

SEMTECH CORP  
Form 10-K  
March 21, 2019

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

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FORM 10-K

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(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

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SEMTECH CORPORATION  
(Exact name of registrant as specified in its charter)

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Delaware 95-2119684  
(State or other jurisdiction of (I.R.S. Employer  
incorporation or organization) 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	Name of each exchange on which registered
Common Stock par value \$.01 per share	The Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act:  
None  
(Title of Class)

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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

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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  Accelerated filer

Non-accelerated filer  Smaller reporting company

Emerging growth company

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.

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**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.

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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

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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.

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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

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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:

	Fiscal Years		
(in thousands)	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 <sup>(1)</sup>	(21,501 )	(16,219 )	(5,396 )
Total	\$627,196	\$587,847	\$544,272

<sup>(1)</sup>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.

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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:

Fiscal Years

(percentage of sales) 2018<sup>(1)</sup> 2017<sup>(1)</sup>

Enterprise Computing