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 26, 2021

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	**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)

Securities registered pursuant to Section12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $0.001 par value	**FORM**	**Nasdaq Global Market**

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 every Interactive Data File required to be submitted 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 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	☐
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 July 27, 2021, 77,674,960 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 26, 2021
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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 26, 2021	December 26, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 160,273	$ 187,225
Marketable securities	95,962	67,810
Accounts receivable, net of allowance for doubtful accounts of $217 and $248	108,265	107,603
Inventories, net	111,890	99,229
Restricted cash	1,857	1,904
Prepaid expenses and other current assets	19,244	23,303
Total current assets	497,491	487,074
Restricted cash	1,836	1,969
Operating lease, right-of-use-assets	38,485	30,756
Property, plant and equipment, net of accumulated depreciation	125,348	104,103
Goodwill	214,548	212,761
Intangibles, net	41,913	59,147
Deferred tax assets	66,945	66,242
Other assets	1,980	1,165
Total assets	$ 988,546	$ 963,217
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 62,445	$ 62,045
Accrued liabilities	51,487	55,342
Current portion of term loans, net of unamortized issuance costs	9,356	9,516
Deferred revenue	22,655	20,964
Operating lease liabilities	7,908	6,704
Total current liabilities	153,851	154,571
Term loans, less current portion, net of unamortized issuance costs	20,123	24,978
Deferred tax liabilities	4,613	5,346
Long-term operating lease liabilities	34,211	27,996
Other liabilities	6,201	6,242
Total liabilities	218,999	219,133
Stockholders' equity:		
Common stock, $0.001 par value:		
250,000,000 shares authorized; 77,454,800 and 77,437,997 shares issued and outstanding	77	78
Additional paid-in capital	894,062	903,838
Accumulated other comprehensive income	3,596	5,886
Accumulated deficit	(128,188)	(165,718)
Total stockholders' equity	769,547	744,084
Total liabilities and stockholders' equity	$ 988,546	$ 963,217

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 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Revenues	$ 188,076	$ 157,824	$ 374,712	$ 318,577
Cost of revenues	111,793	91,657	221,723	185,020
Gross profit	76,283	66,167	152,989	133,557
Operating expenses:				
Research and development	25,454	20,919	49,500	42,186
Selling, general and administrative	30,479	22,755	60,494	50,448
Total operating expenses	55,933	43,674	109,994	92,634
Operating income	20,350	22,493	42,995	40,923
Interest income	148	376	342	1,061
Interest expense	(116)	(171)	(296)	(489)
Other expense, net	(194)	(67)	(22)	(158)
Income before income taxes	20,188	22,631	43,019	41,337
Provision for income taxes	2,283	2,162	5,489	4,978
Net income	$ 17,905	$ 20,469	$ 37,530	$ 36,359
Net income per share:				
Basic	$ 0.23	$ 0.27	$ 0.48	$ 0.48
Diluted	$ 0.23	$ 0.26	$ 0.47	$ 0.46
Weighted-average number of shares used in per share calculations:				
Basic	77,463	76,275	77,530	76,140
Diluted	79,466	78,861	79,621	78,710

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 26, 2021	**June 27, 2020**	**June 26, 2021**	**June 27, 2020**
Net income	$ 17,905	$ 20,469	$ 37,530	$ 36,359
Other comprehensive income (loss), net of tax:				
Translation adjustments and other	632	763	(1,747)	364
Unrealized gains (losses) on available-for-sale marketable securities	(97)	524	(228)	497
Unrealized gains (losses) on derivative instruments	(89)	80	(315)	256
Other comprehensive income (loss), net of tax	446	1,367	(2,290)	1,117
Comprehensive income	$ 18,351	$ 21,836	$ 35,240	$ 37,476

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

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

	Shares of Common Stock	Common Stock	Shares of Treasury Stock	Treasury Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Six Months Ended June 26, 2021							
Balances, December 26, 2020	77,437,997	$ 78	—	$ —	$ 903,838	$ 5,886	$ (165,718)	$ 744,084
Issuance of common stock under the Employee Stock Purchase Plan	228,784	—	—	—	5,065	—	—	5,065
Issuance of common stock pursuant to exercise of options	100,000	—	—	—	844	—	—	844
Issuance of common stock pursuant to vesting of restricted stock units, net of stock withheld for tax	308,219	—	—	—	(5,261)	—	—	(5,261)
Purchase and retirement of common stock through repurchase program	(620,200)	(1)	—	—	(23,950)	—	—	(23,951)
Stock-based compensation	—	—	—	—	13,526	—	—	13,526
Other comprehensive loss	—	—	—	—	—	(2,290)	—	(2,290)
Net income	—	—	—	—	—	—	37,530	37,530
Balances, June 26, 2021	77,454,800	$ 77	—	$ —	$ 894,062	$ 3,596	$ (128,188)	$ 769,547
	Three Months Ended June 26, 2021							
Balances, March 27, 2021	77,758,530	$ 78	(136,402)	$ (5,738)	$ 915,136	$ 3,150	$ (146,093)	$ 766,533
Issuance of common stock pursuant to exercise of options	50,000	—	—	—	422	—	—	422
Issuance of common stock pursuant to vesting of restricted stock units, net of stock withheld for tax	266,470	—	—	—	(4,120)	—	—	(4,120)
Purchase and retirement of common stock through repurchase program	(620,200)	(1)	136,402	5,738	(23,950)	—	—	(18,213)
Stock-based compensation	—	—	—	—	6,574	—	—	6,574
Other comprehensive income	—	—	—	—	—	446	—	446
Net income	—	—	—	—	—	—	17,905	17,905
Balances, June 26, 2021	77,454,800	$ 77	—	$ —	$ 894,062	$ 3,596	$ (128,188)	$ 769,547

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

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

	Shares of Common Stock	Common Stock	Shares of Treasury Stock	Treasury Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Six Months Ended June 27, 2020							
Balances, December 28, 2019	75,764,990	$ 76	—	$ —	$ 885,821	$ (659)	$ (244,241)	$ 640,997
Issuance of common stock under the Employee Stock Purchase Plan	311,591	—	—	—	4,066	—	—	4,066
Issuance of common stock pursuant to exercise of options	105,769	1	—	—	868	—	—	869
Issuance of common stock pursuant to vesting of restricted stock units, net of stock withheld for tax	319,109	—	—	—	(3,800)	—	—	(3,800)
Stock-based compensation	—	—	—	—	11,114	—	—	11,114
Other comprehensive income	—	—	—	—	—	1,117	—	1,117
Net income	—	—	—	—	—	—	36,359	36,359
Balances, June 27, 2020	76,501,459	$ 77	—	$ —	$ 898,069	$ 458	$ (207,882)	$ 690,722
	Three Months Ended June 27, 2020							
Balances, March 28, 2020	76,158,251	$ 77	$ —	$ —	$ 895,600	$ (909)	$ (228,351)	$ 666,417
Issuance of common stock pursuant to exercise of options	50,000	—	—	—	422	—	—	422
Issuance of common stock pursuant to vesting of restricted stock units, net of stock withheld for tax	293,208	—	—	—	(3,415)	—	—	(3,415)
Stock-based compensation	—	—	—	—	5,462	—	—	5,462
Other comprehensive income	—	—	—	—	—	1,367	—	1,367
Net income	—	—	—	—	—	—	20,469	20,469
Balances, June 27, 2020	76,501,459	$ 77	—	$ —	$ 898,069	$ 458	$ (207,882)	$ 690,722

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 26, 2021	**June 27, 2020**
Cash flows from operating activities:		
Net income	$ 37,530	$ 36,359
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	12,678	9,240
Amortization	13,900	13,717
Reduction in the carrying amount of right-of-use assets	3,652	2,419
Stock-based compensation expense	13,665	11,265
Provision for excess and obsolete inventories	6,898	6,407
Gain on contingent consideration	(95)	(3,700)
Other adjustments to reconcile net income to net cash provided by operating activities	1,211	1,327
Changes in assets and liabilities:		
Accounts receivable	(1,194)	11,364
Inventories	(20,388)	(11,089)
Prepaid expenses and other current assets	3,179	(3,271)
Other assets	(344)	248
Accounts payable	(2,028)	5,247
Accrued liabilities	(235)	1,529
Other liabilities	184	292
Deferred revenues	1,522	3,855
Operating lease liabilities	(3,980)	(2,762)
Net cash provided by operating activities	66,155	82,447
Cash flows from investing activities:		
Acquisition of property, plant and equipment	(31,322)	(36,743)
Proceeds from sale of a subsidiary	—	82
Purchases of marketable securities	(71,186)	(19,726)
Proceeds from maturities and sales of marketable securities	42,695	35,410
Net cash used in investing activities	(59,813)	(20,977)
Cash flows from financing activities:		
Proceeds from issuances of common stock	5,909	4,935
Purchase of common stock through stock repurchase program	(23,951)	—
Tax withholdings related to net share settlements of equity awards	(5,261)	(3,800)
Payment of contingent consideration	(3,873)	—
Proceeds from term loan debt	—	18,000
Principal repayments on term loans	(4,740)	(26,322)
Payment of term loan debt issuance costs	—	(78)
Net cash used in financing activities	(31,916)	(7,265)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(1,558)	583
Net increase (decrease) in cash, cash equivalents and restricted cash	(27,132)	54,788
Cash, cash equivalents and restricted cash, beginning of period	191,098	147,937
Cash, cash equivalents and restricted cash, end of period	$ 163,966	$ 202,725

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 26, 2021	June 27, 2020
Non-cash investing and financing activities:		
Increase (decrease) in accounts payable and accrued liabilities related to property, plant and equipment purchases	$ 2,906	$ (2,274)
Operating lease, right-of-use assets obtained in exchange for lease obligations	11,629	428
Supplemental disclosure of cash flow information:		
Cash paid for income taxes, net	$ 4,559	$ 4,133
Cash paid for interest	339	473
Reconciliation of cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 160,273	$ 199,926
Restricted cash, current	1,857	1,424
Restricted cash, non-current	1,836	1,375
Total cash, cash equivalents and restricted cash	$ 163,966	$ 202,725

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

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 condensed consolidated financial statements included herein should be read in conjunction with the consolidated financial statements and the notes thereto included in our 2020 Annual Report on Form 10-K filed with the SEC on February 22, 2021. 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 2021 and 2020 each contain 52 weeks and the six months ended June 26, 2021 and June 27, 2020 each contained 26 weeks. Fiscal 2021 will end on December 25, 2021.

Significant Accounting Policies

Our significant accounting policies have not changed during the six months ended June 26, 2021 from those disclosed in our Annual Report on Form 10-K for the year ended December 26, 2020.

New Accounting Pronouncements

ASU 2019-12

In December 2019, the Financial Accounting Standard Board ("FASB") issued Accounting Standards Update ("ASU") 2019-12, "Income Taxes (Topic 740)," which simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740. The amendments also improve consistent application of and simplify GAAP for other areas of Topic 740 by clarifying and amending existing guidance. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. We adopted ASU 2019-12 on a prospective basis on December 27, 2020, the first day of fiscal 2021. The adoption did not have a material effect on our consolidated financial position, results of operations or cash flows.

ASU 2020-04

In March 2020, the FASB issued ASU 2020-04, "Referenced Rate Reform (Topic 848) - Facilitation of the Effects of Reference Rate Reform on Financial Reporting." The ASU provides temporary optional expedients and exceptions for applying generally accepted accounting principles to contract modifications and hedging relationships, subject to meeting certain criteria, that reference the London Interbank Offered Rate ("LIBOR") or another reference rate expected to be discontinued. In January 2021, the FASB issued ASU 2021-01, "Reference Rate Reform (Topic 848)," which permits entities to apply optional expedients in Topic 848 to derivative instruments modified because of discounting transition resulting from reference rate reform. ASU 2020-04 became effective upon issuance and may be applied prospectively to contract modifications made on or before December 31, 2022. ASU 2021-01 became effective upon issuance and may be applied on a full retrospective basis as of any date from the beginning of an interim period that includes or is subsequent to March 12, 2020 or prospectively for contract modifications made on or before December 31, 2022. The Company has not yet applied the relief afforded by these standard amendments and is currently assessing contracts that will require modification due to reference rate reform to which these standard amendments may be applied.

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 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Intel Corporation	16.2 %	36.1 %	22.1 %	36.2 %
Samsung Electronics., LTD.	14.7 %	*	*	*
Taiwan Semiconductor Manufacturing Co., LTD.	11.0 %	*	11.2 %	*
	41.9 %	36.1 %	33.3 %	36.2 %

*Represents less than 10% of total revenues.

At June 26, 2021, one customer accounted for 20.6% of gross accounts receivable. At December 26, 2020, two customers accounted for 15.3% and 13.7% of gross accounts receivable, respectively.

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):

	June 26, 2021	December 26, 2020
Raw materials	$ 56,138	$ 48,122
Work-in-progress	35,911	30,806
Finished goods	19,841	20,301
	$ 111,890	$ 99,229

Note 4 — Acquisition

High Precision Devices, Inc. Acquisition

On October 19, 2020, we acquired 100% of the shares of HPD for total consideration of $16.9 million, net of cash acquired of $1.7 million, which included an adjustment for changes in working capital. This acquisition brings highly specialized skills and know-how to address the unique test challenges within the emerging quantum computing, superconducting computing, and ultra-sensitive sensor markets which operate at temperatures as low as 30 millikelvin.

The acquisition was accounted for using the acquisition method of accounting, with FormFactor treated as the acquirer. The acquired assets and liabilities of HPD were recorded at their respective fair values including an amount for goodwill representing the difference between the acquisition consideration and the fair value of the identifiable net assets.

Our Condensed Consolidated Statements of Income include the financial results of HPD subsequent to the acquisition date of October 19, 2020. Revenue in fiscal 2020 related to HPD subsequent to the acquisition date that was included in our Condensed Consolidated Statements of Income was not material.

The acquisition price was allocated to the tangible and identified intangible assets acquired and liabilities assumed as of the closing date of the acquisition based upon their respective fair values. The fair values assigned to assets acquired and liabilities assumed were based on management’s assumptions as of the reporting date.

We estimated the acquisition price and the allocation of fair value to assets acquired and liabilities assumed as of the acquisition date, October 19, 2020. We subsequently made certain immaterial adjustments within the measurement period to the preliminary acquisition price allocation. See Note 5, *Goodwill and Intangible Assets*, for changes in identified intangible values and goodwill. Our purchase accounting remains open at June 26, 2021, subject to finalization of certain deferred tax items. The estimated fair value of assets acquired, including goodwill and intangibles, and liabilities assumed is as follows (in thousands):

	Amount
Cash and cash equivalents	$ 1,680
Accounts receivable	1,017
Inventories	3,047
Property, plant and equipment	669
Operating lease, right of use assets	2,554
Prepaid expenses and other current assets	599
Tangible assets acquired	9,566
Deferred revenue	(2,529)
Accounts payable and accrued liabilities	(1,268)
Operating lease liabilities	(2,554)
Deferred tax liabilities	(2,840)
Total tangible assets acquired and liabilities assumed	375
Intangible assets	11,520
Goodwill	6,665
Net Assets Acquired	$ 18,560

The intangible assets as of the closing date of the acquisition included (in thousands):

	Amount	Weighted Average Useful Life (in years)
Developed technologies	$ 7,500	10.0
Customer relationships	3,600	5.0
Order backlog	200	0.5
Trade names	220	5.0
Total intangible assets	$ 11,520	8.2

The fair value of the intangible assets acquired in connection with the acquisition was determined using either the income, market or replacement cost methodologies. The intangible assets are being amortized over periods which reflect the pattern in which economic benefits of the assets are expected to be realized.

Identifiable Intangible Assets
Valuation of intangible assets involves multiple assumptions. The key assumptions are described below.

Developed technology acquired primarily consists of existing technology related to cryogenic probe stations, Adiabatic Demagnetization Refrigerator (“ADR”), and continuous ADR cryostats and similar tools, and technology related to other cryogenic applications. We valued the developed technology using the multi-period excess earnings method under the income approach. Using this approach, the estimated fair values were calculated using expected future cash flows from specific products discounted to their net present values at an appropriate risk-adjusted rate of return.

The value of customer relationships represents the fair value of future projected revenues that will be derived from the sale of products to HPD's existing customers. We valued customer relationships using the incremental cash flow method. This method estimates value based on the incremental cash flow afforded by having the customers relationships in place on the acquisition date versus having no relationships in place and needing to replicate or replace those relationships. The incremental cash flows are then discounted to a present value to arrive at an estimate of fair value for this asset class.

Order backlog represents the value of future sales under existing contracts as of the acquisition date. Expected cash flow from order backlog was valued on a discounted direct cash flow basis, net of returns on contributory assets such as working capital, property and equipment, trade name and assembled workforce.

The identified trade names intangibles relate to the estimated fair value of future cash flows related to the HPD brand. We valued trade names by applying the relief-from-royalty method under the income approach. This method is based on the application of a royalty rate to forecasted revenue under the trade name.

Goodwill

The excess of purchase price over the fair value assigned to the assets acquired and liabilities assumed represents the amount of goodwill resulting from the acquisition. We believe the factors that contributed to goodwill include synergies that are specific to our consolidated business, such as cost savings and operational efficiencies, and the acquisition of a talented workforce that expands our expertise in business development and commercializing semiconductor test products, none of which qualify for recognition as a separate intangible asset. We do not expect any portion of this goodwill to be deductible for tax purposes. The goodwill attributable to the acquisition was recorded as a non-current asset and is not amortized, but is subject to an annual review for impairment.

The goodwill arising from the acquisition was allocated to the HPD reporting unit within the Systems reportable segment.

We have not presented unaudited combined pro forma financial information as the HPD acquisition was not significant to our consolidated results of operations and financial position.

Baldwin Park Acquisition

On July 30, 2020, we acquired the probe card assets of Advantest Corporation for total cash consideration of $35.0 million. This acquisition brings important enabling technologies and capabilities for designing and manufacturing advanced probe cards, and adds a complementary 3D-NAND Flash probe-card product that is qualified and in production at one of the world's leading NAND Flash manufacturers.

The acquisition was accounted for using the acquisition method of accounting, with FormFactor treated as the acquirer. The acquired assets and liabilities of Baldwin Park were recorded at their respective fair values including an amount for goodwill representing the difference between the acquisition consideration and the fair value of the identifiable net assets.

Our Condensed Consolidated Statements of Income include the financial results of Baldwin Park subsequent to the acquisition date of July 30, 2020. Revenue related to Baldwin Park since the acquisition date that was included in our Condensed Consolidated Statements of Income for fiscal 2020 was not material.

We estimated the acquisition price and the allocation of fair value to assets acquired and liabilities assumed as of the acquisition date, July 30, 2020. We subsequently made certain immaterial adjustments within the measurement period to the acquisition price allocation as a result of finalization of our valuation of identifiable assets and liabilities. See Note 5, *Goodwill and Intangible Assets*, for changes in identified intangible values and goodwill. The final allocation of the assets acquired, including goodwill and intangibles, and liabilities assumed for the purchase as follows (in thousands):

	Amount
Accounts receivable	$ 4,365
Inventories	2,727
Property, plant and equipment	9,053
Operating lease, right of use assets	519
Prepaid expenses and other current assets	56
Tangible assets acquired	16,720
Accounts payable and accrued liabilities	(743)
Operating lease liabilities	(519)
Total tangible assets acquired and liabilities assumed	15,458
Intangible assets	13,600
Goodwill	5,942
Net assets acquired	$ 35,000

The intangible assets as of July 30, 2020 included (in thousands):

	Amount	Weighted Average Useful Life (in years)
Developed technologies	$ 8,800	10.0
Customer relationships	4,400	3.0
In-process research and development	400	N/A
Total intangible assets	$ 13,600	7.7

Indications of fair value of the intangible assets acquired in connection with the acquisition were determined using either the income, market or replacement cost methodologies. The intangible assets are being amortized over periods which reflect the pattern in which economic benefits of the assets are expected to be realized.

Identifiable Intangible Assets
Valuation of intangible assets involves multiple assumptions. The key assumptions are described below.

Developed technology acquired consists of existing technology related to 3D NAND Flash probe cards and the value expected to be derived from interconnect technology. We valued the developed technology related to 3D NAND Flash using the multi-period excess earnings method under the income approach. Using this approach, the estimated fair values were calculated using expected future cash flows from specific products discounted to their net present values at an appropriate risk-adjusted rate of return. We valued the interconnect developed technology asset using the incremental cash flow method. This method estimates value based on the incremental cash flow afforded by having the interconnect capability in place on the acquisition date versus having no capability in place and needing to replicate or replace that capability. The incremental cash flows are then discounted to a present value to arrive at an estimate of fair value for this asset class.

The value of customer relationships represents the fair value of future projected revenues that will be derived from the sale of products to Baldwin Park's existing customers. We valued customer relationships using the incremental cash flow method. This method estimates value based on the incremental cash flow afforded by having the customers relationships in place on the acquisition date versus having no relationships in place and needing to replicate or replace those relationships. The incremental cash flows are then discounted to a present value to arrive at an estimate of fair value for this asset class.

In-process research and development (“IPR&D”) acquired primarily consists of research and development projects that were in process at the time of acquisition related to technologies used in DRAM probe cards. Once these projects are complete they will be amortized over their useful life. We valued the IPR&D using the multi-period excess earnings method under the income approach. Using this approach, the estimated fair values were calculated using expected future cash flows from specific products discounted to their net present values at an appropriate risk-adjusted rate of return.

Goodwill
The excess of purchase price over the fair value assigned to the assets acquired and liabilities assumed represents the amount of goodwill resulting from the acquisition. We believe the factors that contributed to goodwill include synergies that are specific to our consolidated business, such as cost savings and operational efficiencies, and the acquisition of a talented workforce that expands our expertise in business development, none of which qualify for recognition as a separate intangible asset. We expect this goodwill to be deductible for tax purposes. The goodwill attributable to the acquisition was recorded as a non-current asset and is not amortized, but is subject to an annual review for impairment.

The goodwill arising from the acquisition was allocated to the Probe Cards reporting unit within the Probe Cards reportable segment.

We have not presented unaudited combined pro forma financial information as the Baldwin Park acquisition was not significant to our consolidated results of operations and financial position.

Note 5 — Goodwill and Intangible Assets

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

	Probe Cards	Systems	Total
Goodwill, gross, as of December 28, 2019	$ 172,482	$ 26,714	$ 199,196
Addition - FRT GmbH Acquisition	—	975	975
Addition - Baldwin Park Acquisition	5,590	—	5,590
Addition - HPD Acquisition	—	4,654	4,654
Foreign currency translation	—	2,346	2,346
Goodwill, gross, as of December 26, 2020	178,072	34,689	212,761
Addition - Baldwin Park Acquisition	352	—	352
Addition - HPD Acquisition	—	2,011	2,011
Foreign currency translation	—	(576)	(576)
Goodwill, gross, as of July 26, 2021	$ 178,424	$ 36,124	$ 214,548

We have not recorded goodwill impairments for the six months ended June 26, 2021.

Intangible assets were as follows (in thousands):

	June 26, 2021			December 26, 2020		
Intangible Assets	**Gross**	**Accumulated Amortization**	**Net**	**Gross**	**Accumulated Amortization**	**Net**
Developed technologies	$ 173,627	$ 147,968	$ 25,659	$ 176,265	$ 137,754	$ 38,511
Customer relationships	51,641	36,437	15,204	52,488	33,378	19,110
Trade names	8,140	7,520	620	8,162	7,363	799
Order backlog	1,990	1,960	30	2,227	1,900	327
In-process research and development	400	—	400	400	—	400
	$ 235,798	$ 193,885	$ 41,913	$ 239,542	$ 180,395	$ 59,147

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

	Three Months Ended		Six Months Ended	
	June 26, 2021	**June 27, 2020**	**June 26, 2021**	**June 27, 2020**
Cost of revenues	$ 5,505	$ 4,926	$ 10,595	$ 10,676
Selling, general and administrative	1,590	1,528	3,305	3,041
	$ 7,095	$ 6,454	$ 13,900	$ 13,717

The estimated future amortization of definite-lived intangible assets, excluding in-process research and development, is as follows (in thousands):

Fiscal Year	**Amount**
Remainder of 2021	$ 4,885
2022	9,647
2023	7,271
2024	4,652
2025	4,389
Thereafter	10,669
	$ 41,513

Note 6 — Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	June 26, 2021	December 26, 2020
Accrued compensation and benefits	$ 31,210	$ 33,110
Accrued income and other taxes	6,049	6,976
Accrued warranty	4,258	3,918
Employee stock purchase plan contributions withheld	4,768	4,240
Accrued contingent consideration	—	4,012
Other accrued expenses	5,202	3,086
	$ 51,487	$ 55,342

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 three and six months ended June 26, 2021 or the year ended December 26, 2020.

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

No changes were made to our valuation techniques during the first six months of fiscal 2021.

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 26, 2021	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:				
Cash equivalents:				
Money market funds	$ 25,917	$ —	$ —	$ 25,917
Marketable securities:				
U.S. treasuries	27,112	—	—	27,112
Certificates of deposit	—	1,207	—	1,207
U.S. agency securities	—	575	—	575
Corporate bonds	—	28,893	—	28,893
Commercial paper	—	38,175	—	38,175
	27,112	68,850	—	95,962
Foreign exchange derivative contracts (Designated)	—	152	—	152
Interest rate swap derivative contracts	—	571	—	571
Total assets	$ 53,029	$ 69,573	$ —	$ 122,602
Liabilities:				
Foreign exchange derivative contracts (Designated)	$ —	$ (53)	$ —	$ (53)
Interest rate swap derivative contracts	—	(103)	—	(103)
Total liabilities	$ —	$ (156)	$ —	$ (156)

December 26, 2020	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:				
Cash equivalents:				
Money market funds	$ 43,019	$ —	$ —	$ 43,019
Marketable securities:				
U.S. treasuries	40,726	—	—	40,726
Certificates of deposit	—	2,179	—	2,179
U.S. agency securities	—	575	—	575
Corporate bonds	—	24,330	—	24,330
	40,726	27,084	—	67,810
Foreign exchange derivative contracts	—	1,057	—	1,057
Interest rate swap derivative contracts	—	57	—	57
Total assets	$ 83,745	$ 28,198	$ —	$ 111,943
Liabilities:				
Interest rate swap derivative contracts	$ —	$ (87)	$ —	$ (87)
Contingent consideration	—	—	(4,012)	(4,012)
Total liabilities	$ —	$ (87)	$ (4,012)	$ (4,099)

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 investments have a sufficient 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.

Contingent Consideration

Contingent consideration, arising from the acquisition of FRT, was a cash amount equal to 1.5x EBIT as defined in the purchase agreement, up to a maximum of €10.3 million, payable subject to the performance of the acquired business in calendar 2020. We estimated the fair value of contingent consideration using a probability weighted approach. Key assumptions in determining the fair value of contingent consideration included estimating EBIT levels that we believed as of the acquisition date were likely to be achieved during the performance period and discounting at an appropriate discount rate. We settled our contingent consideration in the current quarter for $3.9 million, resulting in a $0.1 million credit to Selling, general and administrative expense with the remaining change from December 26, 2020 resulting from foreign currency translation.

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 Accrued liabilities and Other liabilities 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 (Effective Portion)	Location of Gain or (Loss) Reclassified from Accumulated OCI into Income (Effective Portion)	Amount of Gain or (Loss) Reclassified from Accumulated OCI into Income (Effective Portion)	Location of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion)	Amount of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion)
Three Months Ended June 26, 2021	$ (203)	Interest expense	$ (39)	Interest expense	$ —
Three Months Ended June 27, 2020	$ (174)	Interest expense	$ (10)	Interest expense	$ —
Six Months Ended June 26, 2021	$ 421	Interest expense	$ (77)	Interest expense	$ —
Six Months Ended June 27, 2020	$ (270)	Interest expense	$ 12	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, certain of 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 expense, net in our Condensed Consolidated Statement of Income for both realized and unrealized gains and losses. Certain of our foreign currency forward contracts are designated as cash flow hedges, 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 as a component of Accumulated other comprehensive income and reclassified into earnings in the same period in which the hedged transaction affects earnings, and in the same line item on the Condensed Consolidated Statements of Income as the impact of the hedge transaction.

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 26, 2021 will mature by the second quarter of fiscal 2022.

The following table provides information about our foreign currency forward contracts outstanding as of June 26, 2021 (in thousands):

Currency	Contract Position	Contract Amount (Local Currency)	Contract Amount (U.S. Dollars)
Euro Dollar	Buy	(12,678)	$ (15,124)
Japanese Yen	Sell	1,802,229	16,251
Korean Won	Buy	(3,050,367)	(2,703)
Total USD notional amount of outstanding foreign exchange contracts			$ (1,576)

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 impact of foreign exchange derivative contracts not designated as cash flow hedges on our Condensed Consolidated Statements of Income was as follows (in thousands):

		Amount of Gain (Loss) Recognized on Derivatives			
		Three Months Ended		Six Months Ended	
Derivatives Not Designated as Hedging Instruments	Location of Gain (Loss) Recognized on Derivatives	June 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Foreign exchange forward contracts	Other expense, net	$ (69)	$ 234	$ 1,220	$ 349

The impact of foreign exchange derivative contracts designated as cash flow hedges on our Condensed Consolidated Statements of Income was as follows (in thousands):

	Amount of Gain (Loss) Recognized in Accumulated OCI on Derivative	Location of Gain (Loss) Reclassified from Accumulated OCI into Income	Amount of Gain (Loss) Reclassified from Accumulated OCI into Income
Three Months Ended June 26, 2021	$ 278	Cost of revenues	$ 134
		Research and development	16
		Selling, general and administrative	52
			$ 202
Three Months Ended June 27, 2020	$ 52	Cost of revenues	$ (139)
		Research and development	(17)
		Selling, general and administrative	(35)
			$ (191)
Six Months Ended June 26, 2021	$ (248)	Cost of revenues	$ 384
		Research and development	46
		Selling, general and administrative	134
			$ 564
Six Months Ended June 27, 2020	$ (126)	Cost of revenues	$ (258)
		Research and development	(35)
		Selling, general and administrative	(79)
			$ (372)

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

We measure and report our non-financial assets such as Property, plant and equipment, 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. Other than as discussed in Note 4, *Acquisition*, there were no assets or liabilities measured at fair value on a nonrecurring basis during the three and six months ended June 26, 2021 or June 27, 2020.

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. We continuously monitor product returns for warranty and maintain a reserve for the related expenses based upon our historical experience and any specifically identified 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 26, 2021	**June 27, 2020**
Balance at beginning of period	$ 3,918	$ 1,942
Accruals	3,472	2,116
Settlements	(3,132)	(1,997)
Balance at end of period	$ 4,258	$ 2,061

Note 9 — Property, Plant and Equipment, net

Property, plant and equipment, net consisted of the following (in thousands):

	June 26, 2021	**December 26, 2020**
Land	$ 4,751	$ 4,751
Machinery and equipment	239,322	226,185
Computer equipment and software	44,273	36,361
Furniture and fixtures	6,924	6,894
Leasehold improvements	81,421	79,144
Sub-total	376,691	353,335
Less: Accumulated depreciation and amortization	(305,356)	(294,468)
Net, property, plant and equipment	71,335	58,867
Construction-in-process	54,013	45,236
Total	$ 125,348	$ 104,103

Note 10 — Stockholders' Equity and Stock-Based Compensation

Common Stock Repurchase Program

On October 26, 2020, our Board of Directors authorized a program to repurchase up to $50 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 October 28, 2022. During the six months ended June 26, 2021, we repurchased and retired 620,200 shares of common stock for $24.0 million and, as of June 26, 2021, $26.0 million remained available for future repurchases.

Our policy related to repurchases of our common stock is to charge the excess of cost over par value to additional paid-in capital once the shares are retired. All repurchases were made in compliance with Rule 10b-18 under the Securities Exchange Act of 1934, as amended.

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 26, 2020	2,840,922	$ 19.80
Awards granted	43,949	36.71
Awards vested	(451,957)	15.95
Awards forfeited	(26,996)	22.66
RSUs at June 26, 2021	2,405,918	20.80

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 26, 2021. PRSUs are included as part of the RSU activity above.

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 (in thousands)
Outstanding at December 26, 2020	106,000	$ 8.35		
Options exercised	(100,000)	8.44		
Outstanding at June 26, 2021	6,000	$ 6.93	1.11	$ 172
Vested and expected to vest at June 26, 2021	6,000	$ 6.93	1.11	$ 172
Exercisable at June 26, 2021	6,000	$ 6.93	1.11	$ 172

Employee Stock Purchase Plan

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

	Six Months Ended June 26, 2021
Shares issued	228,784
Weighted average per share purchase price	$ 22.14
Weighted average per share discount from the fair value of our common stock on the date of issuance	$ (18.73)

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 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Cost of revenues	$ 1,079	$ 901	$ 2,414	$ 1,838
Research and development	1,663	1,389	3,352	2,828
Selling, general and administrative	3,846	3,352	7,899	6,599
Total stock-based compensation	$ 6,588	$ 5,642	$ 13,665	$ 11,265

Unrecognized Compensation Costs

At June 26, 2021, the unrecognized stock-based compensation was as follows (dollars in thousands):

	Unrecognized Expense	Average Expected Recognition Period in Years
Restricted stock units	$ 23,767	1.87
Performance restricted stock units	6,369	1.77
Employee stock purchase plan	243	0.11
Total unrecognized stock-based compensation expense	$ 30,379	1.83

Note 11 — 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 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Weighted-average shares used in computing basic net income per share	77,463	76,275	77,530	76,140
Add potentially dilutive securities	2,003	2,586	2,091	2,570
Weighted-average shares used in computing diluted net income per share	79,466	78,861	79,621	78,710
Securities not included as they would have been antidilutive	128	—	118	13

Note 12 — Commitments and Contingencies

Leases

See Note 13, *Leases*.

Contractual Obligations and Commitments

Our contractual obligations and commitments have not materially changed as of June 26, 2021 from those disclosed in our Annual Report on Form 10-K for the year ended December 26, 2020.

Legal Matters

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. As of June 26, 2021, and as of the filing of this Quarterly Report on Form 10-Q, we were not involved in any material legal proceedings.

Note 13 — Leases

We lease real estate space under non-cancelable operating lease agreements for commercial and industrial space, as well as for our corporate headquarters located in Livermore, California. Our leases have remaining terms of 1 to 8 years, and some leases include options to extend up to 20 years. We also have operating leases for automobiles with remaining lease terms of 1 to 4 years. We did not include any of our renewal options in our lease terms for calculating our lease liability as the renewal options allow us to maintain operational flexibility and we are not reasonably certain we will exercise these options at this time. The weighted-average remaining lease term for our operating leases was 6 years as of June 26, 2021 and the weighted-average discount rate was 3.70%.

The components of lease expense were as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Lease expense:				
Operating lease expense	$ 2,048	$ 1,794	$ 4,170	$ 3,719
Short-term lease expense	45	27	83	66
Variable lease expense	426	399	963	782
	$ 2,519	$ 2,220	$ 5,216	$ 4,567

Future minimum payments under our non-cancelable operating leases were as follows as of June 26, 2021 (in thousands):

Fiscal Year	Amount
Remainder of 2021	$ 4,264
2022	8,527
2023	7,172
2024	6,766
2025	6,742
Thereafter	14,850
Total minimum lease payments	48,321
Less: interest	(6,202)
Present value of net minimum lease payments	42,119
Less: current portion	(7,908)
Total long-term operating lease liabilities	$ 34,211

Note 14 — Revenue

Transaction price allocated to the remaining performance obligations: On June 26, 2021, we had $10.7 million of remaining performance obligations, which were comprised of deferred service contracts and extended warranty contracts and contracts with overtime revenue recognition that are not yet delivered. We expect to recognize approximately 41.2% of our remaining performance obligations as revenue in the remainder of fiscal 2021, approximately 43.6% in fiscal 2022, and approximately 15.2% in fiscal 2023 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 26, 2021 and December 26, 2020 were $3.6 million and $3.7 million, respectively, and are reported on the Condensed Consolidated Balance Sheets 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 at the end of each reporting period as a component of Deferred revenue and Other liabilities. Contract liabilities as of June 26, 2021 and December 26, 2020 were $23.9 million and $22.2 million, respectively. During the six months ended June 26, 2021, we recognized $12.8 million of revenue, that was included in contract liabilities as of December 26, 2020.

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 15, *Operating Segments and Enterprise-Wide Information*, for further details.

Note 15 — 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 26, 2021				June 27, 2020			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Revenues	$ 153,641	$ 34,435	$ —	$ 188,076	$ 133,784	$ 24,040	$ —	$ 157,824
Gross profit	$ 66,600	$ 16,907	$ (7,224)	$ 76,283	$ 61,523	$ 10,719	$ (6,075)	$ 66,167
Gross margin	43.3 %	49.1 %		40.6 %	46.0 %	44.6 %		41.9 %

	Six Months Ended							
	June 26, 2021				June 27, 2020			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Revenues	$ 312,539	$ 62,173	$ —	$ 374,712	$ 268,499	$ 50,078	$ —	$ 318,577
Gross profit	$ 136,915	$ 30,506	$ (14,432)	$ 152,989	$ 122,266	$ 24,053	$ (12,762)	$ 133,557
Gross margin	43.8 %	49.1 %		40.8 %	45.5 %	48.0 %		41.9 %

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 amortization of intangible assets, inventory and fixed asset fair value adjustments due to acquisitions, share-based compensation, and other, which are not used in evaluating the results of, or in allocating resources to, our reportable segments.

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

	Three Months Ended					
	June 26, 2021			June 27, 2020		
	Probe Cards	Systems	Total	Probe Cards	Systems	Total
Market:						
Foundry & Logic	$ 103,726	$ —	$ 103,726	$ 109,347	$ —	$ 109,347
DRAM	42,088	—	42,088	19,052	—	19,052
Flash	7,827	—	7,827	5,385	—	5,385
Systems	—	34,435	34,435	—	24,040	24,040
Total	$ 153,641	$ 34,435	$ 188,076	$ 133,784	$ 24,040	$ 157,824
Timing of revenue recognition:						
Products transferred at a point in time	$ 153,129	$ 30,884	$ 184,013	$ 133,208	$ 22,548	$ 155,756
Products and services transferred over time	512	3,551	4,063	576	1,492	2,068
Total	$ 153,641	$ 34,435	$ 188,076	$ 133,784	$ 24,040	$ 157,824
Geographical region:						
Taiwan	$ 46,737	$ 5,147	$ 51,884	$ 29,806	$ 3,365	$ 33,171
South Korea	35,426	751	36,177	14,249	864	15,113
United States	24,174	8,476	32,650	22,368	5,753	28,121
China	23,996	7,831	31,827	45,625	3,133	48,758
Asia-Pacific[1]	12,569	1,719	14,288	4,347	2,153	6,500
Europe	6,466	5,544	12,010	8,767	5,365	14,132
Japan	3,477	4,227	7,704	6,679	3,380	10,059
Rest of the world	796	740	1,536	1,943	27	1,970
Total	$ 153,641	$ 34,435	$ 188,076	$ 133,784	$ 24,040	$ 157,824

	Six Months Ended					
	June 26, 2021			June 27, 2020		
	Probe Cards	Systems	Total	Probe Cards	Systems	Total
Market:						
Foundry & Logic	$ 217,136	$ —	$ 217,136	$ 215,092	$ —	$ 215,092
DRAM	75,986	—	75,986	43,748	—	43,748
Flash	19,417	—	19,417	9,659	—	9,659
Systems	—	62,173	62,173	—	50,078	50,078
Total	$ 312,539	$ 62,173	$ 374,712	$ 268,499	$ 50,078	$ 318,577
Timing of revenue recognition:						
Products transferred at a point in time	$ 311,605	$ 55,555	$ 367,160	$ 267,277	$ 47,406	$ 314,683
Products and services transferred over time	934	6,618	7,552	1,222	2,672	3,894
Total	$ 312,539	$ 62,173	$ 374,712	$ 268,499	$ 50,078	$ 318,577
Geographical region:						
Taiwan	$ 91,471	$ 5,993	$ 97,464	$ 60,245	$ 4,706	$ 64,951
China	61,827	12,625	74,452	82,905	9,495	92,400
United States	45,482	16,654	62,136	47,979	12,058	60,037
South Korea	53,427	1,835	55,262	27,941	1,260	29,201
Asia-Pacific[1]	40,447	2,799	43,246	8,802	5,561	14,363
Europe	9,299	12,710	22,009	24,977	10,198	35,175
Japan	8,726	8,299	17,025	12,214	6,215	18,429
Rest of the world	1,860	1,258	3,118	3,436	585	4,021
Total	$ 312,539	$ 62,173	$ 374,712	$ 268,499	$ 50,078	$ 318,577

[1] Asia-Pacific includes all countries in the region except China, Japan, South Korea, and Taiwan, 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 and impact of accounting standards. 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, the benefits of acquisitions and investments, uncertainties related to COVID-19 and the impact of our responses to it, the interpretation and impacts of changes in export controls and other trade barriers, 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 26, 2020 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 technologies. We provide a broad range of high-performance probe cards, analytical probes, probe stations, metrology systems, thermal systems and cryogenic systems to both semiconductor companies and scientific institutions. Our products provide electrical and physical information from a variety of semiconductor and electro-optical devices and integrated circuits from early research, through development, to high-volume production. Customers use our products and services to lower production costs, improve yields, and enable development of their complex next-generation products.

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, metrology systems, and thermal and cryogenic systems are included in the Systems segment.

We generated net income of $37.5 million in the first six months of fiscal 2021 as compared to $36.4 million in the first six months of fiscal 2020. The increase in net income was primarily due to increased revenues, partially offset by slightly lower margins on a lower mix of Foundry & Logic probe card sales and higher operating expenses on higher operating levels.

Impact of COVID-19

The COVID-19 pandemic continues to cause serious illness and death in many of the regions that we, our customers and our suppliers operate. The COVID-19 pandemic has resulted in significant governmental actions designed to control the spread of the virus, including the imposition of safety requirements and other orders in locations where we have manufacturing and other activities.

We believe that we operate in a critical infrastructure industry, as defined by the U.S. Department of Homeland Security. This reduces the current and anticipated impacts of the COVID-19 pandemic on our major customers and suppliers, and upon our operations, as compared to companies that are not part of the critical infrastructure. We currently continue to operate in all of our manufacturing sites at production levels comparable to those prior to the pandemic, albeit subject to certain safety and related constraints. Our other operations are similarly continuing with substantial work-from-home activities.

If the provisions of governmental health orders or other safety requirements applicable to us or our customers or suppliers become more restrictive for an extended period of time, or if we have repeated occurrences of COVID-19 in any of our facilities, we may experience disruptions or delays in manufacturing, product design, product development, customer support, manufacturing and sales, and an overall loss of productivity and efficiency.

While to date the disruptions in our operations, supply chain and customer demand as a result of the COVID-19 pandemic have been somewhat limited, we believe that the COVID-19 pandemic represents a sustained threat that may give rise to a variety of more significant adverse impacts on our business and financial results. For a further description of the uncertainties and business risks associated with the COVID-19 pandemic, see the risk factors discussed in our Annual Report on Form 10-K for the year ended December 26, 2020.

Significant Accounting Policies and the Use of Estimates

Management’s Discussion and Analysis and Note 2, *Summary of Significant Accounting Policies*, to the Consolidated Financial Statements in our 2020 Annual Report on Form 10-K describe the significant accounting estimates and significant 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 26, 2021, there were no significant changes in our significant accounting policies or estimates from those reported in our Annual Report on Form 10-K for the year ended December 26, 2020, which was filed with the Securities and Exchange Commission on February 22, 2021.

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 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Revenues	100.0 %	100.0 %	100.0 %	100.0 %
Cost of revenues	59.4	58.1	59.2	58.1
Gross profit	40.6	41.9	40.8	41.9
Operating expenses:				
Research and development	13.5	13.3	13.2	13.2
Selling, general and administrative	16.2	14.4	16.1	15.8
Total operating expenses	29.7	27.7	29.3	29.0
Operating income	10.9	14.2	11.5	12.9
Interest income	0.1	0.2	0.1	0.3
Interest expense	(0.1)	(0.1)	(0.1)	(0.2)
Other expense, net	(0.1)	—	—	—
Income before income taxes	10.8	14.3	11.5	13.0
Provision for income taxes	1.2	1.4	1.5	1.6
Net income	9.6 %	12.9 %	10.0 %	11.4 %

Revenues by Segment and Market

	Three Months Ended		Six Months Ended	
	June 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
	(In thousands)			
Probe Cards	$ 153,641	$ 133,784	$ 312,539	$ 268,499
Systems	34,435	24,040	62,173	50,078
	$ 188,076	$ 157,824	$ 374,712	$ 318,577

	Three Months Ended					
	June 26, 2021	% of Revenues	June 27, 2020	% of Revenues	$ Change	% Change
	(Dollars in thousands)					
Probe Cards Markets:						
Foundry & Logic	$ 103,726	55.1 %	$ 109,347	69.3 %	$ (5,621)	(5.1)%
DRAM	42,088	22.4	19,052	12.1	23,036	120.9
Flash	7,827	4.2	5,385	3.4	2,442	45.3
Systems Market:						
Systems	34,435	18.3	24,040	15.2	10,395	43.2
Total revenues	$ 188,076	100.0 %	$ 157,824	100.0 %	$ 30,252	19.2 %

	Six Months Ended					
	June 26, 2021	% of Revenues	June 27, 2020	% of Revenues	$ Change	% Change
	(Dollars in thousands)					
Probe Cards Markets:						
Foundry & Logic	$ 217,136	57.9 %	$ 215,092	67.6 %	$ 2,044	1.0 %
DRAM	75,986	20.3	43,748	13.7	32,238	73.7
Flash	19,417	5.2	9,659	3.0	9,758	101.0
Systems Market:						
Systems	62,173	16.6	50,078	15.7	12,095	24.2
Total revenues	$ 374,712	100.0 %	$ 318,577	100.0 %	$ 56,135	17.6 %

The decrease in Foundry & Logic product revenue for the three months ended June 26, 2021, compared to the three months ended June 27, 2020, was driven principally by lower demand from one major customer, partially offset by increased unit sales to other large semiconductor foundries and integrated device manufacturers, demonstrating success in diversifying across our strategic accounts. The increase in Foundry & Logic product revenue for the six months ended June 26, 2021, compared to the six months ended June 27, 2020, was driven principally by increased unit sales to large semiconductor foundries and integrated device manufacturers, partially offset by lower demand from one major customer.

The increase in DRAM product revenue for the three and six months ended June 26, 2021, compared to the three and six months ended June 27, 2020, was driven by an increase in sales as a result of increased design wins and customer demand.

The increase in Flash product revenue for the three and six months ended June 26, 2021, compared to the three and six months ended June 27, 2020, was driven by increased sales resulting from the acquisition of Baldwin Park. Our revenue in this market continues to be highly variable.

The increase in Systems product revenue for the three and six months ended June 26, 2021, compared to the three and six months ended June 27, 2020, was driven by increased sales of cryogenic systems due to the acquisition of High Precision Devices, Inc. (“HPD”) and increased sales of thermal sub-systems and metrology systems.

Due to COVID-19, there were various impacts across our segments due to governmental mandates of social distancing. This resulted in a temporary factory shutdown for almost two weeks during our first fiscal quarter of 2020 in certain locations, limiting our manufacturing capacity. We believe these shutdowns negatively affected revenue and impacted our ability to maintain typical lead times, especially in our Probes segment. The plant shutdowns we experienced in the six months ended June 27, 2020 did not recur in the six months ended June 26, 2021, which presumably drove some of the increased sales, particularly in the Probe Cards segment where the plant shutdowns in 2020 were longer in duration than the shutdowns for the Systems segment.

Revenues by Geographic Region

	Three Months Ended				Six Months Ended			
	June 26, 2021	**% of Revenue**	**June 27, 2020**	**% of Revenue**	**June 26, 2021**	**% of Revenue**	**June 27, 2020**	**% of Revenue**
	(Dollars in thousands)							
Taiwan	$ 51,884	27.6 %	$ 33,171	21.0 %	$ 97,464	26.0 %	$ 64,951	20.4 %
South Korea	36,177	19.2 %	15,113	9.6 %	55,262	14.7 %	29,201	9.2 %
United States	32,650	17.4 %	28,121	17.8 %	62,136	16.6 %	60,037	18.8 %
China	31,827	16.9 %	48,758	30.9 %	74,452	19.9 %	92,400	29.0 %
Asia-Pacific[1]	14,288	7.6 %	6,500	4.1 %	43,246	11.5 %	14,363	4.5 %
Europe	12,010	6.4 %	14,132	9.0 %	22,009	5.9 %	35,175	11.0 %
Japan	7,704	4.1 %	10,059	6.4 %	17,025	4.5 %	18,429	5.8 %
Rest of the world	1,536	0.8 %	1,970	1.2 %	3,118	0.9 %	4,021	1.3 %
Total revenues	$ 188,076	100.0 %	$ 157,824	100.0 %	$ 374,712	100.0 %	$ 318,577	100.0 %

[1] Asia-Pacific includes all countries in the region except China, Japan, South Korea and Taiwan, 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 the U.S.

Changes in revenue by geographic region for the three and six months ended June 26, 2021, compared to the three and six months ended June 27, 2020, were primarily attributable to changes in customer demand, shifts in customer regional manufacturing strategies, particularly with our large multinational customers, 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 26, 2021	**June 27, 2020**	**$ Change**	**% Change**
Gross profit	$ 76,283	$ 66,167	$ 10,116	15.3 %
Gross margin	40.6 %	41.9 %		

	Six Months Ended			
	June 26, 2021	**June 27, 2020**	**$ Change**	**% Change**
Gross profit	$ 152,989	$ 133,557	$ 19,432	14.5 %
Gross margin	40.8 %	41.9 %		

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

	Three Months Ended							
	June 26, 2021				June 27, 2020			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Gross profit	$ 66,600	$ 16,907	$ (7,224)	$ 76,283	$ 61,523	$ 10,719	$ (6,075)	$ 66,167
Gross margin	43.3 %	49.1 %		40.6 %	46.0 %	44.6 %		41.9 %

	Six Months Ended							
	June 26, 2021				June 27, 2020			
	Probe Cards	Systems	Corporate and Other	Total	Probe Cards	Systems	Corporate and Other	Total
Gross profit	$136,915	$ 30,506	$ (14,432)	$ 152,989	$122,266	$ 24,053	$ (12,762)	$ 133,557
Gross margin	43.8 %	49.1 %		40.8 %	45.5 %	48.0 %		41.9 %

Probe Cards

For the three and six months ended June 26, 2021, gross margins decreased compared to the three and six months ended June 27, 2020, primarily due to a lesser proportion of sales coming from higher gross margin Foundry & Logic probe card sales and a greater proportion of sales coming from lower gross margin DRAM sales, combined with higher materials costs.

Systems

For the three and six months ended June 26, 2021, gross margins increased compared to the three and six months ended June 27, 2020, primarily as a result of favorable product mix, largely related to increased sales of thermal sub-systems and metrology systems.

Corporate and Other

Corporate and Other includes unallocated expenses relating to share-based compensation and amortization of intangible assets, inventory and fixed asset fair value adjustments due to acquisitions, and other which are not used in evaluating the results of, or in allocating resources to, our reportable segments.

Overall

Gross profit and gross margins fluctuate with revenue levels, product mix, selling prices, factory loading and material costs. For the three and six months ended June 26, 2021, compared to the three and six months ended June 27, 2020, gross profit has increased on greater revenue levels while gross margins have decreased, primarily on less favorable Probes segment product mix.

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

	Three Months Ended		Six Months Ended	
	June 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Stock-based compensation	$ 1,079	$ 901	$ 2,414	$ 1,838

Research and Development

	Three Months Ended			
	June 26, 2021	June 27, 2020	$ Change	% Change
	(Dollars in thousands)			
Research and development	$ 25,454	$ 20,919	$ 4,535	21.7 %
% of revenues	13.5 %	13.3 %		

	Six Months Ended			
	June 26, 2021	June 27, 2020	$ Change	% Change
	(Dollars in thousands)			
Research and development	$ 49,500	$ 42,186	$ 7,314	17.3 %
% of revenues	13.2 %	13.2 %		

The increase in research and development expenses in the three and six months ended June 26, 2021 when compared to the corresponding period in the prior year was primarily driven by our recent acquisitions of Baldwin Park and HPD, which increased headcount and general operational costs. Annual salary increases and higher stock-based compensation also contributed to the increase. The increase is in alignment with current operating levels with no change as a percent of revenues for the six months ended June 26, 2021 when compared to the corresponding period in the prior year.

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

	Three Months Ended June 26, 2021 compared to Three Months Ended June 27, 2020	Six Months Ended June 26, 2021 compared to Six Months Ended June 27, 2020
Employee compensation costs	$ 2,992	$ 4,429
Stock-based compensation	274	524
Project material costs	206	510
Depreciation	146	260
Other general operations	917	1,591
	$ 4,535	$ 7,314

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

	Three Months Ended		Six Months Ended	
	June 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Stock-based compensation	$ 1,663	$ 1,389	$ 3,352	$ 2,828

Selling, General and Administrative

	Three Months Ended			
	June 26, 2021	June 27, 2020	$ Change	% Change
	(Dollars in thousands)			
Selling, general and administrative	$ 30,479	$ 22,755	$ 7,724	33.9 %
% of revenues	16.2 %	14.4 %		

	Six Months Ended			
	June 26, 2021	June 27, 2020	$ Change	% Change
	(Dollars in thousands)			
Selling, general and administrative	$ 60,494	$ 50,448	$ 10,046	19.9 %
% of revenues	16.1 %	15.8 %		

The increase in selling, general and administrative expenses in the three and six months ended June 26, 2021 when compared to the corresponding period in the prior year was primarily driven by our recent acquisitions of Baldwin Park and HPD, which increased headcount and general operational costs. Annual salary increases and higher stock-based compensation also contributed to the increase, together with a benefit in the prior year related to contingent consideration for the acquisition of FRT GmbH ("FRT") that did not repeat.

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

	Three Months Ended June 26, 2021 compared to Three Months Ended June 27, 2020	Six Months Ended June 26, 2021 compared to Six Months Ended June 27, 2020
Gain on contingent consideration	$ 3,605	$ 3,605
Employee compensation costs	2,831	4,903
Stock-based compensation	494	1,300
General operating expenses	488	506
Consulting fees	145	(34)
Travel related costs	100	(498)
Amortization of intangibles	61	264
	$ 7,724	$ 10,046

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

	Three Months Ended		Six Months Ended	
	June 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
Stock-based compensation	$ 3,846	$ 3,352	$ 7,899	$ 6,599

Interest Income and Interest Expense

	Three Months Ended		Six Months Ended	
	June 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
	(Dollars in thousands)			
Interest Income	$ 148	$ 376	$ 342	$ 1,061
Weighted average balance of cash and investments	$ 263,363	$ 235,888	$ 215,232	$ 223,340
Weighted average yield on cash and investments	0.32 %	0.81 %	0.35 %	1.26 %
Interest Expense	$ 116	$ 171	$ 296	$ 489
Average debt outstanding	$ 30,453	$ 32,368	$ 31,358	$ 38,843
Weighted average interest rate on debt	1.58 %	1.92 %	1.58 %	2.26 %

Interest income is earned on our cash, cash equivalents, restricted cash and marketable securities. The decrease in interest income for the three and six months ended June 26, 2021 compared with the corresponding period of the prior year was attributable to lower investment yields due to the low interest rate environment, despite higher invested balances.

Interest expense primarily includes interest on our term loans, interest rate swap derivative contracts, and term loan issuance costs amortization charges. The decrease in interest expense for the three and six months ended June 26, 2021 compared to the same period of the prior year was primarily due to lower outstanding debt balances due to the pay-off of the term loan acquired when we purchased Cascade Microtech, Inc, and subsequently paid off on June 30, 2020, partially offset by the Building Term Loan that originated in the second quarter of 2020. Interest expense was also lower due to lower average interest rates on the outstanding debt.

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 26, 2021	June 27, 2020	June 26, 2021	June 27, 2020
	(In thousands, except percentages)			
Provision for income taxes	$ 2,283	$ 2,162	$ 5,489	$ 4,978
Effective tax rate	11.3 %	9.6 %	12.8 %	12.0 %

Provision for income taxes reflects the tax provision on our operations in foreign and U.S. jurisdictions, offset by tax benefits from tax credits and the foreign-derived intangible income (“FDII”) deduction. Our effective tax rate may vary from period to period based on changes in estimated taxable income or loss by jurisdiction, changes to the valuation allowance, changes to U.S. federal, state or foreign tax laws, changes in ASC 718 stock-based compensation expense/benefit, future expansion into areas with varying country, state, and local income tax rates, and deductibility of certain costs and expenses by jurisdiction. We have utilized our previous net operating loss carryforwards, and expect the FDII deduction and corresponding benefit to be available, resulting in a decrease from the U.S. statutory rate and included in our worldwide effective tax rate for the year ending December 25, 2021.

Liquidity and Capital Resources

Capital Resources

Our working capital was $343.6 million at June 26, 2021, compared to $332.5 million at December 26, 2020.

Cash and cash equivalents primarily consist of deposits held at banks and money market funds. Marketable securities primarily consist of U.S. treasuries, corporate bonds, and commercial paper. 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 $256.2 million at June 26, 2021, compared to $255.0 million at December 26, 2020. 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.

The COVID-19 pandemic has negatively impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets. An extended period of global supply chain and economic disruption could materially affect our business, results of operations, access to sources of liquidity and financial condition.

If we are unsuccessful in maintaining or growing our revenues, maintaining or reducing our cost structure (in response to a potential reduction in demand due to an industry downturn, COVID-19, or other event), or increasing our available cash through debt or equity financings, our cash, cash equivalents and marketable securities may decline.

We utilize a variety of tax planning and financing strategies to manage our worldwide cash and deploy funds to locations where needed. As part of these strategies, we indefinitely reinvest a portion of our 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 26, 2021	**June 27, 2020**
	(In thousands)	
Net cash provided by operating activities	$ 66,155	$ 82,447
Net cash used in investing activities	(59,813)	(20,977)
Net cash used in financing activities	$ (31,916)	$ (7,265)

Operating Activities

Net cash provided by operating activities for the six months ended June 26, 2021 was primarily attributable to net income of $37.5 million and net non-cash expenses of $51.9 million, further impacted by changes in operating assets and liabilities, as explained below.

Inventories, net, increased $12.7 million to $111.9 million at June 26, 2021, compared to $99.2 million at December 26, 2020, as a result of anticipated projected customer demand. Due to provisions for excess and obsolete inventories of $6.9 million, the change in Inventories, net, was further impacted.

Operating lease liabilities increased $7.4 million to $42.1 million at June 26, 2021, compared to $34.7 million at December 26, 2020 as a result of additional right-of-use assets obtained in exchange for lease obligations of $11.6 million offset by lease payments.

Investing Activities

Net cash used in investing activities for the six months ended June 26, 2021 was primarily related to $31.3 million property, plant and equipment acquisitions, and $28.5 million net cash used to purchase marketable securities.

Financing Activities

Net cash used in financing activities for the six months ended June 26, 2021 primarily related to $24.0 million used to purchase common stock under our stock repurchase program, $5.3 million related to tax withholding associated with the net share settlements of our equity awards, and $4.7 million of principal payments made towards the repayment of our term loans, partially offset by $5.9 million of proceeds received from issuances of common stock under our employee stock purchase plan and stock option plans, and $3.9 million paid to settle the contingent consideration from the acquisition of FRT.

Debt

FRT Term Loan
On October 25, 2019, we entered into a $23.4 million three-year credit facility loan agreement (the "FRT Term Loan"), to fund the acquisition of FRT GmbH, which we acquired on October 9, 2019.

The FRT Term Loan bears interest at a rate equal to the Euro Interbank Offered Rate ("EURIBOR") plus 1.75% per annum and will be repaid in quarterly installments of approximately $2.0 million plus interest. The interest rate at June 26, 2021 was 1.21%. As of June 26, 2021, the balance outstanding pursuant to the FRT term loan was $12.5 million.

Building Term Loan
On June 22, 2020, we entered into an $18.0 million 15-year credit facility loan agreement (the "Building Term Loan"). The proceeds of the Building Term Loan were used to finance the purchase a building adjacent to our leased facilities in Livermore, California.

The Building Term Loan bears interest at a rate equal to the applicable LIBOR rate plus 1.75% per annum. Interest payments are payable in monthly installments over a fifteen-year period. The interest rate at June 26, 2021 was 1.84%. As of June 26, 2021, the balance outstanding pursuant to the Building Term Loan was $17.0 million.

On March 17, 2020, we entered into a forward starting interest rate swap agreement to hedge the interest payments on the Building Term Loan for the notional amount of $18.0 million, and an amortization period that matches the debt. As future levels of LIBOR over the life of the loan are uncertain, we entered into this interest-rate swap agreement to hedge the exposure in interest rate risks associated with movement in LIBOR rates. By entering into the agreement, we convert a floating rate interest at one-month LIBOR plus 1.75% into a fixed rate interest at 2.75%. As of June 26, 2021, the notional amount of the loan that is subject to this interest rate swap is $17.0 million.

Stock Repurchase Program

In October 2020, our Board of Directors authorized a program to repurchase up to $50.0 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 October 28, 2022. During the six months ended June 26, 2021, we repurchased 620,200 shares of common stock for $24.0 million and, as of June 26, 2021, $26.0 million remained available for future repurchases.

Contractual Obligations and Commitments

The following table summarizes our significant contractual commitments to make future payments in cash under contractual obligations as of June 26, 2021:

	Payments Due In Fiscal Year						
	Remainder 2021	2022	2023	2024	2025	Thereafter	Total
Operating leases	$ 4,264	$ 8,527	$ 7,172	$ 6,766	$ 6,742	$ 14,850	$ 48,321
Term loans - principal payments	4,677	9,376	1,050	1,080	1,111	12,259	29,553
Term loans - interest payments [1]	228	364	281	262	240	1,146	2,521
Total	$ 9,169	$ 18,267	$ 8,503	$ 8,108	$ 8,093	$ 28,255	$ 80,395

[1] Represents our minimum interest payment commitments at 1.84% per annum for the Building Term Loan and 1.21% per annum for the FRT Term Loan. This also excludes any amounts related to our interest rate swap.

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 26, 2021, we were not involved in any such off-balance sheet arrangements.

Recent Accounting Pronouncements

See Note 1, *Basis of Presentation and New Accounting Pronouncements*, 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 26, 2020. Our exposure to market risk has not changed materially since December 26, 2020.

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 a 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 26, 2021 to the risk factors discussed in our Annual Report on Form 10-K for the year ended December 26, 2020. 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 26, 2020 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 2. ***Unregistered Sales of Equity Securities and Use of Proceeds***

Repurchase of Common Stock

The following table summarizes our repurchases of outstanding common stock for the three months ended June 26, 2021:

Period (fiscal months)	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs(1)	Maximum Amount that May Yet Be Purchased Under the Plans or Programs
March 28, 2021 - April 24, 2021	—	$ —	—	$ 44,261,726
April 25, 2021 - May 22, 2021	438,798	$ 38.07	438,798	$ 27,558,329
May 23, 2021 - June 26, 2021	45,000	$ 33.53	45,000	$ 26,049,418
	483,798	37.64	483,798	

[1] In October 2020, our Board of Directors authorized a program to repurchase up to $50.0 million of outstanding common stock to offset potential dilution from issuances of our common stock under our employee stock purchase plan and equity incentive plan. Under the authorized stock repurchase program, we may repurchase shares from time to time on the open market. The pace of repurchase activity will depend on levels of cash generation, current stock price and other factors. The program may be modified or discontinued at any time. The share repurchase program will expire on October 28, 2022.

Item 6. *Exhibits*

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

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
3.1	Amended and Restated Certificate of Incorporation of the Registrant as filed with the Delaware Secretary of State on June 17, 2003	S-1	October 20, 2003	3.01	
3.2	Amended and Restated Bylaws of the Registrant	8-K	July 22, 2016	3.2	
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	The following financial statements from the Company's Quarterly Report on Form 10-Q for the quarter ended June 26, 2021, formatted in Inline XBRL: (i) Condensed Consolidated Balance Sheets, (ii) Condensed Consolidated Statements of Income, (iii) Condensed Consolidated Statements of Comprehensive Income, (iv) Condensed Consolidated Statements of Stockholders' Equity, (v) Condensed Consolidated Statements of Cash Flows, and (vi) Notes to Condensed Consolidated Financial Statements, tagged as blocks of text and including detailed tags				X
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
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended June 26, 2021, formatted in Inline XBRL (included as Exhibit 101)				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:	July 30, 2021	By:	/s/ SHAI SHAHAR

Shai Shahar
Chief Financial Officer
(Duly Authorized Officer, Principal Financial Officer, and Principal Accounting Officer)

Exhibit 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**

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: July 30, 2021

/s/ MICHAEL D. SLESSOR

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

Exhibit 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

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: July 30, 2021

/s/ SHAI SHAHAR

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

Exhibit 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

In connection with the Quarterly Report on Form 10-Q of FormFactor, Inc., a Delaware corporation, for the period ended June 26, 2021, 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:	July 30, 2021	/s/ MICHAEL D. SLESSOR
		Michael D. Slessor *Chief Executive Officer* *(Principal Executive Officer and Director)*
Date:	July 30, 2021	/s/ SHAI SHAHAR
		Shai Shahar *Chief Financial Officer* *(Principal Financial Officer and Principal Accounting Officer)*