
Unrealized loss on derivative instruments, net of tax	—	—	—	(36)	—	(36)
Net income	—	—	—	—	12,563	12,563
Balances, September 30, 2017	72,973,018	$ 73	$845,942	$ 1,996	$(393,161)	$454,850

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

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

	Nine Months Ended	
	September 29, 2018	September 30, 2017
Cash flows from operating activities:		
Net income	$18,936	$ 35,325
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	10,494	10,046
Amortization	21,876	23,509
Accretion of discount on investments	21	22
Stock-based compensation expense	12,421	11,279
Amortization of debt issuance costs	333	482
Deferred income tax provision	70	122
Recovery of doubtful accounts receivable	—	(97)
Provision for excess and obsolete inventories	7,414	6,899
Acquired inventory step-up amortization	—	484
Loss on disposal of long-lived assets	264	101
(Gain) loss on derivative instruments	—	(18)
Foreign currency transaction losses (gains)	409	(1,957)
Changes in assets and liabilities:		
Accounts receivable	(7,569)	(17,097)
Inventories	(21,806)	(14,270)
Prepaid expenses and other current assets	(1,874)	1,140
Refundable income taxes	933	(440)
Other assets	697	823
Accounts payable	10,425	3,040
Accrued liabilities	(8,882)	(1,048)
Income tax payable	(248)	(97)
Deferred rent and other liabilities	2,445	101
Deferred revenues	(221)	1,517
Net cash provided by operating activities	46,138	59,866
Cash flows from investing activities:		
Acquisition of property, plant and equipment	(12,326)	(13,918)
Proceeds from sale of a subsidiary	67	48
Proceeds from sale of property, plant and equipment	23	—
Purchases of marketable securities	(18,984)	(27,373)
Proceeds from maturities of marketable securities	17,757	3,000
Net cash used in investing activities	(13,463)	(38,243)
Cash flows from financing activities:		
Proceeds from issuances of common stock	7,712	19,108
Purchase and retirement of common stock	—	(10,963)
Tax withholdings related to net share settlements of equity awards	(5,694)	(6,617)
Principal repayments on term loan	(33,750)	(24,375)
Net cash used in financing activities	(31,732)	(22,847)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(516)	2,481
Net increase in cash, cash equivalents and restricted cash	427	1,257

Cash, cash equivalents and restricted cash, beginning of period	92,726	102,596
Cash, cash equivalents and restricted cash, end of period	$93,153	$ 103,853
Non-cash investing and financing activities:		
Change in accounts payable and accrued liabilities related to property, plant and equipment purchases	$4,724	$ (283)
Supplemental disclosure of cash flow information:		
Cash paid for income taxes, net	$2,513	$ 2,847
Cash paid for interest	2,299	2,974

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. 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 nine months ended September 29, 2018 and September 30, 2017 each contained 39 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

Except as described below, our critical accounting policies have not changed during the nine months ended September 29, 2018 from those disclosed in our Annual Report on Form 10-K for the year ended December 30, 2017.

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 September 29, 2018, we had $3.5 million of remaining performance obligations, which were comprised of deferred service contracts and extended warranty contracts not yet delivered. We expect to recognize approximately 54.4% of our remaining performance obligations as revenue in fiscal 2019, and approximately 13.2% 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 September 29, 2018 and December 30, 2017 were $1.4 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 September 29, 2018 and December 30, 2017 were $5.4 million and $5.7 million. During the three and nine months ended September 29, 2018, we recognized $0.2 million and $3.9 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 nine months ended September 29, 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 early adopted ASU 2017-04 on July 1, 2018, the first day of the third quarter. The adoption did not have an 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	September 30, 2017	December 31, 2016
Cash and cash equivalents as previously reported in the Condensed Consolidated Statements of Cash Flows	$ 91,184	$ 103,083	$ 101,408
Current assets - Restricted cash	372	4	106
Restricted cash	1,170	766	1,082
Cash, cash equivalents and restricted cash as currently reported in the Condensed Consolidated Statements of Cash Flows	$ 92,726	$ 103,853	$ 102,596

As of September 29, 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 December 30, 2018, 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. Upon adoption we will use the modified 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		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Intel	24.5 %	30.6 %	18.0 %	27.4 %
Micron	12.0	*	10.1	*
SK Hynix	*	*	10.2	*
Total revenues attributable to 10% or greater customers	36.5 %	30.6 %	38.3 %	27.4 %

*Represents less than 10% of total revenues.

At September 29, 2018, two customers accounted for 25.4% and 10.2% 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, net

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

	September 29, 2018	December 30, 2017
Raw materials	$ 44,793	$ 33,101
Work-in-progress	21,922	20,134
Finished goods	14,823	14,613
	$ 81,538	$ 67,848

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	—	(493)	(493)
Goodwill, gross, as of September 29, 2018	$172,482	$16,945	$189,427

We have not recorded any goodwill impairments as of September 29, 2018.

Intangible assets were as follows (in thousands):

	September 29, 2018			December 30, 2017		
Other Intangible Assets	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Existing developed technologies	$143,577	$ 92,074	$51,503	$143,966	$ 76,826	$67,140
Trade name	12,042	8,136	3,906	12,086	5,735	6,351
Customer relationships	40,196	20,327	19,869	40,313	16,320	23,993
Backlog	—	—	—	15,811	15,811	—
	$195,815	$ 120,537	$75,278	$212,176	$ 114,692	$97,484

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

	Three Months Ended		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Cost of revenues	$5,123	$ 5,473	$15,418	$ 17,411
Selling, general and administrative	2,389	2,043	6,458	6,098
	$7,512	$ 7,516	$21,876	$ 23,509

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

Fiscal Year	Amount
Remainder of 2018	$7,509
2019	26,432
2020	23,421
2021	12,655
2022	3,215
Thereafter	2,046
	$75,278

Note 5 — Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	September 29, 2018	December 30, 2017
Accrued compensation and benefits	$ 14,002	$ 18,141
Accrued warranty	2,457	3,662
Accrued withholding for employee stock purchase plan	1,430	3,279
Accrued income and other taxes	3,397	3,965
Other accrued expenses	3,591	4,647
	$ 24,877	$ 33,694

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 three quarters of fiscal 2017 related to the consolidation of an acquired subsidiary into our operations.

There were no restructuring charges in the first three quarters of fiscal 2018. Changes to the restructuring accrual in the nine months ended September 29, 2018 were as follows (in thousands):

	Accrual
December 30, 2017	$ 399
Cash payments	(399)
September 29, 2018	$ —

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 nine months ended September 29, 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 nine 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):

September 29, 2018	Level 1	Level 2	Total
Assets:			
Cash equivalents:			
Money market funds	$265	$—	$265
Commercial paper	—	999	999
Total cash equivalents	265	999	1,264
Marketable securities:			
U.S. Treasuries	4,453	—	4,453
Certificates of deposit	—	1,197	1,197
Agency securities	—	8,994	8,994
Corporate bonds	—	32,186	32,186
Commercial paper	—	3,279	3,279
Total marketable securities	4,453	45,656	50,109
Interest rate swap derivative contracts	—	951	951
Total assets	$4,718	$47,606	$52,324

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 September 29, 2018 or 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	Location of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion)
Three Months Ended September 29, 2018	$ 62	Interest expense	$ 196	Interest expense
Three Months Ended September 30, 2017	$ 18	Interest expense	$ 54	Interest expense
Nine Months Ended September 29, 2018	$ 418	Interest expense	$ 514	Interest expense
Nine Months Ended September 30, 2017	$ 8	Interest expense	$ (32)	Interest expense

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 September 29, 2018 will mature in the third quarter of fiscal 2018.

The following table provides information about our foreign currency forward contracts outstanding as of September 29, 2018 (in thousands):

Currency	Contract Position	Contract Amount (Local Currency)	Contract Amount (U.S. Dollars)
Japanese Yen	Sell	(2,241,544)	$19,783
Taiwan Dollar	Buy	49,404	(1,626)
Korean Won	Buy	4,508,988	(4,082)
Euro Dollar	Sell	(15,050)	17,574
Total USD notional amount of outstanding foreign exchange contracts			$31,649

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 September 29, 2018	Three Months Ended September 30, 2017	Nine Months Ended September 29, 2018	Nine Months Ended September 30, 2017
Foreign exchange forward contracts	Other income (expense), net	$706	$ (556)	$923	$ (2,364)

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 nine months ended September 29, 2018 or September 30, 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):

	Nine Months Ended September 29, 2018	Nine Months Ended September 30, 2017

Balance at beginning of period	$3,662	$ 2,972
Accruals	3,168	4,888
Settlements	(4,373)	(5,009)
Balance at end of period	$2,457	$ 2,851

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 nine months ended September 29, 2018, we did not repurchase any shares. As of September 29, 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	1,551,770	13.79
Awards vested	(1,271,132)	10.45
Awards forfeited	(293,969)	11.60
RSUs at September 29, 2018	3,134,730	$ 12.77

The total fair value of RSUs vested during the nine months ended September 29, 2018 was $17.3 million.

Performance Restricted Stock Units
We may grant Performance RSUs ("PRSUs") to certain executives, which vest based upon us achieving certain market performance criteria.

On August 16, 2018, we granted a total of 318,100 PRSUs to nine senior executives for a total grant date fair value of $4.7 million, which will be recognized ratably over the requisite service period. The performance criteria are based on a metric called Total Shareholder Return ("TSR") for the period from July 1, 2018 to June 30, 2021, relative to the TSR of the companies identified as being part of the S&P Semiconductor Select Industry Index (FormFactor peer companies) as of June 30, 2018.

There were no other PRSUs granted during the nine months ended September 29, 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 September 29, 2018	553,724	$ 7.77	3.56	$3,308,931
Exercisable at September 29, 2018	430,104	$ 7.67	3.54	$2,620,928

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Employee Stock Purchase Plan

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

	Nine Months Ended September 29, 2018
Shares issued	610,297
Weighted average per share purchase price	$ 12.84
Weighted average per share discount from the fair value of our common stock on the date of issuance	$ 2.82

Stock-Based Compensation

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

	Three Months Ended		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Cost of revenues	$832	$ 894	$2,565	$ 2,540
Research and development	1,312	1,437	3,870	3,768
Selling, general and administrative	2,393	2,255	5,986	4,971
Total stock-based compensation	$4,537	$ 4,586	$12,421	$ 11,279

Unrecognized Compensation Costs

At September 29, 2018, the unrecognized stock-based compensation was as follows (in thousands):

	Unrecognized Expense	Average Expected Recognition Period in Years
Stock options	$ 167	0.36
Restricted stock units	28,035	2.76
Performance restricted stock units	6,580	2.38
Employee stock purchase plan	974	0.34
Total unrecognized stock-based compensation expense	$ 35,756	1.76

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		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Weighted-average shares used in computing basic net income per share	73,837	72,651	73,273	72,103
Add potentially dilutive securities	1,125	1,234	1,355	1,437
Weighted-average shares used in computing diluted net income per share	74,962	73,885	74,628	73,540
Securities not included as they would have been antidilutive	5	—	21	77

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. During the third quarter of 2018, we amended our lease for our Livermore, California facility, which extended the lease through 2028. Our purchase obligations and other contractual obligations have not materially changed as of September 29, 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 September 29, 2018 (in thousands):

Fiscal Year	Amount
Remainder of 2018	$1,698
2019	5,944
2020	5,861
2021	5,663
2022	4,784
Thereafter	24,737
Total	$48,687

Legal Matters

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. As of September 29, 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 September 29, 2018				September 30, 2017			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Revenues	$111,606	$23,383	$—	$134,989	$119,439	$24,296	$—	$143,735
Gross profit	$47,675	$11,250	$(5,955)	$52,970	$51,438	$12,571	$(6,379)	$57,630
Gross margin	42.7 %	48.1 %	— %	39.2 %	43.1 %	51.7 %	— %	40.1 %
Operating income (loss)	$25,609	$4,228	$(20,469)	$9,368	$17,894	$5,277	$(8,905)	$14,266

	Nine Months Ended September 29, 2018				September 30, 2017			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Revenues	$318,120	$70,668	$—	$388,788	$347,559	$68,981	$—	$416,540
Gross profit	$138,182	$34,118	$(17,983)	$154,317	$151,204	$36,176	$(20,412)	$166,968
Gross margin	43.4 %	48.3 %	— %	39.7 %	43.5 %	52.4 %	— %	40.1 %
Operating income (loss)	$71,326	$12,634	$(59,647)	$24,313	$54,289	$14,363	$(27,748)	$40,904

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					
	September 29, 2018			September 30, 2017		
	Probe Cards	Systems	Total	Probe Cards	Systems	Total
Market:						
Foundry & Logic	$61,270	$—	$61,270	$81,914	$—	$81,914
DRAM	37,359	—	37,359	32,373	—	32,373
Flash	12,977	—	12,977	5,151	—	5,151
Systems	—	23,383	23,383	—	24,297	24,297
Total	$111,606	$23,383	$134,989	$119,438	$24,297	$143,735
Timing of revenue recognition:						
Products transferred at a point in time	$111,020	$22,422	$133,442	$118,995	$23,372	$142,367
Services transferred over time	586	961	1,547	443	925	1,368
Total	$111,606	$23,383	$134,989	$119,438	$24,297	$143,735
Geographical region:						
United States	$34,398	$5,729	$40,127	$48,544	$8,712	$57,256
Taiwan	18,904	777	19,681	15,951	1,863	17,814
South Korea	19,664	1,437	21,101	21,217	545	21,762
Asia-Pacific[1]	22,388	6,825	29,213	19,136	4,664	23,800
Europe	5,499	3,629	9,128	6,015	6,079	12,094
Japan	10,462	4,273	14,735	8,419	2,037	10,456
Rest of the world	291	713	1,004	156	397	553
Total	$111,606	$23,383	$134,989	$119,438	$24,297	$143,735

	Nine Months Ended					
	September 29, 2018			September 30, 2017		
	Probe Cards	Systems	Total	Probe Cards	Systems	Total
Market:						
Foundry & Logic	$181,819	$—	$181,819	$244,952	$—	$244,952
DRAM	105,716	—	105,716	92,798	—	92,798
Flash	30,585	—	30,585	9,809	—	9,809
Systems	—	70,668	70,668	—	68,981	68,981
Total	$318,120	$70,668	$388,788	$347,559	$68,981	$416,540
Timing of revenue recognition:						
Products transferred at a point in time	$316,495	$67,794	$384,289	$346,191	$66,388	$412,579
Services transferred over time	1,625	2,874	4,499	1,368	2,593	3,961
Total	$318,120	$70,668	$388,788	$347,559	$68,981	$416,540
Geographical region:						
United States	$89,960	$16,861	$106,821	$126,110	$21,384	$147,494
Taiwan	71,300	5,680	76,980	61,568	5,593	67,161
South Korea	58,250	4,317	62,567	60,306	2,909	63,215
Asia-Pacific[1]	50,956	16,263	67,219	53,620	16,606	70,226
Europe	15,181	14,969	30,150	17,664	13,808	31,472
Japan	31,426	10,523	41,949	27,219	7,847	35,066
Rest of the world	1,047	2,055	3,102	1,072	834	1,906
Total	$318,120	$70,668	$388,788	$347,559	$68,981	$416,540

[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 electrical 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 $18.9 million in the first nine months of fiscal 2018 as compared to $35.3 million in the first nine 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 nine months ended September 29, 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		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Revenues	100.0 %	100.0 %	100.0 %	100.0 %
Cost of revenues	60.8	59.9	60.3	59.9
Gross profit	39.2	40.1	39.7	40.1
Operating expenses:				
Research and development	14.0	13.5	14.6	13.3
Selling, general and administrative	18.3	16.7	18.9	16.9
Restructuring	—	—	—	0.1
Total operating expenses	32.3	30.2	33.5	30.3
Operating income	6.9	9.9	6.2	9.8
Interest income	0.3	0.1	0.2	0.1
Interest expense	(0.6)	(0.8)	(0.7)	(0.8)
Other income (expense), net	0.2	0.2	(0.2)	—
Income before income taxes	6.7	9.6	5.5	9.1
Provision for income taxes	1.1	0.7	0.9	0.6
Net income	5.7 %	8.8 %	4.6 %	8.6 %

Revenues by Segment and Market

	Three Months Ended		Nine Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
	(In thousands)			
Probe Cards	$111,606	$119,439	$318,120	$347,559
Systems	23,383	24,296	70,668	68,981
	$134,989	$143,735	$388,788	$416,540