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 July 28, 2019

or

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from to

Commission File Number 001-06395

SEMTECH CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**95-2119684**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

200 Flynn Road, Camarillo, California, 93012-8790
(Address of principal executive offices, Zip Code)

Registrant's telephone number, including area code: (805) 498-2111

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock par value $0.01 per share	**SMTC**	**The Nasdaq Global Select 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 x No ¨

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

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

Large accelerated filer	x	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 x

Number of shares of Common Stock, $0.01 par value per share, outstanding at August 23, 2019: 66,530,435

SEMTECH CORPORATION
INDEX TO FORM 10-Q
FOR THE QUARTER ENDED JULY 28, 2019

PART I - FINANCIAL INFORMATION	3
ITEM 1. Financial Statements	5
ITEM 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations	30
ITEM 3. Quantitative and Qualitative Disclosures About Market Risk	39
ITEM 4. Controls and Procedures	39
PART II – OTHER INFORMATION	40
ITEM 1. Legal Proceedings	40
ITEM 1A. Risk Factors	40
ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds	41
ITEM 3. Defaults Upon Senior Securities	42
ITEM 4. Mine Safety Disclosures	42
ITEM 5. Other Information	42
ITEM 6. Exhibits	42

Unless the context otherwise requires, the use of the terms "Semtech," "the Company," "we," "us" and "our" in this Quarterly Report on Form 10-Q refers to Semtech Corporation and its consolidated subsidiaries. This Quarterly Report on Form 10-Q may contain references to the Company's trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this Quarterly Report on Form 10-Q, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other company.

Special Note Regarding Forward-Looking and Cautionary Statements

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, as amended, based on our current expectations, estimates and projections about our operations, industry, financial condition, performance, results of operations, and liquidity. Forward-looking statements are statements other than historical information or statements of current condition and relate to matters such as future financial performance, future operational performance, the anticipated impact of specific items on future earnings, and our plans, objectives and expectations. Statements containing words such as "may," "believe," "anticipate," "expect," "intend," "plan," "project," "estimate," "should," "will," "designed to," "projections," or "business outlook," or other similar expressions constitute forward-looking statements. Forward-looking statements involve known and unknown risks and uncertainties that could cause actual results and events to differ materially from those projected.

Potential factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to:

- *fluctuation in the Company's future results;*
- *downturns in the business cycle;*
- *rapid decline in the average selling prices of the Company's products;*
- *reduced demand for the Company's products due to global economic conditions;*
- *changes in the U.S. and global social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment, including potential increases on tariffs of goods imported into the U.S.;*
- *export restrictions and laws affecting the Company's trade and investments including the adoption and expansion of trade restrictions, including on Huawei Technologies Co., Ltd., or the occurrence of trade wars;*
- *business interruptions;*
- *the Company's reliance on a limited number of suppliers and subcontractors for components and materials;*
- *potentially insufficient liability insurance if the Company's products are found to be defective;*
- *obsolete inventories as a result of changes in demand and change in life cycles for the Company's products;*
- *the Company's inability to successfully develop and sell new products;*
- *lengthy and expensive product qualification processes without any assurance of product sales;*
- *the Company's products failing to meet industry standards;*
- *the Company's inability to protect intellectual property rights;*
- *the Company suffering losses if its products infringe the intellectual property rights of others;*
- *the Company's need to commit resources to product production prior to receipt of purchase commitments;*
- *increased business risk resulting from significant business with foreign customers;*
- *the Company's foreign currency exposures;*
- *the Company's inability to adequately compete against larger, more established entities;*
- *increased competition due to industry consolidation;*
- *the loss of any one of the Company's significant customers;*
- *volatility of customer demand;*
- *termination of a contract by a distributor;*
- *sales of our products on the gray market;*

- *the Company’s failure to maintain effective internal control over financial reporting and disclosure controls and procedures;*
- *government regulations and other standards, including those that impose operational and reporting requirements;*
- *any impact on the Company from changes leading up to and following the United Kingdom’s likely exit from the European Union;*
- *the Company’s failure to comply with applicable environmental regulations;*
- *increase in the Company’s cost of doing business as a result of having to comply with the codes of conduct of certain of the Company’s customers and suppliers;*
- *changes in tax law, including effective tax rates;*
- *taxation of Company sales in non-U.S. jurisdictions;*
- *potential increased tax liabilities and effective tax rate if the Company needs to repatriate funds held by foreign subsidiaries;*
- *the Company’s limited experience with government contracting;*
- *potential government investigations and inquiries;*
- *loss of the Company’s key personnel;*
- *risks associated with companies the Company has acquired in the past and may acquire in the future and the Company’s ability to successfully integrate acquired businesses and benefit from expected synergies;*
- *the Company’s reliance on certain critical information systems for the operation of its business;*
- *the Company may be required to recognize additional impairment charges;*
- *loss of value of investments in entities not under our control;*
- *the Company may not receive accurate, complete or timely financial information from entities for which the Company is required to consolidate such information;*
- *the Company’s ability to generate cash to service its debt obligations;*
- *restrictive covenants in the Company’s credit agreement which may restrict its ability to pursue its business strategies;*
- *costs associated with the Company’s indemnification of certain customers, distributors and other parties;*
- *the Company’s share price could be subject to extreme price fluctuations;*
- *the impact on the Company’s common stock price if securities or industry analysts do not publish reports about the Company’s business or adversely change their recommendations regarding the Company’s common stock;*
- *anti-takeover provisions in the Company’s organizational documents could make an acquisition of the Company more difficult; and*
- *the Company is subject to litigation risks which may be costly to defend*

Additionally, forward-looking statements should be considered in conjunction with the cautionary statements contained in this Quarterly Report on Form 10-Q, including, without limitation, information under the captions "Management’s Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors" and additional factors that accompany the related forward-looking statements in this Quarterly Report on Form 10-Q, in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 including, without limitation, information under the caption "Risk Factors," in other filings with the U.S. Securities and Exchange Commission, and in material incorporated herein and therein by reference. In light of the significant risks and uncertainties inherent in the forward-looking information included herein that may cause actual performance and results to differ materially from those predicted, any such forward-looking information should not be regarded as representations or guarantees by the Company of future performance or results, or that its objectives or plans will be achieved, or that any of its operating expectations or financial forecasts will be realized. Reported results should not be considered an indication of future performance. Investors are cautioned not to place undue reliance on any forward-looking information contained herein, which reflect management’s analysis only as of the date hereof. Except as required by law, the Company assumes no obligation to publicly release the results of any update or revision to any forward-looking statement that may be made to reflect new information, events or circumstances after the date hereof or to reflect the occurrence of unanticipated or future events, or otherwise.

In addition to regarding forward-looking statements with caution, you should consider that the preparation of the consolidated financial statements requires us to draw conclusions and make interpretations, judgments, assumptions and estimates with respect to certain factual, legal, and accounting matters. Our financial statements might have been materially impacted if we had reached different conclusions or made different interpretations, judgments, assumptions or estimates.

PART I - FINANCIAL INFORMATION

ITEM 1. Financial Statements

SEMTECH CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share data)
(unaudited)

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Net sales	$ 137,146	$ 163,211	$ 268,500	$ 293,640
Cost of sales	52,262	63,087	102,341	122,047
Gross profit	84,884	100,124	166,159	171,593
Operating costs and expenses:				
Selling, general and administrative	39,875	33,529	78,252	74,935
Product development and engineering	25,553	28,079	52,652	54,278
Intangible amortization	3,908	6,480	9,051	13,441
Changes in the fair value of contingent earn-out obligations	—	(900)	(2,161)	(900)
Total operating costs and expenses	69,336	67,188	137,794	141,754
Operating income	15,548	32,936	28,365	29,839
Interest expense	(2,597)	(2,200)	(5,064)	(4,390)
Non-operating income, net	1,213	542	2,256	732
Income before taxes and equity in net gains (losses) of equity method investments	14,164	31,278	25,557	26,181
Provision (benefit) for income taxes	8,966	6,082	6,654	(11,428)
Net income before equity in net gains (losses) of equity method investments	5,198	25,196	18,903	37,609
Equity in net gains (losses) of equity method investments	168	(27)	(243)	(58)
Net income	$ 5,366	$ 25,169	$ 18,660	$ 37,551
Earnings per share:				
Basic	$ 0.08	$ 0.38	$ 0.28	$ 0.57
Diluted	$ 0.08	$ 0.37	$ 0.28	$ 0.55
Weighted average number of shares used in computing earnings per share:				
Basic	66,519	66,063	66,312	66,194
Diluted	67,746	68,880	67,814	68,428

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

SEMTECH CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)
(unaudited)

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Net income	$ 5,366	$ 25,169	$ 18,660	$ 37,551
Other comprehensive loss, net:				
Unrealized loss on foreign currency cash flow hedges	(229)	(164)	(280)	(117)
Realized loss on foreign currency cash flow hedges	38	25	9	25
Change in employee benefit plans	69	(16)	137	(32)
Other comprehensive loss, net	(122)	(155)	(134)	(124)
Comprehensive income	$ 5,244	$ 25,014	$ 18,526	$ 37,427

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

SEMTECH CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)
(unaudited)

	July 28, 2019	January 27, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 287,839	$ 312,120
Accounts receivable, less allowances of $618 and $774, respectively	58,643	79,223
Inventories	75,060	63,679
Prepaid taxes	15,540	8,406
Other current assets	16,175	21,876
Total current assets	453,257	485,304
Non-current assets:		
Property, plant and equipment, net of accumulated depreciation of $203,320 and $196,033, respectively	125,764	118,488
Deferred tax assets	17,896	14,362
Goodwill	351,141	351,141
Other intangible assets, net	27,506	36,558
Other assets	80,750	57,028
TOTAL ASSETS	**$ 1,056,314**	**$ 1,062,881**
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 38,903	$ 43,183
Accrued liabilities	49,925	65,023
Deferred revenue	3,455	3,439
Current portion - long-term debt	18,294	18,269
Total current liabilities	110,577	129,914
Non-current liabilities:		
Deferred tax liabilities	3,620	3,363
Long term debt, less current portion	183,692	192,845
Other long-term liabilities	68,885	54,078
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Common stock, $0.01 par value, 250,000,000 shares authorized, 78,136,144 issued and 66,314,933 outstanding and 78,136,144 issued and 65,238,255 outstanding, respectively	785	785
Treasury stock, at cost, 11,821,211 shares and 12,897,889 shares, respectively	(345,810)	(346,218)
Additional paid-in capital	444,716	456,791
Retained earnings	593,590	574,930
Accumulated other comprehensive loss	(3,741)	(3,607)
Total stockholders' equity	689,540	682,681
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**$ 1,056,314**	**$ 1,062,881**

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

SEMTECH CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share data)
(unaudited)

	Three Months Ended July 28, 2019						
	Common Stock						
	Number of Shares Outstanding	Amount	Additional Paid-in Capital	Retained Earnings	Treasury Stock, at Cost	Accumulated Other Comprehensive Loss	Stockholders' Equity
Balance at April 28, 2019	**66,644,921**	**$ 785**	**$ 437,278**	**$ 588,224**	**$ (327,442)**	**$ (3,619)**	**$ 695,226**
Net income	—	—	—	5,366	—	—	5,366
Other comprehensive loss	—	—	—	—	—	(122)	(122)
Stock-based compensation	—	—	8,526	—	—	—	8,526
Repurchase of outstanding common stock	(446,270)	—	—	—	(20,000)	—	(20,000)
Treasury stock reissued	116,282	—	(1,088)	—	1,632	—	544
Balance at July 28, 2019	**66,314,933**	**$ 785**	**$ 444,716**	**$ 593,590**	**$ (345,810)**	**$ (3,741)**	**$ 689,540**

	Six Months Ended July 28, 2019						
	Common Stock						
	Number of Shares Outstanding	Amount	Additional Paid-in Capital	Retained Earnings	Treasury Stock, at Cost	Accumulated Other Comprehensive Loss	Stockholders' Equity
Balance at January 27, 2019	**65,238,255**	**$ 785**	**$ 456,791**	**$ 574,930**	**$ (346,218)**	**$ (3,607)**	**$ 682,681**
Net income	—	—	—	18,660	—	—	18,660
Other comprehensive loss	—	—	—	—	—	(134)	(134)
Stock-based compensation	—	—	18,890	—	—	—	18,890
Repurchase of outstanding common stock	(448,481)	—	—	—	(20,110)	—	(20,110)
Treasury stock reissued	1,525,159	—	(30,965)	—	20,518	—	(10,447)
Balance at July 28, 2019	**66,314,933**	**$ 785**	**$ 444,716**	**$ 593,590**	**$ (345,810)**	**$ (3,741)**	**$ 689,540**

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

SEMTECH CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share data)
(unaudited)

	Three Months Ended July 29, 2018						
	Common Stock						
	Number of Shares Outstanding	Amount	Additional Paid-in Capital	Retained Earnings	Treasury Stock, at Cost	Accumulated Other Comprehensive Loss	Stockholders' Equity
Balance at April 29, 2018	**66,140,592**	**$ 785**	**$ 438,364**	**$ 524,238**	**$ (268,864)**	**$ (1,169)**	**$ 693,354**
Cumulative-effect adjustment to beginning balance from adoption of ASU 2014-09	—	—	—	—	—	—	—
Cumulative-effect adjustment to beginning balance from adoption of ASU 2016-16	—	—	—	(3)	—	—	(3)
Net income	—	—	—	25,169	—	—	25,169
Other comprehensive loss	—	—	—	—	—	(155)	(155)
Stock-based compensation	—	—	10,175	—	—	—	10,175
Repurchase of outstanding common stock	(495,609)	—	—	—	(24,414)	—	(24,414)
Treasury stock reissued	286,426	—	(5,575)	—	4,737	—	(838)
Balance at July 29, 2018	**65,931,409**	**$ 785**	**$ 442,964**	**$ 549,404**	**$ (288,541)**	**$ (1,324)**	**$ 703,288**

	Six Months Ended July 29, 2018						
	Common Stock						
	Number of Shares Outstanding	Amount	Additional Paid-in Capital	Retained Earnings	Treasury Stock, at Cost	Accumulated Other Comprehensive Loss	Stockholders' Equity
Balance at January 28, 2018	**66,280,129**	**$ 785**	**$ 415,056**	**$ 502,346**	**$ (251,974)**	**$ (1,200)**	**$ 665,013**
Cumulative-effect adjustment to beginning balance from adoption of ASU 2014-09	—	—	—	11,104	—	—	11,104
Cumulative-effect adjustment to beginning balance from adoption of ASU 2016-16	—	—	—	(1,597)	—	—	(1,597)
Net income	—	—	—	37,551	—	—	37,551
Other comprehensive loss	—	—	—	—	—	(124)	(124)
Stock-based compensation	—	—	43,649	—	—	—	43,649
Repurchase of outstanding common stock	(1,140,753)	—	—	—	(49,739)	—	(49,739)
Treasury stock reissued	792,033	—	(15,741)	—	13,172	—	(2,569)
Balance at July 29, 2018	**65,931,409**	**$ 785**	**$ 442,964**	**$ 549,404**	**$ (288,541)**	**$ (1,324)**	**$ 703,288**

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

SEMTECH CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Six Months Ended	
	July 28, 2019	July 29, 2018
Cash flows from operating activities:		
Net income	$ 18,660	$ 37,551
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	20,543	24,540
Accretion of deferred financing costs and debt discount	247	269
Deferred income taxes	3,253	(14,870)
Share-based compensation and warrant costs	19,974	49,481
Loss on disposition of assets	426	11
Earn-out liabilities	(2,161)	(900)
Equity in net losses of equity method investments	243	58
Corporate owned life insurance, net	756	645
Changes in assets and liabilities:		
Accounts receivable, net	20,580	(20,653)
Inventories	(11,381)	13,020
Other assets	(6,950)	4,190
Accounts payable	(2,256)	2,626
Accrued liabilities	(18,057)	(6,414)
Deferred revenue	16	(53)
Income taxes payable	(2,105)	(1,697)
Other liabilities	(1,695)	(3,437)
Net cash provided by operating activities	40,093	84,367
Cash flows from investing activities:		
Proceeds from sales of property, plant and equipment	143	10
Purchase of property, plant and equipment	(16,893)	(9,821)
Purchase of investments	(7,692)	(5,595)
Acquisition, net of cash acquired	—	(7,321)
Proceeds from sale of investments	—	1,601
Net cash used in investing activities	(24,442)	(21,126)
Cash flows from financing activities:		
Payments of term loans	(9,375)	(7,500)
Payment for employee share-based compensation payroll taxes	(13,401)	(10,640)
Proceeds from exercise of stock options	2,954	8,048
Repurchase of outstanding common stock	(20,110)	(49,738)
Net cash used in financing activities	(39,932)	(59,830)
Net (decrease) increase in cash and cash equivalents	(24,281)	3,411
Cash and cash equivalents at beginning of period	312,120	307,923
Cash and cash equivalents at end of period	$ 287,839	$ 311,334
Supplemental disclosure of cash flow information		
Income taxes paid	$ 7,580	$ 2,939
Interest paid	$ 4,348	$ 3,900
Non-cash items		
Capital expenditures in accounts payable	$ 2,024	$ 2,314

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

Note 1: Organization and Basis of Presentation

Nature of Business

Semtech Corporation (together with its consolidated subsidiaries, the "Company" or "Semtech") is a global supplier of analog and mixed-signal semiconductors and advanced algorithms. The end customers for the Company’s products are primarily original equipment manufacturers ("OEMs") that produce and sell electronics.

The Company designs, develops and markets a wide range of products for commercial applications, the majority of which are sold into the enterprise computing, communications, high-end consumer and industrial end-markets.

Enterprise Computing: datacenters, passive optical networks, desktops, notebooks, servers, monitors, printers and other computer peripherals.

Communications: base stations, optical networks, carrier networks, switches and routers, cable modems, wireless local area network ("LAN") and other communication infrastructure equipment.

High-End Consumer: handheld products, smartphones, wireless charging, set-top boxes, digital televisions, monitors and displays, tablets, wearables, digital video recorders and other consumer equipment.

Industrial: analog and digital video broadcast equipment, video-over-IP solutions, automated meter reading, Internet of Things ("IoT"), smart grid, wireless charging, military and aerospace, medical, security systems, automotive, industrial and home automation and other industrial equipment.

Fiscal Year

The Company reports results on the basis of 52 and 53 week periods and ends its fiscal year on the last Sunday in January. The other quarters generally end on the last Sunday of April, July and October. All quarters consist of 13 weeks except for one 14-week period in the fourth quarter of 53-week years. The second quarters of fiscal years 2020 and 2019 each consisted of 13 weeks.

Principles of Consolidation

The accompanying interim unaudited condensed consolidated financial statements have been prepared by the Company, in accordance with accounting principles generally accepted in the United States ("GAAP") and on the same basis as the audited consolidated financial statements included in the Company’s Annual Report on Form 10-K for the fiscal year ended January 27, 2019 ("Annual Report"). In the opinion of the Company, these interim unaudited condensed consolidated financial statements contain all adjustments (consisting of normal recurring adjustments) necessary to present fairly, in all material respects, the financial position of the Company for the interim periods presented. All intercompany balances have been eliminated. Certain information and footnote disclosures normally included in annual consolidated financial statements have been condensed or omitted pursuant to the rules and regulations of the U.S. Securities and Exchange Commission. Because the interim unaudited condensed consolidated financial statements do not include all of the information and notes required by GAAP for a complete set of consolidated financial statements, they should be read in conjunction with the audited consolidated financial statements and notes included in the Company's Annual Report. The results reported in these interim unaudited condensed consolidated financial statements should not be regarded as indicative of results that may be expected for any subsequent period or for the entire year.

The Company’s interim unaudited condensed consolidated statements of income are referred to herein as the "Statements of Income." The Company’s interim unaudited condensed consolidated balance sheets are referred to herein as the "Balance Sheets" and interim unaudited condensed consolidated statements of cash flows as the "Statements of Cash Flows."

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Acquisitions

On May 2, 2018, the Company acquired substantially all the assets of IC Interconnect, Inc. (“ICI”) for an aggregate purchase price of approximately $7.4 million. The addition of ICI is aimed at further enhancing the Company’s U.S. research and development capabilities for its next-generation Z-Pak™ platform. $4.9 million was attributed to goodwill (see Note 7) and $2.5 million was attributed to the estimated fair values of the tangible net assets acquired. The goodwill is deductible for tax purposes. The transaction was accounted for as a business combination. Net revenues, earnings, and pro forma results of operations have not been presented because they are not material to the Company’s consolidated financial statements.

Settlements

On August 1, 2018, the Company announced the settlement of a lawsuit filed against HiLight Semiconductor Limited and related individual defendants in accordance with which the Company was paid approximately $9.0 million to cover damages for claims, costs and attorneys' fees. The Company recorded gains of $6.7 million and $1.3 million in the second and third quarters of fiscal year 2019, respectively, and $1.0 million in the first quarter of fiscal year 2020 for recoveries related to this settlement. All recoveries were presented in "Selling, general and administrative" ("SG&A") in the Statements of Income in the respective periods in which the cash was received.

Recent Accounting Standards Adopted

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-02, Leases (Topic 842), to increase transparency and comparability among organizations by requiring the recognition of right-of-use ("ROU") assets and lease liabilities in the balance sheet. Most prominent among the changes in the standard is the recognition of ROU assets and lease liabilities by lessees for those leases classified as operating leases. Under the standard, disclosures are required to meet the objective of enabling users of financial statements to assess the amount, timing, and uncertainty of cash flows arising from leases.

In July 2018, the FASB issued additional guidance on the accounting for leases. The guidance provides companies with another transition method by allowing entities to recognize a cumulative-effect adjustment to the opening balance of retained earnings as of the date of adoption. Under this method, financial information related to periods prior to adoption will be as originally reported under Accounting Standards Codification ("ASC") 840, Leases. Upon adoption as of January 28, 2019, the Company recorded ROU assets of $13.0 million and lease liabilities of $13.8 million. There was no other impact from the adoption. The difference between the ROU assets and lease liabilities primarily represents the existing deferred rent liabilities balance, resulting from historical straight-lining of operating leases, which was reclassified upon adoption to reduce the measurement of the ROU assets. The adoption of the standard did not have an impact on the Company's shareholder's equity and did not have a material impact on the Company's results from operations and cash flows.

The new standard provides several optional practical expedients in transition. The Company elected a transition package of three practical expedients permitted within the standard, which eliminates the requirements to reassess prior conclusions about lease identification, lease classification, and initial direct costs. The Company elected the hindsight practical expedient, which permits the use of hindsight when determining lease term and impairment of ROU assets.

The Company also made accounting policy elections, including a short-term lease exception policy, permitting it to not apply the recognition requirements of this standard to short-term leases (i.e. leases with terms of 12 months or less), and an accounting policy to account for lease and non-lease components as a single component for equipment leases.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (AOCI), which gives entities the option to reclassify to retained earnings the tax effects resulting from the Tax Cuts and Jobs Act ("Tax Act") related to items in AOCI that the FASB refers to as having been stranded in AOCI. The new guidance may be applied retrospectively to each period in which the effect of the Tax Act is recognized in the period of adoption. The Company must adopt this guidance for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years. Early adoption is permitted for periods for which financial statements have not yet been issued or made available for issuance, including the period the Tax Act was enacted. The guidance, when adopted, requires new disclosures regarding a company's accounting policy for releasing the tax effects in AOCI and provides the Company the option to reclassify to retained earnings the tax effects resulting from the Tax Act that are stranded in AOCI. The Company adopted this guidance in the first quarter of fiscal year 2020. Adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In August 2017, the FASB issued ASU No. 2017-12, Derivatives and Hedging (Topic 815). The new standard is designed to refine and expand hedge accounting for both financial (e.g., interest rate) and commodity risks. Its provisions create more transparency around how economic results are presented, both on the face of the financial statements and in the footnotes. It also makes certain targeted improvements to simplify the application of hedge accounting guidance. The new standard is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption, including adoption in an interim period, is permitted. The Company adopted this guidance in the first quarter of fiscal year 2020. Adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

Note 2: Earnings per Share

The computation of basic and diluted earnings per common share was as follows:

	Three Months Ended		Six Months Ended	
(in thousands, except per share amounts)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Net income	$ 5,366	$ 25,169	$ 18,660	$ 37,551
Weighted average common shares outstanding - basic	66,519	66,063	66,312	66,194
Dilutive effect of share-based compensation	1,227	2,817	1,502	2,234
Weighted average common shares outstanding - diluted	67,746	68,880	67,814	68,428
Basic earnings per common share	$ 0.08	$ 0.38	$ 0.28	$ 0.57
Diluted earnings per common share	$ 0.08	$ 0.37	$ 0.28	$ 0.55
Anti-dilutive shares not included in the above calculations	525	202	443	364

Diluted earnings per common share incorporates the incremental shares issuable, calculated using the treasury stock method, upon the assumed exercise of non-qualified stock options and the vesting of restricted stock units and performance unit awards if certain conditions have been met, but excludes such incremental shares that would have an anti-dilutive effect.

Note 3: Share-Based Compensation

Financial Statement Effects and Presentation

Pre-tax share-based compensation was included in the Statements of Income as follows:

	Three Months Ended		Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Revenue offset	$ —	$ —	$ —	$ 21,501
Cost of sales	402	306	829	633
Selling, general and administrative	6,082	11,378	14,426	22,840
Product development and engineering	2,162	2,282	4,719	4,507
Total share-based compensation	$ 8,646	$ 13,966	$ 19,974	$ 49,481

Warrant

On October 5, 2016, the Company issued a warrant (the "Warrant") to Comcast Cable Communications Management LLC ("Comcast") to purchase up to 1,086,957 shares (the "Warrant Shares") of the common stock of Semtech Corporation. The Warrant was issued by the Company to Comcast in connection with an agreement between the parties regarding the intended trial deployment by Comcast of a low-power wide-area network in the U.S., based on the Company's LoRa® devices and wireless radio frequency technology. The Warrant was accounted for as equity and the cost was recognized as an offset to net sales over the respective performance period. The Warrant consisted of five performance tranches. The cost associated with each tranche had been recognized based on the fair value at each reporting date until vesting, which was the measurement date. On April 27, 2018, the Company accelerated the vesting of the remaining 586,956 unvested shares from the Warrant ("Acceleration Event"), resulting in the full recognition of the remaining costs to be recognized for the Warrant. For the six-month period ended July 29, 2018, the revenue offset reflects the cost associated with the Warrant of $21.5 million, including $15.9 million related to the Acceleration Event. As of January 27, 2019, the Warrant was fully-vested and exercisable for a total of 869,565 shares, with no additional costs to be recognized in future periods. The Warrant was fully exercised and no longer outstanding as of March 15, 2019.

Performance-Based Restricted Stock Units

The Company grants performance-based restricted stock units to select employees. These awards have a performance condition in addition to a service condition. The performance-based restricted stock units are valued as of the measurement date and expense is recognized on a straight line basis for the awards expected to vest based on the probability of attainment of the performance condition for each separately vesting portion of the award.

In the first quarter of fiscal year 2020, the Company granted 106,000 performance-based restricted stock units that have a pre-defined market condition and a service condition that are accounted for as equity awards. The market condition is determined based upon the Company's total stockholder return ("TSR") benchmarked against the TSR of the S&P SPDR Semiconductor ETF (NYSE:XSD) over a one, two and three year period (one-third of the awards vesting each performance period). The fiscal year 2020 award recipients must be employed for the entire performance period and be an active employee at the time of vesting of the awards. The Company used a Monte Carlo simulation to determine the grant-date fair value for these awards, which takes into consideration the possible outcomes pertaining to the TSR market condition. The grant-date fair value per unit of the awards granted in the first quarter of fiscal year 2020 for each one, two and three year performance periods was $55.82, $59.36 and $61.45, respectively.

In the first quarter of fiscal year 2020, the Company granted to the CEO, 160,000 performance-based restricted stock units that have a pre-defined market condition and a service condition that are accounted for as equity awards. The market condition is determined based upon the Company's TSR benchmarked against the TSR of the S&P SPDR Semiconductor ETF (NYSE:XSD) over a one, two, three and four year period (one-fourth of the awards vesting each performance period). The CEO must be employed for the entire performance period and be an active employee at the time of vesting of the awards. The Company used a Monte Carlo simulation to determine the grant-date fair value for these awards, which takes into consideration the possible outcomes pertaining to the TSR market condition. The grant-date fair value per unit of the awards granted in the first quarter of fiscal year 2020 for each one, two, three and four year performance periods was $55.82, $59.36, $61.45 and $62.98, respectively.

Market Performance Restricted Stock Units

On March 5, 2019, the Company granted its CEO 320,000 restricted stock units with a market performance condition. The award is eligible to vest during the period commencing March 5, 2019, and ending March 5, 2024 (the "Performance Period") as follows: 30% of the restricted stock units covered by the award will vest if, during any consecutive 30 trading day period that commences and ends during the Performance Period, the average per-share closing price of the Company's common stock equals or exceeds $71.00 ("Tranche 1") and the remaining 70% of the restricted stock units covered by the award will vest if, during any consecutive 30 trading day period that commences and ends during the Performance Period, the average per-share closing price of the Company's common stock equals or exceeds $95.00 ("Tranche 2").

The award will also vest if a majority change in control of the Company occurs during the Performance Period and, in connection with such event, the Company's stockholders become entitled to receive per-share consideration equal to or in excess of the per-share performance targets. Specifically, if stockholders become entitled to receive per-share consideration equal to or in excess of $71.00, then 30% of the award will vest and become nonforfeitable. If the per share consideration is greater than $71.00, but less than $95.00, then 30% of the award and a pro-rata percentage of the remaining 70% of the award will vest and become nonforfeitable. If the per share consideration is equal to or greater than $95.00, the entire award will vest and become nonforfeitable. The grant-date fair value per unit of the awards was determined to be $44.32 and $33.19 for Tranche 1 and Tranche 2, respectively, by application of the Monte Carlo simulation model.

The following tables summarize the assumptions used in the Monte Carlo simulation model to determine the fair value of restricted stock units granted in fiscal year 2020 for both Tranche 1 and Tranche 2.

	Tranche 1	Tranche 2
Expected life, in years	1.0	2.1
Estimated volatility	34.3%	34.3%
Dividend yield	—%	—%
Risk-free interest rate	2.5%	2.5%
Weighted-average fair value on grant date	$ 44.32	$ 33.19

Award Modifications

In the first quarter of fiscal year 2019, the Company modified the terms of 159,000 fully vested shares held by 8 employees. As a result of the modification, additional compensation cost of $2.8 million was recognized during the first quarter of fiscal year 2019.

Note 4: Investments

The following table summarizes the values of the Company's available-for-sale securities:

	July 28, 2019			January 27, 2019		
(in thousands)	Market Value	Adjusted Cost	Gross Unrealized Gain	Market Value	Adjusted Cost	Gross Unrealized Gain
Convertible debt	$ 7,922	$ 7,922	$ —	$ 3,105	$ 3,105	$ —
Total available-for-sale securities	$ 7,922	$ 7,922	$ —	$ 3,105	$ 3,105	$ —

The following table summarizes the maturities of the Company's available-for-sale securities:

	July 28, 2019		January 27, 2019	
(in thousands)	Market Value	Adjusted Cost	Market Value	Adjusted Cost
Within 1 year	$ 1,013	$ 1,013	$ 3,105	$ 3,105
After 1 year through 5 years	6,909	6,909	—	—
Total available-for-sale securities	$ 7,922	$ 7,922	$ 3,105	$ 3,105

The Company's available-for-sale securities consisted of investments in convertible debt instruments issued by privately-held companies. The available-for-sale securities with maturities within one year were included in "Other current assets" and with maturities greater than one year were included in "Other assets" in the Balance Sheets. The Company's available-for-sale securities during the second quarter of fiscal year 2020 included a $3.2 million convertible note that has a maturity date of December 15, 2020 and an interest rate of 12%.

Note 5: Fair Value Measurements

The following fair value hierarchy is applied for disclosure of the inputs used to measure fair value and prioritizes the inputs into three levels as follows:

Level 1—Quoted prices in active markets for identical assets or liabilities;
Level 2—Observable inputs other than Level 1 prices, such as quoted prices for similar assets and liabilities in active markets or other inputs that are observable for the assets or liabilities, either directly or indirectly;
Level 3—Unobservable inputs based on the Company's own assumptions, requiring significant management judgment or estimation.

Instruments Measured at Fair Value on a Recurring Basis

Financial assets and liabilities measured and recorded at fair value on a recurring basis were presented in the Balance Sheets as follows:

	Fair Value as of July 28, 2019				Fair Value as of January 27, 2019			
(in thousands)	Total	(Level 1)	(Level 2)	(Level 3)	Total	(Level 1)	(Level 2)	(Level 3)
Financial assets:								
Convertible debt	$ 7,922	$ —	$ —	$ 7,922	$ 3,105	$ —	$ —	$ 3,105
Derivative financial instruments	—	—	—	—	69	—	69	—
Total financial assets	$ 7,922	$ —	$ —	$ 7,922	$ 3,174	$ —	$ 69	$ 3,105
Financial liabilities:								
AptoVision Earn-out	$ —	$ —	$ —	$ —	$ 2,161	$ —	$ —	$ 2,161
Cycleo Earn-out	462	—	—	462	462	—	—	462
Derivative financial instruments	225	—	225	—	—	—	—	—
Total financial liabilities	$ 687	$ —	$ 225	$ 462	$ 2,623	$ —	$ —	$ 2,623

During the six months ended July 28, 2019, the Company had no transfers of financial assets or liabilities between Level 1, Level 2 or Level 3. As of July 28, 2019 and January 27, 2019, the Company had not elected the fair value option for any financial assets and liabilities for which such an election would have been permitted.

The fair values of the foreign currency forward contracts are valued using Level 2 inputs. Foreign currency forward contracts are valued using readily available foreign currency forward and interest rate curves. The fair value of each contract is determined by comparing the contract rate to the forward rate and discounting to the present value. Contracts in a gain position are recorded in "Other current assets" in the Balance Sheets and the value of contracts in a loss position are recorded in "Accrued liabilities" in the Balance Sheets. See Note 15 for further discussion of the Company's derivative instruments.

The convertible debt investments are valued utilizing a combination of estimates of the discounted cash flows associated with the debt and the fair value of the equity into which the debt may be converted (Level 3 inputs).

The AptoVision Earn-out liability (see Note 11) is valued utilizing estimates of annual revenue, adjusted earnings and product development targets (Level 3 inputs) through July 2020. These estimates represent inputs for which market data is not available and are developed using the best information available about the assumptions that market participants would use when pricing the liability.

The Cycleo Earn-out liability (see Note 11) is valued utilizing estimates of annual revenue and operating income (Level 3 inputs) through April 2020. These estimates represent inputs for which market data is not available and are developed using the best information available about the assumptions that market participants would use when pricing the liability.

The Company measures contingent earn-out liabilities at fair value on a recurring basis using significant unobservable inputs classified within Level 3 of the fair value hierarchy. The Company uses a Monte Carlo valuation method as a valuation technique to determine the value of the earn-out liability. The significant unobservable inputs used in the fair value measurements are revenue projections over the earn-out period, and the probability outcome percentages assigned to each scenario. Significant increases or decreases to either of these inputs in isolation would result in a significantly higher or lower liability, with a higher liability capped by the contractual maximum of the contingent earn-out obligation. Ultimately, the liabilities will be equivalent to the amount paid, and the difference between the fair value estimate and amount paid will be recorded in earnings. For the Cycleo Earn-out and AptoVision Earn-out, these companies have business profiles comparable to a start-up company. Accordingly, their respective revenue projections are subject to significant revisions. This characteristic can result in volatile changes to the measurement of fair value for a given earn-out.

The Company reviews and re-assesses the estimated fair value of contingent consideration on a recurring basis, and the updated fair value could differ materially from the previous estimates. Adjustments to the estimated fair value related to changes in all other unobservable inputs are reported in operating income.

A reconciliation of the change in the earn-out liability during the six months ended July 28, 2019 is as follows:

(in thousands)	AptoVision	Cycleo	Total
Balance at January 27, 2019	$ 2,161	$ 462	$ 2,623
Changes in the fair value of contingent earn-out obligations	(2,161)	—	(2,161)
Balance at July 28, 2019	$ —	$ 462	$ 462

Instruments Not Recorded at Fair Value on a Recurring Basis

Some of the Company’s financial instruments are not measured at fair value on a recurring basis, but are recorded at amounts that approximate fair value due to their liquid or short-term nature. Such financial assets and financial liabilities include: cash and cash equivalents including money market deposits, net receivables, certain other assets, accounts payable, accrued expenses, accrued personnel costs, and other current liabilities.

The Company’s long-term debt is not recorded at fair value on a recurring basis, but is measured at fair value for disclosure purposes. The fair value of the Company’s Term Loans (as defined in Note 8) was $105.9 million and $115.3 million as of July 28, 2019 and January 27, 2019, respectively. The fair value of the Company's Revolving Loans (as defined in Note 8) was $97.0 million as of both July 28, 2019 and January 27, 2019. These fair values are based on Level 2 inputs as they were derived from quoted rates from banks for transactions with similar amounts, maturities, credit ratings and payment terms, which determined that the carrying amounts of the Company's Term Loans and Revolving Loans approximate fair value.

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

The Company reduces the carrying amounts of its goodwill, intangible assets, long-lived assets and non-marketable equity securities to fair value when held for sale or determined to be impaired.

For the Company's investments in non-marketable equity interests, the Company has not identified events or changes in circumstances that may have a significant adverse effect on the fair value of its equity investments during the first six months of fiscal year 2020.

Note 6: Inventories

Inventories, consisting of material, material overhead, labor, and manufacturing overhead, are stated at the lower of cost (first-in, first-out) or market and consisted of the following:

(in thousands)	July 28, 2019	January 27, 2019
Raw materials	$ 2,271	$ 2,057
Work in progress	52,863	44,530
Finished goods	19,926	17,092
Inventories	$ 75,060	$ 63,679

Note 7: Goodwill and Intangible Assets

Goodwill

Changes in the carrying amount of goodwill by applicable reporting unit were as follows:

(in thousands)	Signal Integrity	Wireless and Sensing	Protection	Total
Balance at January 27, 2019	$ 274,085	$ 72,128	$ 4,928	$ 351,141
Additions	—	—	—	—
Balance at July 28, 2019	$ 274,085	$ 72,128	$ 4,928	$ 351,141

(in thousands)	Signal Integrity	Wireless and Sensing	Protection	Total
Balance at January 28, 2018	$ 274,085	$ 67,812	$ —	$ 341,897
Additions	—	—	4,834	4,834
Balance at July 29, 2018	$ 274,085	$ 67,812	$ 4,834	$ 346,731

The reporting units are the same as the operating segments, which are part of a single reportable segment (see Note 13).

Goodwill is tested for impairment at the reporting unit level during the fourth quarter of each fiscal year. In addition to its annual review, the Company performs a test of impairment when indicators of impairment are present. As of July 28, 2019, there was no indication of impairment of the Company's goodwill balances.

Purchased Intangibles

The following table sets forth the Company’s finite-lived intangible assets resulting from business acquisitions, which continue to be amortized:

		July 28, 2019			January 27, 2019		
(in thousands)	Estimated Useful Life	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Core technologies	5-8 years	$ 88,088	$ (64,337)	$ 23,751	$ 167,930	$ (136,544)	$ 31,386
Customer relationships	3-10 years	6,001	(4,546)	1,455	34,031	(31,159)	2,872
Total finite-lived intangible assets		$ 94,089	$ (68,883)	$ 25,206	$ 201,961	$ (167,703)	$ 34,258

Amortization expense of finite-lived intangible assets recorded in the Statements of Income for each period was as follows:

	Three Months Ended		Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Core technologies	$ 3,475	$ 5,047	$ 7,634	$ 10,575
Customer relationships	433	1,433	1,417	2,866
Total amortization expense	$ 3,908	$ 6,480	$ 9,051	$ 13,441

Future amortization expense of finite-lived intangible assets is expected as follows:

(in thousands) Fiscal Year Ending:	Core Technologies	Customer Relationships	Total
2020 (remaining six months)	$ 6,604	$ 866	$ 7,470
2021	7,389	589	7,978
2022	4,655	—	4,655
2023	3,714	—	3,714
2024	1,389	—	1,389
Thereafter	—	—	—
Total expected amortization expense	$ 23,751	$ 1,455	$ 25,206

The following table sets forth the Company’s indefinite-lived intangible assets resulting from additions to in-process research and development:

(in thousands)	Net Carrying Value
Value at January 27, 2019	$ 2,300
In-process research and development through acquisitions	—
Value at July 28, 2019	$ 2,300

Indefinite-lived intangible assets are tested for impairment annually on the first day of the fourth quarter or more frequently if events or changes in circumstances (each, a “triggering event”) would more likely than not reduce the carrying value of the asset below its fair value, calculated as the future discounted cash flows that asset is expected to generate. Management did not identify any triggering events during the six months ended July 28, 2019, that would require an interim impairment analysis.

Note 8: Long-Term Debt

Long-term debt and the current period interest rates were as follows:

	Balance as of	
(in thousands)	July 28, 2019	January 27, 2019
Term loans	$ 105,938	$ 115,312
Revolving loans	97,000	97,000
Total debt	202,938	212,312
Current portion, net	(18,294)	(18,269)
Total long-term debt	184,644	194,043
Debt issuance costs	(952)	(1,198)
Total long-term debt, net of debt issuance costs	$ 183,692	$ 192,845
Weighted-average interest rate	3.90%	4.14%

On November 15, 2016, the Company, with certain of its domestic subsidiaries as guarantors, entered into an amended and restated credit agreement with the lenders party thereto and HSBC Bank USA, National Association, as administrative agent, swing line lender and letter of credit issuer, consisting of senior secured term loans in an aggregate principal amount of $150.0 million (the "Term Loans") and senior secured revolving commitments in an aggregate principal amount of $250.0 million (the “Revolving Loans” and together with the Term Loans, the "Credit Facility"). The Credit Facility is scheduled to mature on November 12, 2021.

The outstanding principal balance of the Term Loans is subject to repayment in quarterly installments. No amortization is required with respect to the Revolving Loans. As of July 28, 2019, the Company was in compliance with all financial covenants required under the Credit Facility.

Scheduled maturities of current and long-term Term Loans are as follows:

(in thousands)	
Fiscal Year Ending:	
2020 (remaining six months)	$ 9,375
2021	19,688
2022	76,875
Total Term Loans	$ 105,938

There are no scheduled principal payments for the Revolving Loans, which had outstanding borrowings of $97.0 million at July 28, 2019, and are due on or before November 12, 2021. As of July 28, 2019, the Company had $153.0 million of unused borrowing capacity under the Revolving Loans.

Interest expense was comprised of the following components for the periods presented:

	Three Months Ended		Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Contractual interest	$ 2,475	$ 2,067	$ 4,817	$ 4,121
Amortization of debt discount	86	94	174	190
Amortization of debt issuance costs	36	39	73	79
Total interest expense	$ 2,597	$ 2,200	$ 5,064	$ 4,390

As of July 28, 2019, there were no amounts outstanding under the letters of credit, swing line loans and alternative currency sub-facilities.

Note 9: Income Taxes

The Company's effective tax rate differs from the statutory federal income tax rate of 21% primarily due to the regional mix of income and the impact of finalized regulations on the U.S. transition tax.

The Company uses a two-step approach to recognize and measure uncertain tax positions ("UTP"). The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon ultimate settlement.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits (before the federal impact of state items) is as follows:

(in thousands)		
Balance at January 27, 2019	$	18,293
Additions/(decreases) based on tax positions related to the current fiscal year		6,614
Balance at July 28, 2019	$	24,907

Included in the balance of gross unrecognized tax benefits at July 28, 2019 and January 27, 2019 are $11.0 million and $4.5 million, respectively, of net tax benefits (after the federal impact of state items), that, if recognized, would impact the effective tax rate, prior to consideration of any required valuation allowance.

The liability for UTP is reflected in the Balance Sheets as follows:

(in thousands)		July 28, 2019		January 27, 2019
Deferred tax assets - non-current	$	12,569	$	12,492
Other long-term liabilities		11,010		4,479
Total accrued taxes	$	23,579	$	16,971

The Company's policy is to include net interest and penalties related to unrecognized tax benefits in the "Provision for taxes" in the Statements of Income.

Tax years prior to 2013 (the Company's fiscal year 2014) are generally not subject to examination by the U.S. Internal Revenue Service ("IRS") except for items involving tax attributes that have been carried forward to tax years whose statute of limitations remains open. For state returns, the Company is generally not subject to income tax examinations for calendar years prior to 2012 (the Company's fiscal year 2013). The Company has a significant tax presence in Switzerland for which Swiss tax filings have been examined through fiscal year 2018. The Company is also subject to routine examinations by various foreign tax jurisdictions in which it operates. The Company believes that adequate provisions have been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in the Company's tax audits are resolved in a manner not consistent with the Company's expectations, the Company could be required to adjust its provision for income taxes in the period such resolution occurs.

The Company's regional income (loss) from continuing operations before taxes and equity in net losses of equity method investments was as follows:

	Three Months Ended				Six Months Ended			
(in thousands)		July 28, 2019		July 29, 2018		July 28, 2019		July 29, 2018
Domestic	$	(6,426)	$	(3,524)	$	(14,894)	$	(11,224)
Foreign		20,590		34,802		40,451		37,405
Total	$	14,164	$	31,278	$	25,557	$	26,181

Note 10: Leases

The Company has operating leases for real estate, vehicles, and office equipment. Real estate leases are used to secure office space for the Company's administrative, engineering, production support and manufacturing activities. The Company's leases have remaining lease terms of 1 to 7 years, some of which include options to extend the leases for up to 5 years, and some of which include options to terminate the leases within 1 year.

The components of lease expense for the three and six months ended July 28, 2019 were as follows:

(in thousands)	Three Months Ended	Six Months Ended
Operating lease cost	$ 1,214	2,428
Short-term lease cost	83	161
Sublease income	(32)	(65)
Total lease cost	$ 1,265	$ 2,524

Supplemental cash flow information for the six months ended July 28, 2019 related to leases was as follows:

(in thousands)	
Cash paid for amounts included in the measurement of lease liabilities	$ 2,560
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 25

Weighted-average remaining lease term - operating leases	4 years
Weighted-average discount rate - operating leases	6.7%

Supplemental balance sheet information as of July 28, 2019 related to leases was as follows:

(in thousands)	
Operating lease right-of-use assets [1] [2]	$ 10,919

Other current liabilities [1]	$ 4,011
Operating lease liabilities [1]	7,672
Total operating lease liabilities	$ 11,683

[1] Operating lease right-of-use assets are included in "Other assets", other current liabilities are included in "Accrued liabilities" and operating lease liabilities are included in "Other long-term liabilities" in the Balance Sheets.
[2] The difference between the ROU assets and lease liabilities primarily represents the existing deferred rent liabilities balance, resulting from historical straight-lining of operating leases, which was effectively reclassified upon adoption to reduce the measurement of the ROU assets.

Maturities of lease liabilities as of July 28, 2019 are as follows:

(in thousands)	
Fiscal Year Ending:	
2020 (remaining six months)	$ 2,531
2021	3,864
2022	2,492
2023	1,461
2024	1,191
2025	1,022
Thereafter	874
Total lease payments	13,435
Less: imputed interest	(1,752)
Total	$ 11,683

As of July 28, 2019, the Company has an additional operating lease, primarily for office space, that it has yet to occupy for a value of approximately $3.2 million. The operating lease will commence at the end of fiscal year 2020 with a lease term of 7 years.

Note 11: Commitments and Contingencies

In accordance with ASC 450-20, Loss Contingencies, the Company accrues an undiscounted liability for those contingencies where the incurrence of a loss is probable and the amount can be reasonably estimated. The Company also discloses the amount accrued and the amount of a reasonably possible loss in excess of the amount accrued, if such disclosure is necessary for its consolidated financial statements not to be misleading. The Company does not record liabilities when the likelihood that the liability has been incurred is probable but the amount cannot be reasonably estimated, or when the liability is believed to be only reasonably possible or remote. The Company evaluates, at least quarterly, developments in its legal matters that could affect the amount of liability that has been previously accrued, and makes adjustments as appropriate. Significant judgment is required to determine both probability and the estimated amount. The Company may be unable to estimate a possible loss or range of possible loss due to various reasons, including, among others: (i) if the damages sought are indeterminate; (ii) if the proceedings are in early stages, (iii) if there is uncertainty as to the outcome of pending appeals, motions or settlements, (iv) if there are significant factual issues to be determined or resolved, and (v) if there are novel or unsettled legal theories presented. In such instances, there is considerable uncertainty regarding the ultimate resolution of such matters, including a possible eventual loss, if any.

Because the outcomes of litigation and other legal matters are inherently unpredictable, the Company's evaluation of legal matters or proceedings often involves a series of complex assessments by management about future events and can rely heavily on estimates and assumptions. While the consequences of certain unresolved matters and proceedings are not presently determinable, and an estimate of the probable and reasonably possible loss or range of loss in excess of amounts accrued for such proceedings cannot be reasonably made, an adverse outcome from such proceedings could have a material adverse effect on the Company's earnings in any given reporting period. However, in the opinion of management, after consulting with legal counsel, any ultimate liability related to current outstanding claims and lawsuits, individually or in the aggregate, is not expected to have a material adverse effect on the Company's consolidated financial statements, as a whole. However, legal matters are inherently unpredictable and subject to significant uncertainties, some of which are beyond the Company's control.

As such, even though the Company intends to vigorously defend itself with respect to its legal matters, there can be no assurance that the final outcome of these matters will not materially and adversely affect the Company's business, financial condition, operating results, or cash flows.

From time to time, the Company is involved in various claims, litigation, and other legal actions that are normal to the nature of its business, including with respect to IP, contract, product liability, employment, and environmental matters. In the opinion of management, after consulting with legal counsel, any ultimate liability related to current outstanding claims and lawsuits, individually or in the aggregate, is not expected to have a material adverse effect on the Company's consolidated financial statements, as a whole.

The Company's currently pending legal matters of note are discussed below:

Environmental Matters

The Company vacated a former facility in Newbury Park, California in 2002, but continues to address groundwater and soil contamination at the site. The Company's efforts to address site conditions have been at the direction of the Los Angeles Regional Water Quality Control Board ("RWQCB"). In October 2013, an order was issued including a scope of proposed additional site work, monitoring, and proposed remediation activities. The Company has been complying with RWQCB orders and direction, and has implemented an approved remedial action plan addressing the soil, groundwater, and soil vapor at the site.

The Company has accrued liabilities where it is probable that a loss will be incurred and the cost or amount of loss can be reasonably estimated. Based on the latest determinations by the RWQCB and the most recent actions taken pursuant to the remedial action plan, the Company estimates the range of probable loss between $5.9 million and $7.5 million. To date, the Company has made $3.7 million in payments towards the remedial action plan and, as of July 28, 2019, has a remaining accrual of $2.2 million related to this matter. Given the uncertainties associated with environmental assessment and the remediation activities, the Company is unable to determine a best estimate within the range of loss. Therefore, the Company has recorded the minimum amount of probable loss. These estimates could change as a result of changes in planned remedial actions, further actions from the regulatory agency, remediation technology, and other factors.

Indemnification

The Company has entered into agreements with its current and former executives and directors indemnifying them against certain liabilities incurred in connection with the performance of their duties. The Company's Certificate of Incorporation and Bylaws contain comparable indemnification obligations with respect to the Company's current directors and employees.

Product Warranties

The Company's general warranty policy provides for repair or replacement of defective parts. In some cases, a refund of the purchase price is offered. In certain instances, the Company has agreed to other or additional warranty terms, including indemnification provisions.

The product warranty accrual reflects the Company's best estimate of probable liability under its product warranties. The Company accrues for known warranty issues if a loss is probable and can be reasonably estimated, and accrues for estimated incurred but unidentified issues based on historical experience. Historically, warranty expense and the related accrual has been immaterial to the Company's consolidated financial statements.

Deferred Compensation

The Company maintains a deferred compensation plan for certain officers and key executives that allow participants to defer a portion of their compensation for future distribution at various times permitted by the plan. This plan provides for a discretionary Company match up to a defined portion of the employee's deferral, with any match subject to a vesting period.

The Company's liability for the deferred compensation plan is presented below:

(in thousands)	July 28, 2019	January 27, 2019
Accrued liabilities	$ 1,403	$ 2,203
Other long-term liabilities	30,953	27,251
Total deferred compensation liabilities under this plan	$ 32,356	$ 29,454

The Company has purchased whole life insurance on the lives of certain current deferred compensation plan participants. This Company-owned life insurance is held in a grantor trust and is intended to cover a majority of the Company's costs of the deferred compensation plan. The cash surrender value of the Company-owned life insurance was $22.7 million and $20.4 million as of July 28, 2019 and January 27, 2019, respectively, and is included in "Other assets" in the Balance Sheets.

Earn-out Liability

Pursuant to the terms of an amended earn-out arrangement ("Cycleo Earn-out") with the former shareholders of Cycleo SAS ("Cycleo Earn-out Beneficiaries"), which the Company acquired in March 2012, as of July 28, 2019, the Company potentially may make payments totaling up to approximately $11.3 million based on the achievement of a combination of certain revenue and operating income milestones over a defined period ("Cycleo Defined Earn-out Period"). The Cycleo Defined Earn-out Period covers the period April 27, 2015 to April 26, 2020. For certain of the Cycleo Earn-out Beneficiaries, payment of the earn-out liability is contingent upon continued employment and is accounted for as post-acquisition compensation expense over the service period. The portion of the earn-out liability that is not dependent on continued employment is not considered as compensation expense. The Company has recorded a liability for the Cycleo Earn-out of $4.8 million and $4.5 million as of July 28, 2019 and January 27, 2019, respectively.

Pursuant to the terms of an earn-out arrangement ("AptoVision Earn-out") with the former shareholders of AptoVision, which the Company acquired in July 2017, as of July 28, 2019, the Company potentially may make payments totaling up to approximately $35.3 million based on the achievement of a combination of certain net revenue, adjusted earnings and product development targets measured from the acquisition date through July 26, 2020. The Company fully released its liability for the AptoVision Earn-out during the six months ended July 28, 2019 based on the Company's assessment of performance.

A summary of earn-out liabilities, included in "Accrued liabilities" and "Other long-term liabilities" in the Balance Sheets, by classification follows:

	Balance at July 28, 2019			Balance at January 27, 2019		
(in thousands)	Cycleo	AptoVision	Total	Cycleo	AptoVision	Total
Compensation expense	$ 4,367	$ —	$ 4,367	$ 4,052	$ —	$ 4,052
Not conditional upon continued employment	462	—	462	462	2,161	2,623
Total liability	$ 4,829	$ —	$ 4,829	$ 4,514	$ 2,161	$ 6,675
Amount expected to be settled within twelve months	$ 4,829	$ —	$ 4,829			

Restructuring

From time to time, the Company takes steps to realign the business to focus on high-growth areas, provide customer value and make the Company more efficient. As a result, the Company has re-aligned resources and infrastructure predominantly related to its wireless charging business, which resulted in restructuring expense of $2.0 million and $2.1 million in the three and six months ended July 28, 2019, respectively, which was included in "Selling, general and administrative" within the Statements of Income. The Company does not expect a material amount of expenses related to this restructuring in future periods.

Note 12: Concentration of Risk

The following significant customers accounted for at least 10% of net sales in one or more of the periods indicated:

	Three Months Ended		Six Months Ended	
(percentage of net sales)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Trend-tek Technology Ltd (and affiliates)	14%	13%	13%	13%
Frontek Technology Corporation (and affiliates)	10%	13%	10%	10%
Arrow Electronics (and affiliates)	9%	10%	9%	11%
Huawei Technologies Co., Ltd. (and affiliates)	5%	9%	10%	7%
Samsung Electronics (and affiliates)	3%	7%	6%	7%
Premier Technical Sales Korea, Inc. (and affiliates) (1)	8%	4%	7%	5%

(1) Premier is a distributor with a concentration of sales to Samsung. The above percentages represent the Company's estimate of the sales activity related to Samsung that is passing through this distributor.

The following table shows the customers that have an outstanding receivable balance that represents at least 10% of total net receivables as of the dates indicated:

	Balance as of	
(percentage of net sales)	July 28, 2019	January 27, 2019
Frontek Technology Corporation (and affiliates)	12%	10%
Trend-tek Technology Ltd (and affiliates)	12%	11%

Outside Subcontractors and Suppliers

The Company relies on a limited number of third-party subcontractors and suppliers for the production of silicon wafers, packaging and certain other tasks. Disruption or termination of supply sources or subcontractors, including due to natural disasters such as an earthquake or other causes, could delay shipments and could have a material adverse effect on the Company. Although there are generally alternate sources for these materials and services, qualification of the alternate sources could cause delays sufficient to have a material adverse effect on the Company. Several of the Company’s third-party subcontractors and suppliers, including third-party foundries that supply silicon wafers, are located in foreign countries, including China, Israel and Taiwan. A significant amount of the Company’s assembly and test operations are conducted by third-party contractors in China, Malaysia, Taiwan, Thailand, South Korea and the Philippines. During the three and six months ended July 28, 2019, approximately 23% and 20%, respectively, of the Company’s silicon in terms of cost of wafers was supplied by a third-party foundry in China, and approximately 14% and 13%, respectively, of the Company’s silicon in terms of cost of wafers was supplied by a third-party foundry in Israel. During the three and six months ended July 29, 2018, approximately 15% and 15%, respectively, of the Company’s silicon in terms of cost of wafers was supplied by a third-party foundry in China, and approximately 16% and 12%, respectively, of the Company’s silicon in terms of cost of wafers was supplied by a third-party foundry in Israel. These percentages could be higher in future periods.

For the three and six months ended July 28, 2019, authorized distributors accounted for approximately 72% and 67%, respectively, of the Company’s net sales, compared to approximately 67% for both the three and six months ended July 29, 2018. Generally, the Company does not have long-term contracts with its distributors and most can terminate their agreement with little or no notice. For the second quarter of fiscal year 2020, the Company's two largest distributors were based in Asia.

Note 13: Segment Information

The Company’s CEO functions as the chief operating decision maker ("CODM"). The CODM makes operating decisions and assesses performance based on the Company's major product lines, which represent its operating segments. The Company has three operating segments—Protection, Signal Integrity, and Wireless and Sensing—that have similar economic characteristics and have been aggregated into one reportable segment identified as the "Semiconductor Products Group."

The Company’s assets are commingled among the various operating segments and the CODM does not use asset information in making operating decisions or assessing performance. Therefore, the Company has not included asset information by segment in the segment disclosures below.

Net sales by segment were as follows:

	Three Months Ended		Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Semiconductor Products Group	$ 137,146	$ 163,211	$ 268,500	$ 293,640
Total	$ 137,146	$ 163,211	$ 268,500	$ 293,640

The following table presents a reconciliation of operating income by segment to consolidated income before taxes. Historical amounts have been adjusted to conform to the current presentation:

	Three Months Ended		Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Semiconductor Products Group	$ 31,505	$ 47,110	$ 60,133	$ 87,922
Operating income by segment	31,505	47,110	60,133	87,922
Items to reconcile segment operating income to consolidated income before taxes:				
Share-based compensation	8,646	13,966	19,974	49,481
Intangible amortization	3,908	6,480	9,051	13,441
Changes in the fair value of contingent earn-out obligations	—	(900)	(2,161)	(900)
Restructuring and other reserves	2,571	85	2,711	431
Litigation cost, net of recoveries	799	(5,857)	725	(5,297)
Transaction and integration related	33	400	1,468	927
Interest expense	2,597	2,200	5,064	4,390
Non-operating expense, net	(1,213)	(542)	(2,256)	(732)
Income before taxes	$ 14,164	$ 31,278	$ 25,557	$ 26,181

Information by Product Line

The Company operates exclusively in the semiconductor industry and primarily within the analog and mixed-signal sector.

The table below provides net sales activity by product line on a comparative basis:

	Three Months Ended				Six Months Ended			
(in thousands, except percentages)	July 28, 2019		July 29, 2018		July 28, 2019		July 29, 2018	
Signal Integrity	$ 55,094	40%	$ 68,802	42%	$ 105,350	39%	$ 134,401	45 %
Wireless and Sensing	41,696	30%	48,410	30%	83,903	31%	93,949	32 %
Protection	40,356	30%	45,999	28%	79,247	30%	86,791	30 %
Other: Warrant Shares [(1)]	—	—%	—	—%	—	—%	(21,501)	(7)%
Total net sales	$ 137,146	100%	$ 163,211	100%	$ 268,500	100%	$ 293,640	100 %

[(1)] *For the six-month period ended July 29, 2018, the revenue offset reflects the cost associated with the Warrant of $21.5 million, including $15.9 million related to the Acceleration Event (see Note 3 for discussion regarding Share-Based Compensation).*

Information by Sales Channel

(in thousands)	Three Months Ended July 28, 2019	Three Months Ended July 29, 2018	Six Months Ended July 28, 2019	Six Months Ended July 29, 2018
Distributor	$ 99,138	$ 109,844	$ 180,280	$ 212,317
Direct	38,008	53,367	88,220	102,824
Other: Warrant Shares	—	—	—	(21,501)
Total net sales	$ 137,146	$ 163,211	$ 268,500	$ 293,640

Geographic Information

The Company generates virtually all of its sales from its Semiconductor Products Group through sales of analog and mixed-signal devices.

Net sales activity by geographic region was as follows:

	Three Months Ended July 28, 2019	Three Months Ended July 29, 2018	Six Months Ended July 28, 2019	Six Months Ended July 29, 2018
Asia-Pacific	74%	75%	76%	72 %
North America	16%	19%	14%	28 %
Europe	10%	6%	10%	7 %
Other: Warrant Shares	—%	—%	—%	(7)%
	100%	100%	100%	100 %

The Company attributes sales to a country based on the ship-to address. The table below summarizes sales activity to countries that represented greater than 10% of total net sales for at least one of the periods presented:

(percentage of total sales)	Three Months Ended July 28, 2019	Three Months Ended July 29, 2018	Six Months Ended July 28, 2019	Six Months Ended July 29, 2018
China (including Hong Kong)	52%	56%	52%	53%
United States	9%	10%	10%	12%

Note 14: Stock Repurchase Program

The Company maintains a stock repurchase program that was initially approved by its Board of Directors in March 2008. The stock repurchase program does not have an expiration date and the Company’s Board of Directors has authorized expansion of the program over the years. The following table summarizes activity under the program for the presented periods:

	Three Months Ended				Six Months Ended			
	July 28, 2019		July 29, 2018		July 28, 2019		July 29, 2018	
(in thousands, except number of shares)	Shares	Price Paid	Shares	Price Paid	Shares	Price Paid	Shares	Price Paid
Shares repurchased under the stock repurchase program	446,270	$ 20,000	495,609	$ 24,413	448,481	$ 20,110	1,140,753	$ 49,738

On May 24, 2018, the Company's Board of Directors authorized the expansion of the stock repurchase program by $250.0 million. As of July 28, 2019, the Company had repurchased $287.7 million in shares of its common stock under the program since inception and the remaining authorization under the program was $160.7 million. Under the program, the Company may repurchase its common stock at any time or from time to time, without prior notice, subject to market conditions and other considerations. The Company’s repurchases may be made through Rule 10b5-1 and/or Rule 10b-18 or other trading plans, open market purchases, privately negotiated transactions, block purchases or other transactions. The Company intends to fund repurchases under the program from cash on hand. The Company has no obligation to repurchase any shares under the program and may suspend or discontinue it at any time.

Note 15: Derivatives and Hedging Activities

The Company is exposed to certain risk arising from both its business operations and economic conditions and principally manages its exposures to a wide variety of business and operational risks through management of its core business activities. The Company, on a routine basis and in the normal course of business, experiences expenses denominated in Swiss Franc, Canadian Dollar ("CAD") and Great British Pound ("GBP"). Such expenses expose the Company to exchange rate fluctuations between these foreign currencies and the U.S. Dollar ("USD"). The Company occasionally uses derivative financial instruments, in the form of forward contracts, to mitigate a portion of the risk associated with adverse movements in these foreign currency exchange rates during a twelve month window. Currency forward contracts involve fixing the exchange rate for delivery of a specified amount of foreign currency on a specified date.

The Company's accounting treatment for these instruments is based on whether or not the instruments are designated as a hedging instrument. The Company is currently applying hedge accounting to all foreign currency derivatives and has designated these hedges as cash flow hedges.

At July 28, 2019, the Company did not have a material amount of outstanding foreign exchange contracts. For the first six months of fiscal years 2020 and 2019, the impact of the foreign exchange contracts was not material.

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

The following "Management's Discussion and Analysis of Financial Condition and Results of Operations" should be read in conjunction with our unaudited condensed consolidated financial statements and the accompanying notes included in Part I, Item 1 of this Quarterly Report on Form 10-Q (this "Quarterly Report") and the "Special Note Regarding Forward-Looking and Cautionary Statements" in this Quarterly Report.

Overview

Semtech Corporation (together with its consolidated subsidiaries, the "Company", "we", "our", or "us") designs, develops, manufactures and markets high-performance analog and mixed signal semiconductors and advanced algorithms. We operate and account for results in one reportable segment through three product lines: Signal Integrity, Protection, and Wireless and Sensing.

Signal Integrity Products. We design, develop and market a portfolio of optical data communications and video transport products used in a wide variety of enterprise computing, communications, and industrial applications. Our comprehensive portfolio of integrated circuits ("ICs") for data centers, enterprise networks, passive optical networks ("PON"), and wireless base station optical transceivers and high-speed interfaces ranges from 100Mbps to 400Gbps and supports key industry standards such as Fibre Channel, Infiniband, Ethernet, PON and synchronous optical networks. Our video products offer advanced solutions for next generation high-definition broadcast applications, as well as highly differentiated video-over-IP technology for professional audio video ("Pro AV") applications.

Protection Products. We design, develop and market high-performance protection devices, which are often referred to as transient voltage suppressors ("TVS"). TVS devices provide protection for electronic systems where voltage spikes (called transients), such as electrostatic discharge, electrical over stress or secondary lightning surge energy, can permanently damage sensitive ICs. Our portfolio of protection solutions include filter and termination devices that are integrated with the TVS device. Our products provide robust protection while preserving signal integrity in high-speed communications, networking and video interfaces. These products also operate at very low voltage. Our protection products can be found in a broad range of applications including smart phones, LCD and organic light-emitting diode TVs and displays, set-top boxes, monitors and displays, tablets, computers, notebooks, base stations, routers, automobile and industrial instruments.

Wireless and Sensing Products. We design, develop and market a portfolio of specialized radio frequency products used in a wide variety of industrial, medical and communications applications, and specialized sensing products used in industrial and consumer applications. Our wireless products, which include our LoRa® devices and wireless radio frequency technology ("LoRa Technology"), feature industry leading and longest range industrial, scientific and medical radio, enabling a lower total cost of ownership and increased reliability in all environments. This makes these products particularly suitable for machine to machine and IoT applications. Our unique sensing technology enables proximity sensing and advanced user interface solutions for our mobile and consumer products. Our wireless and sensing products can be found in a broad range of applications in the industrial, medical, and consumer markets. We also design, develop, and market power product devices that control, alter, regulate, and condition the power within electronic systems focused on the LoRa® and IoT infrastructure segment. The highest volume product types within this category are switching voltage regulators, combination switching and linear regulators, smart regulators, isolated switches, and wireless charging.

Our interim unaudited condensed consolidated balance sheets are referred to herein as the "Balance Sheets" and interim unaudited condensed consolidated statements of income are referred to herein as the "Statements of Income."

Our net sales by product line were as follows:

	Three Months Ended		Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Signal Integrity	$ 55,094	$ 68,802	$ 105,350	$ 134,401
Wireless and Sensing	41,696	48,410	83,903	93,949
Protection	40,356	45,999	79,247	86,791
Other: Warrant Shares [1]	—	—	—	(21,501)
Total	$ 137,146	$ 163,211	$ 268,500	$ 293,640

[1] On October 5, 2016, we issued a warrant (the "Warrant") to Comcast Cable Communications Management LLC ("Comcast") to purchase up to 1,086,957 shares (the "Warrant Shares") of the common stock of Semtech Corporation. The Warrant was issued in connection with an agreement between the parties regarding the intended trial deployment by Comcast of a low-power wide-area Network ("LPWAN") in the U.S., based on our LoRa® devices and wireless radio frequency technology. As of January 27, 2019, the Warrant was fully vested and exercisable for a total of 869,565 shares, with no additional costs to be recognized in future periods. The Warrant was fully exercised and no longer outstanding as of March 15, 2019.

Factors Affecting Our Performance

Most of our sales to customers are made on the basis of individual customer purchase orders. Many customers include cancellation provisions in their purchase orders. Trends within the industry toward shorter lead-times and "just-in-time" deliveries have resulted in our reduced ability to predict future shipments. As a result, we rely on orders received and shipped within the same quarter for a significant portion of our sales. Orders received and shipped in the second quarters of fiscal years 2020 and 2019 represented 41% and 39% of net sales, respectively. Sales made directly to customers during the second quarters of fiscal years 2020 and 2019 were 28% and 33% of net sales, respectively. The remaining sales were made through independent distributors. Our business relies on foreign-based entities. Most of our outside subcontractors and suppliers, including third-party foundries that supply silicon wafers, are located in foreign countries, including China, Taiwan and Israel. For the second quarters of fiscal years 2020 and 2019, approximately 23% and 15%, respectively, of the Company's silicon in terms of cost of wafers was supplied by a third-party foundry in China, and 14% and 16%, respectively, of the Company's silicon in terms of cost of wafers was supplied by a third-party foundry in Israel. These percentages could be higher in future periods. Foreign sales during the second quarters of fiscal years 2020 and 2019 constituted approximately 91% and 90%, respectively, of our net sales. Approximately 74% and 75% of foreign sales during the second quarters of fiscal years 2020 and 2019, respectively, were to customers located in the Asia-Pacific region. The remaining foreign sales were primarily to customers in Europe, Canada, and Mexico.

We use several metrics as indicators of future potential growth. The indicators that we believe best correlate to potential future revenue growth are design wins and new product releases. There are many factors that may cause a design win or new product release not to result in sales, including a customer decision not to go to system production, a change in a customer's perspective regarding a product's value or a customer's product failing in the end-market. As a result, although a design win or new product introduction is an important step towards generating future revenue, it does not inevitably result in us being awarded business or receiving a purchase commitment.

Historically, our results have reflected some seasonality, with demand levels generally lower during the first and fourth quarters of our fiscal year in comparison to the second and third quarters. Inflationary factors have not had a significant effect on our performance over the past several years. A significant increase in inflation would affect our future performance if we were unable to pass these higher costs on to our customers. We are continuing to monitor the near term geopolitical uncertainty and the recent export restrictions on shipments to Huawei Technologies Co., Ltd. ("Huawei") and certain of its affiliates. The following discussion reflects our current assessment of the near term impact of this uncertainty.

Revenue and Cost of Sales

We derive our revenue primarily from the sale of semiconductor products into various end markets. Revenue is recognized when control of these products is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for these products. Control is generally transferred when products are shipped and, to a lesser extent, when the products are delivered. Recovery of costs associated with product design and engineering services are recognized during the period in which services are performed and are reported as a reduction to product development and engineering expense. Historically, these recoveries have not exceeded the cost of the related development efforts. We include revenue related to granted technology licenses as part of "Net sales" in the Statements of Income. Historically, revenue from these arrangements has not been significant though it is part of our recurring ordinary business.

We determine revenue recognition through the following five steps:

- Identification of the contract, or contracts, with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, performance obligations are satisfied

We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable.

Our revenue contracts generally represent a single performance obligation to sell our products to trade customers. Net sales reflect the transaction prices for contracts, which include units shipped at selling prices reduced by variable consideration. Determination of variable consideration requires judgment by us. Variable consideration includes expected sales returns and other price adjustments. Variable consideration is estimated using the expected value method considering all reasonably available information, including our historical experience and our current expectations, and is reflected in the transaction price when sales are recorded. Sales returns are generally accepted at our discretion or from distributors with such rights. Our contracts with trade customers do not have significant financing components or non-cash consideration. We record net sales excluding taxes collected on our sales to our trade customers.

We provide an assurance type warranty which is typically not sold separately and does not represent a separate performance obligation. Our payment terms are generally aligned with shipping terms.

On October 5, 2016, we issued a Warrant to Comcast to purchase up to 1,086,957 Warrant Shares. The cost of the Warrant is recognized as an offset to net sales. On April 27, 2018, we accelerated the vesting of the remaining 586,956 unvested shares from the Warrant ("Acceleration Event"), resulting in the full recognition of the previously unrecognized costs. For the six-month period ended July 29, 2018, the revenue offset reflects the cost associated with the Warrant of $21.5 million, including $15.9 million related to the Acceleration Event. As of January 27, 2019, the Warrant was fully-vested and exercisable for a total of 869,565 shares, with no additional costs to be recognized in future periods. The Warrant was fully exercised and no longer outstanding as of March 15, 2019.

Gross Profit

Gross profit is equal to our net sales less our cost of sales. Our cost of sales includes materials, depreciation on fixed assets used in the manufacturing process, shipping costs, direct labor and overhead. We determine the cost of inventory by the first-in, first-out method.

Operating Costs

Our operating costs and expenses generally consist of selling, general and administrative, product development and engineering costs, costs associated with acquisitions, restructuring charges, and other operating related charges.

Results of Operations

The following table sets forth, for the periods indicated, our Statements of Income expressed as a percentage of revenues.

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Net sales	100.0 %	100.0 %	100.0 %	100.0 %
Cost of sales	38.1 %	38.7 %	38.1 %	41.6 %
Gross profit	61.9 %	61.3 %	61.9 %	58.4 %
Operating costs and expenses:				
Selling, general and administrative	29.1 %	20.5 %	29.1 %	25.5 %
Product development and engineering	18.6 %	17.2 %	19.6 %	18.5 %
Intangible amortization	2.8 %	4.0 %	3.4 %	4.6 %
Changes in the fair value of contingent earn-out obligations	— %	(0.6)%	(0.8)%	(0.3)%
Total operating costs and expenses	50.6 %	41.2 %	51.3 %	48.3 %
Operating income	11.3 %	20.1 %	10.6 %	10.2 %
Interest expense	(1.9)%	(1.3)%	(1.9)%	(1.5)%
Non-operating income, net	0.9 %	0.3 %	0.8 %	0.2 %
Income before taxes and equity in net gains (losses) of equity method investments	10.3 %	19.1 %	9.5 %	8.9 %
Provision (benefit) for income taxes	6.5 %	3.7 %	2.5 %	(3.9)%
Net income before equity in net losses of equity method investments	3.8 %	15.4 %	7.0 %	12.8 %
Equity in net losses of equity method investments	0.1 %	— %	(0.1)%	— %
Net income	3.9 %	15.4 %	6.9 %	12.8 %

Percentages may not add precisely due to rounding.

Our regional mix of income (loss) from continuing operations before taxes and equity in net losses of equity method investments was as follows:

	Three Months Ended		Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Domestic	$ (6,426)	$ (3,524)	$ (14,894)	$ (11,224)
Foreign	20,590	34,802	40,451	37,405
Total	$ 14,164	$ 31,278	$ 25,557	$ 26,181

Domestic performance from continuing operations includes amortization of acquired intangible assets and higher levels of share-based compensation compared to foreign operations.

<u>Comparison of the Three Months Ended July 28, 2019 and July 29, 2018</u>

All periods presented in the following summary of sales by major end-market reflect our current classification methodology (see Note 1 to our unaudited condensed consolidated financial statements for a description of each market category):

	Three Months Ended			
(in thousands, except percentages)	July 28, 2019		July 29, 2018	
Industrial	$ 48,766	36%	$ 49,746	30%
Enterprise Computing	37,163	27%	49,677	31%
High-End Consumer	36,892	27%	44,658	27%
Communications	14,325	10%	19,130	12%
Total	$ 137,146	100%	$ 163,211	100%

Net Sales

Net sales for the second quarter of fiscal year 2020 were $137.1 million, a decrease of 16.0% compared to $163.2 million for the second quarter of fiscal year 2019. During the second quarter of fiscal year 2020, China-based demand weakened as we experienced declines driven by weakness across all markets, primarily due to geopolitical headwinds driven by export restrictions and tariffs imposed by the U.S. government. Enterprise computing declined due to below-seasonal PON demand in China and lower data center demand at cloud computing and hyper scale providers. High-end consumer declined due to lower China-based demand for proximity sensing solutions. The communications end market declined on softer demand for base stations for the wireless infrastructure market.

Based on bookings trends and our backlog entering the quarter, we estimate net sales for the third quarter of fiscal year 2020 to be between $135.0 million and $145.0 million. The range of guidance reflects continued uncertainty regarding macro-related events associated with the geopolitical headwinds discussed above, including approximately $4.0 million in potential reduced shipments and associated reduced demand related to the executive order preventing shipments to Huawei.

Gross Profit

In the second quarter of fiscal year 2020, gross profit decreased to $84.9 million from $100.1 million in the second quarter of fiscal year 2019. Gross margins were 61.9% in the second quarter of fiscal year 2020 compared to 61.3% in the second quarter of fiscal year 2019. In the second quarter of fiscal year 2020, gross margin benefited from a favorable product mix.

In the third quarter of fiscal year 2020, we expect our gross margins to be in the range of 61.0% to 61.6%.

Operating Costs and Expenses

	Three Months Ended				
(in thousands, except percentages)	July 28, 2019		July 29, 2018		Change
Selling, general and administrative	$ 39,875	57%	$ 33,529	50 %	19 %
Product development and engineering	25,553	37%	28,079	41 %	(9)%
Intangible amortization	3,908	6%	6,480	10 %	(40)%
Changes in the fair value of contingent earn-out obligations	—	—%	(900)	(1)%	(100)%
Total operating costs and expenses	$ 69,336	100%	$ 67,188	100 %	3 %

<u>Selling, General and Administrative Expenses</u>

Selling, general and administrative ("SG&A") expenses increased in the second quarter of fiscal year 2020 compared to the same quarter of fiscal year 2019 primarily as a result of $6.7 million of legal recoveries related to the settlement of the lawsuit filed against HiLight Semiconductor Limited and related individual defendants (the "HiLight lawsuit") received in the second quarter of fiscal year 2019, as well as restructuring expenses related to our wireless charging business and higher supplemental compensation, partially offset by lower levels of performance-based compensation, including share-based compensation tied to total stockholder return.

<u>Product Development and Engineering Expenses</u>

Product development and engineering expenses decreased in the second quarter of fiscal year 2020 compared to the second quarter of fiscal year 2019 as a result of fluctuations in the timing of development activities. The levels of product development and engineering expenses reported in a fiscal period can be significantly impacted, and therefore experience period over period volatility, by the number of new product tape-outs and by the timing of recoveries from non-recurring engineering services, which are typically recorded as a reduction to product development and engineering expense.

Intangible Amortization

Intangible amortization was $3.9 million and $6.5 million in the second quarters of fiscal years 2020 and 2019, respectively. This decrease was primarily due to certain finite-lived intangible assets associated with the acquisition of Gennum Corporation that had become fully amortized during the first quarter of fiscal year 2020.

Interest Expense

Interest expense, including amortization of debt discounts and issuance costs, was $2.6 million and $2.2 million in the second quarters of fiscal years 2020 and 2019, respectively. This increase was primarily due to higher interest rates, partially offset by lower overall debt levels.

Provision for Income Taxes

The effective tax rates for the second quarters of fiscal years 2020 and 2019 were 62.6% and 19.5%, respectively. In the second quarter of fiscal year 2020, we recorded a provision of $9.0 million, compared to $6.1 million in the second quarter of fiscal year 2019. The effective tax rate in the second quarter of fiscal year 2020 differs from the statutory federal income tax rate of 21% primarily due to a regional mix of income and the impact of final regulations on the U.S. transition tax. The effective tax rate in the second quarter of fiscal year 2019 differs from the statutory federal income tax rate of 21% primarily due to regional mix of income.

As a global organization, we are subject to audit by taxing authorities in various jurisdictions. To the extent that an audit, or the closure of a statute of limitations, results in adjusting our reserves for uncertain tax positions, our effective tax rate could experience extreme volatility since any adjustment would be recorded as a discrete item in the period of adjustment.

Comparison of the Six Months Ended July 28, 2019 and July 29, 2018

All periods presented in the following summary of sales by major end-market reflect our current classification methodology (see Note 1 to our unaudited condensed consolidated financial statements for a description of each market category):

	Six Months Ended			
(in thousands, except percentages)	July 28, 2019		July 29, 2018	
Industrial	$ 87,874	33%	$ 98,592	34 %
High-End Consumer	80,286	30%	82,171	28 %
Enterprise Computing	72,945	27%	98,539	33 %
Communications	27,395	10%	35,839	12 %
Other: Warrant Shares	—	—%	(21,501)	(7)%
Total	$ 268,500	100%	$ 293,640	100 %

Net Sales

Net sales for the first six months of fiscal year 2020 were $268.5 million, a decrease of 8.6% compared to $293.6 million in the first six months of fiscal year 2019. During the first six months of fiscal year 2020, China-based demand weakened as we experienced declines driven by weakness across all markets, primarily due to geopolitical headwinds driven by export restrictions and tariffs imposed by the U.S. government. Enterprise computing declined due to below-seasonal PON demand in China and lower data center demand at cloud computing and hyper scale providers. Industrial performance reflects a decline in China-based LoRa® product demand. The communications end market declined on softer demand for base stations for the wireless infrastructure market. The cost of the Warrant Shares, which were recorded as an offset to Net Sales, fully vested in the first quarter of fiscal year 2019, and therefore, did not impact the first six months of fiscal year 2020. For the first six months of fiscal year 2019, the cost associated with the Warrant was $21.5 million, which included $15.9 million related to the Acceleration Event (see Note 3).

Gross Profit

In the first six months of fiscal year 2020, gross profit decreased to $166.2 million from $171.6 million in the first six months of fiscal year 2019. Gross margins were 61.9% in the first six months of fiscal year 2020 compared to 58.4% in the first six months of fiscal year 2019. In the first six months of fiscal year 2019, gross margins were unfavorably impacted by the costs of the Warrant Shares.

Operating Costs and Expenses

(in thousands, except percentages)	Six Months Ended				Change
	July 28, 2019		July 29, 2018		
Selling, general and administrative	$ 78,252	57 %	74,935	53 %	4 %
Product development and engineering	52,652	38 %	54,278	39 %	(3)%
Intangible amortization	9,051	7 %	13,441	9 %	(33)%
Changes in the fair value of contingent earn-out obligations	(2,161)	(2)%	(900)	(1)%	140 %
Total operating costs and expenses	$ 137,794	100 %	$ 141,754	100 %	(3)%

Selling, General and Administrative Expenses

SG&A expenses increased in the first six months of fiscal year 2020 compared to the first six months of fiscal year 2019 primarily as a result of $6.7 million of legal recoveries related to the settlement of the HiLight lawsuit received in the second quarter of fiscal year 2019, as well as restructuring expenses related to our wireless charging business, partially offset by lower levels of performance-based compensation, including share-based compensation tied to total stockholder return.

Product Development and Engineering Expenses

Product development and engineering expenses decreased slightly in the first six months of fiscal year 2020 compared to the first six months of fiscal year 2019 as a result of fluctuations in the timing of development activities. The levels of product development and engineering expenses reported in a fiscal period can be significantly impacted, and therefore experience period over period volatility, by the number of new product tape-outs and by the timing of recoveries from non-recurring engineering services, which are typically recorded as a reduction to product development and engineering expense.

Intangible Amortization

Intangible amortization was $9.1 million and $13.4 million in the first six months of fiscal years 2020 and 2019, respectively. This decrease was primarily due to certain finite-lived intangible assets associated with the acquisition of Gennum Corporation that had become fully amortized during the first quarter of fiscal year 2020.

Interest Expense

Interest expense, including amortization of debt discounts and issuance costs, was $5.1 million and $4.4 million in the first six months of fiscal years 2020 and 2019, respectively. This increase was primarily due to higher interest rates, partially offset by lower overall debt levels.

Provision (Benefit) for Income Taxes

The effective tax rates for the first six months of fiscal years 2020 and 2019 were a provision of 26.3% and an income tax benefit of 43.7%, respectively. In the first six months of fiscal year 2020, we recorded a provision of $6.7 million, compared to an income tax benefit of $11.4 million in the first six months of fiscal year 2019. The effective tax rate in the first six months of fiscal year 2020 was higher than the effective tax rate in the first six months of fiscal year 2019 primarily due to fiscal year 2019 having a $15.8 million benefit related to a partial release of the valuation reserve against our U.S. deferred tax assets. The effective tax rate in the first six months of fiscal year 2020 differs from the statutory federal income tax rate of 21% primarily due to a regional mix of income and the impact of the final regulations on the U.S. transition tax. The effective tax rate in the first six months of fiscal year 2019 differs from the statutory federal income tax rate of 21% primarily due to regional mix of income and a partial release of the valuation reserve against our U.S. deferred tax assets.

As a global organization, we are subject to audit by taxing authorities in various jurisdictions. To the extent that an audit, or the closure of a statute of limitations, results in adjusting our reserves for uncertain tax positions, our effective tax rate could experience extreme volatility since any adjustment would be recorded as a discrete item in the period of adjustment.

Liquidity and Capital Resources

Our capital requirements depend on a variety of factors including, but not limited to, the rate of increase or decrease in our existing business base; the success, timing and amount of investment required to bring new products to market; revenue growth or decline; and potential acquisitions. We believe that we have the financial resources necessary to meet business requirements for the next 12 months, including funds needed for working capital requirements.

As of July 28, 2019, our total stockholders' equity was $689.5 million. At that date, we also had approximately $287.8 million in cash and cash equivalents and $202.9 million of outstanding borrowings on our Credit Facility (defined below), which had $153.0 million of undrawn capacity on our Revolving Loans (defined below).

We incur significant expenditures in order to fund the development, design, and manufacture of new products. We intend to continue to focus on those areas that have shown potential for viable and profitable market opportunities, which may require additional investment in equipment and the hiring of additional design and application engineers aimed at developing new

products. Certain of these expenditures, particularly the addition of design engineers, do not generate significant payback in the short-term. We plan to finance these expenditures with cash generated by our operations and our existing cash balances.

A meaningful portion of our capital resources, and the liquidity they represent, are held by our foreign subsidiaries. As of July 28, 2019, our foreign subsidiaries held approximately $204.1 million of cash and cash equivalents, compared to $253.1 million at January 27, 2019. In connection with the enactment of the Tax Act, all historic and current foreign earnings are taxed in the U.S. and are subject to a 5% withholding tax, if repatriated. We have determined that we will repatriate back to the U.S. approximately $240.0 million of foreign earnings of which $156.0 million has been remitted since fiscal year 2019. As of July 28, 2019, our foreign subsidiaries had $513.1 million of unremitted earnings for which no taxes have been provided. Those historical earnings have been and are expected to continue to be permanently reinvested.

Cash Flows

One of our primary goals is to continually improve the cash flows from our existing business activities. Additionally, we will continue to seek to maintain and improve our existing business performance with capital expenditures and, potentially, acquisitions and other investments that support achievement of our business strategies. Acquisitions may be made for either cash or stock consideration, or a combination of both.

In summary, our cash flows for each period were as follows:

	Six Months Ended	
(in thousands)	July 28, 2019	July 29, 2018
Net cash provided by operating activities	$ 40,093	$ 84,367
Net cash used in investing activities	(24,442)	(21,126)
Net cash used in financing activities	(39,932)	(59,830)
Net (decrease) increase in cash and cash equivalents	$ (24,281)	$ 3,411

Operating Activities

Net cash provided by operating activities is primarily due to net income adjusted for non-cash items plus fluctuations in operating assets and liabilities.

Operating cash flows for the first six months of fiscal year 2020 were unfavorably impacted by a $46.6 million reduction in net sales, compared to the first six months of fiscal year 2019, excluding the $21.5 million revenue offset impact of the Warrant Shares in fiscal year 2019.

Investing Activities

Net cash used in investing activities is primarily attributable to capital expenditures and purchases of investments, net of proceeds from sales of property, plant and equipment and proceeds from sales of investments. Investing activities are also impacted by acquisitions, net of any cash received.

Capital expenditures were $16.9 million for the first six months of fiscal year 2020, compared to $9.8 million for the first six months of fiscal year 2019.

In the first six months of fiscal year 2020, we made significant investments to update and expand our production capabilities including the $4.0 million purchase of a facility in Colorado.

During the remainder of fiscal year 2020, we expect to significantly reduce our investments in property, plant and equipment, but continue to invest in companies that are enabling the LoRa®- and LoRaWAN™-based ecosystem. In the first six months of fiscal year 2020, we made $7.7 million of strategic investments in companies that are enabling the LoRa®- and LoRaWAN™-based ecosystem.

On May 2, 2018, we acquired substantially all the assets of IC Interconnect, Inc., a privately-held, U.S.-based company for approximately $7.4 million. We funded the purchase price using our cash on hand.

Financing Activities

Net cash used in financing activities is primarily attributable to repurchases of outstanding common stock, payments related to employee share-based compensation payroll taxes and principal payments related to our long-term debt, offset by proceeds from stock option exercises.

In the first six months of fiscal year 2020, we paid $13.4 million for employee share-based compensation payroll taxes and received $3.0 million in proceeds from the exercise of stock options, compared to payments of $10.6 million for employee share-based compensation payroll taxes and proceeds of $8.0 million from the exercise of stock options in the first six months of fiscal year 2019. We do not directly control the timing of the exercise of stock options. Such exercises are independent decisions made by grantees and are influenced most directly by the stock price and the expiration dates of stock option awards.

Such proceeds are difficult to forecast, resulting from several factors which are outside our control. We believe that such proceeds will remain a nominal source of cash in the future.

Stock Repurchase Program

We currently have in effect a stock repurchase program that was initially approved by our Board of Directors in March 2008. On May 24, 2018, our Board of Directors increased the authorization by $250.0 million. This program represents one of our principal efforts to return value to our stockholders. We repurchased 448,481 shares under this program in the first six months of fiscal year 2020 for $20.1 million. In the first six months of fiscal year 2019, we repurchased 1,140,753 shares under this program for $49.7 million. As of July 28, 2019, the remaining authorization under this program was $160.7 million.

Credit Facility

On November 15, 2016 (the "Closing Date"), we, with certain of our domestic subsidiaries as guarantors, entered into an amended and restated credit agreement ("Credit Agreement") with the lenders party thereto (the "Lenders") and HSBC Bank USA, National Association, as administrative agent, swing line lender and letter of credit issuer. Pursuant to the Credit Agreement, the Lenders provided us with senior secured first lien credit facilities in an aggregate principal amount of $400.0 million (the "Credit Facility"), consisting of term loans in an aggregate principal amount of $150.0 million (the "Term Loans") and revolving commitments in an aggregate principal amount of $250.0 million (the "Revolving Loans"). Up to $40.0 million of the Revolving Loans may be used to obtain letters of credit, up to $25.0 million of the Revolving Loans may be used to obtain swing line loans, and up to $40.0 million of the Revolving Loans may be used to obtain revolving loans and letters of credit in certain currencies other than U.S. Dollars ("Alternative Currencies"). The Credit Facility is scheduled to mature on November 12, 2021.

As of July 28, 2019, we had $105.9 million of outstanding borrowings under our Term Loans and $97.0 million of outstanding borrowings under our Revolving Loans, which had $153.0 million of undrawn capacity. The proceeds of the Revolving Loans may be used by us for capital expenditures, permitted acquisitions, permitted dividends, working capital and general corporate purposes.

The Credit Agreement provides that, subject to certain conditions, we may request, at any time and from time to time, the establishment of one or more additional term loan facilities and/or increases to the Revolving Loans in an aggregate principal amount not to exceed the sum of (a) $150.0 million and (b) the aggregate principal amount of all voluntary prepayments of Term Loans made prior to the date of incurrence of such additional term loan facilities and/or increases to the Revolving Loans; however, the Lenders are not required to provide such increase upon our request.

Interest on loans made under the Credit Facility in U.S. Dollars accrues, at our option, at a rate per annum equal to (1) the Base Rate (as defined below) plus a margin ranging from 0.25% to 1.25% depending upon our consolidated leverage ratio or (2) LIBOR (determined with respect to deposits in U.S. Dollars) for an interest period to be selected by us plus a margin ranging from 1.25% to 2.25% depending upon our consolidated leverage ratio (such margin, the "Applicable Margin"). The "Base Rate" is equal to a fluctuating rate equal to the highest of (a) the prime rate of the Administrative Agent, (b) ½ of 1% above the federal funds effective rate published by the Federal Reserve Bank of New York and (c) one-month LIBOR (determined with respect to deposits in U.S. Dollars) plus 1.00%.

Interest on loans made under the Credit Facility in Alternative Currencies accrues at a rate per annum equal to LIBOR (determined with respect to deposits in the applicable Alternative Currency) (other than loans made in Canadian Dollars, for which a special reference rate for Canadian Dollars applies) for an interest period to be selected by us plus the Applicable Margin.

The outstanding principal balance of the Term Loans is subject to repayment in equal quarterly installments in an amount equal to 10.0% per annum of the original principal amount of the Term Loans on the Closing Date in the first two years after such date, 12.5% per annum in years three and four after such date, and 15.0% per annum in year five after such date, with the balance being due at maturity on November 12, 2021. No amortization is required with respect to the Revolving Loans. We may voluntarily prepay borrowings under the Credit Facility at any time and from time to time, without premium or penalty, other than customary "breakage costs" and fees for LIBOR-based loans.

The Term Loans must be mandatorily prepaid using the proceeds of certain dispositions of assets and receipt of insurance proceeds, subject to agreed upon thresholds and exceptions and customary reinvestment rights.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as those arrangements are defined by the SEC, that are reasonably likely to have a material effect on our financial condition, revenues or expenses, operating results, liquidity, capital expenditures or capital resources.

We do not have any unconsolidated subsidiaries or affiliated entities. We have no special purpose or limited purpose entities that provide off-balance sheet financing, liquidity or market or credit risk support. We do not engage in leasing, hedging, research and development services, or other relationships that expose us to liability that is not reflected on the face of the consolidated financial statements.

Contractual Obligations

There were no material changes in our contractual obligations during the first six months of fiscal year 2020 from those disclosed in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 7 of our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 filed with the U.S. Securities and Exchange Commission on March 21, 2019 (our "Annual Report").

Critical Accounting Policies and Estimates

Our critical accounting policies are disclosed in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 7 of our Annual Report. There have been no significant changes to our policies during the six months ended July 28, 2019, except as discussed below related to our adoption of the new leasing standard. For a discussion of recent accounting pronouncements, see Note 1 to our unaudited condensed consolidated financial statements.

Leases

We have contracts where we are the lessee for real estate, vehicles, and office equipment. We do not have any material leases in which we are considered the lessor. Our leases have remaining lease terms of 1 year to 7 years, some of which include options to extend the leases for up to 5 years, and some of which include options to terminate the leases within 1 year.

We determine whether an arrangement is a lease at inception if we are both able to identify an asset and can conclude we have the right to control the identified asset for a period of time. Leases are recorded as right-of-use ("ROU") assets, other current liabilities, and operating lease liabilities. ROU assets are included in "Other assets", other current liabilities are included in "Accrued liabilities" and operating lease liabilities are included in "Other long-term liabilities" in the Balance Sheets. Leases with an initial term of 12 months or less are not recorded in the Balance Sheets.

ROU assets represent our right to control an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. Our leases typically do not include any residual value guarantees, bargain purchase options, or asset retirement obligations.

Our lease terms are only for periods in which we have enforceable rights. A lease is no longer enforceable when both the lessee and the lessor each have the right to terminate the lease without permission from the other party with no more than an insignificant penalty. Our lease terms are impacted by options to extend or terminate the lease when it is reasonably certain that we will exercise that option.

We have lease agreements with lease and non-lease components, which are generally accounted for as a single lease component. To the extent that our agreements have variable lease payments, we include variable lease payments that depend on an index or a rate and exclude those which depend on facts or circumstances occurring after the commencement date, other than the passage of time.

We concluded a lease exists when the asset is specifically identifiable, substantially all the economic benefit of the asset is obtained, and the right to direct the use of the asset exists during the term of the lease. Most of our leases do not contain an implicit interest rate; therefore, judgment was required in determining a rate that reflects what we would pay to borrow, on a collateralized basis and over a similar term, for our lease obligations. We determined our incremental borrowing rate based on discussions with lenders and other information available at commencement date. We use the portfolio approach when applying the discount rate selected based on the dollar amount and term of the obligation.

Available Information

General information about us can be found on our website at www.semtech.com. The information on our website is for informational purposes only and should not be relied on for investment purposes. The information on our website is not incorporated by reference into this Quarterly Report and should not be considered part of this or any other report filed with the SEC.

We make available free of charge, either by direct access on our website or by a link to the SEC website, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC. Our reports filed with, or furnished to, the SEC are also available directly at the SEC's website at www.sec.gov.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

We are subject to a variety of market risks, including commodity risk and the risks related to foreign currency, interest rates and market performance that are discussed in Item 7A of our Annual Report. Many of the factors that can have an impact on our market risk are external to us, and so we are unable to fully predict them.

We do not engage in the trading of derivative financial instruments in the normal course of business to mitigate our risk related to interest rates. In the event interest rates were to increase 100 basis points and holding all other variables constant, annual net income and cash flows for the following year would decrease by approximately $1.4 million as a result of our variable-rate debt. The effect of the 100 basis points increase would not be expected to significantly impact the fair value of our variable-rate debt.

Our investments are primarily subject to credit risk. Our investments are managed by a limited number of outside professional managers following investment guidelines set by us. Such guidelines prescribe credit quality, permissible investments, diversification, and duration restrictions. These restrictions are intended to limit risk by restricting our investments to high quality debt instruments with relatively short-term durations. Our investment strategy limits investment of new funds and maturing securities to U.S. Treasury, Federal agency securities, high quality money market funds and time deposits with our principal commercial banks.

We considered the historical trends in foreign currency exchange rates and determined that it is reasonably possible that adverse changes in foreign exchange rates of 10% for all currencies could be experienced in the near-term. These reasonably possible adverse changes were applied to our total monetary assets and liabilities denominated in currencies other than our functional currency as of the second quarter of fiscal year 2020. The adverse impact these changes would have had (after taking into account balance sheet hedges only) on our income before taxes is $1.3 million.

ITEM 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, which are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), as appropriate to allow timely decisions regarding required disclosure. Our management, with the participation of our CEO and CFO, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report. Based on that evaluation, our CEO and CFO concluded that, our disclosure controls and procedures were effective as of July 28, 2019.

Changes in Internal Controls

As of July 28, 2019, there were no changes to our internal control over financial reporting that occurred during the fiscal quarter then ended that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1. Legal Proceedings

Information about legal proceedings is set forth in Note 11 to the unaudited condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report.

ITEM 1A. Risk Factors

Please carefully consider and evaluate all of the information in this Quarterly Report and the risk factors set forth in our Annual Report. The risks set forth in our Annual Report on Form 10-K are not the only ones we face. Additional risks not now known to us or that we currently deem immaterial may also impair our business operations. If any of these risks actually occur, our business could be materially harmed. If our business is harmed, the trading price of our common stock could decline.

The risk factors associated with our business have not materially changed, as compared to the risk factors disclosed in our Annual Report except for the following updated risk factors below.

We are subject to export restrictions and laws affecting trade and investments.

As a global company headquartered in the U.S., we are subject to U.S. laws and regulations that limit and restrict the export of some of our products and services and may restrict our transactions with certain customers, business partners and other persons, including, in certain cases, dealings with or between our employees and subsidiaries. In certain circumstances, export control and economic sanctions regulations may prohibit the export of certain products, services and technologies, and in other circumstances we may be required to obtain an export license before exporting the controlled item. Compliance with these laws has not significantly limited our operations or our sales in the recent past, but could significantly limit them in the future. We maintain an export compliance program but there are risks that the compliance controls could be circumvented, exposing us to legal liabilities. We must also comply with export restrictions and laws imposed by other countries affecting trade and investments. Although these restrictions and laws have not significantly restricted our operations in the recent past, there is a risk that they could do so in the future.

For example, on March 8, 2016, the U.S. Department of Commerce published a final rule in the Federal Register that amended the Export Administration Regulations by adding ZTE Corporation ("ZTE") and three of its affiliates to the “Entity List” for actions contrary to the national security and foreign policy interests of the U.S. This rule imposed new export licensing requirements on exports, re-exports, and in-country transfers of all U.S.-regulated products, software and technology to the designated ZTE entities, which prevented sales of our U.S. regulated products to ZTE since license requests were subject to a general policy of denial. On March 24, 2016, the U.S. Department of Commerce issued a temporary general license authorizing most exports to ZTE and one of its designated affiliates through June 30, 2016, thereby enabling us to resume sales to ZTE. The temporary license was repeatedly extended until the Bureau of Industry and Security removed ZTE from the Entity List on March 29, 2017, after ZTE entered a guilty plea and agreed to pay a combined penalty of up to $1.19 billion to settle civil and criminal allegations against it. However, part of this plea deal included the imposition of a Denial Order against ZTE and one of its affiliates, which was initially suspended, but later imposed on April 15, 2018, leading to restrictions on export, re-export or transfer of any items subject to U.S. regulations to ZTE and the listed affiliate. This again impacted our ability to sell certain items to ZTE until the Denial Order was terminated on July 13, 2018. ZTE is still subject to the terms of its settlement agreement that includes the potential for re-imposition of the Denial Order.

In addition, on May 16, 2019, the U.S. Department of Commerce amended the Export Administration Regulations by adding Huawei Technologies Co., Ltd. ("Huawei"), which was recently indicted by the U.S. government for violating U.S. sanctions and bank and wire fraud, among other charges, and 68 of its affiliates to the "Entity List" for actions contrary to the national security and foreign policy interests of the U.S. On August 19, 2019, another 46 of Huawei’s non-U.S. affiliates were added to the “Entity List.” As with ZTE, this rule imposes new export licensing requirements on exports, re-exports, and in-country transfers of all U.S.- regulated products, software and technology to the designated Huawei entities. As noted above, license requests are subject to a general policy of denial and, therefore, we will not be able to sell our U.S. regulated products to Huawei. Sales of our products to Huawei accounted for less than 10% of our net sales during the second quarter of fiscal year 2020. Although the U.S. Department of Commerce granted certain temporary exemptions to Huawei on May 20, 2019 in the form of a temporary 90 day general license for specific activities, which was further extended for another 90 days on August 19, 2019, these exemptions are limited in scope and generally do not apply to the sale of our U.S. regulated products to Huawei. As of the date of this report, we are unable to predict the duration of the export restrictions imposed on Huawei and the corresponding future effects on our business.

These actions by the U.S. Department of Commerce or future regulatory activity may materially interfere with our ability to make sales to ZTE, Huawei or other foreign customers. ZTE, Huawei or other foreign customers affected by future U.S. government sanctions or threats of sanctions may respond by developing their own solutions to replace our products or by adopting our foreign competitors’ solutions. In addition, our association with customers that are or become subject to U.S.

regulatory scrutiny or export restrictions could subject us to actual or perceived reputational harm among current or prospective investors, suppliers or customers, customers of our customers, other parties doing business with us, or the general public. Any such reputational harm could result in the loss of investors, suppliers or customers, which could harm our business, financial condition, operating results or prospects.

Changes in government trade policies could have an adverse impact on our business or the business of our customers, which may materially adversely affect our business operations, sales or gross margins.

The U.S. government has recently made statements and taken certain actions that have led to, and may lead to, further changes to U.S. and international trade policies, including recently imposed tariffs affecting certain products exported by a number of U.S. trading partners, including China. In response, many U.S. trading partners, including China, have imposed or proposed new or higher tariffs on U.S. products. The tariffs imposed by the U.S. on products imported from China include parts and materials used in semiconductor manufacturing and could have the effect of increasing the cost of materials we use to manufacture certain products, which could result in lower margins. In addition, the geopolitical headwinds driven by export restrictions and tariffs imposed by the U.S. government may weaken demand for our products. For example, during the first six months of fiscal year 2020, we experienced a decrease of 8.6% in our net sales compared to the same period last year primarily due to a decline in China-based demand for our products.

We cannot predict what further actions may ultimately be taken with respect to tariffs or trade relations between the U.S. and other countries, what products may be subject to such actions, or what actions may be taken by the other countries in retaliation. Accordingly, it is difficult to predict exactly how, and to what extent, such actions may impact our business, or the business of our customers, partners or vendors. Any unfavorable government policies on international trade, such as capital controls or tariffs, may further affect the demand for our products, increase the cost of components, delay production, impact the competitive position of our products or prevent us from being able to sell products in certain countries, and may have a material adverse effect on our business, operating results and financial condition. Any resulting trade wars could have a significant adverse effect on world trade and global economic conditions and could adversely impact our revenues, gross margins and business operations.

Moreover, U.S. government actions targeting exports of certain technologies to China are becoming more pervasive. For example, in 2018, the U.S. adopted new laws designed to address concerns about the export of emerging and foundational technologies to China. In addition, on May 15, 2019, President Trump issued an executive order that invoked national emergency economic powers to implement a framework to regulate the acquisition or transfer of information communications technology in transactions that imposed undue national security risks. The order would restrict the acquisition or use in the U.S. of information and communications technology or services designed, developed, manufactured, or supplied by persons owned by, controlled by, or subject to the jurisdiction of foreign adversaries. These actions could lead to additional restrictions on the export of products that include or enable certain technologies, including products we provide to China-based customers, thereby further impacting our business, operating results and financial condition.

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

Recent Sales of Unregistered Securities

None.

Issuer Purchase of Equity Securities

This table provides information with respect to purchases by us of shares of our common stock during the second quarter of fiscal year 2020.

Fiscal Month/Year	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares That May Yet Be Purchased Under The Program (1)
May 2019 (04/29/19-05/26/19)	—	$ —	—	$ 180.7 million
June 2019 (05/27/19-06/23/19)	299,652	43.20	299,652	$ 167.8 million
July 2019 (06/24/19-07/28/19)	146,618	48.11	146,618	$ 160.7 million
Total activity	446,270	$ 44.82	446,270	

(1) *The Company maintains an active stock repurchase program that was initially approved by our Board of Directors in March 2008. The stock repurchase program does not have an expiration date and our Board of Directors has authorized expansion of the program over the years. As of July 28, 2019, we have repurchased $287.7 million in shares of our common stock under the program since inception and the current remaining authorization under our stock repurchase program is $160.7 million. Under our stock repurchase program, we may repurchase our common stock at any time or from time to time, without prior notice, subject to market*

conditions and other considerations. Our repurchases may be made through Rule 10b5-1 and/or Rule10b-18 or other trading plans, open market purchases, privately negotiated transactions, block purchases or other transactions. We intend to fund repurchases under the program from cash on hand. We have no obligation to repurchase any shares under the stock repurchase program and may suspend or discontinue it at any time.

ITEM 3. Defaults Upon Senior Securities

None.

ITEM 4. Mine Safety Disclosures

Not applicable.

ITEM 5. Other Information

None.

ITEM 6. Exhibits

Documents that are not physically filed with this report are incorporated herein by reference to the location indicated.

Exhibit No.	Description	Location
3.1	Restated Certificate of Incorporation of Semtech Corporation	Exhibit 3.1 to our Quarterly Report on Form 10-Q for the quarterly period ended October 26, 2003
3.2	Bylaws of Semtech Corporation	Exhibit 3.2 to our Annual Report on Form 10-K for the year ended January 27, 2008
31.1	Certification of the Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended	Filed herewith
31.2	Certification of the Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended	Filed herewith
32.1	Certification of the Chief Executive Officer Pursuant to 18 U.S.C. §1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Exhibit 32.1 is being furnished and shall not be deemed "filed")	Furnished herewith
32.2	Certification of the Chief Financial Officer Pursuant 18 U.S.C. §1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Exhibit 32.2 is being furnished and shall not be deemed "filed")	Furnished herewith
101	The following financial statements from the Company’s Quarterly Report on Form 10-Q for the quarter ended July 28, 2019, formatted in Inline XBRL: (i) Consolidated Statements of Income, (ii) Consolidated Statements of Comprehensive Income, (iii) Consolidated Balance Sheets (iv) Consolidated Statements of Stockholders’ Equity, (v) Consolidated Statements of Cash Flow and (v) Notes to Consolidated Financial Statements, tagged as blocks of text and including detailed tags.	
104	The cover page from the Company’s Quarterly Report on Form 10-Q for the quarter ended July 28, 2019, formatted in Inline XBRL (included as Exhibit 101).	

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

	SEMTECH CORPORATION
	Registrant
Date: August 28, 2019	/s/ Mohan R. Maheswaran
	Mohan R. Maheswaran
	President and Chief Executive Officer
Date: August 28, 2019	/s/ Emeka N. Chukwu
	Emeka N. Chukwu
	Executive Vice President and
	Chief Financial Officer

Exhibit 31.1

CERTIFICATION

I, Mohan R. Maheswaran, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Semtech Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 28, 2019

/s/ Mohan R. Maheswaran

Mohan R. Maheswaran
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Emeka N. Chukwu, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Semtech Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 28, 2019

/s/ Emeka N. Chukwu

Emeka N. Chukwu

Executive Vice President and Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 USC 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 Semtech Corporation (the “Company”) for the period ended July 28, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Mohan R. Maheswaran, Chief Executive Officer of the Company, hereby certify pursuant to 18 USC §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

Date: August 28, 2019

/s/ Mohan R. Maheswaran

Mohan R. Maheswaran
President and Chief Executive Officer

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002, has been provided to Semtech Corporation and will be retained by Semtech Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

The information contained in this Exhibit 32.1 is being furnished and shall not be deemed “filed” for the purposes of section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section. The information in this Exhibit 32.1 shall not be incorporated by reference into any registration statement or other document pursuant to the Securities Exchange Act of 1934, as amended, or the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference to this Exhibit 32.1 in such filing.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 USC 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 Semtech Corporation (the “Company”) for the period ended July 28, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Emeka N. Chukwu, Chief Financial Officer of the Company, hereby certify pursuant to 18 USC §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

Date: August 28, 2019

/s/ Emeka N. Chukwu

Emeka N. Chukwu

Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002, has been provided to Semtech Corporation and will be retained by Semtech Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

The information contained in this Exhibit 32.2 is being furnished and shall not be deemed “filed” for the purposes of section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section. The information in this Exhibit 32.2 shall not be incorporated by reference into any registration statement or other document pursuant to the Securities Exchange Act of 1934, as amended, or the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference to this Exhibit 32.2 in such filing.