

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

FORM 10-K

(Mark One)

- ☒ **Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**
For the fiscal year ended January 27, 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 1-6395

SEMTECH CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

95-2119684
(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 Common Stock par value \$.01 per share	Name of each exchange on which registered The Nasdaq Global Select Market
Securities registered pursuant to Section 12(g) of the Act:	
None (Title of Class)	

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically 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 ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging

growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

The aggregate market value of the common stock held by non-affiliates of the registrant (based upon the closing sale price of \$48.75 on The Nasdaq Global Select Market) as of July 27, 2018 was approximately \$2.3 billion. Stock held by directors, officers and shareholders owning 10% or more of the outstanding common stock (as reported by shareholders on Schedules 13D and 13G) were excluded as they may be deemed affiliates. This determination of affiliate status is not a conclusive determination for any other purpose.

Number of shares of Common Stock, \$0.01 par value per share, outstanding at March 15, 2019: 66,598,572.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the following documents are incorporated by reference in Part III, Item numbers 11, 12, 13 and 14 and portions of Item 10 of this report to: Definitive Proxy Statement in connection with registrant's annual meeting of shareholders to be held on June 13, 2019, to be filed no later than 120 days after the end of the registrant's fiscal year ended January 27, 2019.

SEMTECH CORPORATION
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Unless the context otherwise requires, the use of the terms "Semtech," "the Company," "we," "us" and "our" in this Annual Report on Form 10-K refers to Semtech Corporation and, as applicable, its consolidated subsidiaries.

Special Note
Regarding Forward-Looking and Cautionary Statements

This Annual Report on Form 10-K 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, operating results, 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; decreased average selling prices of the Company's products; reduced demand for the Company's products due to global economic conditions; changes in the United States ("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 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 may be unsuccessful in developing and selling new products; the Company's products having to undergo a lengthy and expensive qualification process 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 from foreign customers; the Company's foreign currency exposures; competition 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; the Company's inability to effectively control the sales of its products on the gray market; the Company's failure to maintain effective internal control over financial reporting or disclosure controls and procedures; government regulations and other standards 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; volatility of the Company's effective tax rate; changes in tax laws; taxation of the Company in other 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; losses in the value of investments in entities we do not control; the receipt of inaccurate, incomplete, or untimely financial information from entities in which we have an interest for which we are required to consolidate; 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 common stock 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; 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 Annual Report on Form 10-K, 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 Annual Report on Form 10-K, in the Company's other filings with the Securities and Exchange Commission ("SEC"), 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 consolidated financial statements might have been materially impacted if we had reached different conclusions or made different interpretations, judgments, assumptions or estimates.

PART I

Item 1. Business

General

We are a leading global supplier of high-performance analog and mixed-signal semiconductors and advanced algorithms and were incorporated in Delaware in 1960. We design, develop, manufacture and market 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: data centers, 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 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.

Our end-customers are primarily original equipment manufacturers ("OEMs") and their suppliers.

Overview of the Semiconductor Industry

The semiconductor industry is broadly divided into analog and digital semiconductor products. Analog semiconductors condition and regulate "real world" functions such as temperature, speed, sound and electrical current. Digital semiconductors process binary information, such as that used by computers. Mixed-signal devices incorporate both analog and digital functions into a single chip and provide the ability for digital electronics to interface with the outside world.

The market for analog and mixed-signal semiconductors differs from the market for digital semiconductors. The analog and mixed-signal industry is typically characterized by longer product life cycles than the digital industry. In addition, analog semiconductor manufacturers tend to have lower capital investment requirements for manufacturing because their facilities tend to be less dependent than digital producers on state-of-the-art production equipment to manufacture leading edge process technologies. The end-product markets for analog and mixed-signal semiconductors are more varied and more specialized than the relatively standardized digital semiconductor product markets.

Another difference between the analog and digital markets is the amount of available talented labor. The analog industry relies more heavily than the digital industry on design and applications talent to distinguish its products from one another. Digital expertise is extensively taught in universities due to its overall market size, while analog and mixed-signal expertise tends to be learned over time based on experience and hands-on training. Consequently, personnel with analog training are scarcer than digital trained engineers. This has historically made it more difficult for new suppliers in the analog market to quickly develop products and gain significant market share.

Advancements in digital signal processing technology typically drive the need for corresponding advancements in analog and mixed-signal solutions. We believe that the diversity of our applications allows us to take advantage of areas of relative market strength and reduces our vulnerability to competitive pressure in any one area.

Business Strategy

Our objective is to be a leading supplier of high-performance analog and mixed-signal semiconductors and advanced algorithms to the fastest growing segments of our target markets. We intend to leverage our pool of skilled technical personnel to develop new products or, where appropriate, use strategic acquisitions or small strategic investments to either accelerate our position in the fastest growing areas or to gain entry into these areas. In order to capitalize on our strengths in analog and mixed-signal processing design, development and marketing, we intend to pursue the following strategies:

Leverage our rare analog and mixed-signal design expertise

We have developed a strategy to invest heavily in human resources needed to define, design and market high-performance analog and mixed-signal platform products. We have built a team of experienced engineers who combine industry expertise with advanced semiconductor design expertise to meet customer requirements and enable our customers to get their products to market rapidly. We

intend to leverage this strategy to achieve new levels of integration, power reduction and performance, enabling our customers to achieve differentiation in their end systems.

Continue to release proprietary new products, achieve new design wins, and cross-sell products

We are focused on developing unique, new, and proprietary products that bring value to our target customers in our target markets. These products are typically differentiated in performance but are priced competitively. We also focus on achieving design wins for our products with current and future customers. Design wins are indications by the customer that they intend to incorporate our products into their product designs. Although we believe that a design win is an indicator of future potential growth, it does not inevitably result in us being awarded business or receiving a purchase commitment. Our technical talent works closely with our customers in securing design wins, defining new products and in implementing and integrating our products into their systems. We also focus on selling our complete portfolio of products to our existing customers, as we believe the technical expertise of our marketing and sales teams allows us to identify and capitalize on cross-selling opportunities.

Focus on fast-growing market segments and regions

We have chosen to target the analog and mixed-signal sub-segments of some of the most exciting and fastest growing end-markets. We participate in these markets by focusing on specific product areas within the analog and mixed-signal market, including products for enterprise computing equipment, communications infrastructure, high-end consumer equipment and certain broad-based industrial markets. All of these markets are characterized by their need for leading-edge, high-performance analog and mixed-signal semiconductor technologies.

The enterprise computing, communications, high-end consumer, and industrial end-markets we supply are characterized by several trends that we believe drive demand for our products. The key trends that we believe are significant for our future growth include:

- Increasing bandwidth over high-speed networks, fueling growth in high speed multimedia transmission;
- Increasing electronic system requirements for smaller, lighter, more highly integrated and feature-rich mobile devices;
- Increasing need for more efficient energy management in the home and in industrial environments and the proliferation of "green" standards; and
- Increasing demands for Internet connectivity to low power sensors.

Our products address these market trends by providing solutions that are ultra-low power thereby extending battery life, small form factor enabling smaller more mobile devices, highly integrated enabling more functionality within devices, and high-performance enabling product differentiation within our customer base. Additionally, as communications functions are increasingly integrated into a range of systems and devices, these products require analog sensing, processing and control capabilities, which increases the number and size of our targeted end-markets.

Leverage outsourced semiconductor fabrication capacity

We outsource most of our manufacturing in order to focus more of our resources on designing, developing and marketing our products. Our primary outside wafer foundries are based in China, Taiwan, South Korea, Israel, and the United States. We believe that outsourcing provides us numerous benefits including, capital efficiency, the flexibility to adopt and leverage emerging process technologies without significant investment risk, and a more variable cost of goods, which provides us with greater operating flexibility.

Products and Technology

We design, develop, manufacture and market high-performance analog and mixed-signal semiconductors and advanced algorithms. We currently operate and account for results in one reportable segment through three product lines: Signal Integrity, Protection, and Wireless and Sensing. Beginning in fiscal year 2019, we restructured and combined the Power and High-Reliability Products Group with the Wireless and Sensing Products Group.

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, 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 smart 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.

Prior to the third quarter of fiscal year 2017, we had a Systems Innovation Products Group that combined the analog and mixed-signal design competencies from our Sierra Monolithics, Inc. ("SMI") and Gennum Corporation ("Gennum") acquisitions and was chartered with developing innovative analog and mixed-signal intellectual property for emerging systems.

On August 5, 2016, we completed the divestiture of the remaining assets in the Systems Innovation Products Group ("Snowbush IP") to Rambus Inc. ("Rambus") for \$32.0 million in cash along with the opportunity to receive additional payments through 2022 based upon a percentage of sales by Rambus of new products expected to be developed by them from the Snowbush IP. In fiscal year 2017, we recorded a gain of \$25.5 million on the disposition of the Snowbush IP. Other than this gain, the divestiture did not and is not expected to have a material impact on our consolidated financial statements. Following the divestiture, beginning in the third quarter of fiscal year 2017, we no longer had a Systems Innovation Products Group.

Our sales by product line are as follows:

(in thousands)	Fiscal Years		
	2019	2018	2017
Signal Integrity	\$ 276,040	\$ 263,015	\$ 258,824
Wireless and Sensing	190,589	164,569	140,774
Protection	182,068	176,482	149,865
Systems Innovation	—	—	205
Other: Warrant Shares ⁽¹⁾	(21,501)	(16,219)	(5,396)
Total	<u>\$ 627,196</u>	<u>\$ 587,847</u>	<u>\$ 544,272</u>

⁽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 of our common stock. 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 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.

Recent Acquisitions

On December 11, 2018, the Company, through its subsidiary Semtech (International) AG, a Swiss corporation, completed its acquisition of all of the outstanding equity interests of Trackio International AG, a Swiss corporation, and its subsidiaries (collectively, "TrackNet"), for an aggregate purchase price of approximately \$8.5 million. TrackNet is a provider of LoRa-based end-to-end solutions for the IoT and provides expertise and intellectual property that will be integrated into the Company's business to support its goal of enabling the growing ecosystem around the Company's LoRa Technology.

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 intended to enhance the Company's U.S. research and development capabilities for its next-generation Z-Pak™ platform.

On July 1, 2017, the Company acquired AptoVision Technologies Inc. ("AptoVision"), a privately-held provider of uncompressed, zero-frame latency, video-over-IP solutions addressing the Pro AV market. The unique combination of AptoVision's advanced algorithms for real-time, full bandwidth video transmission over IP networks, and Semtech's industry leading high-speed signal integrity and chip development expertise is expected to enable the adoption of Software Defined Video over Ethernet ("SDVoE") and

accelerate this natural progression in the evolution of video transport. This transaction expanded the portfolio of our Signal Integrity Products Group.

Semtech End-Markets

Our products are sold primarily to customers in the enterprise computing, industrial, high-end consumer, and communications end-markets. Our estimate of sales by major end-market is detailed below:

(percentage of sales)	Fiscal Years		
	2019	2018 ⁽¹⁾	2017 ⁽¹⁾
Enterprise Computing	32 %	33 %	34 %
Industrial	32 %	29 %	29 %
High-End Consumer	27 %	29 %	24 %
Communications	12 %	12 %	14 %
Other: Warrant Shares	(3)%	(3)%	(1)%
Total	100 %	100 %	100 %

⁽¹⁾Reclassifications have been made to prior period amounts to conform to the current classification.

We believe that our diversity in end-markets provides stability to our business and opportunity for growth.

The following table depicts our main product lines and their end-market and product applications:

Product Groups	Typical End-Product Applications			
	Enterprise Computing	Communications	High-End Consumer	Industrial
Signal Integrity	Optical Transceiver Module IC's supporting 100Mb/s to 400Gb/s for Ethernet, Fibre Channel, CPRI protocols in data center and PON applications	Optical Transceiver Module IC's for 4G/5G/LTE base stations Optical Transceiver Module IC's supporting 100Mb/s to 100Gb/s for Telecom applications, Backplane CDR's and signal conditioners		Serial Digital Interconnect interface IC's for Broadcast Video, Video over IP technology for Pro AV applications
Protection	Servers, workstations, desktop PC/ notebooks, ultrabooks, optical modules, printers, copiers	4G/5G/LTE base stations, 1/10 Gb/s Ethernet	Smartphones, tablets, wearables cameras, TVs, set top boxes	Industrial automation, measurement & instrumentation, automotive, IoT
Wireless and Sensing		4G/5G/LTE wireless base stations	Smartphones, media players, tablets, digital/still video cameras	Automated meter readers, industrial automation, IoT, keyless entry, hearing aids

Seasonality

Historically, our results have reflected some seasonality, with demand levels generally being slightly lower in the industrial and high-end consumer products end-markets during the first and fourth quarters of our fiscal year in comparison to the second and third quarters.

Intellectual Capital and Product Development

The development of intellectual property ("IP") and the resulting proprietary products is a critical success factor for us. Recruiting and retaining key technical talent is the foundation for designing, developing, and marketing our IP in the form of new proprietary products in the global marketplace. Our ability to recruit and retain our engineering talent is one of the keys to maintaining our competitive advantage. Historically, we have been successful in retaining our key engineering staff and recruiting new talent. One of our strategies to recruit talent is the establishment of multiple design center locations. As a result, we have design centers throughout the world.

Circuit design engineers, layout engineers, product and test engineers, application engineers, and field application engineers are our most valuable employees. Together they perform the critical tasks of design and layout of ICs, turning these circuits into silicon devices, and conferring with customers about designing these devices into their applications. The majority of our engineers fit into one of these categories. Most of these engineers have many years of experience in the design, development, and layout of circuits targeted for use in protection, advanced communications and power management, multimedia and data communications, and wireless and sensing applications. We also employ a number of software engineers and systems engineers that specialize in the development of software and systems architecture, who enable us to develop systems oriented products in select markets.

In fiscal year 2019, we incurred \$109.9 million of product development and engineering expense, which represents 18% of net sales. Product development and engineering expense for fiscal years 2018 and 2017 were \$104.8 million and \$102.5 million, respectively, or 18% and 19% of net sales, respectively.

We occasionally enter into agreements with customers that allow us to recover certain costs associated with product design and engineering services. Any recovery for these services is typically recognized upon completion of services, which historically lags behind the period in which we recognize the related expense. This difference in recognition timing can create volatility in our reported product development and engineering expenses.

Sales and Marketing

Net sales made directly to customers during fiscal years 2019, 2018 and 2017, were approximately 32%, 34% and 35% of total net sales, respectively. The remaining 68%, 66% and 65% of net sales were made through independent distributors. The decline in direct sales is primarily related to growth in our industrial end-market sales, which includes our LoRa Technology products, as these products are predominantly sold through our distributors. We have direct sales personnel located throughout the United States, Europe, and Asia who manage the sales activities of independent sales representative firms and independent distributors. We expense our advertising costs as they are incurred.

We operate internationally through our foreign subsidiaries. Semtech (International) AG serves the European and Asian markets from its headquarters in Rapperswil, Switzerland, and through its wholly-owned subsidiaries based in the United Kingdom ("U.K.") and Japan. Semtech (International) AG also maintains branch offices, either directly or through one of its wholly-owned subsidiaries, in multiple countries including China, Taiwan, and South Korea. Semtech Canada Corporation serves the Canadian market for most of the products from our Signal Integrity Products Group, from its headquarters in Burlington, Ontario. Independent representatives and distributors are also used to serve customers throughout the world. Some of our distributors and sales representatives also offer products from our competitors, as is customary in the industry.

Customers, Sales Data, and Backlog

As a result of the breadth of our products and markets, we have a broad and balanced range of customers.

Representative Customers by End-Markets:

Enterprise Computing	Industrial	High-End Consumer	Communications
Alphabet Inc.	Honeywell Inc.	Huawei Technologies Co., Ltd.	Cisco Systems, Inc.
Hewlett-Packard	Itron, Inc.	LG Electronics Inc.	Ericsson
Huawei Technologies Co., Ltd.	Panasonic Corp	Quanta Computer	Huawei Technologies Co., Ltd.
LuxNet Corp	Raytheon Company	Samsung Electronics Co., Ltd.	Samsung Electronics Co., Ltd.
Lumentum Holdings Inc.	Rockwell Automation	Sharp Corporation	ZTE Corporation
Samsung Electronics Co., Ltd.	Sharp Corporation		
Sumitomo Electric	Sonova International		
ZTE Corporation	Sony Corp		

Our customers include major OEMs and their subcontractors in the enterprise computing, communications, high-end consumer, and industrial end-markets. Our products are typically purchased by these customers for their performance, price, and/or technical support,

as compared to our competitors.

During fiscal years 2019, 2018 and 2017, sales in the U.S. contributed 11%, 9% and 9%, respectively, to our sales. Foreign sales constituted 89%, 91% and 91% of our sales during fiscal years 2019, 2018 and 2017, respectively. Sales to customers located in China (including Hong Kong), South Korea and Vietnam comprised 55%, 5% and 5% of our sales, respectively, in fiscal year 2019. No other foreign country comprised more than 5% of sales in fiscal year 2019. See Note 14 to the Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for additional financial information by geographic region. Additional information regarding certain risks associated with our international operations is provided under Item 1A. Risk Factors - Risks Relating to Our Business - Risks Relating to International Operations.

Sales by Region

A summary of net sales by region is as follows:

(in thousands, except percentages)	Fiscal Years					
	2019		2018		2017	
Asia-Pacific	\$ 480,680	76 %	\$ 439,342	75 %	\$ 412,167	76 %
North America	118,664	19 %	121,144	21 %	94,123	17 %
Europe	49,353	8 %	43,580	7 %	43,378	8 %
Other: Warrant Shares	(21,501)	(3)%	(16,219)	(3)%	(5,396)	(1)%
Total Net Sales	\$ 627,196	100 %	\$ 587,847	100 %	\$ 544,272	100 %

The following table sets forth the concentration of sales among the customers that accounted for more than 10% of our sales in at least one of the fiscal years 2019, 2018 and 2017:

Concentration of Net Sales - Significant Customers

(percentage of net sales)	Fiscal Years		
	2019	2018	2017
Trend-tek Technology Ltd (and affiliates)	14%	10%	10%
Frontek Technology Corporation (and affiliates)	11%	7%	8%
Arrow Electronics (and affiliates)	10%	11%	10%
Samsung Electronics (and affiliates)	8%	8%	7%
Premier Technical Sales Korea, Inc. (and affiliates) ⁽¹⁾	4%	6%	4%

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

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

Concentration of Accounts Receivable - Significant Customers

(percentage of net receivables)	Fiscal Years	
	2019	2018
Trend-tek Technology Ltd (and affiliates)	11%	8%
Frontek Technology Corporation (and affiliates)	10%	9%

Backlog

Our backlog of orders as of the end of fiscal years 2019, 2018 and 2017 was approximately \$72.6 million, \$102.9 million and \$112.4 million, respectively. The majority of our backlog is typically requested for delivery within six months. In markets where the end system life cycles are relatively short, customers typically request delivery in four to eight weeks. A backlog analysis at any given time gives little indication of our future business except on a short-term basis, principally within the next 45 days. We do not have any significant backlog with deliveries beyond 18 months.

Manufacturing Capabilities

Our strategy is to outsource most of our manufacturing functions to third-party foundries and assembly and test contractors. The third-party foundries fabricate silicon wafers, while the assembly and test contractors package and test our products. We believe this outsourcing permits us to take advantage of the best available technology, leverage the capital investment of others, and reduce our operating costs associated with manufacturing assets.

We perform a limited amount of internal probe and final test activities at our facilities in Camarillo, Irvine, and San Diego in California; Neuchâtel in Switzerland; and Reynosa in Mexico. These activities accommodate situations in which tight coupling with product design is desirable or where there are unique requirements. A majority of our very small form factor protection devices are packaged at our facility in Colorado Springs, Colorado. Our packaged discrete rectifier products are packaged and tested in-house in Reynosa, Mexico. Almost all of our other products are packaged and tested by outside subcontractors.

In keeping with our mostly "fabless" business model, we have no wafer fabrication facilities except for our operation in Reynosa, Mexico. For fiscal year 2019, the Reynosa facility provided almost all of the silicon for our packaged discrete rectifier products, which were approximately 2% of our end product net sales. The remaining end products representing 98% of our net sales were supported with finished silicon wafers purchased from third-party wafer foundries in China, Taiwan, South Korea, Israel and the U.S. We anticipate that substantially all the silicon wafers we require will come from third-party foundries in fiscal year 2020.

Despite our use of third-party wafer foundries for sourcing a majority of our silicon needs, we do maintain internal process development capabilities. Our process engineers work closely with our third-party foundries on the improvement and development of process capabilities. In fiscal year 2019, we purchased the vast majority of our wafers from approximately five different third-party wafer foundries and used various manufacturing processes, including Bipolar, CMOS, RF-CMOS and Silicon Germanium ("SiGe") BiCMOS processes.

While we do have some redundancy of fabrication processes by using multiple third-party foundries, any interruption of supply by one or more of these foundries could materially impact us. As a result, we maintain some amount of business interruption insurance in part to help reduce the financial risk associated with a wafer supply interruption, but we are not fully insured against this risk.

Although our products are made from basic materials (principally silicon, metals and plastics), all of which are available from a number of suppliers, capacity at wafer foundries sometimes becomes constrained. The limited availability of certain materials, such as silicon wafer substrates, may impact our suppliers' ability to meet our demand needs or impact the price we are charged. The prices of certain other basic materials, such as metals, gases and chemicals used in the production of ICs can exhibit price volatility depending on the changes in demand for these basic commodities. In most cases we do not procure these materials ourselves, but we are nevertheless reliant on these materials for producing our products because our third-party foundry and package and test subcontractors must procure them. To help minimize risks associated with constrained capacity, we use multiple foundries and have taken other steps to prevent supply interruptions at certain foundries and subcontractors.

In fiscal years 2019, 2018, and 2017, a Chinese foundry provided 16%, 20% and 25% of our total silicon requirements in terms of cost of wafers purchased, respectively.

In addition to our development and production facility in Colorado Springs, Colorado, which provides assembly services for a majority of our very small form factor protection devices, we use third-party subcontractors to perform almost all of our other assembly and test operations. A majority of our offshore assembly and test activity is conducted by third-party subcontractors based in China, Malaysia, Taiwan, Thailand, South Korea and the Philippines. We have operations offices located in the Philippines, Malaysia and China that support and coordinate some of the worldwide shipment of products. We have installed our own test equipment at some of our packaging and testing subcontractors in order to ensure a certain level of capacity, assuming the subcontractor has ample employees to operate the equipment.

Our arrangements with both third-party wafer foundries and package and test subcontractors are designed to provide some assurance of capacity but are not expected to assure access to all the manufacturing capacity we may need in the future.

Competition

The analog and mixed-signal semiconductor and advanced algorithms industries are highly competitive, and we expect competitive pressures to continue. Our ability to compete effectively and to expand our business will depend on our ability to continue to recruit and retain key engineering talent, our ability to execute on new product developments, and our ability to persuade customers to design these new products into their applications.

Our industry is characterized by decreasing average unit selling prices over the life of a product as the volumes typically increase. However, price decreases can sometimes be quite rapid and faster than the rate of increase of the associated product volumes. We believe we compete effectively based upon our ability to capitalize on efficiencies and economies of scale in production and sales, and our ability to maintain or improve our productivity and product yields to reduce manufacturing costs.

We are in direct and active competition, with respect to one or more of our product lines, with numerous manufacturers of varying size, technical capability and financial strength. A number of these competitors are dependent on semiconductor products as their principal source of income, and some are much larger and better resourced than we are. The number of competitors has grown due to expansion

of the market segments in which we participate. Additionally, there has been a trend toward consolidation in our industry as companies attempt to strengthen or hold their market positions in an evolving industry.

Such consolidations may make it more difficult for us to compete effectively, including on the basis of price, sales and marketing programs, channel coverage, technology or product functionality.

Intellectual Property and Licenses

We have been granted 201 U.S. patents and 152 foreign patents and have numerous patent applications pending with respect to our products and to technologies associated with our business. The expiration dates of issued patents range from 2019 to 2038. Although we consider patents to be helpful in maintaining a competitive advantage, we do not believe they create definitive competitive barriers to entry. There can be no assurance that our patent applications will lead to issued patents, that others will not develop or patent similar or superior products or technologies, or that our patents will not be challenged, invalidated, or circumvented by others. We have no revenue from patents that expire in calendar year 2019 and no material revenue associated with patents that expire in 2020 or 2021.

We have registered many of our trademarks in the U.S. and in various foreign jurisdictions. Registration generally provides rights in addition to basic trademark protections and is typically renewable upon proof of continued use. We have registered, or are in the process of registering, our SEMTECH trademark in many jurisdictions. In one location use of this trademark is prohibited, but we are permitted to use our Semtech International trade name. This restriction has not had a material impact on our business to date and we do not anticipate it will have a material impact in the future.

We also have registered certain materials in which we have copyright ownership, which provides additional protection for this intellectual property.

Employees

As of January 27, 2019, we had 1,335 full-time employees. There were 509 employees in research and development, 260 in sales, marketing and field services, and 192 in general, administrative and finance. The remaining employees support operational activities, including product and test engineering, assembly, manufacturing, distribution and quality functions.

We have not had a work stoppage in the last decade and the only unionized employees are approximately 167 Mexican nationals who work at our manufacturing facility in Reynosa, Mexico. Our employee relations during the last fiscal year have been, and remain, satisfactory.

We adjust our workforce from time to time to meet the changing needs of our business. Competition for key design engineering talent globally is significant.

Government Regulations and Environmental Matters

We are required to comply, and it is our policy to comply, with numerous government regulations that are normal and customary to businesses in our industry and that operate in our markets and operating locations.

Our sales that serve the military and aerospace markets primarily consist of high-reliability products that are offered within our Wireless and Sensing product line that have been qualified to be sold in these markets by the U.S. Department of Defense ("DOD"). In order to maintain these qualifications, we must comply with certain specifications promulgated by the DOD. As part of maintaining these qualifications, we are routinely audited by the DOD. Based on current specifications, we believe we can maintain our qualifications for the foreseeable future. However, these specifications could be modified by the DOD in the future or we could become subject to other government requirements, which could make the manufacturing of these products more difficult and thus could adversely impact our profitability in the Wireless and Sensing Product Group. In fiscal year 2019, our sales that serve military and aerospace markets made up 2% of net sales. The U.S. State Department has determined that a small number of special assemblies from the Wireless and Sensing product line are subject to the International Traffic in Arms Regulations ("ITAR"). We have a Technical Assistance Agreement in place that permits us to assemble certain of these products in Mexico. International shipments of products subject to ITAR require a State Department license.

For further discussion related to environmental matters, see Note 13 to the Consolidated Financial Statements.

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 Annual Report on Form 10-K 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 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"), 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 1A. Risk Factors

You should carefully consider and evaluate all of the information in this Annual Report on Form 10-K, including the risk factors listed below. The risks described below are not the only ones facing our Company. 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.

As discussed earlier in "Special Note Regarding Forward-Looking and Cautionary Statements," this Annual Report on Form 10-K contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of such risks and uncertainties and certain factors including the risks faced by us described below and elsewhere in this Annual Report on Form 10-K, including, without limitation, information under the section "Management's Discussion and Analysis of Financial Condition and Results of Operations" and additional factors that accompany the related forward-looking statements in this Annual Report on Form 10-K, in the Company's other filings with the SEC, 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 statements 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.

Risks Relating to General Business Conditions

Our future results may fluctuate, fail to match past performance or fail to meet expectations.

Our results may fluctuate in the future, may fail to match our past performance or fail to meet our expectations and the expectations of analysts and investors. Our results and related ratios, such as gross margin, operating income percentage and effective tax rate may fluctuate as a result of:

- general economic conditions in the countries where we sell our products;
- seasonality and variability in the computer market and our other end-markets;
- the timing of new product introductions by us, our customers and our competitors;
- product obsolescence;
- the scheduling, rescheduling or cancellation of orders by our customers;
- the cyclical nature of demand for our customers' products;
- our ability to predict and meet evolving industry standards and consumer preferences;
- our ability to develop new process technologies and achieve volume production;
- our ability to integrate and realize synergies from recent acquisitions;
- changes in manufacturing yields;
- capacity utilization;
- product mix and pricing;
- movements in exchange rates, interest rates or tax rates;
- the availability of adequate supply commitments from our outside suppliers;
- the manufacturing and delivery capabilities of our subcontractors; and
- litigation and regulatory matters.

As a result of these factors, our past financial results are not necessarily indicative of our future results.

Downturns in the business cycle could adversely affect our revenues and profitability.

The semiconductor industry is highly cyclical and has experienced significant downturns, which are characterized by reduced product demand, production overcapacity, increased levels of inventory, industry-wide fluctuations in the demand for semiconductors and the significant erosion of average selling prices. The cyclical nature of the semiconductor industry may cause us to experience substantial period-to-period fluctuations in our operating results. The growth rate of the global economy is one of the factors affecting demand for semiconductor components. Many factors could adversely affect regional or global economic growth including increased price inflation for goods, services or materials, rising interest rates in the U.S. and the rest of the world, or tight credit markets. In addition, economic slowdowns may also affect our customers' ability to pay for our products. Accordingly, economic slowdowns may harm our business.

The average selling prices of products in our markets have historically decreased rapidly and will likely do so in the future, which could harm our revenue and gross margins.

As is typical in the semiconductor industry, the average selling price of a particular product has historically declined significantly over the life of the product. In the past, we have reduced the average selling prices of our products in anticipation of future competitive pricing pressures, new product introductions by us or our competitors and other factors. We expect that we will have to similarly reduce prices in the future for older generations of products. Reductions in our average selling prices to one customer could also impact our average selling prices to all customers. A decline in average selling prices would harm our gross margins for a particular product. If not offset by sales of other products with higher gross margins, our overall gross margins may be adversely affected. Our business, results of operations, financial condition and prospects will suffer if we are unable to offset any reductions in our average selling prices by increasing our sales volumes, reducing our costs and developing new or enhanced products on a timely basis, with higher selling prices or gross margins.

Current global economic conditions and the potential changes in global economic policy could reduce demand for our products and have a material adverse impact on our business, operating results and financial condition.

Uncertainty about global economic conditions can pose a risk to the overall economy by causing fluctuations to and reductions in consumer and commercial spending. Demand for our products could be different from our expectations due to many factors including changes in business and economic conditions, conditions in the credit market that affect consumer confidence, customer acceptance of our products, changes in customer order patterns, including order cancellations, and changes in the level of inventory held by vendors. In particular, in fiscal year 2019, sales to customers in China comprised 55% of our net sales. The recent economic slowdown in China could adversely affect our sales to customers in China and consequently, our business, operating results and financial condition. Further, changes in U.S. and global social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment could adversely affect our business.

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. For example, during 2018, the U.S. and China each imposed new tariffs, and announced further proposed tariffs, on various products imported from China and the U.S., respectively. Between July 2018 and September 2018, the Office of the United States Trade Representative ("USTR") imposed tariffs of 10% and 25% on three product lists totaling approximately \$250 billion in Chinese imports. In particular, in September 2018, the USTR imposed its third round of 10% tariffs on more than 5,700 categories of products imported from China with a value of approximately \$200 billion, including parts and materials used in semiconductor manufacturing, which were scheduled to increase to a rate of 25% on March 2, 2019 but have been postponed depending on negotiations between the countries. In response, many of those trading partners, including China, have imposed or proposed new or higher tariffs on U.S. products. We cannot predict what 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 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 could adversely impact our revenues, gross margins and business operations.

Business interruptions such as natural disasters could harm our business and have a material adverse effect on our operations.

Our corporate headquarters, a portion of our assembly and research and development activities and certain other critical business operations are located near major earthquake fault lines. We do not maintain earthquake insurance and our business

could be harmed in the event of a major earthquake. We generally do not maintain flood coverage, including for our Asian locations where certain of our operations support and sales offices are located. Such flood coverage has become very expensive; as a result we have elected not to purchase this coverage. If one of these locations were to experience a major flood, our business may be harmed.

Our business could be harmed if natural disasters interfere with production of wafers by our suppliers, with assembly and testing of products by our subcontractors, or with our distribution network. We maintain some business interruption insurance to help reduce the effect of such business interruptions, but we are not fully insured against such risks. Likewise, our business could be adversely impacted if a natural disaster were to shut down or significantly curtail production by one or more of our end customers. Any such loss of revenue due to a slowdown or cessation of end customer demand is uninsured.

When natural disasters such as an earthquake or other causes result in wide-spread destruction, the impact on our business may not be readily apparent. This is especially true when trying to assess the impact of the disaster on our end customers, who themselves may not fully understand the impact of the event on their businesses. The full extent and scope of natural disaster impacts, both in terms of direct impact on us and our supply chain, as well as on our end customers (to include their own supply chain issues as well as end-market issues), may not be known for a considerable period of time following the disaster. When any such natural disaster occurs, there can be no assurance that our operating results may not be materially affected as a result of the impact of the disaster on us or on our end customers.

We may experience other causes of business interruptions that may affect our operations and we may not have sufficient business interruption insurance to compensate us for losses that may occur.

We rely on third party freight firms for nearly all of our shipments from vendors to assembly and test sites, primarily in Asia, and for shipments of our final product to customers. This includes ground and air transportation. Any significant disruption of such freight business globally or in certain parts of the world, particularly where our operations are concentrated, could materially and adversely affect our ability to generate revenues. Business interruption insurance may not provide enough protection to compensate us for losses that may occur. Accordingly, any of these disruptions could significantly harm our business.

Terrorist attacks, wars and other acts of violence, or any other national or international crisis, calamity or emergency, may result in interruption to the business activities of many entities, business losses and overall disruption of the economy at many levels. These events may directly impact our physical facilities or those of our customers and suppliers. Additionally, these events or armed conflicts may cause some of our customers or potential customers to reduce the level of expenditures on their services and products that ultimately may reduce our revenue. The consequences of these reductions are unpredictable, and we may not be able to foresee events that could have an adverse effect on our business. For example, as a result of these events, insurance premiums for businesses may increase and the scope of coverage may be decreased. Consequently, we may not be able to obtain adequate insurance coverage for our business and properties. To the extent that these disruptions result in delays or cancellations of customer orders, a general decrease in corporate spending, or our inability to effectively market our services and products, our business and operating results could be harmed.

We operate a manufacturing facility in Reynosa, Mexico. Historically, certain regions in Mexico have experienced high levels of violence. Any significant disruption of our operations at this facility could materially affect our ability to generate revenues for certain products within our Wireless and Sensing products line. Some of the products that we produce at this facility require certification by the Defense Contract Audit Agency ("DCAA"). Failure to secure or maintain the required certification, either directly through the DCAA or through a qualifying third party would materially affect our authorization to manufacture applicable products at this facility, and our revenue for certain products within our Wireless and Sensing products line could materially decline.

Risks Relating to Production Operations

We obtain many essential components and materials and certain critical manufacturing services from a limited number of suppliers and subcontractors, most of which are foreign-based entities.

Our reliance on a limited number of subcontractors and suppliers for wafers, packaging, testing and certain other processes involves several risks, including potential inability to obtain an adequate supply of required components and reduced control over the price, timely delivery, reliability and quality of components. These risks are attributable to several factors, including limitations on resources, labor problems, equipment failures or the occurrence of natural disasters. The good working relationships we have established with our suppliers and subcontractors could be disrupted, and our supply chain could suffer, if a supplier or subcontractor were to experience a change in control. There can be no assurance that problems will not occur in the future with suppliers or subcontractors. Disruption or termination of our supply sources or subcontractors could significantly delay our shipments and harm our business. Delays could also damage relationships with current and prospective customers. Any prolonged inability to obtain timely deliveries or quality manufacturing or any other circumstances that would require us to seek alternative sources of supply or to manufacture or package certain components internally could limit our growth and harm our business.

We are subject to risk from fluctuating market prices of certain commodity raw materials, particularly gold, that are incorporated into our end products or used by our suppliers to process our end products. Increased commodity prices are passed on to us in the form of higher prices from our suppliers, either in the form of general price increases or commodity surcharges. Although we generally deal with our suppliers on a purchase order basis rather than on a long-term contract basis, we generally attempt to obtain firm pricing for volumes consistent with planned production. Our gross margins may decline if we are not able to increase selling prices of our products or obtain manufacturing efficiencies to offset the increased cost. We do not enter into formal hedging arrangements to mitigate against commodity risk.

Most of our third-party subcontractors and suppliers, including foundries that supply silicon wafers, are located in foreign countries, including China, Taiwan, South Korea and Israel. For fiscal year 2019, approximately 16% of our silicon in terms of cost of wafers, was supplied by a third-party foundry in China, and this percentage could be even higher in future periods. For fiscal years 2018 and 2017, approximately 20% and 25% of our silicon in terms of cost of wafers was supplied by this third-party foundry in China, respectively. While our utilization of multiple third-party foundries does create some redundancy of fabrication processes, any interruption of supply by one or more of these foundries could materially impact us. We maintain some amount of business interruption insurance to help reduce the risk of wafer supply interruption, but we are not fully insured against such risk. In addition, the U.S. government has recently announced import tariffs on goods manufactured in China. See the risk factor captioned "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" above. These tariffs, depending upon their ultimate scope, duration and how they are implemented, could negatively impact our business by continuing to increase our costs and by making our products less competitive. We may not be able to pass such increased costs to our customers. In addition, any relocation of manufacturing facilities or to using suppliers outside of China may increase our costs and could impact the global competitiveness of our products.

A majority of our package and test operations are performed by third-party contractors based in China, Malaysia, South Korea, Taiwan, Thailand, and the Philippines. Our international business activities, in general, are subject to a variety of potential risks resulting from political and economic uncertainties. Any political turmoil or trade restrictions in these countries, particularly China, could limit our ability to obtain goods and services from these suppliers and subcontractors. The effect of an economic crisis or political turmoil on our suppliers located in these countries may impact our ability to meet the demands of our customers. If we find it necessary to transition the goods and services received from our existing suppliers or subcontractors to other firms, we would likely experience an increase in production costs and a delay in production associated with such a transition, both of which could have a significant negative effect on our operating results, as these risks are substantially uninsured.

Our products may be found to be defective, product liability claims may be asserted against us and we may not have sufficient liability insurance.

Manufacturing semiconductors is a highly complex and precise process, requiring production in a tightly controlled, clean environment. Minute impurities in our manufacturing materials, contaminants in the manufacturing environment, manufacturing equipment failures, and other defects can cause our products to be non-compliant with customer requirements or otherwise nonfunctional. We face an inherent business risk of exposure to warranty and product liability claims in the event that our products fail to perform as expected or such failure of our products results, or is alleged to result, in bodily injury or property damage (or both). Since a defect or failure in our product could give rise to failures in the goods that incorporate them (and consequential claims for damages against our customers from their customers), we may face claims for damages that are disproportionate to the revenues and profits we receive from the products involved.

Our 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, we have agreed to other warranty terms, including some indemnification provisions, which could prove to be significantly more costly than repair, replacement or refund. We attempt to limit our liability through our standard terms and conditions and negotiation of sale and other customer contracts, but there is no assurance that such limitations will be accepted or effective. While we maintain some insurance for such events, a successful warranty or product liability claim against us in excess of our available insurance coverage, if any, and established reserves, or a requirement that we participate in a product recall, would have adverse effects (that could be material) on our business, operating results and financial condition. Additionally, in the event that our products fail to perform as expected, our reputation may be damaged, which could make it more difficult for us to sell our products to existing and prospective customers and could adversely affect our business, operating results and financial condition.

Obsolete inventories as a result of changes in demand for our products and change in life cycles of our products could adversely affect our business, operating results and financial condition.

The life cycles of some of our products depend heavily upon the life cycles of the end-products into which our products are designed. End-market products with short life cycles require us to manage closely our production and inventory levels. Inventory may also become obsolete because of adverse changes in end-market demand. We may in the future be adversely affected by obsolete or excess inventories, which may result from unanticipated changes in the estimated total demand for our

products or the estimated life cycles of the end-products into which our products are designed. In addition, some customers restrict how far back the date of manufacture for our products can be and certain customers may stop ordering products from us and go out of business due to adverse economic conditions; therefore, some of our product inventory may become obsolete and, thus, adversely affect our business, operating results and financial condition.

Risks Relating to Research and Development, Engineering, Intellectual Property and New Technologies

We may be unsuccessful in developing and selling new products, which is central to our objective of maintaining and expanding our business.

We operate in a dynamic environment characterized by price erosion, rapid technological change, and design and other technological obsolescence. Our competitiveness and future success depend on our ability to predict and adapt to these changes in a timely and cost-effective manner by designing, developing, manufacturing, marketing and providing support for our own new products and technologies.

A failure to achieve design wins, to introduce these new products in a timely manner, or to achieve market acceptance for these products on commercially reasonable terms could harm our business.

The introduction of new products presents significant business challenges because product development commitments and expenditures must be made well in advance of product sales. The success of a new product depends on accurate forecasts of long-term market demand and future technological developments, as well as on a variety of specific implementation factors, including:

- timely and efficient completion of technology, product and process design and development;
- timely and efficient implementation of manufacturing, assembly, and test processes;
- the ability to secure and effectively utilize fabrication capacity in different geometries;
- product performance;
- product quality and reliability; and
- effective marketing, sales and service

Even if we are able to develop products and achieve design wins, the design wins may never generate revenues if end-customer projects are unsuccessful in the marketplace or the end-customer terminates the project, which may occur for a variety of reasons. Mergers and consolidations among customers may lead to termination of certain projects before the associated design win generates revenue. If design wins do generate revenue, the time lag between the design win and meaningful revenue can be uncertain and could be significant. If we fail to develop products with required features or performance standards or experience even a short delay in bringing a new product to market, or if our customers fail to achieve market acceptance of their products, our business, financial condition and operating results could be materially and adversely impacted.

Our customers require our products to undergo a lengthy and expensive qualification process without any assurance of product sales.

Prior to purchasing our products, our customers require that our products undergo an extensive qualification process, which involves testing of the products in the customer's system as well as rigorous reliability testing. This qualification process may continue for six months or longer. However, qualification of a product by a customer does not ensure any sales of the product to that customer. Even after successful qualification and sales of a product to a customer, a subsequent revision to the product or software, changes in the manufacturing process or the selection of a new supplier by us may require a new qualification process, which may result in delays and in us holding excess or obsolete inventory. After our products are qualified, it can take an additional six months or more before the customer commences volume production of components or devices that incorporate our products. Despite these uncertainties, we devote substantial resources, including design, engineering, sales, marketing and management efforts, toward qualifying our products with customers in anticipation of sales. If we are unsuccessful or delayed in qualifying any of our products with a customer, such failure or delay would preclude or delay sales of such product to the customer, which may impede our growth and cause our business to suffer.

Our products may fail to meet new industry standards or requirements and the efforts to meet such industry standards or requirements could be costly.

Many of our products are based on industry standards that are continually evolving. Our ability to compete in the future will depend in part on our ability to anticipate, identify and ensure compatibility or compliance with these evolving industry standards. The emergence

of new industry standards could render our products incompatible with products developed by our customers and potential customers. As a result, we could be required to invest significant time and effort and to incur significant expense to redesign our products to ensure compliance with relevant standards. If our products are not in compliance with prevailing industry standards or requirements, we could miss opportunities to achieve crucial design wins which in turn could have a material adverse effect on our business, operating results and financial conditions.

We may be unable to adequately protect our intellectual property rights.

We pursue patents for some of our new products and unique technologies, but we rely primarily on trade secret protections through a combination of nondisclosure agreements and other contractual provisions, as well as our employees' commitment to confidentiality and loyalty, to protect our know-how and processes. We intend to continue protecting our proprietary technology, including through trademark and copyright registrations and patents. Despite this intention, we may not be successful in achieving adequate protection. Our failure to adequately protect our material know-how and processes could harm our business. There can be no assurance that the steps we take will be adequate to protect our proprietary rights, that our patent applications will lead to issued patents, that others will not develop or patent similar or superior products or technologies, or that our patents will not be challenged, invalidated, or circumvented by others. Furthermore, the laws of the countries in which our products are or may be developed, manufactured or sold may not protect our products and intellectual property rights to the same extent as laws in the U.S.

We may suffer losses and business interruption if our products infringe the intellectual property rights of others.

The semiconductor industry is characterized by frequent claims of infringement and litigation regarding patent and other intellectual property rights. Due to the number of competitors, intellectual property infringement is an ongoing risk since other companies in our industry could have intellectual property rights that may not be identifiable when we initiate development efforts. Litigation may be necessary to enforce our intellectual property rights and we may have to defend ourselves against infringement claims. Any such litigation could be very costly and may divert our management's resources. If one of our products is found to infringe on a third party's rights, we may have liability for past infringement and may need to seek a license to use such intellectual property going forward. If a license is not available or if we are unable to obtain a license on terms acceptable to us, we would either have to change our product so that it does not infringe or stop making the product.

We must commit resources to product production prior to receipt of purchase commitments and could lose some or all of the associated investment.

Sales are made primarily on a current delivery basis, pursuant to purchase orders that may be revised or cancelled by our customers without penalty, rather than pursuant to long-term contracts. Some contracts require that we maintain inventories of certain products at levels above the anticipated needs of our customers. As a result, we must commit resources to the production of products without binding purchase commitments from customers. Our inability to sell products after we devote significant resources to them could harm our business.

Risks Relating to International Operations

We sell and trade with foreign customers, which subjects our business to increased risks.

Sales to foreign customers accounted for approximately 89% of net sales in the fiscal year ended January 27, 2019. Sales to our customers located in China (including Hong Kong), South Korea and Vietnam constituted 55%, 5% and 5%, respectively, of net sales for fiscal year 2019. International sales are subject to certain risks, including unexpected changes in regulatory requirements, tariffs and other barriers, political and economic instability, difficulties in accounts receivable collection, difficulties in managing distributors and representatives, difficulties in staffing and managing foreign subsidiary and branch operations and potentially adverse tax consequences. Other risks include local business and cultural factors that may differ from our domestic standards and practices, including business practices from which we are prohibited from engaging by the Foreign Corrupt Practices Act and other anti-corruption laws and regulations, laws of certain foreign countries that may not protect our products, assets or intellectual property rights to the same extent as do U.S. laws, and difficulties enforcing contracts in such foreign countries generally. These factors may harm our business. Our use of the Semtech name may be prohibited or restricted in some countries, which may negatively impact our sales efforts. In addition, substantially all of our foreign sales are denominated in U.S. Dollars and currency exchange fluctuations in countries where we do business could harm us by resulting in pricing that is not competitive with prices denominated in local currencies.

Our foreign currency exposures may change over time as the level of activity in foreign markets grows and could have an adverse impact upon financial results.

As a global enterprise, we face exposure to adverse movements in foreign currency exchange rates. Certain of our assets, including certain bank accounts, exist in non-U.S. Dollar-denominated currencies, which are sensitive to foreign currency exchange rate fluctuations. The non-U.S. Dollar-denominated currencies are principally the Swiss Franc, Euro, Canadian Dollar, Mexican Peso, Japanese Yen and Great British Pound. We also have a significant number of employees that are paid in foreign currency, the largest groups being United Kingdom-based employees who are paid in Great British Pound, Switzerland-based employees who are paid in Swiss Francs, Canada-based employees who are paid in Canadian Dollars, China-based employees who are paid in Chinese Renminbi and Mexican nationals who are paid in Mexican Pesos.

If the value of the U.S. Dollar weakens relative to these specific currencies, as it has done in recent years, the cost of doing business in terms of U.S. Dollars rises. Whereas if the value of the U.S. Dollar strengthens relative to these specific currencies,

it could make the pricing of our products less competitive and affect demand for our products. With the growth of our international business, our foreign currency exposures may grow and under certain circumstances, could harm our business.

As a means of managing our foreign exchange exposure, we routinely convert U.S. Dollars into foreign currency in advance of the expected payment. We regularly assess whether or not to hedge foreign exchange exposure. Any future use of forward contracts to hedge foreign exchange exposure may be required to be marked-to-market each quarter and can create volatility in net income not directly tied to our operating results.

We may be subject to increased tax liabilities and an increased effective tax rate if we need to remit funds held by our foreign subsidiaries.

As of January 27, 2019, our foreign subsidiaries held \$676.0 million of unremitted foreign earnings. With the enactment of the Tax Cuts and Jobs Act ("Tax Act"), all post-1986 previously unremitted earnings for which no U.S. deferred tax liability had been accrued were subject to U.S. tax. Notwithstanding the U.S. taxation of these amounts, we have determined that \$516.0 million of foreign earnings ("Reinvested Funds") will continue to be reinvested indefinitely outside of the U.S. As a result, we have not recorded a provisional income tax expense for these amounts because we believe that we currently have the ability to keep those earnings indefinitely invested and we have specific plans for reinvestment of these undistributed foreign earnings. In connection with the enactment of the Tax Act, we have determined that we will remit approximately \$240.0 million of foreign earnings, of which \$80.0 million was remitted during fiscal year 2019, in the foreseeable future, and as a result, we have established a deferred income tax liability for the withholding tax that will be due upon distribution of these earnings. If we needed to remit all or a portion of our Reinvested Funds to the U.S. for investment in our domestic operations, any such remittance could result in increased tax liabilities and a higher effective tax rate. For more information, see Note 12 to the Consolidated Financial Statements.

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 Semtech's 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. This or future regulatory activity may materially interfere with our ability to make sales to ZTE or other customers, such as Huawei Technologies Co., Ltd., which was recently indicted by the U.S. government for violating U.S. sanctions and bank and wire fraud, among other charges, and could potentially be subject to export restrictions in the future.

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.

Risks Relating to Sales, Marketing and Competition

We compete against larger, more established entities and our market share may be reduced if we are unable to respond to our competitors effectively.

The semiconductor industry is intensely competitive and is characterized by price erosion, rapid technological change, and design and other technological obsolescence. We compete with domestic and international semiconductor companies, many of which have substantially greater financial and other resources with which to pursue engineering, manufacturing, marketing and distribution of their products.

We expect continued competition from existing competitors as well as competition from new entrants in the semiconductor market. Our ability to compete successfully in the rapidly evolving area of integrated circuit technology depends on several factors, including:

- success in designing and manufacturing new products that implement new technologies;
- protection of our processes, trade secrets and know-how;
- maintaining high product quality and reliability;
- pricing policies of our competitors;
- performance of competitors' products;
- ability to deliver in large volume on a timely basis;
- marketing, manufacturing and distribution capability; and
- financial strength.

To the extent that our products achieve market success, competitors typically seek to offer competitive products or lower prices; if they are successful, they could harm our business.

Industry consolidation may lead to increased competition and may harm our operating results.

There has been a trend toward industry consolidation in our industry as companies attempt to strengthen or hold their market positions in an evolving industry and as companies are acquired or are unable to continue operations. Some of our competitors have made acquisitions or entered into partnerships or other strategic relationships to offer a more comprehensive solution than they individually had offered. Such consolidations or strategic partnerships may continue in the future. The companies or alliances resulting from these possible consolidations may create more compelling bundled products as well as being able to offer greater pricing flexibility, making it more difficult for us to compete effectively, including on the basis of price, sales and marketing programs, channel coverage, technology or product functionality. Continued industry consolidation may adversely impact customers' perceptions of the viability of smaller and even medium-sized semiconductor companies such as ourselves and, consequently, customers' willingness to purchase from us. We believe that industry consolidation may result in stronger competitors, with more efficient cost structures that are better able to compete as sole-source vendors for our end-customers. This could lead to more variability in our operating results and could have a material adverse effect on our business, operating results and financial condition.

We receive a significant portion of our revenues from a small number of customers and the loss of any one of these customers or failure to collect a receivable from them could adversely affect our business.

Our largest customers have varied from year to year. Historically, we have had significant customers that individually accounted for 10% or more of consolidated revenues in certain quarters or years or represented 10% or more of net accounts receivables at any given date. Sales to our customers are generally made on open account, subject to credit limits we may impose, and the receivables are subject to the risk of being uncollectible.

The volatility of customer demand limits our ability to predict future levels of sales and profitability.

We primarily conduct our sales on a purchase order basis, rather than pursuant to long-term contracts. The loss of any significant customer, any material reduction in orders by any of our significant customers, the cancellation of a significant customer order or the cancellation or delay of a customer's significant program or product could harm our business.

Semiconductor suppliers can rapidly increase production output in response to slight increases in demand, leading to a sudden oversupply situation and a subsequent reduction in order rates and revenues as customers adjust their inventories to account for shorter lead times. Conversely, when circumstances create longer lead times customers may order in excess of what they need to ensure availability, then cancel orders if lead times are reduced. A rapid and sudden decline in customer demand for products or cancellation of orders can result in excess quantities of certain products relative to demand. Should this occur, our operating results may be adversely affected as a result of charges to reduce the carrying value of our inventory to the estimated demand level or market price.

Our quarterly revenues are highly dependent upon turns fill orders (orders booked and shipped in the same quarter). The short-term and volatile nature of customer demand makes it extremely difficult to accurately predict near term revenues and profits.

Most of our authorized distributors, which collectively represent more than half of our net sales, can terminate their contract with us with little or no notice. The termination of a distributor could negatively impact our business, including net sales and accounts receivable.

In fiscal year 2019, authorized distributors accounted for approximately 68% of our net sales. We generally do not have long-term contracts with our distributors and most can terminate their agreement with us with little or no notice. For fiscal year 2019, our two largest distributors were based in Asia.

The termination of any of our distributor relationships could impact our net sales and limit our access to certain end-customers. It could also result in the return of excess inventory of our product held by that distributor. Since many distributors simply resell finished products, they generally operate on very thin profit margins. If a distributor were to terminate an agreement with us or go out of business, our accounts receivable from the particular distributor would be subject to significant collection risk. Our reliance on distributors also subjects us to a number of additional risks, including:

- write-downs in inventories associated with stock rotation rights and increases in provisions for price adjustments granted to certain distributors;
- potential reduction or discontinuation of sales of our products by distributors;
- failure to devote resources necessary to sell our products at the prices, in the volumes and within the time frames that we expect;
- dependence upon the continued viability and financial resources of these distributors, some of which are small organizations with limited working capital and all of which depend on general economic conditions and conditions within the semiconductor industry;
- dependence on the timeliness and accuracy of shipment forecasts and resale reports from our distributors; and
- management of relationships with distributors, which can deteriorate as a result of conflicts with efforts to sell directly to our end customers.

If any significant distributor becomes unable or unwilling to promote and sell our products, or if we are not able to renew our contracts with the distributors on acceptable terms, we may not be able to find a replacement distributor on reasonable terms or at all and our business could be harmed.

Our inability to effectively control the sales of our products on the gray market could have a material adverse effect on us.

We market and sell our products directly to OEMs and through authorized third-party distributors. From time to time, it's possible our products could be diverted from our authorized distribution channels and customers may purchase products from the unauthorized "gray market." Gray market products result in shadow inventory that is not visible to us, thus making it difficult to forecast demand accurately. Also, when gray market products enter the market, we and our distribution channels compete with these discounted gray market products, which adversely affects demand for our products and negatively impacts our margins. In addition, our inability to control gray market activities could result in customer satisfaction issues because when products are purchased outside of our authorized distribution channels there is a risk that our customers are buying products that may have been altered, mishandled or damaged, or are used products represented as new.

Risks Relating to Governmental Regulations, including Taxes, Financial Reporting Rules and Regulations, and Environmental Regulations

Failure to maintain effective internal control over financial reporting or disclosure controls and procedures could have a material adverse effect on our business and stock price.

Section 404 of the Sarbanes-Oxley Act requires an annual management assessment of the effectiveness of internal controls over financial reporting and an annual report by our independent registered public accounting firm opining on our internal controls over financial reporting. Management is similarly required to review disclosure controls, which are controls established to ensure that information required to be disclosed in SEC reports is recorded, processed, summarized and reported in a timely manner.

If we fail to maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal control over financial reporting. Moreover, effective internal controls are necessary for us to produce reliable financial reports and are important to help prevent fraud. As a result, any failure to satisfy the requirements of Section 404 on a timely basis could result in the loss of investor

confidence in the reliability of our consolidated financial statements, which in turn could harm our business and negatively impact the trading price of our common stock.

We are subject to government regulations and other standards that impose operational and reporting requirements.

We, our suppliers, and our customers are subject to a variety of U.S. federal, foreign, state and local governmental laws, rules and regulations, including laws, rules and regulations governing data privacy protections for personal information, and corrupt practices/anti-bribery prohibitions, impact our business in terms of ongoing monitoring of compliance. Legislation and related regulations in the United Kingdom under that country's Bribery Act could have extra-territorial application of compliance standards that may be inconsistent with comparable U.S. law, requiring us to re-evaluate and amend our compliance programs, policies and initiatives. The General Data Protection Regulation ("GDPR") is a comprehensive update to the data protection regime in the European Economic Area that became effective as of May 25, 2018. The cost of compliance with the GDPR and the potential for fines and penalties in the event of a breach of the GDPR may have an adverse effect on our operations.

The SEC and The Nasdaq Stock Market LLC ("Nasdaq") have revised, and continue to revise, their regulations and listing standards. These developments have increased, and may continue to increase, our legal compliance and financial reporting costs. These developments also may make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. This, in turn, could make it more difficult for us to attract and retain qualified members of our Board of Directors, or qualified executive officers.

Failure to comply with present or future laws, rules and regulations of any kind that govern our business could result in suspension of all or a portion of production, cessation of all or a portion of operations, or the imposition of significant regulatory, administrative, civil, or criminal penalties or sanctions, any of which could harm our business.

Economic conditions and regulatory changes leading up to and following the United Kingdom's likely exit from the European Union could have a material adverse effect on our business and results of operations.

In June 2016, voters in the U.K. approved the country's exit from the European Union, and the U.K. government has commenced the legal process of leaving the European Union, typically referred to as Brexit. While the full effects of Brexit will not be known for some time, Brexit could cause disruptions to, and create uncertainty surrounding, our business and results of operations. The most immediate effect has been significant volatility in global equity and debt markets and currency exchange rate fluctuations. Ongoing global market volatility and a deterioration in economic conditions due to uncertainty surrounding Brexit could significantly disrupt the markets in which we operate and lead our customers to closely monitor their costs and delay capital spending decisions.

The effects of Brexit will depend on any agreements the U.K. makes to retain access to E.U. markets, either during a transitional period or more permanently. The measures could potentially disrupt the markets we serve and may cause us to lose customers and employees. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. Any of these effects of Brexit could materially adversely affect our business, results of operations and financial condition.

Our failure to comply with any applicable environmental regulations could result in a range of consequences, including fines, suspension of production, excess inventory, sales limitations, and criminal and civil liabilities.

We are subject to various state, federal and international laws and regulations governing the environment, including those restricting the presence of certain substances in electronic products and making producers of those products financially responsible for the collection, treatment, recycling and disposal of those products and those related to the use, storage, handling, discharge or disposal of certain toxic, volatile or otherwise hazardous chemicals and the incorporation of such substances into products available for sale. If we or our suppliers were to incur substantial additional expenses to acquire equipment or otherwise comply with environmental regulations, product costs could significantly increase, thus harming our business.

Although our management systems are designed to maintain compliance, we cannot assure you that we have been or will be at all times in complete compliance with such laws and regulations. If we violate or fail to comply with any of them, a range of consequences could result, including fines, import/export restrictions, sales limitations, criminal and civil liabilities or other sanctions. We could also be held liable for any and all consequences arising out of exposure to hazardous materials used, stored, released, disposed of by us or located at, under or emanating from our facilities or other environmental or natural resource damage. We have incurred, and may continue to incur, liabilities under various statutes for the cleanup of pollutants at locations we have operated and at third-party disposal and recycling sites we have used.

Environmental laws are complex, change frequently and have tended to become more stringent over time. For example, the European Union and China are two among a growing number of jurisdictions that have enacted in recent years restrictions on the use of lead, among other chemicals, in electronic products. These regulations affect semiconductor packaging. There is a risk that the cost, quality and manufacturing yields of lead-free products may be less favorable compared to lead-based products or that the transition to lead-free products may produce sudden changes in demand, which may result in excess inventory.

Future environmental legal requirements may become more stringent or costly and our compliance costs and potential liabilities arising from past and future releases of, or exposure to, hazardous substances may harm our business and our reputation.

Certain of our customers and suppliers require us to comply with their codes of conduct, which may include certain restrictions that may substantially increase our cost of doing business as well as have an adverse effect on our operating efficiencies, operating results and financial condition.

Certain of our customers and suppliers require us to agree to comply with their codes of conduct, which may include detailed provisions on labor, human rights, health and safety, environment, corporate ethics and management systems. Certain of these provisions are not requirements under the laws of the countries in which we operate and may be burdensome to comply with on a regular basis. Moreover, new provisions may be added or material changes may be made to any these codes of conduct, and we may have to promptly implement such new provisions or changes, which may substantially further increase the cost of our business, be burdensome to implement and adversely affect our operational efficiencies and operating results. If we violate any such codes of conduct, we may lose further business with the customer or supplier and, in addition, we may be subject to fines from the customer or supplier. While we believe that we are currently in compliance with our customers and suppliers' codes of conduct, there can be no assurance that, from time to time, if any one of our customers and suppliers audits our compliance with such code of conduct, we would be found to be in full compliance. A loss of business from these customers or suppliers could have a material adverse effect on our business, operating results and financial condition.

Our operating results could be adversely affected as a result of changes in our effective tax rates, the adoption of new U.S. or foreign tax legislation or exposure to additional tax liabilities, or by material differences between our forecasted annual effective tax rates and actual tax rates.

Our future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in applicable tax laws or their interpretation. We are also subject to the examination of our tax returns and other tax matters by the Internal Revenue Service of the U.S. ("IRS") and other tax authorities and governmental bodies. We regularly assess the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of our provision for taxes. There can be no assurance as to the outcome of these examinations. If our effective tax rates were to increase, particularly in the U.S., Canada or Switzerland, or if the ultimate determination of taxes owed is for an amount in excess of amounts previously accrued, our operating results, cash flows, and financial condition could be adversely affected. See the risk factor captioned "We may be subject to increased tax liabilities and an increased effective tax rate if we need to remit funds held by our foreign subsidiaries" above.

In October 2015, the Organization for Economic Co-operation and Development, an international association of 34 countries, including the U.S., released the final reports from its Base Erosion and Profit Shifting ("BEPS") Action Plans. The BEPS recommendations covered a number of issues, including country-by-country reporting, permanent establishment rules, transfer pricing rules and tax treaties. Although the BEPS recommendations are not themselves changes in tax law, this guidance has resulted in unilateral action by several member countries and is also prompting possible amendment of other countries' tax laws and regulations on a prospective and potentially retroactive basis. In October 2015, the European Commission concluded that certain member countries had granted unlawful rulings that artificially reduced tax burdens and has ordered the recovery of the unpaid taxes. Future tax law changes resulting from these developments may result in changes to long-standing tax principles, which could adversely affect our effective tax rate or result in higher cash tax liabilities.

In addition, due to the complexity associated with the calculation of our tax provision, we have hired independent tax advisors to assist us. Significant judgment is required in the calculation of our tax provision and the resulting tax liabilities as well as determination of our ability to realize our deferred tax assets. Our estimates of future taxable income and the regional mix of this income can change as new information becomes available. Any such changes in our estimates or assumptions can significantly impact our tax provision in a given period by, for example, requiring us to impair existing deferred tax assets. Such required changes could result in us having to restate our consolidated financial statements. Restatements are generally costly and could adversely impact our operating results or have a negative impact on the trading price of our common stock.

We may be subject to taxation and review of our compliance with income, value-added and other sales-type tax regulations in other jurisdictions which could negatively affect our operations.

As a global organization, we may be subject to a variety of transfer pricing or permanent establishment challenges by taxing authorities in various jurisdictions. If certain of our non-U.S. activities were treated as carrying on business as a permanent establishment and therefore, subject to income tax in such jurisdiction, our operating results could be materially adversely affected.

We are required to comply with rules regarding value-added taxes and other sales-type taxes in various jurisdictions. If these taxes are not properly collected and paid, our operating results could be materially adversely affected.

We have limited experience with government contracting, which entails differentiated business risks.

Although such contracts have not constituted a material portion of our revenue in the past, we may from time-to-time derive revenue from contracts and subcontracts with agencies of, or prime or secondary contractors to, the U.S. government, including U.S. military agencies. Consequently, we are subject to certain business risks that are particular to companies that contract with U.S. government agencies. These risks include the ability of the U.S. government or related contractors to unilaterally:

- terminate contracts at its convenience;
- terminate, modify or reduce the value of existing contracts, if there are budgetary constraints or needed changes;
- cancel multi-year contracts and related orders, if funds become unavailable;
- adjust contract costs and fees on the basis of audits performed by U.S. government agencies;
- control and potentially prohibit the export of our products;
- require that we continue to supply products despite the expiration of a contract under certain circumstances;
- require that we fill certain types of rated orders for the U.S. government prior to filling any orders for other customers; and
- suspend us from receiving new contracts pending resolution of any alleged violations of procurement laws or regulations.

In addition, because we may enter into defense industry contracts with respect to products that are sold both within and outside of the U.S., we are subject to the following additional risks in connection with government contracts:

- the need to bid on programs prior to completing the necessary design, which may result in unforeseen technological difficulties, delays and/or cost overruns;
- the difficulty in forecasting long-term costs and schedules and the potential obsolescence of products related to long-term fixed price contracts; and
- the need to transfer and obtain security clearances and export licenses, as appropriate.

Government investigations and inquiries from regulatory agencies could lead to enforcement actions, fines, restatement of our financial statements or other penalties and could result in litigation against us.

In the past, we have been subject to government investigations and inquiries from regulatory agencies such as the SEC and we have had to restate our historical financial statements in connection with such inquiry related to our historical stock option practices. We may be subject to government investigations and receive additional inquiries from regulatory agencies in the future, which may lead to enforcement actions, fines or other penalties.

In addition, litigation has often been brought against a company in connection with the announcement of a government investigation or inquiry from a regulatory agency. Such lawsuits could result in the diversion of management's time and attention away from business operations, which could harm our business. In addition, the costs of defense and any damages resulting from litigation, a ruling against us, or a settlement of the litigation could adversely affect our cash flow and financial results.

If such government investigations or inquiries result in a restatement of our financial statements, this could delay the filing of our subsequent SEC reports which, in turn, might result in the delisting of our common stock from Nasdaq for failure to meet continued listing requirements.

Risks Relating to our Business Strategies, Personnel and Other Operations

The loss of any of our key personnel or the failure to attract or retain specialized technical and management personnel could impair our ability to grow our business.

Our future success depends upon our ability to attract and retain highly qualified technical, marketing and managerial personnel. We are dependent on a relatively small group of key technical personnel with analog and mixed-signal expertise. Personnel with highly skilled managerial capabilities, and analog and mixed-signal design expertise, are scarce and competition for personnel with these skills is intense. There can be no assurance that we will be able to retain key employees or that we will be successful in attracting, integrating or retaining other highly qualified personnel in the future. If we are unable to retain the services of key employees or are unsuccessful in attracting new highly qualified employees, our business could be harmed.

We face risks associated with companies we have acquired in the past and may acquire in the future.

We have expanded our operations through strategic acquisitions, such as the acquisition of SMI in December 2009, Gennum in March 2012, select assets from EnVerv, Inc. in January 2015, Triune Systems, L.L.C. in March 2015, AptoVision in 2017, and ICI and TrackNet in 2018, and we may continue to expand and diversify our operations with additional acquisitions. Acquisitions may divert management attention and resources from other business objectives. Acquisitions have used and could use in the future a significant portion of our available liquid assets or we could incur debt or issue equity securities to fund acquisitions. Issuance of equity securities could be dilutive to existing shareholders. Debt financing could subject us to restrictive covenants that could have an adverse effect on our business. Although we undertake detailed reviews of proposed acquisition candidates and attempt to negotiate acquisition terms favorable to us, we may encounter difficulties or incur liabilities for which we have no recourse. We cannot provide any assurance that any acquisition will have a positive impact on our future performance.

If we are unsuccessful in integrating acquired companies into our operations or if integration is more difficult than anticipated, then we may not achieve anticipated cost savings or synergies and may experience disruptions that could harm our business. Some of the risks that may affect our ability to successfully integrate acquired companies include those associated with:

- conforming the acquired company's standards, processes, procedures and controls with our operations;
- coordinating new product and process development, especially with respect to highly complex technologies;
- assuring acquired products meet our quality standards;
- loss of key employees or customers of the acquired company;
- hiring additional management and other critical personnel;
- increasing the scope, geographic diversity and complexity of our operations;
- consolidation of facilities and functions;
- the geographic distance between the companies; and
- disparate corporate cultures.

Acquisitions could have a negative impact on our future earnings by way of poor performance by the acquired company or, if we later conclude we are unable to use or sell an acquired product or technology, we could be required to write down the related intangible assets and goodwill.

We may be required to recognize additional impairment charges in the future which could have an adverse effect on our financial condition and operating results.

We assess our goodwill, other intangible assets and our long-lived assets on an annual basis and whenever events or changes in circumstances indicate the carrying value of our assets may not be recoverable, and as and when required by accounting principles generally accepted in the U.S. ("GAAP") to determine whether they are impaired. During the third quarter of fiscal year 2019, we recorded a non-cash impairment charge of \$30.0 million, which represented the entire carrying value of our investment in Multiply Ltd. ("Multiply"). Future restructuring or appraisal of our business impacting fair value of our assets or changes in estimates of our future cash flows could affect our impairment analysis in future periods and cause us to record either an additional expense for impairment of assets previously determined to be partially impaired or record an expense for impairment of other assets. Depending on future circumstances, we may never realize the full value of intangible assets. Any future determination or impairment of a significant portion of our goodwill and other intangibles could have an adverse effect on our financial condition and operating results.

We have investments in entities that we do not control. Losses in the value of such investments could have an adverse effect on our financial condition or operating results.

We have investments in entities that we do not control, including equity and cost method investments. Our interests in such entities do not provide us with control over the business strategy, financial goals, development roadmaps or other operational aspects of these entities. We cannot provide assurance that these entities will operate in a manner that will increase or maintain the value of our investment, that our proportionate share of income or loss from these investments will continue at the current level in the future or that we will not incur losses from the holding of such investments.

To the extent that we have any interest in an entity for which we are required to consolidate, we would need to rely on those entities to timely deliver important financial information to us. In the event that the financial information is inaccurate, incomplete, or not timely, we may not be able to meet our financial reporting obligations as required by the SEC.

To the extent we create such arrangements for which we would be required to consolidate and the financial statements of such entities are not prepared by us, we will not have direct control over their financial statement preparation. As a result, we will,

for our financial reporting, depend on what these entities report to us, which could result in us adding monitoring and audit processes, which could increase the difficulty of implementing and maintaining adequate controls over our financial processes and reporting in the future. This may be particularly true when such entities do not have sophisticated financial accounting processes in place, or where we are entering into new relationships at a rapid pace, straining our integration capacity. Additionally, if we do not receive the information from the variable interest entity on a timely basis, this could cause delays in our external reporting obligations as required by the SEC.

Our ability to generate the significant amount of cash needed to service our debt obligations or to obtain additional financing depends on many factors beyond our control.

As of January 27, 2019, we had \$212.3 million of outstanding indebtedness under our senior secured first lien credit facility ("Credit Facility").

Our ability to make payments on amounts borrowed under the Credit Facility, and to fund our operations, will depend on our ability to generate substantial operating cash flow. Our cash flow generation will depend on our future performance, which will be subject to prevailing economic conditions and to financial, business and other factors, many of which are beyond our control.

Our business may not generate sufficient cash flow from operations and, if we cannot service our debt, we will have to take actions such as reducing or delaying capital investments, selling assets, or seeking additional equity capital. We may not be able to, if required, effect these actions on commercially reasonable terms, or at all. Because of these and other factors beyond our control, we may be unable to pay the interest on or other amounts in respect of our indebtedness.

Restrictive covenants in the credit agreement ("Credit Agreement") governing the Credit Facility may restrict our ability to pursue our business strategies.

The Credit Agreement contains a number of restrictive covenants that impose significant operating and financial restrictions on us and may limit our ability to engage in acts that may be in our long-term best interests. The Credit Agreement includes covenants restricting, among other things, our and our subsidiaries' ability to:

- incur or guarantee additional debt or issue certain preferred stock;
- pay dividends or make distributions on our capital stock or redeem, repurchase or retire our capital stock;
- make certain investments and acquisitions;
- create liens on our or our subsidiaries' assets;
- enter into transactions with affiliates;
- merge or consolidate with another person or sell or otherwise dispose of substantially all of our assets;
- make certain payments in respect of other material indebtedness;
- alter the business that we conduct; and
- make certain capital expenditures.

Under the Credit Agreement, we are required to maintain a consolidated leverage ratio and an interest expense coverage ratio. Our ability to meet such financial ratios can be affected by events beyond our control, and we cannot assure you that we will be able to meet such ratios. The Credit Agreement also contains various covenants and restrictions and a breach of any covenant or restriction could result in a default under our Credit Agreement. If any such default occurs, the lenders may elect (after the expiration of any applicable notice or grace periods) to declare all outstanding borrowings, together with accrued and unpaid interest and other amounts payable thereunder, to be immediately due and payable. Further, following an event of default under the Credit Facility, the lenders will have the right to proceed against the collateral granted to them to secure that debt. If the debt under the Credit Facility were to be accelerated, our assets may not be sufficient to repay in full that debt that may become due as a result of that acceleration.

We rely on certain critical information systems for the operation of our business and a disruption in our information systems, including those related to cybersecurity, could adversely affect our business operations.

We maintain and rely upon certain critical information systems for the effective operation of our business. These information systems include telecommunications, the Internet, our corporate intranet, various computer hardware and software applications, network communications, and e-mail. These information systems may be owned by us or by our outsource providers or even third parties such as vendors and contractors and may be maintained by us or by such providers or third parties. These information systems are subject to attacks, failures, and access denials from a number of potential sources including viruses, destructive or inadequate code, power failures, and physical damage to computers, hard drives, communication lines and networking equipment. To the extent that these information systems are under our control, we have implemented security procedures, such as virus protection software and emergency recovery processes, to address the outlined risks; however, security procedures for information systems cannot be guaranteed to be failsafe and our inability to use or access these information systems at critical points in time could unfavorably impact the timely and efficient operation of our business. Additionally, any compromise of our information security could result in the unauthorized publication of our confidential business or proprietary information, including potential theft of our intellectual property or trade secrets (including our proprietary technology) or the unauthorized release of customer, supplier or employee data and result in a violation of privacy or other laws, thus exposing us to litigation or damage to our reputation. To the extent that our business is interrupted or data or proprietary technology is lost, destroyed or inappropriately used or disclosed, such disruption could adversely affect our competitive position, relationship with customers, suppliers or employees or our business, financial condition and operating results. In addition, we may be required to incur significant costs to protect against or repair the damage caused by these disruptions or security breaches in the future.

The costs associated with our indemnification of certain customers, distributors, and other parties could be higher in future periods.

In the normal course of our business, we indemnify other parties, including customers, distributors, and lessors, with respect to certain matters. These obligations typically arise pursuant to contracts under which we agree to hold the other party harmless against losses arising from a breach of representations and covenants related to certain matters, such as acts or omissions of our employees, infringement of third-party intellectual property rights, and certain environmental matters. We have not incurred any significant expense as a result of agreements of this type in at least a decade, but there can be no assurances that we will not incur expense under these indemnification provisions in the future.

We have also entered into agreements with our current and former directors and certain of our current and former executives indemnifying them against certain liabilities incurred in connection with their duties. Our Certificate of Incorporation and Bylaws contain similar indemnification obligations with respect to our current and former directors and employees, as does the California Labor Code. We cannot estimate the amount of potential future payments, if any, that we might be required to make as a result of these agreements.

Our stock price could be subject to extreme price fluctuations, and stockholders could have difficulty trading shares.

Historically, the market for semiconductor companies has been volatile, and the market price of our common stock has been and may continue to be subject to significant fluctuations. Fluctuations could be in response to items such as operating results, announcements of technological innovations, or market conditions for semiconductor stocks in general. Additionally, the stock market in recent years has experienced extreme price and volume fluctuations that often have been unrelated to the operating performance of individual companies. These market fluctuations, as well as general economic conditions, may adversely affect the price of our common stock.

In addition, the future sale of a substantial number of shares of common stock by us or by our existing stockholders or option holders (including directors, officers, and employees, some of whom hold stock options that are approaching their expiration date) may have an adverse impact on the market price of the shares of common stock. There can be no assurance that the trading price of our common stock will remain at or near its current level.

If securities or industry analysts do not publish research or reports about our business, or if they adversely change their recommendations regarding our common stock or if our operating results do not meet their expectations, the trading price of our common stock could decline.

The market price of our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. There is no guarantee that these analysts will understand our business and results, or that their reports will be accurate or correctly predict our operating results or prospects. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause the market price of our common stock or its trading volume to decline. Moreover, if one or more of the analysts who cover our company downgrade our common stock or if our operating results or prospects do not meet their expectations, the market price of our common shares could decline significantly.

Anti-takeover provisions in our Certificate of Incorporation and Bylaws could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Certain provisions in our Certificate of Incorporation and Bylaws may delay or prevent an acquisition of us or a change in our management. These provisions include:

- the ability of our board of directors to determine the rights, preferences and privileges of our preferred shares and to issue the preferred shares without stockholder approval;
- advance notice requirements for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings; and
- the inability of stockholders to call a special meeting.

These provisions could make it more difficult for a third-party to acquire us, even if the third-party's offer may be considered beneficial by many stockholders. As a result, stockholders may be limited in their ability to obtain a premium for their shares.

We are subject to litigation risks which may be costly to defend and the outcome of which is uncertain and could adversely affect our business and financial condition.

All industries, including the semiconductor industry, are subject to legal claims, with and without merit, which may divert the attention of our management and our resources in general. From time to time in the ordinary course of its business, 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. We believe it is unlikely that the final outcome of these legal claims will have a material adverse effect on our financial condition, operating results or cash flows. However, defense and settlement costs can be substantial, even with respect to claims that we believe have no merit. Due to the inherent uncertainty of the litigation process, the resolution of any particular legal claim or proceeding could adversely affect our business, operating results and financial condition.

From time to time, we have been, or may in the future be, involved in securities litigation or litigation arising from our acquisitions. We can provide no assurance as to the outcome of any such litigation matter in which we are a party. These types of matters are costly to defend and even if resolved in our favor, could have a material adverse effect on our business, financial condition, operating results and cash flow. Such litigation could also substantially divert the attention of our management and our resources in general. Uncertainties resulting from the initiation and continuation of securities or other litigation could harm our ability to obtain credit and financing for our operations and to compete in the marketplace. Because the price of our common stock has been, and may continue to be, volatile, we can provide no assurance that securities litigation will not be filed against us in the future. In addition, we can provide no assurance that our past or future acquisitions will not subject us to additional litigation.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters is located in Camarillo, California where we own an approximately 88,000 square foot facility. The parcel on which our headquarters is located can accommodate substantial expansion.

As of March 1, 2019, we owned or leased multiple properties. The locations and primary functions of significant properties are summarized in the following table:

<u>Locations</u>	<u>Square Feet</u>	Administration	Research and/or development	Manufacturing support	Sales and marketing	Application engineering	Test and assembly	Reliability testing	Leased
Camarillo, California ⁽¹⁾	88,000	•	•	•	•	•		•	
Colorado Springs, Colorado	51,940	•	•	•	•	•	•		•
Colorado Springs, Colorado	51,588	•	•	•	•	•	•		
Irvine, California	20,072	•	•	•	•		•		•
San Jose, California	17,016	•	•	•	•	•			•
Plano, Texas	14,784	•	•		•				•
San Diego, California	13,798	•	•		•	•			•
Burlington, Ontario, Canada	68,000	•	•		•	•	•	•	
Neuchatel, Switzerland	37,275	•	•	•	•	•	•	•	•
Reynosa, Mexico	30,000	•	•	•			•	•	
Kanata, Ontario, Canada	27,888	•	•		•				•
Shenzhen, China	15,678	•			•	•			•
Bristol, United Kingdom	13,640	•	•		•	•		•	•
Bhubaneswar, India	12,316	•	•						•

⁽¹⁾ Our corporate headquarters have been pledged to secure our obligations under the Credit Facility.

In addition to the properties listed in the above table, we also lease Sales and Marketing, Research and Development, and Administrative offices at various locations in the U.S. and internationally under operating leases, none of which are material to our future cash flows. Our leases expire at various dates through 2027.

We believe that our existing leased and owned space is more than adequate for our current operations, and that suitable replacement and additional space will be available in the future on commercially reasonable terms as circumstances warrant.

Item 3. Legal Proceedings

The descriptions of the legal proceedings in Note 13 to the Consolidated Financial Statements are incorporated by reference into this Item 3.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock is traded on The Nasdaq Global Select Market under the symbol "SMTC."

Holders

As of March 15, 2019, we had 187 holders of record of our common stock.

Dividends

The payment of dividends on our common stock is within the discretion of our Board of Directors. Currently, we intend to retain earnings to finance the growth of our business. We did not pay cash dividends on our common stock during fiscal year 2019, and our Board of Directors has not indicated an intent to declare a cash dividend on our common stock in the foreseeable future. The credit agreement governing our senior secured first lien credit facilities includes covenants limiting our ability to pay dividends or make distributions on our capital stock.

Purchases of Equity

We maintain a stock repurchase program that was initially approved by our Board of Directors and announced by us 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. During fiscal year 2019, we repurchased \$116.2 million in shares of our common stock. As of January 27, 2019, we have repurchased \$267.6 million in shares of our common stock under the program since its inception and the current remaining authorization under our stock repurchase program is \$180.8 million. Under the 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 Rule 10b-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 program and may suspend or discontinue it at any time.

Information with respect to purchases by the Company of shares of common stock during the fourth quarter of fiscal year 2019 follows:

Issuer Purchases of Equity Securities

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
November 2018 (10/29/18- 11/25/18)	—	\$ —	—	\$ 217.3 million
December 2018 (11/26/18- 12/23/18)	603,900	\$ 48.08	603,900	\$ 188.3 million
January 2019 (12/24/18-01/27/19)	166,800	\$ 44.58	166,800	\$ 180.8 million
Total activity in the fourth quarter	<u>770,700</u>	<u>\$ 47.32</u>	<u>770,700</u>	

Securities Authorized for Issuance Under Equity Compensation Plans

See the information set forth in Part III, Item 12 of this Annual Report on Form 10-K.

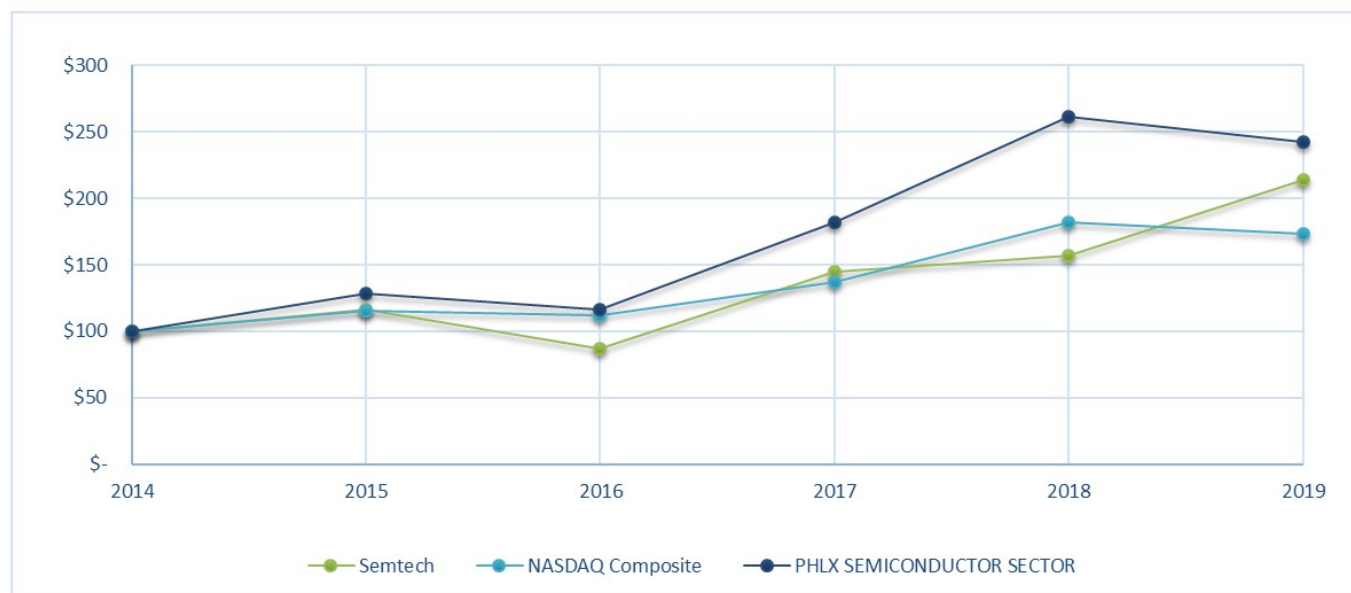
Sales of Unregistered Securities

We did not make any sales of unregistered securities during fiscal year 2019 that have not been previously reported.

Performance Graph

This chart and graph show the value of a \$100 cash investment on the last day of fiscal year 2014 in (i) the Company's common stock, (ii) the NASDAQ Composite Index, and (iii) the Philadelphia Semiconductor Index. Note that historic stock price performance is not

necessarily indicative of future stock price performance.



Fiscal Year	2014	2015	2016	2017	2018	2019
Semtech	\$100	\$117	\$87	\$145	\$157	\$214
NASDAQ Composite	\$100	\$115	\$112	\$137	\$182	\$174
PHLX SEMICONDUCTOR SECTOR	\$100	\$129	\$116	\$182	\$261	\$242

The information contained in this Item 5 under the heading "Performance Graph" (i) is being furnished and shall not be deemed "filed" for the purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities of that section, and (ii) shall not be incorporated by reference into any registration statement or other document pursuant to the Exchange Act, or the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filing to this Item 5 Performance Graph information.

Item 6. Selected Financial Data

The Consolidated Statements of Income data set forth below for fiscal years 2019, 2018 and 2017 and the Consolidated Balance Sheets data as of the end of fiscal years 2019 and 2018 are derived from, and qualified by reference to, the Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K. The Consolidated Statements of Income data for fiscal years 2016 and 2015 and the Consolidated Balance Sheets data as of the end of fiscal years 2017, 2016 and 2015 are derived from the Consolidated Financial Statements previously filed with the SEC on Annual Reports on Form 10-K.

This information should be read in conjunction with Management's Discussion and Analysis contained in Item 7 of this Annual Report on Form 10-K, the Consolidated Financial Statements and accompanying notes, and the corresponding items included in our Annual Report on Form 10-K for fiscal years 2018 and 2017.

All fiscal years presented consisted of fifty-two weeks except for fiscal year 2016 which consisted of fifty-three weeks. Our past results are not necessarily indicative of our future performance.

Consolidated Income Statement Data

	Fiscal Year Ended				
	January 27, 2019 ^{(1), (3)}	January 28, 2018 ⁽¹⁾	January 29, 2017	January 31, 2016 ⁽¹⁾	January 25, 2015
(in thousands, except per share amounts)					
Net sales	\$ 627,196	\$ 587,847	\$ 544,272	\$ 490,219	\$ 557,885
Cost of sales	250,174	235,876	219,410	197,109	229,093
Gross profit	377,022	351,971	324,862	293,110	328,792
Operating costs and expenses:					
Selling, general and administrative ⁽²⁾	151,397	146,303	138,708	140,677	128,419
Product development and engineering	109,918	104,798	102,500	113,737	119,371
Intangible amortization	26,649	27,867	25,301	25,059	25,718
Loss (gain) on disposition of business operations	—	375	(25,513)	—	—
Changes in the fair value of contingent earn-out obligations	(9,419)	3,892	(215)	(16,362)	1,391
Intangible asset impairments	—	—	—	—	11,636
Total operating costs and expenses	278,545	283,235	240,781	263,111	286,535
Operating income	98,477	68,736	84,081	29,999	42,257
Interest expense	(9,202)	(7,963)	(9,300)	(7,819)	(5,927)
Non-operating income (expense), net	3,823	3,348	(1,721)	(1,201)	165
Investment impairments	(30,000)	(4,250)	—	(600)	—
Income before taxes and equity in net losses of equity method investments	63,098	59,871	73,060	20,379	36,495
(Benefit) provision for income taxes	(84)	23,191	18,399	8,882	8,548
Net income before equity in net losses of equity method investments	63,182	36,680	54,661	11,497	27,947
Equity in net losses of equity method investments	(126)	(254)	—	—	—
Net income	<u>\$ 63,056</u>	<u>\$ 36,426</u>	<u>\$ 54,661</u>	<u>\$ 11,497</u>	<u>\$ 27,947</u>
Earnings per share:					
Basic	\$ 0.96	\$ 0.55	\$ 0.84	\$ 0.18	\$ 0.42
Diluted	\$ 0.92	\$ 0.54	\$ 0.83	\$ 0.17	\$ 0.41
Weighted average number of shares used in computing earnings per share:					
Basic	65,982	66,027	65,427	65,657	67,108
Diluted	68,481	67,605	66,109	65,961	67,685
Anti-dilutive shares not included in the EPS calculations	553	402	1,111	2,569	1,714

Consolidated Balance Sheet Data

(in thousands)	January 27, 2019 ^{(1), (3)}	January 28, 2018 ⁽¹⁾	January 29, 2017	January 31, 2016 ⁽¹⁾	January 25, 2015
Cash and cash equivalents	\$ 312,120	\$ 307,923	\$ 297,134	\$ 211,810	\$ 230,328
Working capital	355,390	335,024	315,453	237,334	288,647
Total assets	1,062,881	1,085,776	1,011,542	911,517	929,431
Long term debt, less current portion	192,845	211,114	226,524	239,177	234,746
Non-current liabilities	250,286	294,555	283,304	279,579	270,032
Total stockholders' equity	682,681	665,013	605,263	528,051	551,358

(1) We acquired Trackio International AG on December 11, 2018, IC Interconnect, Inc. on May 2, 2018, AptoVision Technologies Inc. on July 1, 2017. For more information, refer to Note 3 to the Consolidated Financial Statements. We also acquired Triune Systems, L.L.C. on March 4, 2015.

(2) We have realigned resources and infrastructure, resulting in restructuring expense of \$0.7 million, \$6.3 million, \$2.3 million, \$4.5 million, and \$1.3 million in fiscal years 2019, 2018, 2017, 2016 and 2015, respectively, included in selling, general and administrative.

(3) Effective January 29, 2018, we adopted Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Accounting Standards Codification ("ASC") 606) which resulted in increases to net sales of \$9.8 million, cost of sales of \$2.2 million and provision for income taxes of \$1.6 million as compared with the guidance that was in effect before the change.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and operating results should be read in conjunction with Item 6 "Selected Consolidated Financial Data" and our Consolidated Financial Statements and related Notes included in Item 8 of this Annual Report on Form 10-K.

This Annual Report on Form 10-K 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, operating results, 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. Please see Special Note Regarding Forward-Looking and Cautionary Statements elsewhere in this Annual Report on Form 10-K for potential factors that could cause actual results to differ materially from those in the forward-looking statements.

Overview

We are a leading global supplier of high-performance analog and mixed-signal semiconductors and advanced algorithms and were incorporated in Delaware in 1960. We design, develop, manufacture, and market a broad range of products that are sold principally into applications within the enterprise computing, communications, high-end consumer, and industrial end-markets. Enterprise computing end-markets include data center related equipment, passive optical networks, storage networks, desktops, notebooks, servers, printers, monitors, and computer peripherals. Communications end-market applications include wireless base stations, long-haul optical networks, carrier networks, switches and routers, cable modems, backplane signal conditioners, wireless LAN, and other communication infrastructure equipment. The high-end consumer end-market includes handheld devices, smartphones, tablets, wireless charging, set-top boxes, digital televisions, digital video recorders, thunderbolt cables and other consumer equipment. Applications for the industrial market include analog and digital video broadcast studio equipment, video-over-IP solutions, automated meter reading, smart grid, wireless charging, military and aerospace, medical, security systems, automotive, IoT, industrial and home automation, and other industrial equipment. Our end-customers are primarily OEMs and their suppliers.

We report results on the basis of 52 and 53 week periods and our fiscal year ends on the last Sunday in January. The fiscal years ended January 27, 2019, January 28, 2018, and January 29, 2017, each consisted of 52 weeks.

On December 11, 2018, we, through our subsidiary Semtech (International) AG, a Swiss corporation, completed our previously announced acquisition of all of the outstanding equity interests of TrackNet, for an aggregate purchase price of approximately \$8.5 million. TrackNet is a provider of LoRa®-based end-to-end solutions for the IoT and provides expertise and intellectual property that will be integrated into our business to support our goal of enabling the growing ecosystem around our LoRa Technology. \$4.3 million of the purchase price was attributed to goodwill, and \$3.0 million and \$0.3 million of the purchase price was attributed to the estimated fair values of the intangible and tangible net assets acquired, respectively. The goodwill is not 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 our consolidated financial statements. We are still in the process of determining the final purchase price allocation. For more information, refer to Note 8 to the Consolidated Financial Statements.

On May 2, 2018, we acquired substantially all the assets of ICI for an aggregate purchase price of approximately \$7.4 million. The addition of ICI is aimed at further enhancing our U.S. research and development capabilities for our next-generation Z-Pak™ platform. \$4.9 million of the purchase price was attributed to goodwill and \$2.5 million of the purchase price 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 our consolidated financial statements. For more information, refer to Note 8 to the Consolidated Financial Statements.

On July 1, 2017, we acquired AptoVision, a privately-held provider of uncompressed, zero-frame latency, video-over-IP solutions addressing the professional audio visual market. The unique combination of AptoVision's advanced algorithms for real-time, full bandwidth video transmission over IP networks, and our industry leading high-speed signal integrity and chip development expertise is expected to enable the adoption of SDVoE accelerating this natural progression in the evolution of video transport.

Under the terms of the share purchase agreement with AptoVision, we acquired all of the outstanding equity interest in AptoVision for a cash payment of \$17.6 million at closing, net of acquired cash, and a commitment to pay additional contingent consideration of up to a maximum of \$47.0 million over three years if certain goals are achieved in each of the earn-out periods. The fair value of the additional contingent consideration (the "AptoVision Earn-out") as of January 27, 2019 was \$2.2 million, of which \$1.3 million is presented within "Accrued liabilities" and \$0.9 million is presented within "Other long-term liabilities" in the Consolidated Balance Sheets. Acquisition-related transaction costs of \$1.6 million were accounted for as an expense in the period in which the costs were incurred and were presented within "Selling, general and administrative" expense in the Consolidated Statements of Income.

See Note 3 and Note 13 to the Consolidated Financial Statements.

We operate and account for results in one reportable segment. See Note 14 to the Consolidated Financial Statements. During the first quarter of fiscal year 2019, we restructured and combined the Power and High-Reliability operating segment with the Wireless and Sensing operating segment to better align resources with our LoRa-based initiatives. This resulted in having three operating segments compared to previously having four operating segments. The three operating segments: Signal Integrity, Protection, and Wireless and Sensing, all have similar economic characteristics and have been aggregated into one reportable segment identified in the table below as the "Semiconductor Products Group". On August 5, 2016, we completed the divestiture of the remaining assets in the Snowbush IP, now a legacy operating segment, to Rambus for a purchase price of \$32.0 million in cash along with the opportunity to receive additional payments through 2022 based upon a percentage of sales by Rambus of new products expected to be developed by them from the Snowbush IP. Beginning in the third quarter of fiscal year 2017, we

no longer had a Systems Innovation Products Group or an “All others” category, and therefore we have only three operating segments that aggregate into one reportable segment, the Semiconductor Products Group.

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. Sales made directly to customers during fiscal year 2019 were 32% of net sales. The remaining 68% of net sales were made through independent distributors.

Our business relies on foreign-based entities. Most of our subcontractors and suppliers, including third-party foundries that supply silicon wafers, are located in foreign countries, including China, Taiwan, South Korea and Israel. For the fiscal year ended January 27, 2019, approximately 16% of our silicon, in terms of cost of wafers purchased, was manufactured in China. Foreign sales for fiscal year 2019 constituted approximately 89% of our net sales. Approximately 76% of foreign sales in fiscal year 2019 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 to not result in revenue, 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.

Results of Operations

Fiscal Year 2019 Compared with Fiscal Year 2018

All periods presented in the following summary of sales by major end-market reflect our current classification methodology:

(in thousands, except percentages)	Fiscal Years				
	2019		2018 ⁽¹⁾		Change
	Net Sales	% Net Sales	Net Sales	% Net Sales	
Enterprise Computing	\$ 203,692	32 %	\$ 194,645	33 %	5 %
Industrial	201,832	32 %	167,891	29 %	20 %
High-End Consumer	169,822	27 %	171,885	29 %	(1)%
Communications	73,351	12 %	69,645	12 %	5 %
Other: Warrant Shares	(21,501)	(3)%	(16,219)	(3)%	33 %
Total	\$ 627,196	100 %	\$ 587,847	100 %	7 %

⁽¹⁾Reclassifications have been made to prior period amounts to conform to the current classification.

Net Sales. Net sales for fiscal year 2019 were \$627.2 million, an increase of 7% compared to \$587.8 million for fiscal year 2018. During fiscal year 2019, our industrial end-market growth benefited from growing demand for our LoRa Technology, which is increasingly becoming the defacto standard for LPWANs. Growth in our Enterprise Computing products benefited from continued data center build outs by cloud and hyper-scale data center customers and on-going demand for our PON solutions. Additionally, fiscal year 2019 reflects a \$9.8 million benefit from the adoption of ASC 606.

As we enter fiscal year 2020, the broader macro concerns and extremely soft demand from China is expected to result in first quarter net sales in the range of \$125.0 million to \$135.0 million.

Gross Profit. Gross profit was \$377.0 million and \$352.0 million in fiscal years 2019 and 2018, respectively. Our gross margin was 60.1% for fiscal year 2019, comparable with 59.9% in fiscal year 2018. Fiscal year 2019 performance benefited from a more favorable mix of products from the industrial end-market which have a higher gross profit profile.

We expect overall gross margins for fiscal year 2020 to remain consistent with our fiscal year 2019 performance.

Operating Costs and Expenses.

(in thousands, except percentages)	Fiscal Years				
	2019		2018		Change
	Cost/Exp.	% Net Sales	Cost/Exp.	% Net Sales	
Selling, general and administrative	\$ 151,397	24 %	\$ 146,303	27%	3 %
Product development and engineering	109,918	18 %	104,798	19%	5 %
Intangible amortization	26,649	4 %	27,867	5%	(4)%
Loss on disposition of business operations	—	— %	375	—%	— %
Changes in the fair value of contingent earn-out obligations	(9,419)	(2)%	3,892	1%	(342)%
Total operating costs and expenses	\$ 278,545	44 %	\$ 283,235	52%	(2)%

Selling, General & Administrative Expense

Selling, general and administrative ("SG&A") expenses for fiscal year 2019 increased by \$5.1 million as a result of a \$20.6 million increase in share-based compensation offset by lower restructuring expenses and the \$8.0 million recovery from the settlement of the lawsuit we filed against HiLight Semiconductor Limited and related individual defendants ("HiLight Settlement").

The higher levels of share-based compensation expense in fiscal year 2019 primarily resulted from higher levels of performance achievement for awards with performance-based vesting conditions and the impact of increases in our stock price, and the related fair value re-measurement, of awards accounted for as a liability rather than equity.

The levels of selling, general and administrative expenses reported in a fiscal period can be significantly impacted, and therefore experience period over period volatility, by share-based compensation which is substantially influenced by movements in our stock price and assumptions regarding performance vesting conditions.

Product Development and Engineering Expenses

Product development and engineering expenses for fiscal years 2019 and 2018 were \$109.9 million and \$104.8 million, respectively, or an increase of 5%. The increase was primarily a result of higher variable compensation expense and 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 recorded as a reduction to product development and engineering expense.

Intangible Amortization

Intangible amortization was \$26.6 million and \$27.9 million in fiscal years 2019 and 2018, respectively. The decrease is related to the full amortization of finite-lived intangible assets associated with the acquisitions of Gennum Corporation and Cycleo SAS ("Cycleo").

Changes in the Fair Value of Contingent Earn-out Obligations

Changes in the fair value of contingent earn-out expense reflects the impact of changes in the estimated probability of achievement of AptoVision Earn-out targets.

We measure contingent earn-out liabilities at fair value on a recurring basis using significant unobservable inputs classified within Level 3 of the fair value hierarchy. We use 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 liability will be equivalent to the amount paid, and the difference between the fair value estimate and amount paid will be recorded in earnings.

Interest Expense

Interest expense was \$9.2 million and \$8.0 million for fiscal years 2019 and 2018, respectively. The \$1.2 million increase is primarily related to higher interest rates, partially offset by the improvement in our consolidated leverage ratio.

Interest on loans made under the Credit Agreement (as defined below) accrues at a rate based in part on our consolidated leverage ratio, which is the ratio of our indebtedness to adjusted earnings before interest, taxes, depreciation and amortization, on a consolidated basis. As our sales performance improved, we ended fiscal year 2018 with a consolidated leverage ratio of approximately 1.20. At the end of fiscal year 2019, our consolidated leverage ratio was 1.02 as we continued to benefit from increasing sales and lower debt levels. We expect our consolidated leverage ratio to continue to improve in fiscal year 2020. The impact of the benefit of improvements to our consolidated leverage ratio on our total interest costs is being more than offset by increases in the 30-day LIBOR rate. If the 30-day LIBOR rate increases 100 basis points, our interest costs for fiscal year 2020 will increase by approximately \$2.1 million.

Investment Impairments

In fiscal year 2019, we fully impaired our investment in Multiply resulting in a \$30.0 million charge compared to a \$4.3 million impairment on a cost method investment in fiscal year 2018.

(Benefit) Provision for Income Taxes

The benefit for income taxes was \$0.1 million for fiscal year 2019 compared to a provision of \$23.2 million for fiscal year 2018. The effective tax rates for fiscal years 2019 and 2018 were a tax benefit of (0.1%) and a provision of 38.9%, respectively. The decrease in our effective tax rate in fiscal year 2019 was primarily driven by a partial release of the valuation allowance that was previously recorded against U.S. deferred tax assets. Specifically, due to the impact of the Tax Act, and based on the weight of all available evidence, we concluded that it was more likely than not that we will be able to utilize the benefit of certain U.S. deferred tax assets. Our effective tax rate for fiscal year 2019 differs from the statutory federal income tax rate of 21% primarily due to our regional mix of income and a partial release of the valuation allowance that was previously recorded against our U.S. deferred tax assets.

We receive a tax benefit from a tax holiday that was granted in Switzerland. The tax holiday commenced on January 30, 2017, and is effective for five years ("Initial Term") and can be extended for an additional five years, subject to meeting certain staffing targets. The ability to meet the requirements to extend the ruling is within our control and we do not anticipate any issues meeting the established targets. The maximum benefit under this tax holiday is CHF 500.0 million. Depending on the operational performance of our Swiss operations, it is possible that we could utilize the maximum benefit during the Initial Term. Once the term of the tax holiday expires or we achieve the maximum benefit, our effective tax rate could be negatively impacted if we are unable to negotiate an extension or expansion of the tax holiday.

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.

For further information on the effective tax rate and Tax Act's impact, see Note 12 to the Consolidated Financial Statements.

Fiscal Year 2018 Compared with Fiscal Year 2017

All periods presented in the following summary of sales by major end-market reflect our current classification methodology:

(in thousands, except percentages)	Fiscal Years				
	2018 ⁽¹⁾		2017 ⁽¹⁾		Change
	Net Sales	% Net Sales	Net Sales	% Net Sales	
Enterprise Computing	\$ 194,645	33 %	\$ 183,732	34 %	6 %
High-End Consumer	171,885	29 %	133,337	24 %	29 %
Industrial	167,891	29 %	157,550	29 %	7 %
Communications	69,645	12 %	75,049	14 %	(7)%
Other: Warrant Shares	(16,219)	(3)%	(5,396)	(1)%	201 %
Total	<u>\$ 587,847</u>	<u>100 %</u>	<u>\$ 544,272</u>	<u>100 %</u>	<u>8 %</u>

⁽¹⁾Reclassifications have been made to prior period amounts to conform to the current classification.

Net Sales. Net sales for fiscal year 2018 were \$587.8 million, an increase of 8% compared to \$544.3 million for fiscal year 2017. During fiscal year 2018, our revenues within the high-end consumer end-market increased as a result of expanded use of our proximity sensing solutions and protection products across a broader range of phones and other devices. Our enterprise computing end-market benefited from strong demand for our optical products, which are well positioned for the current cycle of data center upgrades and increased PON deployments. The escalating adoption of our LoRa Technology continued to drive growth in the industrial end-market. The decline in our communications end-market was driven by lower demand in surveillance systems and base station markets.

Gross Profit. Gross profit was \$352.0 million and \$324.9 million in fiscal years 2018 and 2017, respectively. Our gross margin was 59.9% for fiscal year 2018, comparable with 59.7% in fiscal year 2017. Fiscal year 2018 performance benefited from a more favorable mix of higher margin product sales, the benefit of which was offset by a \$16.2 million charge (2.8% of net sales) related to the Comcast Warrant, which was reported as a reduction to revenue. In fiscal year 2017, the charge related to the Comcast Warrant was \$5.4 million (1% of net sales).

Operating Costs and Expenses.

(in thousands, except percentages)	Fiscal Years				
	2018		2017		Change
	Cost/Exp.	% Net Sales	Cost/Exp.	% Net Sales	
Selling, general and administrative	\$ 146,303	27%	\$ 138,708	25 %	5 %
Product development and engineering	104,798	19%	102,500	19 %	2 %
Intangible amortization	27,867	5%	25,301	5 %	10 %
Loss (gain) on disposition of business operations	375	—%	(25,513)	(5)%	(101)%
Changes in the fair value of contingent earn-out obligations	3,892	1%	(215)	— %	(1,910)%
Total operating costs and expenses	<u>\$ 283,235</u>	<u>52%</u>	<u>\$ 240,781</u>	<u>44 %</u>	<u>18 %</u>

Selling, General & Administrative Expenses

SG&A expenses for fiscal year 2018 increased by \$7.6 million as a result of a \$6.3 million increase in share-based compensation and higher restructuring costs of \$6.3 million compared to \$2.3 million in fiscal year 2017. The higher levels of share-based compensation expense primarily resulted from much higher levels of anticipated performance achievement for awards with performance-based vesting conditions, and the impact of increases in our stock price and the related fair value re-measurement of awards accounted for as a liability rather than equity.

Product Development and Engineering Expenses

Product development and engineering expenses for fiscal years 2018 and 2017 were \$104.8 million and \$102.5 million, respectively or an increase of 2%. The increase was primarily a result of lower recoveries for non-recurring engineering

services and incremental spending associated with the development of SDVoE, partially offset by the benefit of lower spending compared with the higher expense associated with our actions in fiscal year 2017 to reduce our investment in the defense and microwave communications markets and the sale of the Snowbush IP to Rambus.

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 recorded as a reduction to product development and engineering expense.

Intangible Amortization

Intangible amortization was \$27.9 million and \$25.3 million in fiscal years 2018 and 2017, respectively. The increase is related to the amortization of intangible assets that were established as part of the purchase price allocation for AptoVision.

Gain on Disposition of Business Operations

In the third quarter of fiscal year 2017, we completed our divestiture of the Snowbush IP to Rambus. As a result, we recognized a gain of \$25.5 million on the disposition of this business.

Changes in the Fair Value of Contingent Earn-out Obligations

The contingent earn-out expense increased by \$4.1 million in fiscal year 2018 primarily as a result of the change in our estimated probability of projected net revenue and adjusted earnings associated with the AptoVision Earn-out.

We measure contingent earn-out liabilities at fair value on a recurring basis using significant unobservable inputs classified within Level 3 of the fair value hierarchy. We use 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 liability will be equivalent to the amount paid, and the difference between the fair value estimate and amount paid will be recorded in earnings.

Interest Expense

Interest expense was \$8.0 million and \$9.3 million for fiscal years 2018 and 2017, respectively. The \$1.3 million decrease is primarily related to the non-reoccurrence of debt issuance costs and the write-off of historical debt issuance costs resulting from the debt modification that was completed in the fourth quarter of fiscal year 2017.

Primarily as a result of declining revenue, our consolidated leverage ratio exceeded 2.50 at the beginning of fiscal year 2017, which resulted in our applicable margin increasing to 2.25%. As our sales performance improved, we ended fiscal year 2017 with a consolidated leverage ratio of approximately 1.69. At the end of fiscal year 2018, our consolidated leverage ratio was 1.23 as we continued to benefit from increasing sales.

(Benefit) Provision for Income Taxes

The provision for income taxes was \$23.2 million for fiscal year 2018 compared to \$18.4 million for fiscal year 2017. The effective tax rates for fiscal years 2018 and 2017 were a tax provision of 38.9% and 25.2%, respectively. The increase in the effective tax rate was primarily the result of the one-time provisional impact of the Tax Act. We do not expect the Tax Act to have a material impact on our future overall effective tax rate since U.S. based activities have historically generated operating losses for tax purposes. We have established a valuation allowance against these operating losses and, given our current assessment of operations, we expect to continue to establish valuation allowances against future generated operating losses. We will continue to assess the impact of, and opportunities presented by, the Tax Act on our operations.

We receive a tax benefit from a tax holiday that was granted in Switzerland. The tax holiday is effective for the Initial Term and can be extended for an additional five years, subject to meeting certain staffing targets. The ability to meet the requirements to extend the ruling is within our control and we do not anticipate any issues meeting the established targets. The maximum benefit under this tax holiday is CHF 500.0 million. Depending on the operational performance of our Swiss operations, it is possible that we could utilize the maximum benefit during the Initial Term. Once the term of the tax holiday expires or we achieve the maximum benefit, our effective tax rate could be negatively impacted if we are unable to negotiate an extension or expansion of the tax holiday.

For further information on the effective tax rate and Tax Act's impact, see Note 12 to the Consolidated Financial Statements.

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 January 27, 2019, our total stockholders' equity was \$682.7 million. At that date, we also had approximately \$312.1 million in cash and cash equivalents and \$211.1 million of borrowings, net of debt discount, outstanding.

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 January 27, 2019, our foreign subsidiaries held approximately \$253.1 million of cash and cash equivalents compared to \$215.1 million at January 28, 2018. 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 remit approximately \$240.0 million of foreign earnings of which \$80.0 million was remitted during fiscal year 2019. As of January 27, 2019, our foreign subsidiaries had \$516.0 million of unremitted earnings for which no Federal or state taxes have been provided. Those historical earnings have been and are expected to continue to be permanently reinvested.

One of our primary goals is to improve the cash flows from our existing business activities. Additionally, we will continue to seek to maintain or improve our existing business performance and deploy our accumulated cash balances in the most effective manner through alternatives such as 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.

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. In fiscal year 2019, net cash provided by operating activities was \$183.6 million, up 64.7% compared to fiscal year 2018.

Operating cash flows for fiscal years 2019 and 2018 were impacted by several significant non-cash transaction related items including, for fiscal 2019, depreciation and amortization expense of \$49.6 million, the impairment of our investment in MultiPhy of \$30.0 million and share-based compensation expense of \$73.9 million. The significant non-cash transactions for fiscal 2018 included depreciation and amortization expense of \$49.0 million and share-based compensation expense of \$47.9 million.

Proceeds from the HiLight Settlement of \$8.0 million contributed to the cash transaction related items for fiscal year 2019, in addition to the gains from sale of cost method investments.

Investing Activities

Cash flows used in investing activities is primarily attributable to capital expenditures, 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 \$17.1 million and \$35.5 million in fiscal years 2019 and 2018, respectively. In fiscal year 2019, we increased capital expenditures to support our business growth and the release of new products.

In fiscal year 2020, we expect our capital expenditures to be flat compared to our fiscal year 2019 levels. If product demand were to increase significantly beyond current projections, we would expect to increase capital spending to accommodate the growth. Similarly, to the extent practical, we would expect to decrease capital spending to address market contractions.

On August 17, 2018, the Company acquired all of the outstanding equity interests of TrackNet for an aggregate purchase price of approximately \$8.5 million. On May 2, 2018, we acquired substantially all the assets of ICI for approximately \$7.4 million. We funded the purchase price using cash on hand. On July 1, 2017, we acquired AptoVision for an upfront cash payment of \$17.6 million at closing, net of acquired cash, and a commitment to pay an additional contingent consideration of up to a maximum of \$47.0 million over three years if certain goals are achieved in each of the earn out periods. We expect to fund any obligations associated with the additional cash consideration with cash generated by our operations and our existing cash balances.

In fiscal year 2019, we invested \$9.3 million in companies that are enabling the ecosystem based on the LoRaWAN™ protocol and developing technologies to support the requirements of our customers.

Financing Activities

Cash used in financing activities is primarily attributable to principal payments related to our long-term debt and repurchase of outstanding common stock, offset by borrowings under our Credit Agreement (as defined below).

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 (the "Administrative Agent"). 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.

All of the proceeds of the Term Loans were used to repay in full all of the obligations outstanding under our then existing senior secured first lien credit facility and to pay transaction costs in connection with such refinancing. We accounted for the Credit Agreement as a debt modification.

As of January 27, 2019, we have \$115.3 million outstanding under our Term Loans and \$97.0 million outstanding under our Revolving Loans.

As of January 27, 2019, \$153.0 million of the Revolving Loans were undrawn. 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 Agreement 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 Agreement 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.

In fiscal year 2019, we settled the AptoVision Earn-out for the performance period ended July 29, 2018. Of the total earn-out distribution for this performance period, \$8.5 million was attributable to the original acquisition fair value and therefore presented as a Financing Activity.

We currently have in effect a stock repurchase program that was initially approved by our Board of Directors in March 2008. This program represents one of our principal efforts to return value to our stockholders. During fiscal years 2019 and 2018, we repurchased

shares of common stock under this program for \$116.2 million and \$14.8 million, respectively. As of January 27,

2019, we had repurchased \$267.6 million in shares of our common stock under the program since inception and the current remaining authorization under the program is \$180.8 million.

In fiscal year 2019, we received \$16.3 million in proceeds from the exercise of stock options compared to \$6.7 million in fiscal year 2018. 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.

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.

Noted below under "Contractual Obligations" are various commitments we have associated with our business, such as lease commitments and open purchase obligations, which are not recorded as liabilities on our Consolidated Balance Sheets because we have not yet received the related goods or services as of January 27, 2019.

Contractual Obligations

Presented below is a summary of our contractual obligations as of January 27, 2019.

(in thousands)	Less than 1 year	1-3 years	4-5 years	After 5 years	Total
Long-term debt	\$ 18,750	\$ 96,562	\$ —	\$ —	\$ 115,312
Operating leases	5,049	5,845	1,859	1,273	14,026
Open capital purchase commitments	7,749	—	—	—	7,749
Other open purchase commitments	51,362	6,223	—	—	57,585
Deferred compensation	2,203	1,778	1,068	24,405	29,454
Cycleo-deferred compensation	1,978	2,536	—	—	4,514
AptoVision Earn-out	1,298	863	—	—	2,161
Share-based compensation	—	9,214	—	—	9,214
Swiss plan ⁽¹⁾	2,000	3,446	3,276	8,333	17,055
Total contractual cash obligations	<u>\$ 90,389</u>	<u>\$ 126,467</u>	<u>\$ 6,203</u>	<u>\$ 34,011</u>	<u>\$ 257,070</u>

⁽¹⁾ Amounts include expected payments under the current defined benefit pension plan for the employees of our Swiss subsidiary through 2027.

The table above includes the interest payments we owe on our long-term debt. We have assumed no additional borrowings or repayments under our Revolving Loans. For debt that has variable rate interest, we have calculated future interest obligations based on the interest rate for that debt as of January 27, 2019.

Capital purchase commitments and other open purchase commitments are for the purchase of plant, equipment, raw material, supplies and services. They are not recorded as liabilities on our Consolidated Balance Sheets as of January 27, 2019, as we have not yet received the related goods or taken title to the property.

As part of our acquisition of AptoVision and Cycleo, we have agreed to pay consideration if certain revenue and operating income targets are achieved in each of the measurement periods. See Note 13 to the Consolidated Financial Statements.

We maintain 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. Our liability for deferred compensation under this plan was \$29.5 million and \$30.5 million as of January 27, 2019 and January 28, 2018, respectively, and is included in accrued liabilities and other long-term liabilities on the Consolidated Balance Sheets and in the table above. The 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.

We have purchased whole life insurance on the lives of some of our current and former deferred compensation plan participants. This Company-owned life insurance is held in a grantor trust and is intended to cover a majority of the costs of our

deferred compensation plan. The cash surrender value of our Company-owned life insurance was \$20.4 million and \$22.3 million as of January 27, 2019 and January 28, 2018, respectively.

Inflation

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.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with accounting principles generally accepted in the U.S. ("GAAP"). In doing so, we have to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenues, and expenses, as well as related disclosure of contingent assets and liabilities. Accordingly, actual results could differ materially from our estimates. We consider an accounting policy to be a "critical accounting policy and estimate" if: (1) we must make assumptions that were uncertain when the judgment was made, and (2) changes in the estimate assumptions or selection of a different estimate methodology could have a significant impact on our financial position and the results that we report in our consolidated financial statements. While we believe that our estimates, assumptions, and judgments are reasonable, they are based on information available when the estimate was made.

Refer to Note 2 to the Consolidated Financial Statements for further information on our critical accounting estimates and policies, which are as follows:

- *Inventories* - Inventoried product reflected at the lower of cost or market value considering future demand and market conditions; evaluation of inventories for excess quantities and obsolescence utilizing an analysis of sales levels by product and projections of future demand;
- *Business combinations* - the assumptions used to allocate the purchase price paid for assets acquired and liabilities assumed in connection with our acquisitions;
- *Property, plant and equipment* - the useful life determination and the related timing of when depreciation begins;
- *Long-lived assets* - the valuation methods and assumptions used in assessing the impairment of property, plant and equipment, identified intangibles, and goodwill, including the determination of asset groupings and the identification and allocation of goodwill to reporting units;
- *Revenue recognition* - the criteria used to recognize revenue. Adjustments to net sales due to offset by the cost of the Warrant issued to Comcast over the respective performance period (since the Warrant was issued to our customer in exchange for services) are further discussed in "Note 11: Share-Based Compensation". Since the computation of the Warrant cost is based on the level of performance completed and the then current fair value of the unvested Warrant milestones, rather than unit sales, net sales can experience variability that is unrelated to the recognition of revenue.
- *Income taxes* - the identification and measurement of deferred tax assets and liabilities and the provisional estimates associated with applicable tax laws; and
- *Contingencies* - the estimation of when a loss is probable and reasonably estimable; measurement of contingent earn-out liabilities at fair value on a recurring basis using significant unobservable inputs classified within Level 3 of the fair value hierarchy.

New Accounting Standards

New accounting standards are discussed in Note 2 to the Consolidated Financial Statements.

Item 7A. 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 detailed below. 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.

Market Conditions

A deterioration of global economic conditions can impact demand for our products which could result in changes in customer order patterns, including order cancellations, and changes in the level of inventory held by vendors.

Commodity Risk

We are subject to risk from fluctuating market prices of certain commodity raw materials, particularly gold, that are incorporated into our end products or used by our suppliers to process our end products. Increased commodity prices are passed on to us in the form of higher prices from our suppliers, either in the form of general price increases or a commodity surcharge. Although we generally deal with our suppliers on a purchase order basis rather than on a long-term contract basis, we generally attempt to obtain firm pricing for volumes consistent with planned production. Our gross margins may decline if we are not able to increase selling prices of our products or obtain manufacturing efficiencies to offset the increased cost. We do not enter into formal hedging arrangements to mitigate against commodity risk.

Foreign Currency Risk

Our foreign operations expose us to the risk of fluctuations in foreign currency exchange rates against our functional currency (the U.S. Dollar) and we may economically hedge this risk with foreign currency contracts (such as currency forward contracts). Gains or losses on these non-U.S.-currency balances are generally offset by corresponding losses or gains on the related hedging instruments. As of January 27, 2019, our largest foreign currency exposures were from the Canadian Dollar, Swiss Franc, and Great British Pound.

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 January 27, 2019, to compute the adverse impact these changes would have had (after taking into account balance sheet hedges only) on our income before taxes, to show an impact of \$2.2 million.

Interest Rate and Credit Risk

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 \$2.1 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.

Interest rates affect our return on excess cash and investments. As of January 27, 2019, we had \$312.1 million of cash and cash equivalents. A majority of our cash and cash equivalents generate interest income based on prevailing interest rates. Investments and cash and cash equivalents generated interest income of \$2.8 million in fiscal year 2019. A significant change in interest rates would impact the amount of interest income generated from our cash and investments. It would also impact the market value of our investments.

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.

Item 8. Financial Statements and Supplementary Data

The information required by Item 8 is presented in the following order:

<u>Management’s Report on Internal Control Over Financial Reporting</u>	<u>48</u>
<u>Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting</u>	<u>48</u>
<u>Report of Independent Registered Public Accounting Firm on the Consolidated Financial Statements</u>	<u>49</u>
<u>Consolidated Statements of Income</u>	<u>50</u>
<u>Consolidated Statements of Comprehensive Income (Loss)</u>	<u>51</u>
<u>Consolidated Balance Sheets</u>	<u>52</u>
<u>Consolidated Statements of Stockholders’ Equity</u>	<u>53</u>
<u>Consolidated Statements of Cash Flows</u>	<u>54</u>
<u>Notes to Consolidated Financial Statements</u>	<u>56</u>
<u>Schedule II — Valuation and Qualifying Accounts</u>	<u>102</u>

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The report called for by Item 308(a) of Regulation S-K is incorporated herein by reference to the *Report of Management on Internal Control Over Financial Reporting* that is included in Part II, Item 9A of this Annual Report on Form 10-K.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The report called for by Item 308(b) of Regulation S-K is incorporated herein by reference to the *Report of Independent Registered Public Accounting Firm* on Internal Control Over Financial Reporting that is included in Part II, Item 9A of this Annual Report on Form 10-K.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Semtech Corporation
Camarillo, California

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Semtech Corporation and subsidiaries (the "Company") as of January 27, 2019 and January 28, 2018, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended January 27, 2019, and the related notes and the schedule listed in the Index at Item 15(a) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of January 27, 2019 and January 28, 2018, and the results of its operations and its cash flows for each of the three years in the period ended January 27, 2019, in conformity with the accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of January 27, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 21, 2019, expressed an unqualified opinion on the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for revenue from contracts with customers effective January 29, 2018 due to adoption of FASB ASC Topic 606, *Revenue from Contracts with Customers*, using the modified retrospective approach.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP

Los Angeles, California

March 21, 2019

We have served as the Company's auditor since 2016.

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

	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Net sales	\$ 627,196	\$ 587,847	\$ 544,272
Cost of sales	250,174	235,876	219,410
Gross profit	377,022	351,971	324,862
Operating costs and expenses:			
Selling, general and administrative	151,397	146,303	138,708
Product development and engineering	109,918	104,798	102,500
Intangible amortization	26,649	27,867	25,301
Loss (gain) on disposition of business operations	—	375	(25,513)
Changes in the fair value of contingent earn-out obligations	(9,419)	3,892	(215)
Total operating costs and expenses	278,545	283,235	240,781
Operating income	98,477	68,736	84,081
Interest expense, net	(9,202)	(7,963)	(9,300)
Non-operating income (expense), net	3,823	3,348	(1,721)
Investment impairments	(30,000)	(4,250)	—
Income before taxes and equity in net losses of equity method investments	63,098	59,871	73,060
(Benefit) provision for income taxes	(84)	23,191	18,399
Net income before equity in net losses of equity method investments	63,182	36,680	54,661
Equity in net losses of equity method investments	(126)	(254)	—
Net income	<u>\$ 63,056</u>	<u>\$ 36,426</u>	<u>\$ 54,661</u>
Earnings per share:			
Basic	\$ 0.96	\$ 0.55	\$ 0.84
Diluted	\$ 0.92	\$ 0.54	\$ 0.83
Weighted average number of shares used in computing earnings per share:			
Basic	65,982	66,027	65,427
Diluted	68,481	67,605	66,109

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

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

	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Net income	\$ 63,056	\$ 36,426	\$ 54,661
Other comprehensive income, net:			
Unrealized (loss) gain on foreign currency cash flow hedges	(115)	942	522
Realized gain (loss) on foreign currency cash flow hedges	189	(1,232)	(232)
Change in unrealized gain on interest rate cap	—	—	48
Change in employee benefit plans	(2,481)	384	(2,414)
Other changes to comprehensive income	—	—	129
Other comprehensive (loss) income, net	(2,407)	94	(1,947)
Comprehensive income	<u>\$ 60,649</u>	<u>\$ 36,520</u>	<u>\$ 52,714</u>

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

SEMTECH CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
AS OF JANUARY 27, 2019 AND JANUARY 28, 2018
(in thousands, except per share amounts)

	<u>January 27, 2019</u>	<u>January 28, 2018</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 312,120	\$ 307,923
Accounts receivable, less allowances of \$774 and \$9,089, respectively	79,223	53,183
Inventories	63,679	71,067
Prepaid taxes	8,406	11,809
Other current assets	21,876	17,250
Total current assets	<u>485,304</u>	<u>461,232</u>
Non-current assets:		
Property, plant and equipment, net of accumulated depreciation of \$196,033 and \$179,604, respectively	118,488	124,586
Deferred tax assets	14,362	4,236
Goodwill	351,141	341,897
Other intangible assets, net	36,558	60,207
Other assets	57,028	93,618
TOTAL ASSETS	<u>\$ 1,062,881</u>	<u>\$ 1,085,776</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 43,183	\$ 37,208
Accrued liabilities	65,023	60,832
Deferred revenue	3,439	12,758
Current portion - long term debt	18,269	15,410
Total current liabilities	<u>129,914</u>	<u>126,208</u>
Non-current liabilities:		
Deferred tax liabilities	3,363	14,682
Long term debt, less current portion	192,845	211,114
Other long-term liabilities	54,078	68,759
Commitments and contingencies (Note 13)		
Stockholders' equity:		
Common stock, \$0.01 par value, 250,000,000 shares authorized, 78,136,144 issued and 65,238,255 outstanding and 78,136,144 issued and 66,280,129 outstanding, respectively	785	785
Treasury stock, at cost, 12,897,889 shares and 11,856,015 shares, respectively	(346,218)	(251,974)
Additional paid-in capital	456,791	415,056
Retained earnings	574,930	502,346
Accumulated other comprehensive loss	(3,607)	(1,200)
Total stockholders' equity	<u>682,681</u>	<u>665,013</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 1,062,881</u>	<u>\$ 1,085,776</u>

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

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

	Common Stock		Additional Paid-in Capital	Retained Earnings	Treasury Stock, at Cost	Accumulated Other	Stockholders' Equity
	Number of Shares Outstanding	Amount				Comprehensive Income (Loss)	
Balance at January 31, 2016	64,998,368	\$ 785	\$ 379,508	\$ 413,280	\$ (266,175)	\$ 653	\$ 528,051
Net income	—	—	—	54,661	—	—	54,661
Other comprehensive loss	—	—	—	—	—	(1,947)	(1,947)
Stock-based compensation	—	—	26,249	—	—	—	26,249
Repurchase of outstanding common stock	(39,024)	—	—	—	(1,005)	—	(1,005)
Treasury stock reissued	833,739	—	(14,819)	—	14,003	—	(816)
Other	—	—	—	—	70	—	70
Balance at January 29, 2017	65,793,083	\$ 785	\$ 390,938	\$ 467,941	\$ (253,107)	\$ (1,294)	\$ 605,263
Cumulative-effect adjustment to beginning balance from adoption of ASU 2016-09 (See Note 12)	—	—	—	(2,021)	—	—	(2,021)
Net income	—	—	—	36,426	—	—	36,426
Other comprehensive income	—	—	—	—	—	94	94
Stock-based compensation	—	—	45,091	—	—	—	45,091
Repurchase of outstanding common stock	(442,607)	—	—	—	(14,849)	—	(14,849)
Treasury stock reissued	929,653	—	(20,973)	—	15,982	—	(4,991)
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 (See Note 2)	—	—	—	11,104	—	—	11,104
Cumulative-effect adjustment to beginning balance from adoption of ASU 2016-16 (See Note 2)	—	—	—	(1,576)	—	—	(1,576)
Net income	—	—	—	63,056	—	—	63,056
Other comprehensive loss	—	—	—	—	—	(2,407)	(2,407)
Stock-based compensation	—	—	65,943	—	—	—	65,943
Repurchase of outstanding common stock	(2,448,133)	—	—	—	(116,210)	—	(116,210)
Treasury stock reissued	1,406,259	—	(24,208)	—	21,966	—	(2,242)
Balance at January 27, 2019	65,238,255	\$ 785	\$ 456,791	\$ 574,930	\$ (346,218)	\$ (3,607)	\$ 682,681

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

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

	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Cash flows from operating activities:			
Net income	\$ 63,056	\$ 36,426	\$ 54,661
<i>Adjustments to reconcile net income to net cash provided by operating activities:</i>			
Depreciation and amortization	49,639	48,999	47,057
Impairment of investments	30,000	4,250	—
Accretion of deferred financing costs and debt discount	528	568	621
Write-off of deferred financing costs and debt discount	—	—	549
Deferred income taxes	(16,486)	15,232	2,185
Share-based compensation and warrant costs	73,859	47,936	30,828
(Gain) loss on disposition of business operations and assets	(26)	276	(25,489)
Earn-out liabilities	(9,419)	3,892	(215)
Equity in net losses of equity method investments	126	254	—
Gain from sale of investment	(1,288)	—	—
Gain from convertible debt settlement	—	(4,275)	—
Contingencies	—	—	(1,518)
Corporate owned life insurance, net	(34)	1,601	770
<i>Changes in assets and liabilities:</i>			
Accounts receivable, net	(21,499)	(1,453)	(7,403)
Inventories	8,444	(5,515)	(1,959)
Other assets	(587)	(5,957)	(7,516)
Accounts payable	7,543	(5,306)	3,101
Accrued liabilities	(1,862)	2,474	10,582
Deferred revenue	1,986	(26)	4,533
Income taxes payable	408	(15,718)	2,618
Other liabilities	(825)	(12,173)	4,207
Net cash provided by operating activities	183,563	111,485	117,612
Cash flows from investing activities:			
Proceeds from convertible debt settlement	—	5,700	—
Proceeds from sales of property, plant and equipment	112	189	48
Purchase of property, plant and equipment	(17,052)	(35,461)	(32,920)
Purchase of investments	(9,297)	(18,665)	(13,198)
Acquisitions, net of cash acquired	(15,948)	(17,619)	—
Proceeds from disposition of business operations	—	—	32,000
Proceeds from sale of investments	5,967	—	555
Net cash used in investing activities	(36,218)	(65,856)	(13,515)
Cash flows from financing activities:			
Proceeds from term loans	—	—	150,000
Payments of term loans	(15,938)	(15,000)	(80,875)
Proceeds from revolving line of credit	—	—	97,000
Payments of revolving line of credit	—	—	(181,000)
Deferred financing costs	—	—	(2,110)

Payment of earn-out	(8,736)	—	—
Payment for employee share-based compensation payroll taxes	(18,539)	(11,671)	(6,562)
Proceeds from exercise of stock options	16,275	6,680	5,779
Repurchase of outstanding common stock	(116,210)	(14,849)	(1,005)
Net cash used in financing activities	(143,148)	(34,840)	(18,773)
Net increase in cash and cash equivalents	4,197	10,789	85,324
Cash and cash equivalents at beginning of period	307,923	297,134	211,810
Cash and cash equivalents at end of period	<u>\$ 312,120</u>	<u>\$ 307,923</u>	<u>\$ 297,134</u>

Supplemental disclosure of cash flow information

Income taxes paid	\$	7,740	\$	31,013	\$	10,503
Interest paid	\$	8,588	\$	6,341	\$	6,492
Non-cash items						
Capital expenditures in accounts payable	\$	2,024	\$	3,789	\$	3,373
Conversion of note into equity	\$	500	\$	—	\$	—

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

SEMTECH CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1: Organization and Basis of Presentation

Semtech Corporation (together with its consolidated subsidiaries, the "Company" or "Semtech") is a global supplier of high-performance 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.

Basis of Presentation

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 fiscal years 2019, 2018 and 2017 each consisted of 52 weeks.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries and have been prepared in conformity with accounting principles generally accepted in the United States ("GAAP"). All intercompany balances have been eliminated.

The Company's Consolidated Statements of Income are referred to herein as the "Statements of Income." The Company's Consolidated Balance Sheets are referred to herein as the "Balance Sheets" and Consolidated Statements of Cash Flows as the "Statements of Cash Flows."

Use of Estimates

The preparation of the consolidated 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 consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

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 is to be paid approximately \$9.0 million to cover damages for claims, costs, and attorneys' fees. Approximately \$8.0 million was received during fiscal year 2019, and is presented within "Selling, general and administrative" ("SG&A") in the Statements of Income.

Note 2: Significant Accounting Policies

Cash and Cash Equivalents

The Company considers all highly-liquid investments with an original maturity of 90 days or less and money market mutual funds to be cash equivalents. The Company maintains cash balances and cash equivalents in highly-qualified financial institutions. At various times such amounts are in excess of insured limits. Cash equivalents can consist of money market mutual funds, government and corporate obligations, and bank time deposits.

Investments

The Company's investment policy restricts investments to high credit quality investments with limits on the length to maturity and the amount invested with any one issuer. These investments, especially corporate obligations, are subject to default risk. The Company classifies its investments as available-for-sale ("AFS") and reports these investments at fair value, with unrealized gains and losses, net of tax, recorded in accumulated other comprehensive income (loss). Realized gains or losses on AFS investments are recorded in "Interest income and other (expense) income, net" in the Statements of Income.

The Company has minority equity investments in privately held companies that are classified in "Other assets" in the Balance Sheets. Substantially, all of these investments are carried at cost because the Company does not have the ability to exercise significant influence over the company. These minority equity investments do not have a readily determinable fair value and the Company has determined that it is not practicable to estimate the fair value of these investments. As of January 27, 2019, and January 28, 2018, the Company had aggregate net investments under the cost method of accounting of \$16.7 million and \$38.1 million, respectively. As of January 27, 2019, and January 28, 2018, aggregate net investment accounted for under equity method of accounting was \$2.7 million and \$3.4 million, respectively. The Company monitors whether there have been any events or changes in circumstances that would have a significant adverse effect on the fair value of these investments and recognizes losses in the income statement when it determines that declines in the fair value of its investments below their cost are other-than-temporary. The Company recorded impairments of \$30.0 million and \$4.3 million during the third quarter of fiscal years 2019 and 2018, respectively.

Accounts Receivable Allowances

Accounts receivable are recorded at net realizable value or the amount that the Company expects to collect on gross customer trade receivables. The Company evaluates the collectability of its accounts receivable based on a combination of factors. The Company generally does not require collateral on accounts receivable as the majority of the Company's customers are large, well-established companies. Historically, bad debt provisions have been consistent with management's expectations. If the Company becomes aware of a customer's inability to meet its financial obligations after a sale has occurred, it records an allowance to reduce the net receivable to the amount it reasonably believes it will be able to collect from the customer. For all other customers, the Company recognizes allowances for doubtful accounts based on the length of time the receivables are past due, the current business environment and historical experience. If the financial condition of the Company's customers were to deteriorate or if economic conditions worsen, additional allowances may be required in the future. All of the Company's accounts receivables are trade-related receivables.

Inventories

Inventories are stated at lower of cost or market and consist of materials, labor, and overhead. The Company determines the cost of inventory by the first-in, first-out method. The Company evaluates inventories for excess quantities and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand. In order to state the inventory at lower of cost or market, the Company maintains reserves against its inventory. If future demand or market conditions are less favorable than the Company's projections, a write-down of inventory may be required, and would be reflected in cost of goods sold in the period the revision is made.

Business Combinations

The Company accounts for business combinations in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 805, "Business Combinations". The Company allocates the purchase price paid for assets acquired and liabilities assumed in connection with acquisitions based on their estimated fair values at the time of acquisition. This allocation involves a number of assumptions, estimates, and judgments that could materially affect the timing or amounts recognized in its financial statements. The most subjective areas include determining the fair value of the following:

- intangible assets, including the valuation methodology, estimations of future cash flows, discount rates, market segment growth rates, and the Company's assumed market segment share, as well as the estimated useful life of intangible assets;
- deferred tax assets and liabilities, uncertain tax positions, and tax-related valuation allowances, which are initially estimated as of the acquisition date;

- inventory; property, plant and equipment; pre-existing liabilities or legal claims; deferred revenue; and contingent consideration, each as may be applicable; and
- goodwill as measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed.

The Company's assumptions and estimates are based upon comparable market data and information obtained from management and the management of the acquired companies. The Company allocates goodwill to the reporting units of the business that are expected to benefit from the business combination.

Variable Interest Entities

The Company is required to consolidate variable interest entities ("VIEs") in which it has a controlling financial interest in accordance with ASC Topic 810, "Consolidation". A controlling financial interest will have both of the following characteristics: (i) the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, and (ii) the obligation to absorb losses of the VIE that could potentially be significant to the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE.

The Company's variable interest in VIEs may be in the form of equity ownership, contracts to purchase assets, management services, and development agreements between the Company and a VIE, loans provided by the Company to a VIE or other member, and/or guarantees provided by members to banks and other parties.

The Company analyzes its investments or other interests to determine whether it represents a variable interest in a VIE. If so, the Company evaluates the facts to determine whether it is the primary beneficiary. The Company considers itself to be the primary beneficiary when it has both the power to direct activities of the VIE that most significantly impact the VIEs economic performance and the obligation to absorb losses from or the right to receive benefits of the VIE that could potentially be significant to the VIE. The Company concluded that some of its equity interests represent a variable interest, but it is not the primary beneficiary as prescribed in ASC 810. Specifically, in reaching this conclusion, the Company considered the activities that most significantly drive profitability for these private entities and determined that the activities that most significantly drive profitability are related to the technology and related product road maps. In some cases, the Company has a board observer role, however, it concluded that in these cases it was not in a position of decision-making or other authority to influence the activities of the private entities that could be considered significant with respect to their operations, including research and development plans and changes to their product road maps. There are currently no VIEs that are consolidated.

Derivatives and Hedging Activities

As required by ASC 815, the Company records all derivatives on the Balance Sheets at fair value. The accounting for changes in the fair value of derivatives depends on the intended use of the derivative, whether the Company has elected to designate a derivative in a hedging relationship and apply hedge accounting and whether the hedging relationship has satisfied the criteria necessary to apply hedge accounting. Derivatives designated and qualifying as a hedge of the exposure to variability in expected future cash flows, or other types of forecasted transactions, are considered cash flow hedges. Hedge accounting generally provides for the matching of the timing of gain or loss recognition on the hedging instrument with the recognition of the changes in the fair value of the hedged asset or liability that are attributable to the hedged risk in a fair value hedge or the earnings effect of the hedged forecasted transactions in a cash flow hedge. The Company may enter into derivative contracts that are intended to economically hedge certain of its risk, even though hedge accounting does not apply or the Company elects not to apply hedge accounting.

In accordance with the FASB's fair value measurement guidance, the Company made an accounting policy election to measure the credit risk of its derivative financial instruments that are subject to master netting agreements on a net basis by counterparty portfolio.

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation is computed over the estimated useful lives of the related asset type or term of the operating lease using the straight-line method for financial statement purposes. Maintenance and repairs are charged to expense as incurred and the costs of additions and betterments that increase the useful lives of the assets are capitalized.

Goodwill

The Company performs an annual impairment assessment of goodwill at the reporting unit level in the fourth quarter of each year, or more frequently if indicators of potential impairment exist. The analysis may include both qualitative and quantitative factors to assess the likelihood of an impairment. The reporting unit's carrying value used in an impairment test represents the assignment of various assets and liabilities, excluding certain corporate assets and liabilities, such as cash, investments, and debt.

Qualitative factors include industry and market considerations, overall financial performance, and other relevant events and factors affecting the reporting unit. Additionally, as part of this assessment, the Company may perform a quantitative analysis to support the qualitative factors above by applying sensitivities to assumptions and inputs used in measuring a reporting unit's fair value.

The Company's quantitative impairment test considers both the income approach and the market approach to estimate a reporting unit's fair value. Significant estimates include market segment growth rates, assumed market segment share, estimated costs, and discount rates based on a reporting unit's weighted average cost of capital.

The Company tests the reasonableness of the inputs and outcomes of its discounted cash flow analysis against available market data. In the current year, the fair value for all of its reporting units exceeds their carrying value, and its annual qualitative assessment did not indicate that a more detailed quantitative analysis was necessary.

Other Intangibles and Long-lived Assets

Finite-lived intangible assets resulting from business acquisitions or technology licenses purchased are amortized on a straight-line basis over their estimated useful lives. The useful lives of acquisition-related intangible assets represent the point where over 90% of realizable undiscounted cash flows for each intangible asset are recognized. The assigned useful lives are based upon the Company's historical experience with similar technology and other intangible assets owned by the Company. The useful life of technology licenses is usually based on the term of the agreement.

Acquired in-process research and development ("IPR&D") projects, which represent projects that had not reached technological feasibility as of the date of acquisition, are recorded at fair value; initially, these are classified as an indefinite-lived intangible asset until the completion or abandonment of the associated research and development efforts. Upon completion of development, acquired IPR&D asset balances are transferred to finite-lived intangible assets and amortized over their useful lives. The asset balances relating to projects that are abandoned after acquisition are impaired and expensed to R&D.

The Company reviews indefinite-lived intangible assets for impairment on an annual basis in conjunction with goodwill or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Recoverability of indefinite-lived intangible assets is measured by comparing the carrying amount of the asset to the future discounted cash flows the asset is expected to generate. Also, the Company reassesses the estimated remaining useful lives of any impaired assets and adjusts accordingly estimates of future amortization expense related to these assets.

The Company assesses finite-lived intangibles and long-lived assets for impairment when indicators of impairment, such as reductions in demand or significant industry and economic slowdowns in the semiconductor industry, are present. Reviews are performed to determine whether the carrying value of an asset is impaired, based on comparisons to undiscounted expected future cash flows. If this comparison indicates that there is impairment, the impaired asset is written down to fair value, which is typically calculated using: (i) quoted market price trends and internal factors such as changes in the Company's business strategy and/or (ii) discounted expected future cash flows utilizing a discount rate. Impairment is based on the excess of the carrying amount over the fair value of those assets the Company forecasts for specific product lines.

For intangible long-lived assets, which consist of core technology and customer relationships, the Company used the multi-period excess earnings method, an income approach, or the replacement cost method (a cost approach), to determine fair value. The multi-period excess earnings method, a form of the income approach, estimates the value of the asset based on the present value of the after-tax cash flows attributable to the intangible asset, which includes the Company's estimates of forecasted revenue, operating margins, taxes, and discount rate. The replacement cost method incorporates a market participant's assumption that an in-use premise is the highest and best use of customer relationships and core technology. The Company estimated the cost it would incur to rebuild or re-establish the intangible asset and the associated effort required to develop it.

The fair values of individual tangible long-lived assets were determined using the cost to reproduce the long-lived asset and taking into account the age, condition, inflation using the U.S. Bureau of Labor Statistics and Marshall Valuation Services, and cost to ready the long-lived asset for its intended use. Additionally, the Company considered the potential existence of functional and economic obsolescence and quantified these elements in its cost approach as appropriate.

Functional Currency

The Company has concluded that the functional currency of all subsidiaries is the United States ("U.S.") Dollar.

Fair Value Measurements

When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the asset or liability, such as inherent risk, transfer restrictions, and risk of nonperformance. The Company uses

the following three levels of inputs in determining the fair value of the Company's assets and liabilities, focusing on the most observable inputs when available:

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 or liabilities; quoted prices in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which all significant inputs are observable or can be derived principally from or corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 - Unobservable inputs to the valuation methodology that are significant to the measurement of fair value of assets or liabilities.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is disclosed is determined based on the lowest level input that is significant to the fair value measurement.

Revenue Recognition

The Company derives its revenue primarily from the sale of semiconductor products into various end markets. Revenue is recognized when control of these products is transferred to the Company's customers, in an amount that reflects the consideration the Company expects 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. The Company includes 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 they are part of its recurring ordinary business.

The Company determines 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; and
- Recognition of revenue when, or as, performance obligations are satisfied.

The Company accounts 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.

The Company's revenue contracts generally represent a single performance obligation to sell its 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 the Company. 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 the Company's historical experience and its current expectations, and is reflected in the transaction price when sales are recorded. Sales returns are generally accepted at the Company's discretion or from distributors with such rights. The Company's contracts with trade customers do not have significant financing components or non-cash consideration. The Company records net sales excluding taxes collected on its sales to its trade customers.

The Company provides an assurance type warranty which is typically not sold separately and does not represent a separate performance obligation. The Company's payment terms are generally aligned with shipping terms.

The following presents the amounts by which financial statement line items were affected in the current period due to the adoption of Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers ("ASC 606") as compared with the guidance that was in effect before the change:

Statements of Income (in thousands, except per share amounts)	Fiscal Year Ended	
	January 27, 2019	
	Increase/(decrease)	
Net sales	\$	9,848
Cost of sales	\$	2,247
Provision for income taxes	\$	1,596
Net income	\$	6,005
Earnings per share:		
Basic	\$	0.09
Diluted	\$	0.09

Balance Sheets (in thousands)	January 27, 2019	
	Increase/(decrease)	
Deferred revenue	\$	(19,987)

This summary excludes line items that were not materially affected by the Company's adoption of ASC 606. The adoption had no impact to total net cash provided by or used in operating, investing or financing activities in the Statements of Cash Flows.

Contract Modifications:

If a contract is modified, which does not normally occur, changes in contract specifications and requirements must be accounted for. The Company considers contract modifications to exist when the modification creates new, or changes existing, enforceable rights and obligations. Most of the Company's contract modifications are to distributor agreements for adding new goods or services that are considered distinct from the existing contract and the change in contract price reflects the standalone selling price of the distinct service.

Disaggregated Revenue:

The Company disaggregates revenue from contracts with customers by types of products and geography, as it believes it best depicts how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors. Refer to "Note 14: Segment Information" for further information on revenues by product line and geographic region.

Contract Balances:

Accounts receivable represents the Company's unconditional right to receive consideration from its customers. Contract assets consist of the Company's right to consideration in exchange for goods or services that the Company has transferred to a customer when that right is conditioned on something other than the passage of time. ASC 606 also requires an entity to present a revenue contract as a contract liability in instances when a customer pays consideration, or an entity has a right to an amount of consideration that is unconditional (e.g. receivable), before the entity transfers a good or service to the customer. The opening and closing contract asset and contract liability balances are not material.

There were no impairment losses recognized on the Company's accounts receivable or contract assets during the fiscal year ended January 27, 2019. There were no significant changes in the contract assets or the contract liabilities for the fiscal year ended January 27, 2019.

Practical Expedients:

Unsatisfied Performance Obligations: Because all of the Company's performance obligations relate to contracts with a duration of less than one year, the Company elected to apply the optional exemption provided in ASC 606 and, therefore, is not required to disclose the aggregate amount of the transaction price allocated to performance obligations that are unsatisfied or partially unsatisfied at the end of the reporting period.

Contract Costs: All incremental customer contract acquisition costs are expensed as they are incurred as the amortization period of the asset that the Company otherwise would have recognized is one year or less in duration.

Significant Financing Component: The Company does not adjust the promised amount of consideration for the effects of a significant financing component as the Company expects, at contract inception, that the period between when the Company transfers a promised

good or service to a customer and when the customer pays for that good or service will be one year or less.

Sales Tax Exclusion from the Transaction Price: The Company excludes from the measurement of the transaction price all taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the Company from the customer.

Shipping and Handling Activities: The Company accounts for shipping and handling activities performed after a customer obtains control of the good as activities to fulfill the promise to transfer the good.

Cost of Sales

Cost of sales includes materials, depreciation on fixed assets used in the manufacturing process, shipping costs, direct labor, and overhead.

Sales and Marketing

The Company expenses sales and marketing costs, which include advertising costs, as they are incurred. Advertising costs were \$0.6 million, \$0.6 million, and \$0.4 million for fiscal years 2019, 2018, and 2017, respectively.

Product Development and Engineering

Product development and engineering costs are charged to expense as incurred. Recoveries from nonrecurring engineering services are recorded as an offset to product development expense incurred in support of this effort since these activities do not represent an earnings process core to the Company's business and serve as a mechanism to partially recover development expenditures.

The Company received approximately \$4.4 million, \$5.4 million, and \$11.9 million in fiscal years 2019, 2018, and 2017 respectively, for nonrecurring engineering services.

Income Taxes

The Company accounts for income taxes using the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts and their respective tax bases. The Balance Sheets include current and long term prepaid taxes under "Prepaid taxes" and "Other assets" and current and long term liabilities for uncertain tax positions under "Accrued liabilities" and "Other long-term liabilities."

As part of the process of preparing the Company's consolidated financial statements, the Company estimates income taxes in each of the jurisdictions in which it operates. This process involves estimating the current tax liability together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities. The Company must assess the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent the Company believes that recovery is not likely, it must establish a valuation allowance. To the extent the Company changes its valuation allowance in a period, the change is generally recorded through the tax provision on the Statements of Income.

The Company continually reviews its position on undistributed earnings from its foreign subsidiaries to determine whether those earnings are indefinitely reinvested offshore. Domestic and foreign operating cash flow forecasts are reviewed to determine the sources and uses of cash. Based on these forecasts, the Company determines the need to accrue deferred tax liabilities associated with its undistributed earnings offshore.

Other Comprehensive Income (Loss)

Other comprehensive income includes unrealized gains and losses on available-for-sale investments, interest rate hedging activities, and defined benefit plans. This information is provided in the Statements of Comprehensive Income.

The following table summarizes the changes in other comprehensive (loss) income by component:

(in thousands)	Fiscal Year Ended								
	January 27, 2019			January 28, 2018			January 29, 2017		
	Pre-tax Amount	Tax Benefit (Expense)	Net Amount	Pre-tax Amount	Tax (Expense) Benefit	Net Amount	Pre-tax Amount	Tax Benefit (Expense)	Net Amount
Defined benefit plan:									
Other comprehensive (loss) gain before reclassifications	\$ (2,597)	\$ 116	(2,481)	\$ 637	\$ (253)	\$ 384	\$ (2,861)	\$ 447	\$ (2,414)
Foreign currency hedge:									
Other comprehensive (loss) gain before reclassifications	(164)	49	(115)	1,205	(263)	942	586	(64)	522
Reclassification adjustments included in "Selling, general and administrative"	233	(44)	189	(1,531)	299	(1,232)	(260)	28	(232)
Interest rate hedge:									
Other comprehensive gain before reclassifications	—	—	—	—	—	—	48	—	48
Other:									
Other comprehensive gain before reclassifications	—	—	—	—	—	—	129	—	129
Other comprehensive (loss) income	<u>\$ (2,528)</u>	<u>\$ 121</u>	<u>\$ (2,407)</u>	<u>\$ 311</u>	<u>\$ (217)</u>	<u>\$ 94</u>	<u>\$ (2,358)</u>	<u>\$ 411</u>	<u>\$ (1,947)</u>

Accumulated Other Comprehensive (Loss) Income

The following summarizes the changes in accumulated other comprehensive (loss) income by component:

(in thousands)	Defined Benefit Plan	Foreign Currency Hedge	Interest Rate Hedge	Other	Accumulated Other Comprehensive (Loss) Income
Balance as of January 31, 2016	\$ —	\$ —	\$ (48)	\$ 701	\$ 653
Other comprehensive (loss) income	(2,414)	290	48	129	(1,947)
Balance as of January 29, 2017	(2,414)	290	—	830	(1,294)
Other comprehensive income (loss)	384	(290)	—	—	94
Balance as of January 28, 2018	(2,030)	—	—	830	(1,200)
Other comprehensive (loss) income	(2,481)	74	—	—	(2,407)
Balance as of January 27, 2019	<u>\$ (4,511)</u>	<u>\$ 74</u>	<u>\$ —</u>	<u>\$ 830</u>	<u>\$ (3,607)</u>

Share-Based Compensation

The Company measures compensation cost for all share-based payments (including stock options) at fair value using valuation models, which consider, among other things, estimates and assumptions on the expected life of options, stock price volatility, and market value of the Company's common stock. Additionally, for awards with a performance condition, the Company uses financial forecasts that use assumptions that are consistent with those used for other valuation exercises, including goodwill valuation and asset impairment assessments. If any of the assumptions used in the valuation model change significantly, share-based compensation expense may differ materially in the future from that recorded in the current period and actual results may differ from estimates.

The Company has various equity award plans ("Plans") that provide for granting stock-based awards to employees and non-employee directors of the Company. The Plans provide for the granting of several available forms of stock compensation. As of January 27, 2019, the Company has granted non-qualified stock option awards ("NQSOs") and restricted stock unit awards ("RSUs") under the Plans and has also issued some share-based compensation outside of the Plans, including NQSOs and RSUs as inducements to join the Company.

Earnings per Share

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

(in thousands, except per share amounts)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Net income	\$ 63,056	\$ 36,426	\$ 54,661
Weighted average common shares outstanding - basic	65,982	66,027	65,427
Dilutive effect of share-based compensation	2,499	1,578	682
Weighted average common shares outstanding - diluted	68,481	67,605	66,109
Basic earnings per common share	\$ 0.96	\$ 0.55	\$ 0.84
Diluted earnings per common share	\$ 0.92	\$ 0.54	\$ 0.83
Anti-dilutive shares not included in the above calculations	553	402	1,111

Basic earnings per common share is computed by dividing income available to common stockholders by the weighted-average number of shares of common stock outstanding during the reporting period. Diluted earnings per common share incorporates the incremental shares issuable, calculated using the treasury stock method, upon the assumed exercise of NQSOs and the vesting of RSUs.

Contingencies

From time to time the Company is a defendant or plaintiff in various legal actions that arise in the normal course of business. The Company is also subject to income tax, indirect tax or other tax claims by tax agencies in jurisdictions in which it conducts business. In addition, the Company is a party to environmental matters including local, regional, state, and federal government clean-up activities at or near locations where the Company currently or has in the past conducted business. The Company is required to assess the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of reasonably possible losses. A determination of the amount of reserves required for these commitments and contingencies that would be charged to earnings, if any, includes assessing the probability of adverse outcomes and estimating the amount of potential losses. The required reserves, if any, may change due to new developments in each matter or changes in circumstances such as a change in settlement strategy.

The Company also records contingent earn-out liabilities, which represent the Company's requirement to make additional payments related to acquisitions based on certain performance targets achieved during the earn-out periods. 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. On a quarterly basis, 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 (or other specified performance targets) 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.

Recently Adopted Accounting Guidance

In May 2014, the FASB issued ASC 606, which requires an entity to recognize revenue from the transfer of control of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance addresses, in particular, contracts with more than one performance obligation, as well as the accounting for some costs to obtain or fulfill a contract with a customer, and provides for additional disclosures with respect to revenues and cash flows arising from contracts with customers.

The Company adopted the standard, effective January 29, 2018, using the modified retrospective transition method which resulted in an adjustment to retained earnings for the cumulative effect of applying the standard to all contracts not completed as of the adoption date. The primary change associated with the adoption relates to the Company's sales to distributors with return or price adjustment rights where the Company will no longer defer revenue until the resale by the distributor to the end customer, but rather, will record revenue at the time control transfers to the distributor. The Company estimated the effects of returns and allowances provided to these distributors. Upon adoption, including the effect of income taxes, opening retained earnings as of January 29, 2018 increased by \$11.1 million net, as a result of these changes. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

In October 2016, the FASB issued ASU No. 2016-16, Intra-Entity Asset Transfers Other Than Inventory (Topic 740). This accounting standard update is aimed at recognizing the income tax consequences of intra-entity transfers of assets other than inventory when they occur. This removes the exception to postpone the recognition of income tax consequences of intra-entity transfers until the asset has been sold to an outside party. In the first quarter of fiscal year 2019, the Company adopted ASU 2016-16 using a modified retrospective transition method, resulting in a \$1.6 million decrease in retained earnings, a \$3.7 million net increase in deferred income tax assets, and a \$5.5 million decrease in pre-paid taxes.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments (Topic 230). The primary purpose of this ASU is to reduce the diversity in practice that has resulted from the lack of consistent principles on this topic. The Company adopted ASU 2016-15 in the first quarter of fiscal year 2019. The adoption of this standard did not result in any changes in classification in the statement of cash flows.

Accounting Guidance Issued but Not Adopted as of January 27, 2019

In February 2018, the FASB issued ASU 2018-02, Income Statement-Reporting Comprehensive Income (ASC 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, will require new disclosures regarding a company's accounting policy for releasing the tax effects in AOCI and permit the Company the option to reclassify to retained earnings the tax effects resulting from the Tax Act that are stranded in AOCI. The Company will adopt this guidance in the first quarter of fiscal year 2020 and does not expect a material impact on its 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 interim and annual 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 will adopt this guidance in the first quarter of fiscal year 2020 and does not expect a material impact on its consolidated financial statements.

In July 2017, the FASB issued ASU No. 2017-11, Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815). This standard addresses narrow issues identified as a result of the complexity associated with applying GAAP for certain financial instruments with characteristics of liabilities and equity. Part I addresses the complexity of accounting for certain financial instruments with down round features. Part II addresses the difficulty of navigating Topic 480, Distinguishing Liabilities from Equity, because of the existence of pending content in the ASC that results from the indefinite deferral of accounting requirements concerning mandatorily redeemable financial instruments of certain non-public entities and certain mandatorily redeemable non-controlling interests. The Company does not expect the adoption of this pronouncement to have a material impact on the Company's consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which will require that substantially all leases be recognized by lessees on their balance sheets as a right-of-use asset and corresponding lease liability, including leases currently accounted for as operating leases with the exception of short-term leases. Public entities are required to apply the amendments for annual periods beginning after December 15, 2018 and for interim periods within those annual periods. The Company will adopt this update beginning in the first quarter of fiscal year 2020 utilizing the modified retrospective transition method by recognizing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company expects to elect certain practical expedients permitted under the transition guidance within the standard.

Although the Company is evaluating the impact of adopting this guidance on its consolidated financial statements, the Company expects that most of its operating lease commitments will be recognized as operating lease liabilities and right-of-use assets upon adoption of this guidance. The Company's leases primarily include, real estate leases (office space) and equipment leases. The Company will adopt the guidance as of January 28, 2019, and prior periods will not be adjusted. The Company continues to implement changes to its systems, processes and controls, in conjunction with its review of existing lease agreements. The Company expects the adoption of this guidance will result in an increase assets and liabilities in the range of \$10.0 million to \$15.0 million on its opening balance sheet as a result of recognizing new right-of-use assets and lease liabilities. The Company does not expect the adoption of this guidance to have a material impact to its consolidated statements of operations or on its total cash flows from operating, investing or financing activities.

The ultimate impact of adopting this guidance will depend on the Company's lease portfolio and other factors as of the transition date.

Note 3: Acquisitions

Trackio International AG

On August 17, 2018, the Company, through its subsidiary Semtech (International) AG, a Swiss corporation, entered into a share purchase agreement to purchase all of the outstanding equity interests of Trackio International AG, a Swiss corporation, and its subsidiaries (collectively, "TrackNet"), for an aggregate purchase price of approximately \$8.5 million (the "TrackNet Acquisition"). TrackNet is a provider of LoRa-based end-to-end solutions for the IoT and provides expertise and intellectual property that will be integrated into the Company's business to support its goal of enabling the growing ecosystem around the Company's LoRa® devices and wireless radio frequency technology. \$4.3 million was attributed to goodwill (see Note 8) and \$3.0 million and \$0.3 million was attributed to the estimated fair values of the intangible and tangible net assets acquired, respectively. The goodwill is not deductible for tax purposes. The transaction was completed on December 11, 2018 and accounted for as a business combination. The Company is still in the process of assessing the purchase price allocation. 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. A summary of the preliminary purchase price allocation is as follows:

(in thousands)	Estimated Useful Life	January 27, 2019
Finite-lived intangible asset - Core Technologies	3 years	\$ 3,000
Goodwill		4,316
Other assets (liabilities), net		1,184
Total consideration		<u>\$ 8,500</u>

IC Interconnect, Inc.

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 8) 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.

AptoVision Technologies Inc.

On July 1, 2017, the Company acquired AptoVision Technologies Inc. ("AptoVision"), a privately-held provider of uncompressed, zero-frame latency, video-over-IP solutions addressing the professional audio visual market. The unique combination of AptoVision's advanced algorithms for real-time, full bandwidth video transmission over IP networks, and Semtech's industry leading high-speed signal integrity and chip development expertise is expected to enable the adoption of Software Defined Video over Ethernet ("SDVoE") accelerating this natural progression in the evolution of video transport.

Under the terms of the share purchase agreement, the Company acquired all of the outstanding equity interest in AptoVision for a cash payment of \$17.6 million at closing, net of acquired cash, and a commitment to pay additional contingent consideration of up to a maximum of \$47.0 million over three years if certain goals are achieved in each of the earn out periods. The fair value of the additional contingent consideration (the "AptoVision Earn-out") as of January 27, 2019, was \$2.2 million, of which \$1.3 million is presented within "Accrued liabilities" and \$0.9 million is presented within "Other long-term liabilities" in the Balance Sheets. For the fiscal year ended January 28, 2018, acquisition related transaction costs of \$1.6 million are accounted for as an expense in the period in which the costs are incurred and are presented within "Selling, general and administrative" expense in the Statements of Income.

AptoVision met the definition of a business and is accounted for under the acquisition method of accounting in accordance with the FASB's ASC Topic 805, Business Combinations. The consideration to acquire AptoVision was allocated to the acquired tangible and intangible assets and assumed liabilities of AptoVision based on their respective estimated fair values as of the acquisition date. A summary of the allocation is as follows:

(in thousands)	Estimated Useful Life	January 27, 2019
Finite-lived intangible asset - Developed Technology	6-7 years	\$ 20,000
Finite-lived intangible asset - Customer Relationships	3 years	4,000
Indefinite-lived intangible asset - in-process research and development ("IPR&D")		2,300
Goodwill		12,194

Other (liabilities) assets, net	(3,875)
Total consideration	<u>\$ 34,619</u>

The fair value of the developed technology rights acquired was determined by estimating the probability-weighted net cash flows attributable to these rights discounted to present value using a discount rate that represents the estimated rate that market participants would use to value this intangible asset. The developed technology rights acquired relate to AptoVision's BlueRiver™ platform.

The fair value of the customer relationships was determined by estimating the amount that would be required currently to replace the customers from lead generations to product shipment.

The IPR&D primarily relates to an assumed license agreement that had been executed in close proximity to the acquisition date. The investment in the license approximates fair value.

The \$12.2 million excess of the acquisition consideration over the fair value of the assets acquired and liabilities assumed was allocated to goodwill. The goodwill resulted from expected synergies and other benefits from the transaction. The Company expects that all such goodwill will be deductible for tax purposes. The purchase price allocation for the AptoVision acquisition is complete.

Net revenues and earnings attributable to AptoVision since the acquisition date were not material. Pro forma results of operations have not been presented as AptoVision's annual financial results are not material to the Company's consolidated financial statements.

Note 4: Investments

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

(in thousands)	January 27, 2019			January 28, 2018		
	Market Value	Adjusted Cost	Gross Unrealized Gain	Market Value	Adjusted Cost	Gross Unrealized Gain
Convertible debt	\$ 3,105	\$ 3,105	\$ —	\$ 1,960	\$ 1,960	\$ —
Total other assets	\$ 3,105	\$ 3,105	\$ —	\$ 1,960	\$ 1,960	\$ —

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

(in thousands)	January 27, 2019	
	Market Value	Adjusted Cost
Within 1 year	\$ 3,105	\$ 3,105
After 1 year through 5 years	—	—
Total investments	\$ 3,105	\$ 3,105

The Company's AFS securities consisted of investments in convertible debt instruments issued by privately-held companies and are included in "Other current assets" in the Balance Sheets.

The Company currently has an investment in MultiPHY Ltd. ("MultiPHY") that is accounted for at cost and was included in "Other assets" in the Balance Sheets. During the third quarter of fiscal year 2019, the Company reduced its expectation of MultiPHY's future operating performance due to new information that became available during the quarter. The Company concluded that the competitive landscape had evolved and that product release and broad market adoption of 400G PAM4 digital signal processing (DSP) technology was delayed. As a result of these indicators of impairment, the Company tested the investment for an other-than-temporary impairment using a discounted cash flow model. The results of its analysis indicated that the investment was other-than-temporarily impaired by \$30.0 million, representing the entire carrying value of the investment. MultiPHY began winding down operations during the fourth quarter of fiscal year 2019.

Note 5: Fair Value Measurements

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 within the Company's Balance Sheets as follows:

(in thousands)	Fair Value as of January 27, 2019				Fair Value as of January 28, 2018			
	Total	(Level 1)	(Level 2)	(Level 3)	Total	(Level 1)	(Level 2)	(Level 3)
Financial assets:								
Convertible debt	\$ 3,105	\$ —	\$ —	\$ 3,105	\$ 1,960	\$ —	\$ —	\$ 1,960
Derivative financial instruments	69	—	69	—	—	—	—	—
Total financial assets	<u>\$ 3,174</u>	<u>\$ —</u>	<u>\$ 69</u>	<u>\$ 3,105</u>	<u>\$ 1,960</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,960</u>
Financial liabilities:								
AptoVision Earn-out	\$ 2,161	\$ —	\$ —	\$ 2,161	\$ 21,000	\$ —	\$ —	\$ 21,000
Cycleo Earn-out	462	—	—	462	668	—	—	668
Total financial liabilities	<u>\$ 2,623</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 2,623</u>	<u>\$ 21,668</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 21,668</u>

During fiscal years 2019 and 2018, the Company had no transfers of financial assets or liabilities between Level 1, Level 2 or Level 3. As of January 27, 2019, and January 28, 2018, 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 exchange 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 the Balance Sheets under the caption "Other current assets" and the value of contracts in a loss position are recorded under the caption "Accrued liabilities" within the Balance Sheets. Please see Note 17 for further discussion of the Company's derivative instruments.

The convertible debt is valued using probability weighted cash flows (Level 3 inputs).

The AptoVision Earn-out liability (see Note 13) 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 are 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 13) is valued utilizing estimates of annual revenue and operating income (Level 3 inputs) through April 2020. These estimates represent inputs for which market data are 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 AptoVision Earn-out and Cycleo 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 fiscal year ended January 27, 2019, is as follows:

(in thousands)	AptoVision	Cycleo	Total
Balance at January 28, 2018	\$ 21,000	668	\$ 21,668
Changes in fair value of contingent earn-out obligations	(9,419)	—	(9,419)
Payments	(9,420)	(206)	(9,626)
Balance as of January 27, 2019	<u>\$ 2,161</u>	<u>\$ 462</u>	<u>\$ 2,623</u>

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 10) is \$115.3 million and Revolving Commitments (as defined in Note 10) is \$97.0 million at January 27, 2019, both of which are based on Level 2 inputs which are derived from transactions with similar amounts, maturities, credit ratings and payment terms.

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 its investment in non-marketable equity interests, the Company has not identified, other than as stated below, events or changes in circumstances that may have a significant adverse effect on the fair value of its equity investments during fiscal year 2019.

As noted in Note 4, the Company tested a cost method investment for impairment during the third quarter of fiscal year 2019 that resulted in a \$30.0 million write-down of the investment. In determining that the fair value of the Company's investment is zero, the Company used a discounted cash flow model. The valuation model is most sensitive to the weighted average cost of capital assumption, which was determined to be approximately 38.8%, given the nature of the investment.

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 consist of the following:

(in thousands)	January 27, 2019	January 28, 2018
Work in progress	\$ 44,530	\$ 46,884
Finished goods	17,092	22,532
Raw materials	2,057	1,651
Inventories	<u>\$ 63,679</u>	<u>\$ 71,067</u>

Note 7: Property, Plant and Equipment

The following is a summary of property and equipment:

(in thousands)	Estimated Useful Lives	January 27, 2019	January 28, 2018
Property		\$ 11,314	\$ 11,314
Buildings	7 to 39 years	32,229	32,244
Leasehold improvements	7 to 39 years	9,863	10,050
Machinery and equipment	5 to 8 years	185,045	171,731
Enterprise resource planning systems	13 years	32,673	32,673
Furniture and office equipment	3 to 7 years	40,437	39,027
Construction in progress		2,960	7,151
Property, plant and equipment, gross		314,521	304,190
Less accumulated depreciation and amortization		(196,033)	(179,604)
Property, plant and equipment, net		\$ 118,488	\$ 124,586

As of January 27, 2019, and January 28, 2018, construction in progress consists primarily of machinery and equipment awaiting completion of installation and being placed in service.

Depreciation expense was \$23.0 million, \$21.1 million, and \$21.7 million in fiscal years 2019, 2018, and 2017, respectively.

Note 8: 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 28, 2018	\$ 274,085	\$ 67,812	\$ —	\$ 341,897
Additions ⁽¹⁾	—	4,316	4,928	9,244
Balance at January 27, 2019	<u>\$ 274,085</u>	<u>\$ 72,128</u>	<u>\$ 4,928</u>	<u>\$ 351,141</u>

⁽¹⁾ See Note 3 for Goodwill associated with acquisitions in the current fiscal year.

Goodwill is not amortized, but is tested for impairment using either a qualitative assessment or a two-step method on an annual basis, and whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The recoverability of goodwill is measured at the reporting unit level by comparing the reporting unit's carrying amount, including goodwill, to the fair market value of the reporting unit.

As a result of the realignment of its operating segments, during the first quarter of fiscal year 2019, the Company combined the Wireless and Sensing and the Power and High-Reliability reporting units (see Note 14). Goodwill of \$49.4 million that was related to the Power and High-Reliability reporting unit, which was previously a separate reporting unit, is now included in the Wireless and Sensing reporting unit's goodwill balance.

The reporting units are the same as the operating segments which are part of a single reportable segment. The difference between the fair value and the carrying amount of these reporting units is one of several factors the Company considers when assessing whether to perform the first step of the goodwill impairment test.

Goodwill is tested for impairment at the reporting unit level during the fourth quarter of each fiscal year.

For fiscal years 2019 and 2018, the Company performed a qualitative assessment and concluded that it was more likely than not that the fair value of each of the three reporting units exceeded its carrying value. As such, the Company did not perform a quantitative impairment analysis.

In addition to its annual review, the Company performs a test of impairment when indicators of impairment are present. As of January 27, 2019, and January 28, 2018, there were no indications 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 and technology licenses purchased, which continue to be amortized:

(in thousands)	Estimated Useful Life	January 27, 2019			January 28, 2018		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Core technologies	5-8 years	\$ 167,930	\$ (136,544)	\$ 31,386	\$ 164,930	\$ (115,628)	\$ 49,302
Customer relationships	3-10 years	34,031	(31,159)	2,872	34,031	(25,426)	8,605
Total finite-lived intangible assets		<u>\$ 201,961</u>	<u>\$ (167,703)</u>	<u>\$ 34,258</u>	<u>\$ 198,961</u>	<u>\$ (141,054)</u>	<u>\$ 57,907</u>

Amortization expenses recorded in the Statements of Income for each period were as follows:

(in thousands)	January 27, 2019	January 28, 2018	January 29, 2017
Core technologies	\$ 20,916	\$ 22,688	\$ 20,901
Customer relationships	5,733	5,179	4,400
Total amortization expense	<u>\$ 26,649</u>	<u>\$ 27,867</u>	<u>\$ 25,301</u>

Future amortization expense is expected to be as follows:

(in thousands)

<u>To be recognized in:</u>	Core Technologies	Customer relationships	Total
Fiscal year 2020	\$ 14,239	\$ 2,283	\$ 16,522
Fiscal year 2021	7,389	589	7,978
Fiscal year 2022	4,655	—	4,655
Fiscal year 2023	3,714	—	3,714
Fiscal year 2024	1,389	—	1,389
Thereafter	—	—	—
Total expected amortization expense	<u>\$ 31,386</u>	<u>\$ 2,872</u>	<u>\$ 34,258</u>

The following table sets forth the Company's indefinite-lived intangible assets resulting from additions to IPR&D:

(in thousands)

	Net Carrying Amount
Value at January 29, 2017	\$ —
In-process research and development through acquisitions	2,300
Value at January 28, 2018	<u>2,300</u>
Value at January 27, 2019	<u>\$ 2,300</u>

The Company reviews indefinite-lived intangible assets for impairment during the fourth quarter of each year by comparing the carrying amount of the asset to the future discounted cash flows that asset is expected to generate.

Note 9: Accrued Liabilities

The following is a summary of accrued liabilities for fiscal years 2019 and 2018:

(in thousands)	January 27, 2019	January 28, 2018
Compensation	\$ 30,292	\$ 20,476
Earn-out liability	3,276	10,958
Deferred compensation	2,203	2,333
Sales reserves (ASC 606)	10,073	3,108
Professional fees	2,336	2,377
Royalties	4,758	3,820
Income taxes payable	2,105	1,470
Environmental reserve	1,460	2,583
Restructuring	720	5,078
Other	7,800	8,629
Accrued liabilities	<u>\$ 65,023</u>	<u>\$ 60,832</u>

Note 10: Long-Term Debt

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

(in thousands)	Balance as of	
	January 27, 2019	January 28, 2018
Term loans	\$ 115,312	\$ 131,250
Revolving loans	97,000	97,000
Total debt	212,312	228,250
Current portion	(18,269)	(15,410)
Total long-term debt	194,043	212,840
Debt issuance costs	(1,198)	(1,726)
Total long-term debt, net of debt issuance costs	\$ 192,845	\$ 211,114
Weighted-average interest rate	4.14%	3.19%

On November 15, 2016 (the "Closing Date"), the Company, with certain of its domestic subsidiaries as guarantors (the "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 (the "Administrative Agent"). Pursuant to the Credit Agreement, the Lenders provided the Company 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 initial principal amount of \$150.0 million ("Term Loans") and revolving commitments in an aggregate principal amount of \$250.0 million ("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. The proceeds of the Revolving Loans may be used by the Company for capital expenditures, permitted acquisitions, permitted dividends, working capital, and general corporate purposes. The Credit Facility is scheduled to mature on November 12, 2021.

All of the proceeds of the Credit Facility were used to repay in full all of the obligations outstanding under the Company's then existing senior secured first lien credit facility and to pay transaction costs in connection with such refinancing.

The Credit Agreement provides that, subject to certain conditions, the Company may request 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. The Lenders will have an opportunity to, but are not required to participate in the additional term loan facilities and/or increases to the Revolving Loans. If the Lenders do not agree to provide such incremental facilities, the Company may request such additional and/or increased facilities from additional lenders.

Interest on loans made under the Credit Agreement in U.S. Dollars accrues, at the Company's 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 the Company's consolidated leverage ratio or (2) LIBOR (determined with respect to deposits in U.S. Dollars) for an interest period to be selected by the Company plus a margin ranging from 1.25% to 2.25% depending upon the Company's consolidated leverage ratio (such margin, the "Applicable Margin"). The initial interest margin will be 2.00% for Base Rate loans and 1.00% for LIBOR rate loans, applicable until 2 business days following delivery of a compliance certificate by Semtech to the Administrative Agent with respect to the first fiscal period ending after the Closing Date. The "Base Rate" is equal to a fluctuating rate equal to the highest of (a) the prime rate of the Administrative Agent, (b) $\frac{1}{2}$ 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 Agreement 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 the Company plus the Applicable Margin.

Commitment fees on the unused portion of the Revolving Loans accrue at a rate per annum ranging from 0.20% to 0.45% depending upon the Company's consolidated leverage ratio, provided the initial commitment fee shall be 0.40% per annum, applicable until two business days following delivery of a compliance certificate by the Company to the Administrative Agent with respect to the first fiscal period ending after the Closing Date. With respect to letters of credit, the Company will pay the Administrative Agent, for the account of the lenders under the revolving credit facility, letter of credit participation fees at a rate per annum equal to the applicable margin then in effect with respect to LIBOR-based loans under the Revolving Loans on the face amount of all outstanding letters of credit. The Company also will pay HSBC Bank USA, National Association, as the

issuing bank, a fronting fee for each letter of credit issued under the Credit Facility at a rate equal to 0.125% per annum based on the maximum amount available to be drawn under each such letter of credit, as well as its customary documentation fees.

All obligations of the Company under the Credit Facility are unconditionally guaranteed by each of the Guarantors, which currently consist of all of the direct and indirect domestic subsidiaries of Semtech Corporation. Semtech Corporation and the Guarantors have also pledged substantially all of their assets to secure their obligations under the Credit Facility, including the Company's owned real property located in Camarillo, California.

The outstanding principal balance of the Term Loans will be subject to repayment in quarterly installments. No amortization is required with respect to the Revolving Loans. The Company 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.

The Credit Agreement contains customary covenants, including limitations on the Company's ability to, among other things, incur indebtedness, create liens on assets, engage in certain fundamental corporate changes, make investments, sell or otherwise dispose of assets, repurchase stock, pay dividends or make similar distributions, engage in certain transactions with affiliates and make capital expenditures. In addition, the Company must comply with the following financial covenants, tested at the end of each fiscal quarter on a trailing four-quarter basis: (i) a minimum consolidated interest coverage ratio of 3.00 to 1.00 and (ii) a maximum consolidated leverage ratio of 3.00 to 1.00 provided that, such maximum consolidated leverage ratio may be increased to 3.25 to 1.00 or 3.50 to 1.00, as applicable, for the four consecutive fiscal quarters ending on or after the date of consummation of a permitted acquisition which constitutes a "Material Acquisition" under the Credit Agreement, subject to the satisfaction of certain conditions. As of January 27, 2019, the Company was in compliance with its financial covenants.

The Credit Agreement also contains customary provisions pertaining to events of default. If any event of default occurs, the principal, interest, and any other monetary obligations on all the then outstanding amounts can become due and payable immediately by action of the Administrative Agent acting upon the instructions of or with the consent of the Lenders representing more than 50% of the Revolving Loans and outstanding Term Loans or automatically upon the occurrence of certain bankruptcy events related to the Company.

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

(in thousands)

Fiscal Year Ending:

2020	\$	18,750
2021		19,687
2022		76,875
Total debt	\$	<u>115,312</u>

There are no scheduled principal payments for the Revolving Loans which had an outstanding balance of \$97.0 million at January 27, 2019, and is due on or before November 12, 2021.

As of January 27, 2019, the Company had \$153.0 million of unused borrowing capacity under the Revolving Loans.

As of January 27, 2019, there were no amounts outstanding under the letters of credit, swing line loans and alternative currency sub-facilities.

Note 11: Share-Based Compensation

Financial Statement Effects and Presentation. The following table summarizes pre-tax share-based compensation included in the Statements of Income for fiscal years 2019, 2018, and 2017:

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Revenue offset (Warrant)	\$ 21,501	\$ 16,219	\$ 5,396
Cost of sales	1,639	1,477	1,591
Selling, general and administrative	41,581	22,423	18,019
Product development and engineering	9,138	7,817	5,822
Share-based compensation	\$ 73,859	\$ 47,936	\$ 30,828
Net change in share-based compensation capitalized into inventory	\$ —	\$ (414)	\$ 38

Grant Date Fair Values and Underlying Assumptions:

The Company uses the Black-Scholes pricing model to value stock options. The estimated fair value of restricted stock units, for which vesting is not linked to a market condition, is calculated based on the market price of the Company's common stock on the date of grant. For restricted stock units that vest according to a market condition, the Company uses a Monte Carlo simulation model to value the award.

The following table summarizes the assumptions used in the Black-Scholes model to determine the fair value of stock options granted in fiscal years 2019, 2018, and 2017:

	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Expected lives, in years	4.5	4.2	4.1 - 4.5
Estimated volatility	32.2%	31.7%	31% - 32%
Dividend yield	—	—	—
Risk-free interest rate	2.55% - 2.68%	1.68%	1.04% - 1.51%
Weighted average fair value on grant date	\$14.53	\$10.70	\$5.71

The assumptions used in the Black-Scholes option pricing model were determined as follows:

- *Fair Value of Common Stock* - The closing price on the date of the grant.
- *Expected Term* - The expected term represents the period that the Company's stock-based awards are expected to be outstanding.
- *Expected Volatility* - The expected volatility was derived from the annualized volatility of the Company's closing stock price over the preceding three or four years depending upon the life of the option award.
- *Risk-Free Interest Rate* - The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the stock option grants.
- *Dividend Rate* - The Company has never declared or paid any cash dividends and do not plan to pay cash dividends in the foreseeable future, and, therefore, use an expected dividend yield of zero.

Stock Options. The Company has historically granted non-qualified stock options to both employees and non-employee directors. The fair value of these grants was measured on the grant date. The grant date for these awards is equal to the measurement date. These awards are valued as of the measurement date and recognized as an expense over the requisite vesting period (typically 3-4 years). The number of shares authorized per the equity incentive plan is 17,031,653. The maximum contractual term of equity share options is ten years.

The following table summarizes the activity for stock options for fiscal years 2019:

(in thousands, except for per share amounts)	Number of Shares	Weighted Average Exercise Price (per share)	Aggregate Intrinsic Value ⁽¹⁾	Number of Shares Exercisable	Weighted Average Contractual Term (years)
Balance at January 28, 2018	1,345	\$ 26.17	\$ 13,953	807	
Options granted	147	47.99			
Options exercised	(595)	27.36	12,280		
Options cancelled/forfeited	(20)	26.15			
Balance at January 27, 2019	877	\$ 29.03	\$ 18,226	472	
Exercisable at January 27, 2019	472	\$ 24.37	\$ 11,991		2.3
Vested and expected to vest after January 27, 2019	877	\$ 29.03	\$ 18,226		3.4

⁽¹⁾ The aggregate intrinsic value of stock options vested and exercisable and vested and expected to vest as of January 27, 2019 is calculated based on the difference between the exercise price and the closing price \$49.77 of the Company's common stock on January 25, 2019.

The aggregate unrecognized compensation as of January 27, 2019, is \$3.2 million to be recognized over 3.0 years.

The following table summarizes information regarding unvested stock option awards at January 27, 2019:

(in thousands, except for per share amounts)	Number of Shares	Weighted Average Exercise Price (per share)	Weighted Average Grant Date Fair Value (per share)
Balance at January 28, 2018	534	\$ 25.50	\$ 7.10
Options granted	147	47.99	14.53
Options vested	(261)	24.28	6.86
Options forfeited	(20)	26.15	7.30
Balance at January 27, 2019	400	\$ 34.52	\$ 10.07

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. Prior to fiscal year 2018, the Company granted performance-based restricted stock units with performance metrics that were based on a pre-defined cumulative three-year performance of the Company's revenue and non-GAAP operating income measured against internal goals. For these awards, the performance was tied to the Company's performance in the grant year and the succeeding two fiscal years. The performance award recipients must be employed for the entire three-year period, which is the explicit service and requisite service period, and be an active employee at the time of vesting of the awards (cliff vesting at the end of the third year). At January 27, 2019, the performance metrics associated with the remaining outstanding awards, which were issued in fiscal year 2017, were met at a level which resulted in a grant that vested at 180.8% of target. Under the terms of these awards, 187,116 shares will be settled in shares and 187,116 shares will be settled in cash. Shares to be settled in cash have been classified as liabilities and the value of these awards are accrued under "Other liabilities" within the Consolidated Balance Sheets.

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.

Beginning in fiscal year 2018, the Company granted 215,857 performance-based restricted stock units that have a pre-defined market condition and service condition. These grants are accounted for as equity awards. The market condition is determined based upon the Company's total shareholder return ("TSR") benchmarked against the TSR of the S&P SPDR Semiconductor ETF (NYSE:XSD) over a one, two and three-year performance period (one-third of the awards vesting each performance period). Award recipients must be employed for the entire performance period and be an active employee at the time of vesting. 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 2018 for each one, two and three-year performance period is \$38.01, \$39.76 and \$40.89, respectively. The portion of the awards that vested at the end of fiscal year 2019 reflected a performance achievement of 158.1% of target. At January 27, 2019, the market metrics associated with the outstanding awards issued in fiscal year 2018 is expected to be met at a level which would result in a performance achievement of 158.1% of target.

In the first quarter of fiscal year 2019, the Company granted 200,442 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, and three-year period (one-third of the awards vesting each performance period). The fiscal year 2019 award recipients must be employed for the entire performance period and be an active employee at the time of vesting. 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 2019 for each one, two, and three-year performance period is \$33.02, \$34.85, and \$36.52, respectively. The portion of the awards that vested at the end of fiscal year 2019 reflected a performance achievement of 180.2% of target. At January 27, 2019, the market metrics associated with the outstanding awards issued in fiscal year 2019 is expected to be met at a level which would result in a performance achievement of 180.2% of target.

The following table summarizes the activity for performance-based restricted stock units for fiscal years 2019 and 2018:

		Subject to Share Settlement	Subject to Cash Settlement	Weighted Average Grant Date Fair Value (per share)
(in thousands, except for per share amounts)	Total Units	Units	Units	Recorded Liability
Balance at January 28, 2018	363	255	108	\$ 6,468
Performance units granted	287	244	43	
Performance units vested	(431)	(286)	(145)	—
Performance units cancelled/forfeited	(16)	(10)	(6)	
Change in liability		—		2,845
Balance at January 27, 2019	203	203	—	\$ 9,313

The liability associated with performance-based restricted stock units increased by \$2.8 million in fiscal year 2019 due to the re-measurement adjustments and changes in the expected performance results. The aggregate unrecognized compensation as of January 27, 2019, is \$6.8 million which will be recognized over 1.3 years.

Market Performance Restricted Stock Units. On February 26, 2014, the Company granted its Chief Executive Officer ("CEO") restricted stock units with a market performance condition. The award is eligible to vest during the period commencing February 26, 2014, and ending February 26, 2019 (the "Performance Period") as follows: 30% of the restricted

stock units covered by the award will vest if, during any consecutive 120 calendar 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 \$35.00 ("Tranche 1") and the award will vest in full if, during any consecutive 120 calendar 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 \$40.00 ("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 having a value equal to or greater than \$40.00. The fair value of the awards was determined to be \$17.26 and \$14.88 for Tranche 1 and Tranche 2, respectively, on the grant date by application of the Monte Carlo simulation model. These awards were fully expensed prior to fiscal year 2018.

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 2015 for both Tranche 1 and Tranche 2.

	January 25, 2015	
	Tranche 1	Tranche 2
Expected life, in years	1.6	2.1
Estimated volatility	34%	34%
Dividend yield	—%	—%
Risk-free interest rate	1.5%	1.5%
Weighted average fair value on grant date	\$17.26	\$14.88

The following table summarizes the activity for the market performance restricted stock units for the fiscal year ended January 27, 2019:

(in thousands, except for per share amounts)	Total Units	Weighted Average Grant Date Fair Value (per share)
Balance at January 28, 2018	154	\$ 14.88
Market performance units granted	—	—
Market performance units vested	(154)	14.88
Market performance units cancelled/forfeited	—	—
Balance at January 27, 2019	—	\$ —

Restricted Stock Units, Employees. The Company grants restricted stock units to employees which are expected to be settled with shares of the Company's common stock. The grant date for these awards is equal to the measurement date. These awards are valued as of the measurement date and recognized as an expense over the requisite vesting period (typically 4 years).

(in thousands, except for per share amounts)	Restricted Stock Units, Stock Grants, and Stock Units			Performance Shares ⁽¹⁾		
	2019	2018	2017	2019	2018	2017
Units granted	998	983	1,228	287	216	231
Weighted-average grant date fair value	\$ 45.36	\$ 36.96	\$ 22.12	\$ 32.93	\$ 39.55	\$ 17.51

⁽¹⁾ Restricted stock units granted includes awards that will be cash settled of 146,827 units in fiscal year 2019, 0 units in fiscal year 2018, and 115,500 units in fiscal year 2017.

The following table is a summary of the status of non-vested restricted stock unit awards as of January 27, 2019, and changes during the year.

(in thousands, except for per share amounts)	Restricted Stock Units, Stock Grants, and Stock Units		Performance Shares	
	Shares	Weighted Average Grant Date Fair Value (per share)	Shares	Weighted Average Grant Date Fair Value (per share)
Nonvested at January 28, 2018	2,175	\$ 28.42	363	\$ 26.58
Granted	998	45.36	287	32.93
Vested	(848)	26.45	(431)	25.83

Forfeited	(121)		32.56	(16)		20.28
Nonvested at January 27, 2019	<u>2,204</u>	\$	36.62	<u>203</u>	\$	37.51

The aggregate unrecognized compensation for the non-vested restricted stock units and performance shares as of January 27, 2019, is \$63.7 million and \$6.8 million, respectively, which will be recognized over 2.3 and 1.3 years, respectively.

Restricted Stock Units, Cash-Settled, Non-Employee Directors. The Company maintains a compensation program pursuant to which restricted stock units are granted to the Company's directors that are not employed by the Company or any of its subsidiaries. In June 2015, the Company changed its director compensation program so that a portion of the stock units granted under the program would be settled in cash and a portion would be settled in shares of the Company's common stock. Restricted stock units awarded under the program are scheduled to vest on the earlier of (i) one year after the grant date or (ii) the day immediately preceding the annual meeting of shareholders in the year following the grant. The portion of a restricted stock unit award under the program that is to be settled in cash will, subject to vesting, be settled when the director who received the award separates from the board of directors. The portion of a restricted stock unit award under the program that is to be settled in shares of stock will, subject to vesting, be settled promptly following vesting. There were no changes to the terms and conditions of the existing awards.

The restricted stock units that are to be settled in cash are accounted for as liabilities. Because these awards are not typically settled until a non-employee director's separation from service, the value of these awards is re-measured at the end of each reporting period until settlement.

As of January 27, 2019, the total number of vested but unsettled restricted stock units for non-employee directors is 176,861. As of January 27, 2019, \$9.2 million of the liability associated with these awards is included in "Other long-term liabilities" within the Balance Sheets.

Restricted Stock Units, Stock Settled, Non-Employee Directors. As a result of the June 2015 changes to the Company's director compensation program, beginning in July 2015, the Company began granting new restricted stock units to non-employee Directors which are expected to be settled with shares of the Company's common stock at the time of vesting. The grant date for these awards is equal to the measurement date. These awards are valued as of the measurement date and recognized as an expense over the requisite vesting period (typically one year). As of January 27, 2019, the total number of unvested shares is 12,257.

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.

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 is recognized based on the fair value at each reporting date until vesting which is the measurement date. On April 27, 2018, the Company accelerated the vesting of the remaining 586,956 unvested shares from the Warrant, resulting in the full recognition of the remaining costs to be recognized for the Warrant. For the fiscal year ended January 27, 2019, the revenue offset reflects the cost associated with the Warrant of \$21.5 million, including \$15.9 million related to the acceleration. 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.

Note 12: Income Taxes

The Company's regional income before income taxes is as follows:

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Domestic	\$ (20,211)	\$ (14,421)	\$ (19,602)
Foreign	83,309	74,292	92,662
Total	<u>\$ 63,098</u>	<u>\$ 59,871</u>	<u>\$ 73,060</u>

The (benefit) provision for income taxes consists of the following:

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Current income tax provision			
Federal	\$ (147)	\$ 2,108	\$ —
State	—	—	—
Foreign	21,753	13,442	16,034
Subtotal	<u>21,606</u>	<u>15,550</u>	<u>16,034</u>
Deferred income tax (benefit) provision			
Federal	(25,367)	7,701	107
State	—	—	—
Foreign	3,677	(60)	2,258
Subtotal	<u>(21,690)</u>	<u>7,641</u>	<u>2,365</u>
(Benefit) provision for income taxes	<u>\$ (84)</u>	<u>\$ 23,191</u>	<u>\$ 18,399</u>

The (benefit) provision for income taxes reconciles to the amount computed by applying the statutory federal rate to income before taxes as follows:

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Federal income tax at statutory rate	\$ 13,223	\$ 20,222	\$ 25,571
State income taxes, net of federal benefit	(55)	(159)	—
Foreign taxes differential	2,910	(8,698)	(12,074)
Tax credits generated	(3,344)	(3,278)	(2,864)
Changes in valuation allowance	(23,029)	(41,911)	5,578
Non-taxable gain on sale	—	—	(2,978)
Changes in uncertain tax positions	2,219	1,538	1,047
Equity compensation	1,849	(8,333)	2,553
Permanent differences	—	264	448
GILTI and Subpart F income	1,164	299	266
Impact of US tax reform	1,904 ⁽¹⁾	65,442 ⁽²⁾	—
Other	3,075	(2,195)	852
(Benefit) provision for income taxes	<u>\$ (84)</u>	<u>\$ 23,191</u>	<u>\$ 18,399</u>

⁽¹⁾ Impact of US tax reform for fiscal year 2019 includes a tax benefit from overall reduction to transition tax of approximately \$5.0 million, and a tax expense from reduction to foreign tax credits of approximately \$6.9 million. During fiscal year 2019, the Company continues to maintain a valuation allowance against foreign tax credits. The transition tax, net of deferreds, resulted in no current income tax payable.

⁽²⁾ Impact of US tax reform for fiscal year 2018 includes \$66.5 million of expense due to the estimated impact of the transition tax, net of foreign tax credits generated.

In prior fiscal years, the Company received an income tax benefit from tax rate differentials due to its presence in foreign jurisdictions such as Switzerland and Canada where statutory rates were lower than U.S. federal tax rates. This income tax benefit is reflected in the line item "Foreign taxes differential." This line also includes the benefit of the Swiss Ruling discussed

below. However, for the current year, due to the US rate being lower than the tax rate in the Company's larger foreign jurisdictions, such as Canada, there is an overall provision expense for foreign jurisdictions in fiscal year 2019.

On December 6, 2016, the Company was granted a tax holiday ("Tax Holiday") with an effective date of January 30, 2017. This Tax Holiday replaced the previous Swiss Ruling. The Tax Holiday provides Semtech (International) AG with a 70% reduction to the Cantonal tax rate, bringing the statutory Cantonal tax rate down from 12.56% to 3.77%. The maximum benefit under this Tax Holiday is CHF 500.0 million of cumulative after tax profit which equates to a maximum potential tax savings of CHF 44.0 million. The Tax Holiday is effective for five years and can be extended for an additional five years if the Company meets certain staffing targets by January 30, 2022.

The Tax Cuts and Jobs Act of 2017

On December 22, 2017, the U.S. enacted the Tax Act that instituted fundamental changes to the taxation of multinational corporations. The Tax Act includes changes to the taxation of foreign earnings by implementing a dividend exemption system, expansion of the current anti-deferral rules, a minimum tax on low-taxed foreign earnings and new measures to deter base erosion. The Tax Act also includes a permanent reduction in the corporate tax rate to 21%, repeal of the corporate alternative minimum tax, expensing of capital investment, and limitation of the deduction for interest expense. Furthermore, as part of the transition to the new tax system, a one-time transition tax is imposed on a U.S. shareholder's historical undistributed earnings of foreign affiliates. Although the Tax Act is generally effective January 1, 2018, GAAP required recognition of the tax effects of new legislation during the reporting period that includes the enactment date, which was December 22, 2017.

As a result of the impact of the Tax Act, the SEC provided guidance (Staff Accounting Bulletin 118 ("SAB 118")) that allows public companies to record provisional amounts for those impacts, with the requirement that the accounting be completed in a period not to exceed one year from the date of enactment. As of January 28, 2018, the Company had not completed the accounting for the tax effects of the Tax Act. Therefore, the Company recorded provisional amounts for the effects of the Tax Act, including but not limited to, the following primary impacts of the Tax Act: re-measurement of deferred tax assets and liabilities and the estimated calculation of the one-time mandatory transition tax on undistributed earnings of foreign affiliates. The final accounting for the Tax Act was completed during fiscal year 2019.

Corporate Tax Rate Change: For the year ended January 28, 2018, the Company recorded an income tax benefit of approximately \$2.6 million due to the decrease in the corporate tax rate from 35% to 21% and resulting re-measurement of the Company's indefinite-lived deferred tax liability. As of January 27, 2019, the Company finalized the analysis and did not make any adjustment to the provisional amount recorded for the year ended January 28, 2018.

Global Intangible Low Taxed Income: In addition to the changes described above, the Tax Act imposed a U.S. tax on global intangible low taxed income ("GILTI") that is earned by certain foreign affiliates owned by a U.S. shareholder. The GILTI provisions effectively tax the foreign earnings of U.S. multinational companies at 10.5%, half the current corporate tax rate. During fiscal year 2019, as a result of the Company obtaining the information necessary to evaluate the impact of the GILTI provisions, the Company finalized its analysis regarding the interplay of foreign tax credits associated with this income, which are allowed against the U.S. tax liability generated as a result of the GILTI provision, and the potential impact on the related valuation allowance. As a result, the Company recorded a tax benefit of \$15.8 million during the first quarter of fiscal year 2019 related to the reduction of the valuation allowance on certain U.S. deferred tax assets generated prior to fiscal year 2019. In accordance with guidance issued by the FASB, the Company has made a policy election to treat future taxes related to GILTI as a current period expense in the reporting period in which the tax is incurred. For fiscal year 2019, the Company recorded approximately \$0.9 million of provision expense related to GILTI inclusions.

Mandatory Transition Tax: For the year ended January 28, 2018, the Company recorded a provisional income tax expense of \$2.1 million (net of valuation allowance) due to the imposition of the mandatory transition tax on the deemed repatriation of undistributed foreign earnings. In connection with this expense, the Company has estimated that it will utilize approximately \$78.4 million of tax attributes, resulting in a current tax liability of \$1.1 million. As of January 27, 2019, the Company completed its accounting for the tax effects of the Tax Act and was able to use approximately \$76.5 million of tax attributes to completely offset any cash tax liability resulting from the transition tax. During the fourth quarter of fiscal year 2019, the Company completed the final accounting related to the remeasurement of its existing deferred tax assets under SAB 118 and recorded a net \$1.9 million increase to the tax provision expense.

Undistributed Foreign Earnings: Prior to the enactment of the Tax Act, with few exceptions, U.S. federal income and foreign withholding taxes had not been provided on the excess of the amount for financial reporting over the tax basis of investments in the Company's foreign subsidiaries that were essentially permanent in duration. With the enactment of the Tax Act, all post-1986 previously unremitted earnings for which no U.S. deferred tax liability had been accrued have now been subject to U.S. tax. Notwithstanding the U.S. taxation of these amounts, the Company has determined that \$516.0 million of foreign earnings will continue to be reinvested indefinitely outside of the U.S. As a result, the Company has not provided any tax on these amounts because the

Company believes that it currently has the ability to keep those earnings indefinitely invested and the Company has specific plans for reinvestment of these undistributed foreign earnings. In connection with the enactment of

the Tax Act, the Company has determined it will remit approximately \$240.0 million of foreign earnings in the foreseeable future, and as a result, has established a deferred income tax liability for the withholding tax that will be due upon distribution of these earnings. During fiscal year 2019, approximately \$80.0 million of foreign earnings were remitted, and the deferred income tax liability for the withholding tax was adjusted accordingly.

While management believes the amounts recorded during fiscal year 2019 represent reasonable estimates of the ultimate impact U.S. tax reform will have on the Company's consolidated financial statements, it is possible the Company may materially adjust these amounts in consideration of future administrative guidance, notices, implementation regulations, potential legislative amendments and interpretations. These adjustments could have a material impact on the Company's Balance Sheets and Statements of Income.

The components of the net deferred income tax assets and liabilities at January 27, 2019 and January 28, 2018 are as follows:

(in thousands)	January 27, 2019	January 28, 2018
Non-current deferred tax asset:		
Inventory reserve	4,984	2,406
Bad debt reserve	17	659
Accrued service fees	—	306
Foreign tax credits	2,996	9,987
Research credit carryforward	6,693	11,707
NOL carryforward	8,773	8,326
Payroll and related accruals	8,133	7,344
Share-based compensation	14,150	9,282
Foreign pension deferred	832	477
Accrued sales reserves	763	—
Other deferred assets	1,031	1,847
Valuation allowance	(18,912)	(41,050)
Total non-current deferred tax asset	29,460	11,291
Non-current deferred tax liabilities:		
Goodwill and other intangibles	(3,227)	(5,844)
Property, plant and equipment	(6,482)	(4,955)
Repatriation of foreign earnings	(8,158)	(10,427)
Other non-current deferred tax liabilities	(592)	(511)
Total non-current deferred tax liabilities	(18,459)	(21,737)
Net deferred tax assets (liabilities)	\$ 11,001	\$ (10,446)

As of January 27, 2019, the Company had federal and state net operating loss carryforwards of \$3.3 million and \$107.7 million, respectively, which, subject to certain limitations, are available to offset future taxable income through fiscal year 2039. The Company believes the change in control limitations will impact its ability to utilize the federal net operating losses and therefore has set up a full valuation allowance.

In the first quarter of fiscal year 2018, the Company adopted FASB ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting (Topic 718). Under the amended guidance, all excess tax benefits and tax deficiencies will be recognized in the Statements of Income as they occur. This replaced the previous guidance, which required tax benefits that exceed compensation cost ("windfalls") to be recognized in additional paid in capital. It also eliminates the need to maintain a windfall pool, and removes the requirement to delay recognizing a windfall until it reduces current taxes payable. For fiscal year 2019, the Company recognized a windfall tax benefit of \$1.3 million.

As of January 27, 2019, the Company had gross federal and state research credits available of approximately \$7.8 million and \$14.9 million, respectively, which are available to offset taxable income. These credits will expire between fiscal years 2031 through 2039. The Company also had gross Canadian research credits available of approximately \$3.3 million. These credits will expire between fiscal years 2029 through 2039.

As of January 27, 2019 and January 28, 2018, the Company had approximately \$29.9 million and \$30.6 million of net deferred tax assets, respectively, the majority of which are in the U.S. and Canada. The Company has recorded valuation allowances of \$18.9

million and \$41.1 million against its deferred tax assets at January 27, 2019 and January 28, 2018, respectively, based on the Company's assessment of its ability to utilize its deferred tax assets. The valuation allowances established relate to certain

U.S. deferred tax assets, for which the Company has determined that it is more likely than not that a benefit will not be realized. In considering whether a valuation allowance was required for the Company's U.S. deferred income tax assets, the Company considered all available positive and negative evidence. Positive evidence considered included reversing taxable temporary differences. Negative evidence considered included the cumulative pre-tax losses in the U.S. recorded during the three-year period ended January 27, 2019, on both an annual and cumulative basis.

Based on the weight of all available evidence, the Company concluded that the negative evidence outweighed the positive evidence and that it was more likely than not that the U.S. state deferred tax assets that cannot be realized through the reversal of taxable temporary differences would not be realized. As a result, the Company established a partial valuation allowance against the deferred tax assets in the U.S. that will not be realized through the reversal of taxable temporary differences and released the associated valuation allowance in the first quarter of fiscal year 2019 with an associated tax benefit of \$15.8 million.

Changes in the valuation allowance for the three years ended January 27, 2019 are summarized in the table below:

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Beginning balance	\$ 41,050	\$ 82,961	\$ 77,383
Additions	152	74	5,578
Releases	(22,290)	(41,985)	—
Ending balance	<u>\$ 18,912</u>	<u>\$ 41,050</u>	<u>\$ 82,961</u>

Uncertain Tax Positions

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 federal impact of state items) is as follows:

(in thousands)	Fiscal Year Ended	
	January 27, 2019	January 28, 2018
Beginning balance	\$ 16,059	\$ 11,452
Additions based on tax positions related to the current year	2,642	5,789
Reductions for tax positions of prior years, net	—	(1,182)
Reductions for settlements with tax authorities	(408)	—
Ending balance	<u>\$ 18,293</u>	<u>\$ 16,059</u>

Included in the balance of gross unrecognized tax benefits at January 27, 2019 and January 28, 2018, are \$4.5 million and \$3.9 million, respectively, of net tax benefits (after federal impact of state items) that, if recognized, would impact the effective tax rate.

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

(in thousands)	Fiscal Year Ended	
	January 27, 2019	January 28, 2018
Deferred tax assets - non-current	\$ 12,492	\$ 12,135
Other long-term liabilities	4,479	3,924
Total accrued taxes	<u>\$ 16,971</u>	<u>\$ 16,059</u>

The Company's policy is to include net interest and penalties related to unrecognized tax benefits within the provision for taxes on the Statements of Income. Since the Company has sufficient research and development ("R&D") credit carryforwards, there would be no cash tax liability, and therefore no additional penalties or interest accrued during fiscal year 2019. The Company had approximately \$0.0 million of net interest and penalties accrued at January 27, 2019 and January 28, 2018.

Tax years prior to 2013 (the Company's fiscal year 2014) are generally not subject to examination by the 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 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.

Note 13: Commitments and Contingencies

Leases

The Company leases facilities and certain equipment under operating lease arrangements expiring in various years through fiscal year 2027. The aggregate minimum annual lease payments under leases in effect on January 27, 2019 are as follows:

Minimum Annual Lease Payments

(in thousands)

Fiscal Year Ending:

2020	\$	5,049
2021		3,712
2022		2,133
2023		1,040
2024		819
Thereafter		1,273
Total minimum lease commitments	\$	14,026

Rent expense was \$6.3 million, \$5.9 million, and \$6.7 million for fiscal years 2019, 2018, and 2017, respectively. The Company received \$138,000, \$141,000, and \$131,000 of sub-lease income in fiscal years 2019, 2018, and 2017, respectively.

Unconditional Purchase Commitments

The following table shows the Company's open capital commitments and other open purchase commitments for the purchase of plant, equipment, raw material, supplies and services:

(in thousands)

	Less than 1 year	1-3 years	Total
Open capital purchase commitments	\$ 7,749	\$ —	\$ 7,749
Other open purchase commitments	51,362	6,223	57,585
Total purchase commitments	\$ 59,111	\$ 6,223	\$ 65,334

Legal Matters

In accordance with accounting standards regarding 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 filed appeals of the October 2013 order seeking reconsideration by the RWQCB and review by the State Water Resources Control Board ("SWRCB") of the removal of two other potentially responsible parties, and seeking clarification of certain other factual findings. In April 2015, the RWQCB denied the Company's request to name the two other potentially responsible parties to the order, but did correct certain findings of fact identified by the Company in its petition for reconsideration.

The Company decided not to continue to pursue the administrative appeal and has been complying with RWQCB orders and direction, and is implementing an approved remedial action plan (prepared by an environmental firm retained by the Company) addressing the cleanup of 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 continues to estimate the range of probable loss between \$5.3 million and \$7.5 million. To date, the Company has made \$3.4 million in payments towards the remedial action plan, and as of January 27, 2019, the Company has accrued \$1.9 million related to this. 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.

Retirement Plans

The Company contributed \$1.0 million, \$1.3 million, and \$1.2 million, respectively, in fiscal years 2019, 2018, and 2017 to the 401(k) retirement plan maintained for its employees based in the U.S.

In addition, the Company also contributed \$0.6 million, \$0.8 million, and \$1.0 million in fiscal years 2019, 2018, and 2017 to a defined contribution plan for its employees in Canada.

The Company has a defined benefit pension plan for the employees of its Swiss subsidiary (the "Swiss Plan"). The Swiss Plan is a multiple-employer plan that provides government mandated retirement, death, and disability benefits. Under the Swiss Plan, the Company and its employees make government mandated minimum contributions. Minimum contributions are based on the respective employee's age, salary, and gender. As of January 27, 2019, the Swiss Plan had an unfunded net pension obligation of approximately

\$6.4 million, plan assets of approximately \$25.7 million, and a projected benefit obligation of approximately \$32.1 million. Net periodic pension expense and contributions made by the Company for fiscal year 2019 were \$0.4 million and \$0.9 million, respectively. The entire pension liability has been classified as non-current because the current portion of the liability is not material.

Although the Swiss Plan originated in prior years, the Company accounted for the Swiss Plan in accordance with ASC 715-30 *Defined Benefit Plans - Pensions* starting in fiscal year 2017. The Company evaluated the impact of not recording the net pension obligation in the Balance Sheets and corresponding charges in net income and total comprehensive income in the Statements of Income and Statements of Comprehensive Income in the historical periods presented, and concluded that the effect was immaterial. The Company corrected the immaterial error in fiscal year 2017 by recording an out of period expense, computed as of February 1, 2016, resulting in a decrease of \$1.4 million in net income, an increase in the pension obligation of \$5.8 million, an increase in deferred income tax assets of \$1.3 million, and a decrease to accumulated other comprehensive income of \$3.1 million.

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.

Under this plan, the Company incurred an expense, net of forfeitures, of \$1.3 million, \$6.0 million, and \$4.3 million in the fiscal years ended 2019, 2018, and 2017, respectively.

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

(in thousands)	January 27, 2019	January 28, 2018
Accrued liabilities	\$ 2,203	\$ 2,333
Other long-term liabilities	27,251	28,197
Total deferred compensation liabilities under this plan	<u>\$ 29,454</u>	<u>\$ 30,530</u>

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 \$20.4 million and \$22.3 million as of January 27, 2019, and January 28, 2018, respectively, and is included in "Other assets" on the Balance Sheets.

Earn-out Liability

Pursuant to the terms of the 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 January 27, 2019, the Company potentially may make payments totaling up to approximately \$14.6 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 \$4.5 million and \$5.5 million as of January 27, 2019, and January 28, 2018.

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 January 27, 2019, the Company potentially may make payments totaling up to approximately \$47.0 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.

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

(in thousands)	Balance at January 27, 2019			Balance at January 28, 2018		
	AptoVision	Cycleo	Total	AptoVision	Cycleo	Total
Compensation expense	\$ —	\$ 4,052	\$ 4,052	\$ —	\$ 4,408	\$ 4,408
Not conditional upon continued employment	2,161	462	2,623	21,000	668	21,668
Interest expense	—	—	—	—	444	444
Total liability	<u>\$ 2,161</u>	<u>\$ 4,514</u>	<u>\$ 6,675</u>	<u>\$ 21,000</u>	<u>\$ 5,520</u>	<u>\$ 26,520</u>

Amount expected to be settled within twelve months \$ 1,298 \$ 1,978 \$ 3,276



Note 14: Segment Information

Segment Information

The Company's CEO functions as the Chief Operating Decision Maker ("CODM"). The Company's CODM makes operating decisions and assesses performance based on these operating segments. As part of a realignment strategy, during the first quarter of fiscal year 2019, the Company restructured and combined the Power and High-Reliability operating segment with the Wireless and Sensing operating segment to better align resources with our LoRa® initiatives. This resulted in the Company having three operating segments compared to previously having four operating segments. The three operating segments: Protection, Signal Integrity, and Wireless and Sensing, all have similar economic characteristics and have been aggregated into one reportable segment identified in the table below as the "Semiconductor Products Group".

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

Net sales by reportable segment are as follows:

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Semiconductor Products Group	\$ 627,196	\$ 587,847	\$ 544,067
All others	—	—	205
Total	<u>\$ 627,196</u>	<u>\$ 587,847</u>	<u>\$ 544,272</u>

Income by segment and reconciliation to consolidated operating income:

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Semiconductor Products Group	\$ 186,975	\$ 160,810	\$ 126,271
All others	—	—	23,406
Operating income by segment	<u>186,975</u>	<u>160,810</u>	<u>149,677</u>
<i>Items to reconcile segment operating income to consolidated income before taxes</i>			
Share-based compensation	73,859	47,936	30,828
Intangible amortization	26,649	27,867	25,301
Investment impairments	30,000	4,250	—
Changes in the fair value of contingent earn-out obligations	(9,419)	3,892	(215)
Other non-segment related expenses	(2,591)	12,189	7,455
Amortization of fair value adjustments related to acquired property, plant and equipment	—	190	2,227
Interest expense, net	9,202	7,963	9,300
Non-operating expense, net	(3,823)	(3,348)	1,721
Income before taxes	<u>\$ 63,098</u>	<u>\$ 59,871</u>	<u>\$ 73,060</u>

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 for all periods.

(in thousands, except percentages)	Fiscal Year Ended					
	January 27, 2019		January 28, 2018		January 29, 2017	
Signal Integrity	\$ 276,040	44 %	\$ 263,015	45 %	\$ 258,824	47 %
Wireless and Sensing	190,589	30 %	164,569	28 %	140,774	26 %
Protection	182,068	29 %	176,482	30 %	149,865	28 %
Systems Innovation	—	— %	—	— %	205	— %
Other: Warrant Shares	(21,501)	(3)%	(16,219)	(3)%	(5,396)	(1)%
Total net sales	<u>\$ 627,196</u>	<u>100 %</u>	<u>\$ 587,847</u>	<u>100 %</u>	<u>\$ 544,272</u>	<u>100 %</u>

The cost of the Warrant granted is recognized as an offset to net sales over the respective performance period (see Note 11 for discussion regarding Share-Based Compensation).

Information by Sales Channel

(in thousands)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Distributor	\$ 442,518	\$ 390,618	\$ 348,070
Direct	206,179	213,448	201,598
Other: Warrant Shares	(21,501)	(16,219)	(5,396)
Total net sales	<u>\$ 627,196</u>	<u>\$ 587,847</u>	<u>\$ 544,272</u>

Geographic Information

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

Sales activity by geographic region is as follows:

(in thousands, except percentages)	Fiscal Year Ended					
	January 27, 2019		January 28, 2018		January 29, 2017	
Asia-Pacific	\$ 480,680	76 %	\$ 439,342	75 %	\$ 412,167	76 %
North America	118,664	19 %	121,144	21 %	94,123	17 %
Europe	49,353	8 %	43,580	7 %	43,378	8 %
Other: Warrant Shares	(21,501)	(3)%	(16,219)	(3)%	(5,396)	(1)%
Total net sales	<u>\$ 627,196</u>	<u>100 %</u>	<u>\$ 587,847</u>	<u>100 %</u>	<u>\$ 544,272</u>	<u>100 %</u>

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 sales for at least one of the periods presented:

(percentage of total net sales)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
China (including Hong Kong)	55%	51%	48%
United States	11%	9%	9%
Total net sales	<u>66%</u>	<u>60%</u>	<u>57%</u>

Significant Customers

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

(percentage of net sales)	Fiscal Year Ended		
	January 27, 2019	January 28, 2018	January 29, 2017
Trend-tek Technology Ltd (and affiliates)	14%	10%	10%
Frontek Technology Corporation (and affiliates)	11%	7%	8%
Arrow Electronics (and affiliates)	10%	11%	10%
Samsung Electronics (and affiliates)	8%	8%	7%
Premier Technical Sales Korea, Inc. (and affiliates) ⁽¹⁾	4%	6%	4%

⁽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 customers that have an outstanding receivable balance that represents at least 10% of total net receivables as of one or more of the dates indicated:

(percentage of net receivables)	Fiscal Years	
	2019	2018
Trend-tek Technology Ltd (and affiliates)	11%	8%
Frontek Technology Corporation (and affiliates)	10%	9%

Long-lived Assets

Long-lived assets, which consist of property, plant and equipment, net of accumulated depreciation and classified by location are summarized as follows:

(in thousands)	Fiscal Year Ended	
	January 27, 2019	January 28, 2018
United States	\$ 46,285	\$ 48,289
Rest of North America	34,493	34,941
Asia and all others	28,871	31,624
Europe	8,839	9,752
Total	\$ 118,488	\$ 124,606

Some of these assets are at locations owned or operated by the Company's suppliers. The Company has consigned certain equipment to a foundry based in China to support its specialized processes run at the foundry. The Company has also installed its own equipment at some of its packaging and testing subcontractors in order to ensure a certain level of capacity, assuming the subcontractor has ample employees to operate the equipment.

The net book value of equipment and machinery that are consigned to multiple foundries in China is \$17.4 million and \$15.4 million as of January 27, 2019, and January 28, 2018, respectively. The net book value of equipment and machinery that are consigned to a foundry in Malaysia is \$5.6 million and \$6.1 million as of January 27, 2019, and January 28, 2018, respectively.

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. For fiscal year 2019, approximately 16% of the Company's silicon in terms of cost of wafers was supplied by a third-party foundry in China, and this percentage could be higher in future periods. For fiscal years 2018 and 2017, approximately 20% and 25% of the Company's silicon in terms of cost of wafers was supplied by this third-party foundry in China,

respectively. Generally, the Company does not have long-term contracts with its distributors and most can terminate their agreement with little or no notice. For fiscal year 2019, the Company's two largest distributors were based in Asia.

Note 15: 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 realigned resources and infrastructure, which resulted in restructuring expense of \$0.7 million, \$6.3 million, and \$2.3 million in fiscal years 2019, 2018, and 2017, respectively.

Restructuring related liabilities are included in "Accrued liabilities" in the Balance Sheets as of January 27, 2019, and January 28, 2018, respectively. Restructuring charges are presented in "Selling, general and administrative" in the Statements of Income.

Activity under the restructuring plans is summarized in the following table:

(in thousands)	One-time employee termination benefits	Contract commitments	Total
Balance at January 31, 2016	\$ 342	\$ —	\$ 342
Charges	2,282	—	2,282
Cash payments	(2,611)	—	(2,611)
Balance at January 29, 2017	13	—	13
Charges	5,615	686	6,301
Cash payments	(1,565)	—	(1,565)
Balance at January 28, 2018	4,063	686	4,749
Charges	695	—	695
Cash payments	(4,038)	(397)	(4,435)
Balance at January 27, 2019	\$ 720	\$ 289	\$ 1,009

Note 16: 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 fiscal years listed below:

(in thousands, except number of shares)	Fiscal Year Ended					
	January 27, 2019		January 28, 2018		January 29, 2017	
	Shares	Value	Shares	Value	Shares	Value
Shares repurchased under the stock repurchase program	2,448,133	\$ 116,210	442,607	\$ 14,849	39,024	\$ 1,005
Total treasury shares required	2,448,133	\$ 116,210	442,607	\$ 14,849	39,024	\$ 1,005

As of January 27, 2019, the Company had repurchased \$267.6 million in shares of its common stock under the program since its inception and the remaining authorization under the program was \$180.8 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 17: 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 ("CHF"), 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 uses derivative financial instruments in the form of forward contracts to mitigate risk associated with adverse movements in these foreign currency exchange rates on a portion of foreign denominated expenses expected to be realized during the current and following fiscal year. 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 January 27, 2019, the Company had the following outstanding foreign exchange contracts:

(in thousands)

Foreign Exchange Contracts	Number of Instruments	Sell Notional Value	Buy Notional Value
Sell USD/Buy GBP Forward Contract	6	\$ 3,910	£ 3,000
Total	6		

These contracts met the criteria for cash flow hedges and the unrealized gains or losses, after tax, are recorded as a component of "Accumulated other comprehensive loss" within the Balance Sheets. The effective portions of cash flow hedges are recorded in accumulated other comprehensive income or loss ("AOCI") until the hedged item is recognized in "Selling, general and administrative" ("SG&A") expense within the Statements of Income when the underlying hedged expense is recognized. Any ineffective portions of cash flow hedges are recorded in "Non-operating expense, net" within the Statements of Income. The Company presents its derivative assets and liabilities at their gross fair values on the Balance Sheets.

The Company had no outstanding foreign exchange contracts at January 28, 2018. The table below summarizes the carrying values of derivative instruments as of January 27, 2019:

(in thousands)	Carrying Values of Derivative Instruments as of January 27, 2019		
	Fair Value - Assets ⁽²⁾	Fair Value - (Liabilities) ⁽²⁾	Derivative Net Carrying Value
Derivatives designated as hedging instruments			
Foreign exchange contracts ⁽¹⁾	\$ 69	\$ —	\$ 69
Total derivatives	\$ 69	\$ —	\$ 69

⁽¹⁾ Assets are included in "Other current assets" and liabilities are included in "Accrued liabilities" within the Balance Sheets.

⁽²⁾ The fair values of the foreign exchange forward contracts are valued using Level 2 inputs. Please refer to Note 5.

The following table summarizes the amount of income recognized from derivative instruments for the fiscal years ended January 27, 2019, and January 28, 2018, as well as the line items within the accompanying Statements of Income where the results are recorded for cash flow hedges:

(in thousands)	Amount of Gain (Loss) Recognized in AOCI on Derivative (Effective Portion)		Location of Gain or Loss into Income (Effective Portion)	Amount of (Gain) Loss Reclassified from AOCI into Income (Effective Portion)		Location of Gain or Loss Recognized in Income on Derivative (Ineffective Portion and Amount Excluded from Effectiveness Testing)	Amount of Gain (Loss) Recognized in Income on Derivative (Ineffective Portion and Amount Excluded from Effectiveness Testing)	
	Fiscal Year Ended			Fiscal Year Ended			Fiscal Year Ended	
	January 27, 2019	January 28, 2018		January 27, 2019	January 28, 2018		January 27, 2019	January 28, 2018
Sell USD/Buy CHF Forward Contract	\$ —	\$ —	SG&A	\$ —	\$ —	SG&A	\$ —	\$ —
Sell USD/Buy CAD Forward Contract	(244)	841	SG&A	244	(841)	SG&A	1	4
Sell USD/Buy GBP Forward Contract	80	364	SG&A	(11)	(690)	SG&A	—	—
	<u>\$ (164)</u>	<u>\$ 1,205</u>		<u>\$ 233</u>	<u>\$ (1,531)</u>		<u>\$ 1</u>	<u>\$ 4</u>

The estimated net amount of the existing gains that are reported in accumulated other comprehensive income as of January 27, 2019, that is expected to be reclassified into earnings within the next twelve months was \$0.1 million.

Note 18: Selected Quarterly Financial Data (Unaudited)

The following tables set forth the Company's Statements of Income data for each of the eight quarterly periods ended January 27, 2019, as well as that data expressed as a percentage of the Company's net sales for the quarters presented. The sum of quarterly per share amounts may differ from year to date amounts due to rounding.

Selected Quarterly Financial Data (Unaudited)

	Fiscal Year 2019				Fiscal Year 2018			
	Quarters Ended				Quarters Ended			
	January 27, 2019	October 28, 2018	July 29, 2018	April 29, 2018	January 28, 2018	October 29, 2017	July 30, 2017	April 30, 2017
(in thousands, except per share amounts)								
Net sales	\$ 160,006	\$ 173,550	\$ 163,211	\$ 130,429	\$ 140,614	\$ 150,304	\$ 153,127	\$ 143,802
Gross profit	98,867	106,562	100,124	71,469	85,401	89,419	92,236	84,915
Operating income (loss)	26,771	41,867	32,936	(3,097)	14,009	17,579	18,892	18,256
Net income (loss)	<u>\$ 13,340</u>	<u>\$ 12,165</u>	<u>\$ 25,169</u>	<u>\$ 12,382</u>	<u>\$ (1,297)</u>	<u>\$ 13,338</u>	<u>\$ 12,564</u>	<u>\$ 11,821</u>
Earnings per share:								
Basic	\$ 0.20	\$ 0.18	\$ 0.38	\$ 0.19	\$ (0.02)	\$ 0.20	\$ 0.19	\$ 0.18
Diluted	\$ 0.20	\$ 0.18	\$ 0.37	\$ 0.18	\$ (0.02)	\$ 0.20	\$ 0.19	\$ 0.18
Weighted average number of shares used in computing earnings per share:								
Basic	65,525	66,014	66,063	66,324	66,310	66,194	65,763	65,839
Diluted	68,165	68,731	68,880	68,195	66,310	67,817	67,470	67,376

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

The Company carried out an evaluation, under the supervision and with the participation of the CEO and Chief Financial Officer ("CFO"), of the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e)) as of January 27, 2019. Based on that evaluation, the Company's CEO and CFO have concluded that such disclosure controls and procedures were effective as of such date.

Changes in Internal Controls

There have been no changes to our internal control over financial reporting that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Management on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Securities Exchange Act of 1934, as amended (the "Exchange Act") Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework set forth in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework, our management has concluded that as of January 27, 2019 the Company's internal control over financial reporting was effective 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.

Deloitte & Touche LLP, an independent registered public accounting firm, audited the consolidated financial statements included in this report, and has audited our internal control over financial reporting as of January 27, 2019 as stated in their report included below.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of
Semtech Corporation
Camarillo, California

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Semtech Corporation and subsidiaries (the "Company") as of January 27, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of January 27, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended January 27, 2019, of the Company and our report dated March 21, 2019, expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the Company's adoption of a new accounting standard.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report of Management on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

Los Angeles, California

March 21, 2019

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

We have adopted a written Code of Conduct that applies to everyone in the Company, including our CEO, CFO and Controller. Our Code of Conduct serves as our written code of ethics for those officers, and for persons performing similar functions. Our current Code of Conduct is incorporated in this Annual Report on Form 10-K for fiscal year 2019 as Exhibit 14. The Code of Conduct is also available at the Corporate Governance section of the Investors page on our website at www.semtech.com. Alternatively, you can request a copy of the Code of Conduct free of charge by sending a written request to the Company's Secretary at 200 Flynn Road, Camarillo, CA 93012. If we make any substantive amendments to the Code of Conduct or grant any waiver, including an implicit waiver, from the Code of Conduct to our CEO, CFO or Controller, we will within four business days of the event disclose the nature of the amendment or waiver on our website or in a report on Form 8-K.

The information relating to our directors, our nominees for directors, and our executive officers pursuant to Items 401; and Item 407(c) (3), (d)(4) and (d)(5) of Regulation S-K required by this item will be contained under the caption "Proposal 1: Election of Directors" in our Definitive Proxy Statement relating to our annual meeting of stockholders to be held on June 13, 2019, to be filed with the SEC pursuant to Regulation 14A of the Exchange Act and is hereby specifically incorporated by reference thereto.

The information required pursuant to Item 405 of Regulation S-K will be contained under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in our Definitive Proxy Statement relating to our annual meeting of stockholders, to be held on June 13, 2019, to be filed with the SEC pursuant to Regulation 14A of the Exchange Act and is hereby specifically incorporated by reference thereto.

Item 11. Executive Compensation

The information required under this item will appear under the captions "Director Compensation," "Compensation Discussion and Analysis", "Executive Compensation" and related discussion and disclosure thereto, in the Definitive Proxy Statement relating to our annual meeting of stockholders to be held on June 13, 2019, to be filed by us with the SEC pursuant to Regulation 14A of the Exchange Act, and is hereby specifically incorporated herein by reference thereto.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required under this item will appear under the captions "Beneficial Ownership of Securities," "Securities Authorized for Issuance under Equity Compensation Plans" and related discussion and disclosure thereto, in the Definitive Proxy Statement relating to our annual meeting of stockholders to be held on June 13, 2019, to be filed by us with the SEC pursuant to Regulation 14A of the Exchange Act, and is hereby specifically incorporated herein by reference thereto.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required under this item will appear under the captions "Election of Directors (Proposal Number 1)" "Corporate Governance, Transactions with Related Parties" and related discussion and disclosure thereto, in the Definitive Proxy Statement relating to our annual meeting of stockholders to be held on June 13, 2019, to be filed by us with the SEC pursuant to Regulation 14A of the Exchange Act, and is hereby specifically incorporated herein by reference thereto.

Item 14. Principal Accounting Fees and Services

The information required under this item will appear under the captions "Independent Accountant Fees," and "Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services" and related discussion and disclosure thereto, in the Definitive Proxy Statement relating to our annual meeting of stockholders to be held on June 13, 2019, to be filed by us with the SEC pursuant to Regulation 14A of the Exchange Act, and is hereby specifically incorporated herein by reference thereto.

PART IV

Item 15. Exhibits, Financial Statement Schedules

- (a)(1) The financial statements, schedules, and reports included in this Form 10-K are listed in the index under Item 8 in this report.
- (a)(2) Schedules other than those listed in Item 8 are omitted since they are not applicable, not required, or the information required to be set forth herein is included in the consolidated financial statements or notes thereto.

SCHEDULE II

SEMTECH CORPORATION AND SUBSIDIARIES SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS THREE YEARS ENDED JANUARY 27, 2019

<u>Total of Accounts Receivable and Other Sales Allowances</u>	<u>Balance at Beginning of Year ⁽¹⁾</u>	<u>Charged (Reversal) to Costs and Expenses</u>	<u>Deductions</u>	<u>Balance at End of Year</u>
Year ended January 29, 2017	\$ 7,792,799	\$ 951,612	\$ (514,436)	\$ 8,229,975
Year ended January 28, 2018	\$ 8,229,975	\$ 11,365,813	\$ (10,506,484)	\$ 9,089,304
Year ended January 27, 2019	\$ 1,705,907	\$ 9,854,148	\$ (10,785,661)	\$ 774,394

⁽¹⁾ For fiscal year 2019, as a result of the adoption of ASC 606, \$7.4 million of sales allowances was reclassified from "Accounts receivable" to "Accrued liabilities" on the Balance Sheets.

- (a)(3) Exhibits. These exhibits are available without charge upon written request directed to the Company's Secretary at 200 Flynn Road, Camarillo, CA 93012. Documents that are not physically filed with this report are incorporated herein by reference to the location indicated.

<u>Exhibit No.</u>	<u>Description</u>	<u>Location</u>
<u>3.1</u>	<u>Restated Certificate of Incorporation of Semtech Corporation</u>	<u>Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended October 26, 2003</u>
<u>3.2</u>	<u>Bylaws of Semtech Corporation</u>	<u>Exhibit 3.2 to the Company's Annual Report on Form 10-K for the fiscal year ended January 27, 2008</u>
<u>10.1</u>	<u>Amended and Restated Credit Agreement dated November 15, 2016 entered into among Semtech Corporation, the guarantors party thereto, the lenders party thereto and HSBC Bank USA, National Association, as administrative agent and as swing line lender and L/C issuer.</u>	<u>Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 16, 2016</u>
<u>10.2</u> *	<u>Form of Indemnification Agreement for Directors and Executive Officers</u>	<u>Exhibit 10.1 to the Company's Current Report on Form 8-K filed November 24, 2010</u>
<u>10.3</u> *	<u>Employment Offer Letter to Mohan Maheswaran, accepted as of March 12, 2006</u>	<u>Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 14, 2006</u>
<u>10.4</u> *	<u>Letter Agreement, dated as of February 27, 2014, by and between the Company and Mohan Maheswaran</u>	<u>Exhibit 10.2 to the Company's Current Report on Form 8-K filed February 28, 2014</u>
<u>10.5</u> *	<u>Letter Agreement, dated as of December 19, 2014, by and between the Company and Mohan Maheswaran</u>	<u>Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 22, 2014</u>

<u>10.6</u> *	<u>Employment Offer Letter to Emeka Chukwu, accepted as of November 11, 2006</u>	<u>Exhibit 10.26 to the Company's Annual Report on Form 10-K for the fiscal year ended January 28, 2007</u>
<u>10.7</u> *	<u>Memo to Emeka Chukwu, dated April 5, 2007</u>	<u>Exhibit 10.27 to the Company's Annual Report on Form 10-K for the fiscal year ended January 28, 2007</u>
<u>10.8</u> *	<u>Semtech Corporation Executive Change in Control Retention Plan</u>	<u>Exhibit 10.2 to the Company's Current Report on Form 8-K filed December 22, 2014</u>
<u>10.9</u> *	<u>Form of Participation Agreement under the Semtech Corporation Executive Change in Control Retention Plan</u>	<u>Exhibit 10.3 to the Company's Current Report on Form 8-K filed December 22, 2014</u>
<u>10.10</u> *	<u>Letter Agreement dated as of August 17, 2015 by and between Semtech Canada Corporation and Gary M. Beauchamp</u>	<u>Exhibit 10.1 to the Company's Current Report on Form 8-K filed August 18, 2015</u>
<u>10.11</u> *	<u>Letter Agreement dated as of August 28, 2018 by and between Semtech Canada Corporation and Gary M. Beauchamp</u>	<u>Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 29, 2018</u>
<u>10.12</u> *	<u>Amended Semtech Corporation Executive (non-CEO) Bonus Plan, as amended and restated on November 15, 2017</u>	<u>Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended October 29, 2017</u>
<u>10.13</u> *	<u>Semtech Corporation Chief Executive Officer Bonus Plan, as amended and restated on November 15, 2017</u>	<u>Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended October 29, 2017</u>
<u>10.14</u> *	<u>Form of Long-Term Stock Incentive Plan Restricted Stock Unit Award Certificate</u>	<u>Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 20, 2008</u>
<u>10.15</u> *	<u>Semtech Corporation 2008 Long-Term Equity Incentive Plan</u>	<u>Exhibit 10.40 to the Company's Annual Report on Form 10-K for the fiscal year ended January 27, 2008</u>
<u>10.16</u> *	<u>Form of Semtech Corporation 2008 Long-Term Equity Incentive Plan Option Award Certificate for Non-Employee Directors</u>	<u>Exhibit 10.3 to the Company's Current Report on Form 8-K filed July 1, 2008</u>
<u>10.17</u> *	<u>Form of Semtech Corporation 2008 Long-Term Equity Incentive Plan Stock Unit Award Certificate for Non-Employee Directors</u>	<u>Exhibit 10.4 to the Company's Current Report on Form 8-K filed July 1, 2008</u>
<u>10.18</u> *	<u>Form of Semtech Corporation 2008 Long-Term Equity Incentive Plan Employee Restricted Stock Award Certificate for Non-Employee Directors</u>	<u>Exhibit 10.5 to the Company's Current Report on Form 8-K filed July 1, 2008</u>
<u>10.19</u> *	<u>Form of Semtech Corporation 2008 Long-Term Equity Incentive Plan Employee Option Award Certificate</u>	<u>Exhibit 10.6 to the Company's Current Report on Form 8-K filed July 1, 2008</u>
<u>10.20</u> *	<u>Form of Semtech Corporation 2008 Long-Term Equity Incentive Plan Option Award Agreement for Non-Employee Directors</u>	<u>Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended May 1, 2011</u>
<u>10.21</u> *	<u>Semtech Corporation 2009 Long-Term Equity Inducement Plan</u>	<u>Exhibit 10.2 to the Company's Current Report on Form 8-K filed December 15, 2009</u>
<u>10.22</u> *	<u>Form of Semtech Corporation 2009 Long-Term Equity Inducement Plan Award Agreements (Time-Based Vesting)</u>	<u>Exhibit 10.38 to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2010</u>

<u>10.23</u> *	<u>Semtech Corporation 2007 SMI Assumed Plan</u>	<u>Exhibit 4.3 to the Company's Registration Statement on Form S-8, Registration No. 333-163780, filed on December 16, 2009</u>
<u>10.24</u> *	<u>Semtech Corporation 2013 Long-Term Equity Incentive Plan</u>	<u>Exhibit 10.1 to our Current Report on Form 8-K filed on June 24, 2013</u>
<u>10.25</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Restricted Stock Unit Award Agreement for Ownership Grants</u>	<u>Exhibit 10.31 to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2016</u>
<u>10.26</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Performance Stock Unit Award Agreement</u>	<u>Exhibit 10.32 to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2016</u>
<u>10.27</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Stock Option Award Agreement for Employees in Switzerland</u>	<u>Exhibit 10.33 to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2016</u>
<u>10.28</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Stock Option Award Certificate for Non-Employee Directors</u>	<u>Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended May 1, 2016</u>
<u>10.29</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Non-Employee Director Stock Unit Award Certificate (Deferred)</u>	<u>Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended May 1, 2016</u>
<u>10.30</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Non-Employee Director Stock Unit Award Certificate (Non-Deferred)</u>	<u>Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended May 1, 2016</u>
<u>10.31</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Stock Option Award Agreement for Employees</u>	<u>Exhibit 10.36 to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2016</u>
<u>10.32</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Restricted Stock Unit Award Agreement for Employees</u>	<u>Exhibit 10.37 to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2016</u>
<u>10.33</u> *	<u>Form of Semtech Corporation 2013 Long-Term Equity Incentive Plan Performance Unit Award Certificate</u>	<u>Exhibit 10.40 to the Company's Annual Report on Form 10-K for the fiscal year ended January 29, 2017</u>
<u>10.34</u> *	<u>Policy Regarding Director Compensation</u>	<u>Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 29, 2018</u>
<u>10.35</u> *	<u>Semtech Corporation 2017 Long-Term Equity Incentive Plan</u>	<u>Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 21, 2017</u>
<u>10.36</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Executive Ownership Restricted Stock Unit Award Certificate</u>	<u>Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 30, 2017</u>
<u>10.37</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Restricted Stock Unit Award Certificate</u>	<u>Filed herewith</u>

<u>10.39</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Option Award Certificate</u>	<u>Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 30, 2017</u>
<u>10.40</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Option Award Certificate - Switzerland Employees</u>	<u>Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 30, 2017</u>
<u>10.41</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Non-Employee Director Stock Unit Award Certificate (deferred)</u>	<u>Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 30, 2017</u>
<u>10.42</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Non-Employee Director Stock Unit Award Certificate (non-deferred)</u>	<u>Exhibit 10.9 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 30, 2017</u>
<u>10.43</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Option Award Certificate (non-employee director)</u>	<u>Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 30, 2017</u>
<u>10.44</u> *	<u>Form of Semtech Corporation 2017 Long-Term Equity Incentive Plan Restricted Stock Unit Award Certificate (rollover award in accordance with acquisition of AptoVision)</u>	<u>Exhibit 10.11 to the Company's Quarterly Report on Form 10-Q for the quarter ended July 30, 2017</u>
<u>10.45</u> *	<u>The Executive Nonqualified Excess Plan of Semtech Corporation (Amended and Restated Effective as of March 1, 2019)</u>	<u>Filed herewith</u>
<u>10.46</u> *	<u>CEO Restricted Stock Unit Award Certificate dated March 5, 2019</u>	<u>Filed herewith</u>
<u>10.47</u> *	<u>CEO Performance Stock Unit Award Certificate-Relative TSR dated March 5, 2019</u>	<u>Filed herewith</u>
<u>10.48</u> *	<u>CEO Performance Stock Unit Award Certificate-Absolute Stock Price dated March 5, 2019</u>	<u>Filed herewith</u>
<u>14</u>	<u>Semtech Corporation Code of Conduct</u>	<u>Exhibit 14.1 to the Company's Current Report on Form 8-K filed June 28, 2010</u>
<u>21.1</u>	<u>Subsidiaries of the Company</u>	<u>Filed herewith</u>
<u>23.1</u>	<u>Consent of Independent Registered Public Accounting Firm Deloitte & Touche LLP</u>	<u>Filed herewith</u>

<u>31.1</u>	<u>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.</u>	<u>Filed herewith</u>
<u>31.2</u>	<u>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.</u>	<u>Filed herewith</u>
<u>32.1</u>	<u>Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act Of 2002 (As set forth in Exhibit 32.1 hereof, Exhibit 32.1 is being furnished and shall not be deemed "filed").</u>	<u>Furnished herewith</u>
<u>32.2</u>	<u>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").</u>	<u>Furnished herewith</u>
101.INS	XBRL Instance Document	Filed herewith
101.SCH	XBRL Taxonomy Extension Schema Document	Filed herewith
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	Filed herewith
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	Filed herewith
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	Filed herewith
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	Filed herewith
* Management contract or compensatory plan or arrangement.		

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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

Date: March 21, 2019

/s/ Mohan R. Maheswaran

Mohan R. Maheswaran

President and Chief Executive Officer

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Date: March 21, 2019

/s/ Mohan R. Maheswaran

Mohan R. Maheswaran
President and Chief Executive Officer
Director

Date: March 21, 2019

/s/ Emeka N. Chukwu

Emeka N. Chukwu
Executive Vice President and Chief Financial Officer
(Principal Accounting and Financial Officer)

Date: March 21, 2019

/s/ Rockell N. Hankin

Rockell N. Hankin
Chairman of the Board

Date: March 21, 2019

/s/ James P. Burra

James P. Burra
Director

Date: March 21, 2019

/s/ Bruce C. Edwards

Bruce C. Edwards
Director

Date: March 21, 2019

/s/ Ye Jane Li

Ye Jane Li
Director

Date: March 21, 2019

/s/ James T. Lindstrom

James T. Lindstrom
Director

Date: March 21, 2019

/s/ Carmelo J. Santoro

Carmelo J. Santoro
Director

Date: March 21, 2019

/s/ Sylvia Summers

Sylvia Summers
Director

Date: March 21, 2019

/s/ Rodolpho Cardenuto

Rodolpho Cardenuto
Director

Date: March 21, 2019

/s/ Saar Gillai

Saar Gillai

Director