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 December 31, 2019
OR
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO**

Commission File Number 001-37900

Everspin Technologies, Inc.
(Exact name of Registrant as specified in its Charter)

Delaware	**26-2640654**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

5670 W. Chandler Boulevard, Suite 100
Chandler, Arizona 85226
(Address of principal executive offices including zip code)
Registrant's telephone number, including area code: (480) 347-1111

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

Title of each class	Trading Symbol(s)	Name of the exchange on which registered
Common Stock, par value $0.0001	MRAM	The Nasdaq Stock Market

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

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

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Small reporting company	☒
	▯	Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

As of June 28, 2019, the last business day of the Registrant's most recently completed second fiscal quarter, the aggregate market value of the common stock of Registrant held by non-affiliates, based upon the closing sales price for the Registrant's common stock for such date, as quoted on the Nasdaq Global Market, was approximately $87.3 million. Shares of common stock held by each officer, director and entities affiliated with directors have been excluded because such persons may be deemed to be "affiliates" as that term is defined under the rules and regulations of the Exchange Act. This determination of affiliate status is not necessarily a conclusive determination for any other purpose.

The number of shares of Registrant's Common Stock outstanding as of March 6, 2020 was 18,627,421.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement relating to the Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission within 120 days after the end of the Registrant's fiscal year ended December 31, 2019, are incorporated by reference into Part III of this Report.

Table of Contents

Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements contained herein that are statements of events or results that may occur in the future are deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These forward-looking statements include, but are not limited to, statements about:

- estimates of our future revenue, expenses, capital requirements and our needs for additional financing;
- the implementation of our business model and strategic plans for our products, technologies and businesses;
- competitive companies and technologies and our industry;
- our ability to manage and grow our business by expanding our sales to existing customers or introducing our products to new customers;
- our ability to establish and maintain intellectual property protection for our products or avoid claims of infringement;
- our ability to hire and retain key personnel;
- our financial performance;
- our estimates of the MRAM market opportunity; and
- the volatility of our share price.

Forward-looking statements are based on management’s current expectations, estimates, forecasts, and projections about our business and the industry in which we operate, and management’s beliefs and assumptions are not guarantees of future performance or development and involve known and unknown risks, uncertainties, and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this report may turn out to be inaccurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Risk Factors” and elsewhere in this report. These statements, like all statements in this report, speak only as of their date, and we undertake no obligation to update or revise these statements in light of future developments. We caution investors that our business and financial performance are subject to substantial risks and uncertainties. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

PART I

Item 1. Business.

General

Everspin is a pioneer in the successful commercialization of Magnetoresistive Random Access Memory (MRAM) technology. Our portfolio of MRAM technologies, including Toggle MRAM and Spin-transfer Torque MRAM (STT-MRAM), is delivering superior performance, persistence and reliability in non-volatile memories that transform how mission-critical data is protected against power loss. With over 10 years of MRAM technology and manufacturing leadership, our memory solutions deliver significant value to our customers in key markets such as industrial, medical, automotive/transportation, aerospace and data center. We are the leading supplier of discrete MRAM components and a successful licensor of our broad portfolio of related technology IP.

We sell our products directly and through our established distribution channel to industry-leading original equipment manufacturers (OEMs) and original design manufacturers (ODMs)

We manufacture our MRAM products using both captive and third-party manufacturing capabilities. We purchase industry-standard complementary metal-oxide semiconductor (CMOS) wafers from semiconductor foundries and perform back end of line (BEOL) processing that includes our magnetic-bit technology at our 200mm fabrication facility in Chandler, Arizona. We also manufacture full-flow 300mm STT-MRAM products as part of our strategic relationship with GLOBALFOUNDRIES.

For the years ended December 31, 2019 and 2018 we recorded revenue of $37.5 million and $49.4 million, gross margin of 48.9% and 51.3%, and a net loss of $14.7 million and $17.8 million, respectively. Our headquarters is located in Chandler, Arizona. Our principal design center is in Austin, Texas, and we have additional sales operations in the Americas, Europe and Asia-Pacific regions.

Product Overview

We have a strong track record of innovation in MRAM technology, as demonstrated by our successive introduction of MRAM products that address an increasingly broad spectrum of applications. Our MRAM discrete solutions as well as other offerings are described as follows:

Toggle MRAM

Our Toggle MRAM products have been in production since 2008 and are currently shipping in 128kb to 32Mb densities. These high performance, non-volatile memories are designed primarily to address applications in the industrial, medical, automotive/transportation, and data center market. We offer these products with industry standard interfaces, including Parallel, Serial Peripheral Interface (SPI) and Quad SPI (QSPI) interfaces, enabling our customers to easily replace legacy memory components like SRAM and FRAM with Toggle MRAM.

Spin-transfer Torque MRAM

Our STT-MRAM products started production in 2017 and are currently shipping in 256Mb and 1Gb densities. These high density, high performance persistent memories are delivering significant value to SSD, Persistent Memory Cards, Fabric Accelerator and other applications in the data center market. We offer these products with standard DDR3 and DDR4 derivative interfaces, facilitating the replacement of battery-backed DRAM with STT-MRAM. We plan to further proliferate this technology in products that target applications outside the data center in the near future.

TMR Sensors

Our 3D Tunnel Magneto Resistance (TMR) sensors provide extremely high magnetic sensitivity in a single component that performs 3D magnetic field measurements in a monolithic solution. We offer these die-level devices to be integrated into consumer electronic applications that utilize a high sensitivity 3D compass function.

Licensing and Royalty Overview

We leverage our broad IP portfolio to enable licensing and royalty revenue streams from non-core applications that can derive valuable differentiation through the use of Everspin MRAM and TMR sensor IP.

- We have licensed GLOBALFOUNDRIES to offer eMRAM in the solutions they manufacture for their customers providing high-performance non-volatile embedded memory.
- We have licensed base MRAM design technology for use in radiation tolerant aerospace applications.
- We have licensed TMR sensor IP in 3D magnetic field sensing and HDD read head applications.

Foundry Services Overview

In our Chandler facility, we perform magnetic BEOL manufacturing services for customers who want to add MRAM functionality to their memory or application base circuits. These services allow aerospace and satellite electronic system manufacturers to integrate our MRAM technology that is able to withstand exposure to the levels of radiation encountered in avionics and space applications by virtue of being magnetic rather than electrical charge based.

Sales and Marketing

We sell our products through a direct sales channel and a network of representatives and distributors. The majority of our customers, and their associated contract manufacturers, buy our products through our distributors. We maintain sales, support, supply chain and logistics operations and have distributors in Asia to service the production needs of contract manufacturers. We also maintain direct selling relationships with several strategic customers. Our direct sales representatives are located in North America, Germany, Italy, Japan, Hong Kong, and Taiwan.

Our typical sales cycle consists of a sales and development process in which our field engineers and sales personnel work closely with our customers' design engineers. This process can take from three to 18 months to complete, and a successful sales cycle culminates in a design win. Note that some customers of our STT-MRAM products may need to modify their controllers to integrate our technology, adding additional time to the cycle. Once we establish a relationship with a customer, we continue a sales process to maintain our position and to secure subsequent new design wins at the customer. Each customer lead, whether new or existing, is tracked through our CRM tool and followed in stages of prospect, design in, design win and production. This tracking results in a design win pipeline that provides a measure of the future business potential of the opportunities.

We have established relationships with several storage controller and Field Programmable Gate Array (FPGA) companies, including Phison Electronics, Sage Micro, and Xilinx as well as IP core companies, including Cadence and Northwest Logic, to facilitate the integration of our MRAM solutions into our customers' end products.

Our technical support personnel have expertise in hardware and software, and have access to our development team to ensure proper service and support for our OEM customers. Our field application and engineering team provides technical training and design support to our customers.

We consider our customer to be the end customer purchasing either directly from a distributor, a contract manufacturer or us. An end customer purchasing through a contract manufacturer typically instructs the contract manufacturer to obtain our products and to incorporate our products with other components for sale by the contract manufacturer to the end customer. Although we actually sell the products to, and are paid by the distributors and contract manufacturers, we refer to the end customer as our customer.

During the year ended December 31, 2019, more than 1,000 end customers purchased our products. One end customer accounted for more than 10% of our revenue during 2019 and one end customer accounted for more than 10% of our revenue during 2018.

Manufacturing

We rely on third-party suppliers for most phases of the manufacturing process, including initial fabrication, final test and assembly.

Wafer Manufacturing

We perform BEOL manufacturing for our Toggle MRAM products and provide foundry services for embedded MRAM, licensed MRAM products and MTJ-based sensors in our 200mm manufacturing facility. Our facility is in an ISO-4 clean room and our manufacturing line is ISO 9001:2015 certified. We actively manage inventory, including automated process flows, process controls and recipe management, and we use standard equipment to manufacture our products.

Our STT-MRAM products are produced in 300mm fabrication facilities operated by GLOBALFOUNDRIES.

Assembly and Test

Our product and test engineering teams develop and implement wafer-level and final test programs for the manufacture of our MRAM devices.

We utilize third-party industry-leading assembly and test sub-contractors, including Amkor, OSE, GTC, ChipMos and UTAC. We have successfully qualified our MRAM devices in various packages at temperatures ranging from commercial to automotive grade. As part of our commitment to quality, our quality management system has been certified to ISO 9001:2015 and ISO 14000 standards. Our foundry vendors and sub-contractors are also ISO 9001 and ISO 14001 certified.

Arrangements with GLOBALFOUNDRIES

Joint Development Agreement

Since October 17, 2014, we have participated in a joint development agreement with GLOBALFOUNDRIES Inc., a semiconductor foundry, for the joint development of STT-MRAM technology to produce of a family of discrete and embedded MRAM technologies. The term of the agreement is until the completion, termination, or expiration of the last statement of work entered into pursuant to the joint development agreement. The agreement was extended on December 31, 2019 to include a new phase of support for 12nm MRAM development.

The joint development agreement also states that the specific terms and conditions for the production and supply of the developed MRAM technology would be pursuant to a separate manufacturing agreement entered into between the parties. See "—STT-MRAM Manufacturing Agreement" below.

Under the joint development agreement, each party granted licenses to its relevant intellectual property to the other party. For certain jointly developed works, the parties have agreed to follow an invention allocation procedure to determine ownership. In addition, GLOBALFOUNDRIES possesses the exclusive right to manufacture our discrete and embedded Spin Transfer Torque MRAM devices developed pursuant to the agreement until the earlier of three years after the qualification of the MRAM device for a particular technology node or four years after the completion of the relevant statement of work under which the device was developed. For the same exclusivity period associated with the relevant device, GLOBALFOUNDRIES agreed not to license intellectual property developed in connection with the agreement to named competitors of ours.

If GLOBALFOUNDRIES manufactures, sells or transfers wafers containing production qualified MRAM devices that utilized certain Everspin design information to its customers, GLOBALFOUNDRIES will pay royalties to us for each such wafer transferred or sold to a customer.

Except for breaches of confidentiality provisions and each party's indemnification obligations to one another under the agreement, liability under the agreement is capped at a range depending on project costs and royalty amounts. Either party may terminate the agreement if the other party materially breaches a term of the agreement, and fails to remedy the breach after receiving notice from the non-breaching party. If a party terminates the manufacturing agreement for material breach in accordance with its terms, that party may also terminate the joint development agreement.

See "Risk Factors" for further discussion of our agreements with GLOBALFOUNDRIES.

Manufacturing Agreement

On October 23, 2014, we entered into a manufacturing agreement with GLOBALFOUNDRIES Singapore Pte. Ltd. that sets forth the specific terms and conditions for the production and supply of wafers manufactured using our Spin Transfer Torque MRAM technology developed under the joint development agreement with GLOBALFOUNDRIES. Pursuant to that joint development agreement, GLOBALFOUNDRIES possesses certain exclusive rights to manufacture such wafers for our discrete and embedded STT-MRAM devices. Our manufacturing agreement with GLOBALFOUNDRIES includes a customary forecast and ordering mechanism for the supply of certain of our wafers, and we are obligated to order and pay for, and GLOBALFOUNDRIES is obligated to supply, wafers consistent with the binding portion of our forecast. GLOBALFOUNDRIES also has the ability to discontinue its manufacture of any of our wafers upon due notice and completion of the notice period. The initial term of the manufacturing agreement is for three years, which automatically renews for successive one year periods thereafter unless either party provides sufficient advance notice of non-renewal.

Except for breaches of confidentiality provisions and each party’s indemnification obligations to one another under the agreement, liability under the agreement is capped at the lesser of a set amount or the total purchase price received by GLOBALFOUNDRIES from us in the 12 months immediately preceding the claim for the specific product that caused the damages. Either party may terminate the agreement if the other party materially breaches a term of the agreement, and fails to remedy the breach after receiving notice from the non-breaching party. GLOBALFOUNDRIES may terminate the agreement if we fail to pay any undisputed sum which has been outstanding for sixty or more days from the date of invoice.

Backlog

As of December 31, 2019, our backlog was $16.2 million, compared to $13.0 million as of December 31, 2018, and includes all purchase orders scheduled for delivery within the subsequent 12 months. Our business and, to a large extent, that of the entire semiconductor industry, is characterized by short-term orders and shipment schedules. Orders constituting our current backlog are subject to changes in delivery schedules, or to cancellation at the customer's option without significant penalty. Thus, while backlog is useful for scheduling production, backlog as of any particular date may not be a reliable measure of sales for any future period.

Product Warranty

Because the design and manufacturing process for semiconductor products is highly complex, it is possible that we may produce products that do not comply with applicable specifications, contain defects, or are otherwise incompatible with end uses. In accordance with industry practice, we generally provide a limited warranty that our products are in compliance with applicable specifications existing at the time of delivery and will operate to those specifications during a stated warranty period. Under our standard terms and conditions of sale, liability for certain failures of product during a stated warranty period is usually limited to repair or replacement of defective items or return of, or a credit with respect to, amounts paid for such items. Under certain circumstances, we provide more extensive limited warranty coverage than that provided under our standard terms and conditions.

Competition

As an emerging specialty memory product supplier, we face intense competition from a wide variety of other memory technology manufacturers.

Our principal competitors to our Toggle MRAM products include companies that offer nonvolatile SRAM (NVSRAM), SRAM, and ferroelectric RAM (FRAM) products, such as Cypress, Fujitsu, Integrated Silicon Solution (ISSI), Macronix, Microchip, Micron, Renesas, Samsung and Toshiba. Our STT-MRAM products replace DRAM where persistence is required and thus compete with DRAM suppliers such as Hynix, Micron, Samsung, and several other smaller companies. In the future we may also face competition from companies developing MRAM technologies, such as Avalanche, Spin Memory (formerly Spin Transfer Technologies), Samsung and other larger and smaller semiconductor companies. We may also face indirect competition from RRAM, 3D XPoint, NOR and NAND Flash manufacturers in some market applications.

Our sensor products compete with giant magnetoresistive (GMR), anisotropic magnetoresistive (AMR) and Hall effect sensors supplied by Alps, Asahi Kasei Microdevices, Crocus, Fairchild, Invensys (now Schneider), Kionix and Micronix and TMR sensors from TDK.

Our ability to compete successfully in the market for our products is based on a number of factors, including:

- our products' attributes and specifications;
- customer adoption of MRAM technology despite the price per bit premium of our products verses competing technologies;
- successful controller supplier and customer engagements throughout the product life cycle;
- high quality and reliability as measured by our customers;
- the ease of implementation of our products by customers;
- preferred supplier status at numerous customers and ODMs
- manufacturing expertise and strength;
- reputation and strength of customer relationships;
- competitive pricing in the market against the competition while maintaining our gross margin profile; and
- our success in meeting the needs of future customer requirements through continued development of new products.

Intellectual Property

Our success depends, in part, on our ability to protect our products and technologies from unauthorized third-party copying and use. To accomplish this, we rely on a combination of intellectual property rights, including patents, trade secrets, copyrights and trademarks, as well as customary contractual protections. As of December 31, 2019, we held 476 issued patents that expire at various times between January 2020 and December 2037, and had 157 patent applications pending. Included in our issued patents and pending applications are patents/applications in the United States, China, Europe, France, Germany, Ireland, Italy, Japan, the Netherlands, the Republic of Korea, Singapore, Taiwan, and the United Kingdom.

We seek to file for patents that have broad application in the semiconductor industry and that would be helpful in the magnetoresistive memory and sensor markets. However, there can be no assurance that our pending patent applications or any future applications will be approved, that any issued patents will provide us with competitive advantages or will not be challenged by third parties, or that the patents or applications of others will not have an adverse effect on our ability to do business. In addition, there can be no assurance that others will not independently develop substantially equivalent intellectual property or otherwise gain access to our trade secrets or intellectual property, or disclose such intellectual property or trade secrets, or that we can effectively protect our intellectual property.

We seek to enforce our IP and to monetize our patent portfolio through licensing of third parties in return for cash remuneration, patent cross licenses or both. We recognized revenue from licensing our IP during the first quarter of 2018.

We generally control access to and use of our confidential information through employing internal and external controls, including contractual protections with employees, contractors and customers. We rely in part on U.S. and international copyright laws to protect our mask work. All employees and consultants are required to execute confidentiality agreements in connection with their employment and consulting relationships with us. We also require them to agree to disclose and assign to us all inventions conceived or made in connection with the employment or consulting relationship.

Environmental Regulation

We must comply with many different federal, state, local and foreign governmental regulations related to the use, storage, discharge and disposal of certain chemicals and gases used in our manufacturing processes. Our facilities have been designed to comply with these regulations and we believe that our activities are conducted in material compliance with such regulations. Any changes in such regulations or in their enforcement could require us to acquire costly equipment or to incur other significant expenses to comply with environmental regulations. Any failure by us to adequately control the storage, use, discharge and disposal of regulated substances could result in significant future liabilities.

Employees

At December 31, 2019, we had 88 employees in the United States and 20 full time equivalent contractors and consultants in Singapore, China, Taiwan, Germany, the United States, Japan, and Italy. None of our employees are either represented by a labor union or subject to a collective bargaining agreement. We have not experienced any work stoppages, and we consider our relations with our employees and contractors to be good.

Corporate Information

We were incorporated in Delaware in May 2008. In June 2008, Freescale Semiconductor, Inc. (now a wholly-owned subsidiary of NXP Semiconductors N.V.), spun-out its MRAM business as Everspin. Our offices are located at 5670 W. Chandler Boulevard, Suite 100, Chandler, Arizona 85226. Our telephone number is (480) 347-1111. Our corporate website is at *www.Everspin.com*. 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 Exchange Act are available free of charge on our website. The information contained on or that can be accessed through our website is not incorporated by reference into this report, and you should not consider information on our website to be part of this report.

Item 1A. Risk Factors.

The following are important factors that could cause actual results or events to differ materially from those contained in any forward-looking statements made by us or on our behalf. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we deem immaterial also may impair our business operations. If any of the following risks or such other risks actually occurs, our business could be harmed.

Risk Factors Related to Our Business and Our Industry

We may need additional funding and may be unable to raise capital when needed, which could force us to delay, reduce or eliminate planned activities.

Our total revenue was $37.5 million for the year ended December 31, 2019, and $49.4 million for the year ended December 31, 2018, and, as of December 31, 2019, we had cash and cash equivalents of approximately $14.5 million. Our existing capital may be insufficient to meet our requirements. Based on our current operating plan, we believe our cash and cash equivalents and availability under our revolving line of credit facility will be sufficient to fund our operating requirements for at least 12 months; however, management expects operating losses and cash flow deficits to continue for the foreseeable future. We may need to raise additional funds through financings or borrowings in order to accomplish our long-term planned objectives. Failure to raise additional funds could delay, reduce, or halt our sales of our products and would impact our ability to continue our business. If we raise additional funds through issuances of equity, convertible debt securities or other securities convertible into equity, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our common stock. We have no committed sources of capital funding other than our revolving line of credit facility and there is no assurance that additional funding will be available to us in the future or be secured on acceptable terms. If adequate funding is not available when needed, we may be forced to curtail operations, including our commercial activities and research and development programs, or cease operations altogether, file for bankruptcy, or undertake any combination of the foregoing. In such event, our stockholders may lose their entire investment in our company.

In addition, if we do not meet our payment obligations to third parties as they become due, we may be subject to litigation claims and our creditworthiness would be adversely affected. Even if we are successful in defending against these claims, litigation could result in substantial costs and would be a distraction to management and may have other unfavorable results that could further adversely impact our financial condition. Stockholders should not rely on our balance sheet as an indication of the amount of proceeds that would be available to satisfy claims of creditors, and potentially be available for distribution to stockholders, in the event of liquidation.

We have a history of losses which may continue in the future, and we cannot be certain that we will achieve or sustain profitability.

We have incurred net losses since our inception. We incurred net losses of $14.7 million and $17.8 million for the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019, we had an accumulated deficit of $148.7 million. We expect to incur significant expenses related to the continued development and expansion of our business, including in connection with our efforts to develop and improve upon our products and technology, maintain and enhance our research and development and sales and marketing activities and hire additional personnel. While our products offer unique benefits over other industry memory technologies, our per-bit cost to product our product is currently higher than competing technologies. As a result, our ability to capture market share and generate sufficient revenue to transition to profitability and generate consistent positive cash flows is uncertain. We do not know whether we will be able to grow our revenue rapidly enough to absorb these costs, and it is difficult for us to assess the extent of our expenses, or their impact on our results of operations.

Further, our revenue may not increase or may decline for a number of possible reasons, many of which are outside our control, including a decline in demand for our products, increased competition, business conditions that adversely affect the semiconductor memory industry, including reduced demand for products in the end markets that we serve, or our failure to capitalize on growth opportunities. If we fail to generate sufficient revenue to support our operations, we may not be able to achieve or sustain profitability. If revenue does not grow sufficiently, we may not be able to meet our debt covenants, including the liquidity ratio and sales targets.

Our limited history of making our STT-MRAM products makes it difficult to evaluate our current business and future prospects.

We have been in existence as a stand-alone company since 2008, when Freescale Semiconductor, Inc. (subsequently acquired by NXP Semiconductor) spun-out its MRAM business as Everspin. We have been shipping magnetoresistive random access memory (MRAM) products since our incorporation in 2008. However, we only began to manufacture and ship our Spin Transfer Torque MRAM (STT-MRAM) products in the fourth quarter of 2017.

Our limited experience selling our STT-MRAM products, combined with the rapidly evolving and competitive nature of our market, makes it difficult to evaluate our current business and future prospects. In addition, we have limited insight into emerging trends that may adversely affect our business, financial condition, results of operations and prospects. We have encountered and will continue to encounter risks and difficulties frequently experienced by growing companies in rapidly changing industries, including unpredictable and volatile revenue and increased expenses as we continue to grow our business. The viability and demand for our products may be affected by many factors outside of our control, such as the factors affecting the growth of the industrial, automotive, transportation, and enterprise storage industries and changes in macroeconomic conditions. If we do not manage these risks and overcome these difficulties successfully, our business will suffer.

We may be unable to match production with customer demand for a variety of reasons including our inability to accurately forecast customer demand or the capacity constraints of our suppliers, which could adversely affect our operating results.

We make planning and spending decisions, including determining production levels, production schedules, component procurement commitments, personnel needs and other resource requirements, based on our estimates of product demand and customer requirements. Our products are typically purchased pursuant to individual purchase orders. While our customers may provide us with their demand forecasts, they are not contractually committed to buy any quantity of products beyond purchase orders. Furthermore, many of our customers may increase, decrease, cancel or delay purchase orders already in place without significant penalty. The short-term nature of commitments by our customers and the possibility of unexpected changes in demand for their products reduce our ability to accurately estimate future customer requirements. On occasion, customers may require rapid increases in production, which can strain our resources, necessitate more onerous procurement commitments and reduce our gross margin. If we overestimate customer demand, we may purchase products that we may not be able to sell, which could result in decreases in our prices or write-downs of unsold inventory. Conversely, if we underestimate customer demand or if sufficient manufacturing capacity is unavailable, we could lose sales opportunities and could lose market share or damage our customer relationships. We manufacture MRAM products at our 200mm facility we lease in Chandler, Arizona and use a single foundry, GLOBALFOUNDRIES for production of higher density products on advanced technology nodes, which may not have sufficient capacity to meet customer demand. The rapid pace of innovation in our industry could also render significant portions of our inventory obsolete. Excess or obsolete inventory levels could result in unexpected expenses or write-downs of inventory values that could adversely affect our business, operating results and financial condition.

As we expand into new potential markets, we expect to face intense competition, including from our customers and potential customers, and may not be able to compete effectively, which could harm our business.

We expect that our new and future MRAM products will be applicable to markets in which we are not currently operating. The markets in which we operate and may operate in the future are extremely competitive and are characterized by rapid technological change, continuous evolving customer requirements and declining average selling prices. We may not be able to compete successfully against current or potential competitors, which include our current or potential customers as they seek to internally develop solutions competitive with ours or as we develop products potentially competitive with their existing products. If we do not compete successfully, our market share and revenue may decline. We compete with large semiconductor manufacturers and designers and others, and our current and potential competitors have longer operating histories, significantly greater resources and name recognition and a larger base of customers than we do. This may allow them to respond more quickly than we can to new or emerging technologies or changes in customer requirements. In addition, these competitors may have greater credibility with our existing and potential customers. Some of our current and potential customers with their own internally developed solutions may choose not to purchase products from third-party suppliers like us.

We rely on third parties to distribute, manufacture, package, assemble and test our products, which exposes us to a number of risks, including reduced control over manufacturing and delivery timing and potential exposure to price fluctuations, which could result in a loss of revenue or reduced profitability.

Although we operate an integrated magnetic fabrication line located in Chandler, Arizona, we purchase wafers from third parties and outsource the manufacturing, packaging, assembly and testing of our products to third-party foundries and assembly and testing service providers. We use a single foundry, GLOBALFOUNDRIES Singapore Pte. Ltd., for production of higher density products on advanced technology nodes. Our primary product package and test operations are located in China, Taiwan and other Asian countries. We also use standard CMOS wafers from third-party foundries, which we process at our Chandler, Arizona, facility.

Relying on third-party distribution, manufacturing, assembly, packaging and testing presents a number of risks, including but not limited to:

- our interests could diverge from those of our foundries, or we may not be able to agree with them on ongoing development, manufacturing and operational activities, or on the amount, timing, or nature of further investments in our joint development;
- capacity and materials shortages during periods of high demand;
- reduced control over delivery schedules, inventories and quality;
- the unavailability of, or potential delays in obtaining access to, key process technologies;
- the inability to achieve required production or test capacity and acceptable yields on a timely basis;
- misappropriation of our intellectual property;
- the third party’s ability to perform its obligations due to bankruptcy or other financial constraints;
- exclusive representatives for certain customer engagements;
- limited warranties on wafers or products supplied to us; and
- potential increases in prices.

For some of our third-party contract manufacturers, including Taiwan Semiconductor Manufacturing Company, Limited (TSMC), Global Testing Corporation (GTC), ChipMos, OSE Taiwan, and Amkor, we typically negotiate pricing on a per-purchase order basis and in some cases on an annual basis. Therefore, they are not obligated to perform services or supply components to us for any specific period, in any specific quantities, or at any specific price, except as may be provided in a particular purchase order. During periods of high demand and tight inventories, our third-party foundries and packaging, assembly and testing contractors may allocate capacity to the production of other companies' products while reducing deliveries to us, or significantly raise their prices. In particular, they may allocate capacity to other customers that are larger and better financed than us or that have long-term agreements, decreasing the capacity available to us. Shortages of capacity available to us may be caused by the actions of their other, large customers that may be difficult to predict, such as major product launches.

Our Master Foundry agreement with NXP includes wafer processing services at our Arizona manufacturing facility through the period of the lease which expires January 2022.

Our Master Services agreement with UTAC Pte. Ltd. includes performing wafer level assembly, test, and related packaging services through the period of the contract ending August 2022.

Our manufacturing agreement with GLOBALFOUNDRIES includes a customary forecast and ordering mechanism for the supply of certain of our wafers, and we are obligated to order and pay for, and GLOBALFOUNDRIES is obligated to supply, wafers consistent with the binding portion of our forecast. However, our manufacturing arrangement is also subject to both a minimum and maximum order quantity that while we believe currently addresses our projected foundry capacity needs, may not address our maximum foundry capacity requirements in the future. We may also be obligated to pay for unused capacity if our demand decreases in the future, or if our estimates prove inaccurate. GLOBALFOUNDRIES also has the ability to discontinue its manufacture of any of our wafers upon due notice and completion of the notice period. This could cause us to have to find another foundry to manufacture those wafers or redesign our core technology and would mean that we may not have products to sell until such time. Any time spent engaging a new manufacturer or redesigning our core technology could be costly and time consuming and may allow potential competitors to take opportunities in the marketplace. Moreover, if we are unable to find another foundry to manufacture our products or if we have to redesign our core technology, this could cause material harm to our business and operating results.

If we need other foundries or packaging, assembly and testing contractors, or if we are unable to obtain timely and adequate deliveries from our providers, we might not be able to cost-effectively and quickly retain other vendors to satisfy our requirements. Because the lead-time needed to establish a relationship with a new third-party supplier could be several quarters, there is no readily available alternative source of supply for any specific component. In addition, the time and expense to qualify a new foundry could result in additional expense, diversion of resources or lost sales, any of which would negatively impact our financial results.

If any of our current or future foundries or packaging, assembly and testing subcontractors significantly increases the costs of wafers or other materials or services, interrupts or reduces our supply, including for reasons outside of their control, or if any of our relationships with our suppliers is terminated, our operating results could be adversely affected. Such occurrences could also damage our customer relationships, result in lost revenue, cause a loss in market share or damage our reputation.

Our joint development agreement and strategic relationships involve numerous risks.

We have entered into strategic relationships to manufacture products and develop new manufacturing process technologies and products. These relationships include our joint development agreement with GLOBALFOUNDRIES to develop advanced MTJ technology and STT-MRAM. These relationships are subject to various risks that could adversely affect the value of our investments and our results of operations. These risks include the following:

- our interests could diverge from those of our foundries, or we may not be able to agree with them on ongoing development, manufacturing and operational activities, or on the amount, timing, or nature of further investments in our joint development;
- we may experience difficulties in transferring technology to a foundry;
- we may experience difficulties and delays in getting to and/or ramping production at foundries;

- our control over the operations of foundries is limited;
- due to financial constraints, our joint development collaborators may be unable to meet their commitments to us and may pose credit risks for our transactions with them;
- due to differing business models or long-term business goals, our collaborators may decide not to join us in funding capital investment, which may result in higher levels of cash expenditures by us;
- our cash flows may be inadequate to fund increased capital requirements;
- we may experience difficulties or delays in collecting amounts due to us from our collaborators;
- the terms of our arrangements may turn out to be unfavorable;
- we are migrating toward a fabless model as 300mm production becomes required and this increases risks related to less control over our critical production processes; and
- changes in tax, legal, or regulatory requirements may necessitate changes in our agreements.

The term of the agreement, as amended, is the completion, termination, or expiration of the last statement of work entered into pursuant to the joint development agreement. On December 31, 2019, this agreement was extended to cover work to develop MRAM on the 12nm technology node. If GLOBALFOUNDRIES fails to extend or terminates the joint development agreement, our ability to continue to develop our MRAM technology could be significantly impaired.

If our strategic relationships are unsuccessful, our business, results of operations, or financial condition may be materially adversely affected.

The market for semiconductor memory products is characterized by declines in average selling prices, which we expect to continue, and which could negatively affect our revenue and margins.

Our customers for some of our products may see the average selling price of competitive products decrease year-over-year and we expect this trend to continue. When such pricing declines occur, we may not be able to mitigate the effects by selling more or higher margin units, or by reducing our manufacturing costs. In such circumstances, our operating results could be materially and adversely affected. Our stand-alone and embedded MRAM products have experienced declining average selling prices over their life cycle. The rate of decline may be affected by a number of factors, including relative supply and demand, the level of competition, production costs and technological changes. As a result of the decreasing average selling prices of our products following their launch, our ability to increase or maintain our margins depends on our ability to introduce new or enhanced products with higher average selling prices and to reduce our per-unit cost of sales and our operating costs. We may not be able to reduce our costs as rapidly as companies that operate their own manufacturing, assembly and testing facilities, and our costs may even increase because we rely in part on third parties to manufacture, assemble and test our products, which could also reduce our gross margins. In addition, our new or enhanced products may not be as successful or enjoy as high margins as we expect. If we are unable to offset any reductions in average selling prices by introducing new products with higher average selling prices or reducing our costs, our revenue and margins will be negatively affected and may decrease.

The semiconductor memory market is highly cyclical and has experienced severe downturns in the past, generally as a result of wide fluctuations in supply and demand, constant and rapid technological change, continuous new product introductions and price erosion. During downturns, periods of intense competition, or the presence of oversupply in the industry, the selling prices for our products may decline at a high rate over relatively short time periods as compared to historical rates of decline. We are unable to predict selling prices for any future periods and may experience unanticipated, sharp declines in selling prices for our products.

Unfavorable economic and market conditions, domestically and internationally, may adversely affect our business, financial condition, results of operations and cash flows.

We have significant customer sales both in the U.S. and internationally. We also rely on domestic and international suppliers, manufacturing partners and distributors. We are therefore susceptible to adverse U.S. and international economic and market conditions. If any of our manufacturing partners, customers, distributors or suppliers experience slowdowns in their business, serious financial difficulties or cease operations, our business will be adversely affected. In addition, the adverse impact of an unfavorable economy may adversely impact consumer spending, which may adversely impact our customers' spending and demand for our products.

Further, increasing trade tensions and tariffs, particularly with China, may increase the costs we incur to produce our products. Although we are seeking to qualify alternative suppliers and facilities in the event that it becomes necessary to obtain materials from other sources to limit the effect of tariffs, there is no guarantee that we will be able to do so or, if we are, that these alternative sources will fully mitigate the effect that tariffs and other trade restrictions will have on our business, which may have an adverse effect on our financial condition and results of operations.

With the extended China factory shutdowns that resulted from the outbreak of COVID-19, a coronavirus, we experienced some slowdown in demand growth immediately following the outbreak, although we are seeing good signals in future demand. Although our supply chain is operating as usual and we have not experienced any impact, we have contingency plans in place to avoid any disruption to our supply chain, as there is no guarantee that the spread of COVID-19 will not affect our supply chain in the future. Further, the outbreak of COVID-19 may have an adverse effect on economies in general and demand for end-user products that incorporate our products, which could impact demand for our products. We continue to watch the situation for these and other possible secondary effects that could impact demand for our products in future quarters.

We must continuously develop new and enhanced products, and if we are unable to successfully market our new and enhanced products for which we incur significant expenses to develop, our results of operations and financial condition will be materially adversely affected.

To compete effectively in our markets, we must continually design, develop and introduce new and improved technology and products with improved features in a cost-effective manner in response to changing technologies and market demand. This requires us to devote substantial financial and other resources to research and development. We are developing new technology and products, which we expect to be one of the drivers of our revenue growth in the future. We also face the risk that customers may not value or be willing to bear the cost of incorporating our new and enhanced products into their products, particularly if they believe their customers are satisfied with current solutions. Regardless of the improved features or superior performance of our new and enhanced products, customers may be unwilling to adopt our solutions due to design or pricing constraints, or because they do not want to rely on a single or limited supply source. Because of the extensive time and resources that we invest in developing new and enhanced products, if we are unable to sell customers our new products, our revenue could decline and our business, financial condition, results of operations and cash flows would be negatively affected. For example, we generated limited revenue from sales of our STT-MRAM products to date. While we expect revenue from our STT-MRAM products to increase, if we are unable to generate more customer adoption of our 256Mb product, customer adoption of our 1Gb product and scale MRAM to gigabit densities to address applications currently served by DRAM, we may not be able to materially increase our revenue. If we are unable to successfully develop and market our new and enhanced products that we have incurred significant expenses developing, our results of operations and financial condition will be materially and adversely affected.

Our success and future revenue depend on our ability to secure design wins and on our customers' ability to successfully sell the products that incorporate our solutions. Securing design wins is a lengthy, expensive and competitive process, and may not result in actual orders and sales, which could cause our revenue to decline.

We sell to customers that incorporate MRAM into their products. A design win occurs after a customer has tested our product, verified that it meets the customer's requirements and qualified our solutions for their products. We believe we are dependent on the adoption of our 256Mb and 1Gb MRAM products by our customers to secure design wins. Our customers may need several months to years to test, evaluate and adopt our product and additional time to begin volume production of the product that incorporates our solution. Due to this generally lengthy design cycle, we may experience significant delays from the time we increase our operating expenses and make investments in our products to the time that we generate revenue from sales of these products. Moreover, even if a customer selects our solution, we cannot guarantee that this will result in any sales of our products, as the customer may ultimately change or cancel its product plans, or efforts by our customer to market and sell its product may not be successful. We may not generate any revenue from design wins after incurring the associated costs, which would cause our business and operating results to suffer.

If a current or prospective customer designs a competitor's solution into its product, it becomes significantly more difficult for us to sell our solutions to that customer because changing suppliers involves significant time, cost, effort and risk for the customer even if our solutions are superior to other solutions and remain compatible with their product design. Our ability to compete successfully depends on customers viewing us as a stable and reliable supplier to mission critical customer applications when we have less production capacity and less financial resources compared to most of our larger competitors. If current or prospective customers do not include our solutions in their products and we fail to achieve a sufficient number of design wins, our results of operations and business may be harmed.

We rely on our relationships with original equipment manufacturers (OEMs) and original design manufacturers (ODMs) to enhance our solutions and market position, and our failure to continue to develop or maintain such relationships in the future would harm our ability to remain competitive.

We develop our products for leading OEMs and ODMs that serve a variety of end markets and are developing devices for automotive, transportation, industrial and storage applications. For each application, manufacturers create products that incorporate specialized semiconductor technology, which makers of memory products use as the basis for their products. These manufacturers set the specifications for many of the key components to be used on each generation of their products and, in the case of memory components, generally qualify only a few vendors to provide memory components for their products. As each new generation of their products is released, vendors are validated in a similar fashion. We must work closely with OEMs and ODMs to ensure our products become qualified for use in their products. As a result, maintaining close relationships with leading OEMs and ODMs that are developing devices for automotive, transportation, industrial and storage applications is crucial to the long-term success of our business. We could lose these relationships for a variety of reasons, including our failure to qualify as a vendor, our failure to demonstrate the value of our new solutions, declines in product quality, or if OEMs or ODMs seek to work with vendors with broader product suites, greater production capacity or greater financial resources. If our relationships with key industry participants were to deteriorate or if our solutions were not qualified by our customers, our market position and revenue could be materially and adversely affected.

The loss of one or several of our customers or reduced orders or pricing from existing customers may have a significant adverse effect on our operations and financial results.

We have derived and expect to continue to derive a significant portion of our revenues from a small group of customers during any particular period due in part to the concentration of market share in the semiconductor industry. Our four largest end customers together accounted for 22% of our total revenue for the year ended December 31, 2019, and one of these customers individually accounted for more than 10% of our total revenue during the period. Our four largest end customers together accounted for 29% of our total revenue for the year ended December 31, 2018, and one of these customers individually accounted for more than 10% of our total revenue during the period. The loss of a significant customer, a business combination among our customers, a reduction in orders or decrease in price from a significant customer or disruption in any of our commercial or distributor arrangements may result in a significant decline in our revenues and could have a material adverse effect on our business, liquidity, results of operations, financial condition and cash flows.

If sales of our customers' products decline or if their products do not achieve market acceptance, our business and operating results could be adversely affected.

Our revenue depends on our customers' ability to commercialize their products successfully. The markets for our customers' products are extremely competitive and are characterized by rapid technological change. Competition in our customers' markets is based on a variety of factors including price, performance, product quality, marketing and distribution capability, customer support, name recognition and financial strength. As a result of rapid technological change, the markets for our customers' products are characterized by frequent product introductions, short product life cycles, fluctuating demand and increasing product capabilities. As a result, our customers' products may not achieve market success or may become obsolete. We cannot assure our stockholders that our customers will dedicate the resources necessary to promote and commercialize their products, successfully execute their business strategies for such products, or be able to manufacture such products in quantities sufficient to meet demand or cost-effectively manufacture products at a high volume. Our customers do not have contracts with us that require them to manufacture, distribute or sell any products. Moreover, our customers may develop internally, or in collaboration with our competitors, technology that they may utilize instead of the technology available to them through us. Our customers' failure to achieve market success for their products, including as a result of general declines in our customers' markets or industries, could negatively affect their willingness to utilize our products, which may result in a decrease in our revenue and negatively affect our business and operating results.

Our revenue also depends on the timely introduction, quality and market acceptance of our customers' products that incorporate our solutions. Our customers' products are often very complex and subject to design complexities that may result in design flaws, as well as potential defects, errors and bugs. We incur significant design and development costs in connection with designing our solutions for customers' products. If our customers discover design flaws, defects, errors or bugs in their products, or if they experience changing market requirements, failed evaluations or field trials, or issues with other vendors, they may delay, change or cancel a project. If we have already incurred significant development costs, we may not be able to recoup those costs, which in turn would adversely affect our business and financial results.

We face competition and expect competition to increase in the future. If we fail to compete effectively, our revenue growth and results of operations will be materially and adversely affected.

The global semiconductor market in general, and the semiconductor memory market in particular, are highly competitive. We expect competition to increase and intensify as other semiconductor companies enter our markets, many of which have greater financial and other resources with which to pursue technology development, product design, manufacturing, marketing and sales and distribution of their products. Increased competition could result in price pressure, reduced profitability and loss of market share, any of which could materially and adversely affect our business, revenue and operating results. Currently, our competitors range from large, international companies offering a wide range of traditional memory technologies to companies specializing in other alternative, specialized emerging memory technologies. Our primary memory competitors include Cypress, Fujitsu, Integrated Silicon Solution, Macronix, Microchip, Micron, Renesas, Samsung, and Toshiba. In addition, as the MRAM market opportunity grows, we expect new entrants such as Avalanche Technologies may enter this market and existing competitors, including leading semiconductor companies, may make significant investments to compete more effectively against our products. These competitors could develop technologies or architectures that make our products or technologies obsolete.

Our ability to compete successfully depends on factors both within and outside of our control, including:

- the functionality and performance of our products and those of our competitors;
- our relationships with our customers and other industry participants;
- prices of our products and prices of our competitors' products;
- our ability to develop innovative products;
- our competitors' greater resources to make acquisitions;
- our ability to obtain adequate capital to finance operations;
- our ability to retain high-level talent, including our management team and engineers; and
- the actions of our competitors, including merger and acquisition activity, launches of new products and other actions that could change the competitive landscape.

Competition could result in pricing pressure, reduced revenue and loss of market share, any of which could materially and adversely affect our business, results of operations and prospects. In the event of a market downturn, competition in the markets in which we operate may intensify as our customers reduce their purchase orders. Our competitors that are significantly larger and have greater financial, technical, marketing, distribution, customer support and other resources or more established market recognition than us may be better positioned to accept lower prices and withstand adverse economic or market conditions.

Our customers require our products and our third-party contractors to undergo a lengthy and expensive qualification process. If we are unsuccessful or delayed in qualifying any of our products with a customer, our business and operating results would suffer.

Prior to selecting and purchasing our products, our customers typically require that our products undergo extensive qualification processes, which involve testing of our products in the customers' systems, as well as testing for reliability. This qualification process may continue for several months or years. However, obtaining the requisite qualifications for a memory product does not assure any sales of the product. Even after successful qualification and sales of a product to a customer, a subsequent revision in our third-party contractors' manufacturing process or our selection of a new contract manufacturer may require a new qualification process, which may result in delays and excess or obsolete inventory. After our products are qualified and selected, it can and often does take several months or years before the customer commences volume production of systems that incorporate our products. Despite these uncertainties, we devote substantial resources, including design, engineering, sales, marketing and management efforts, to qualify our products with customers in anticipation of sales. If we are unsuccessful or delayed in qualifying any of our products with a customer, sales of those products may be precluded or delayed, which may impede our growth and harm our business.

Our costs may increase substantially if we or our third-party manufacturing contractors do not achieve satisfactory product yields or quality.

The fabrication process is extremely complicated and small changes in design, specifications or materials can result in material decreases in product yields or even the suspension of production. From time to time, we and/or the third-party foundries that we contract to manufacture our products may experience manufacturing defects and reduced manufacturing yields. In some cases, we and/or our third-party foundries may not be able to detect these defects early in the fabrication process or determine the cause of such defects in a timely manner. There may be a higher risk of product yield issues in newer STT-MRAM products.

Generally, in pricing our products, we assume that manufacturing yields will continue to improve, even as the complexity of our products increases. Once our products are initially qualified either internally or with our third-party foundries, minimum acceptable yields are established. We are responsible for the costs of the units if the actual yield is above the minimum set with our third-party foundries. If actual yields are below the minimum we are not required to purchase the units. Typically, minimum acceptable yields for our new products are generally lower at first and gradually improve as we achieve full production, but yield issues can occur even in mature processes due to break downs in mechanical systems, equipment failures or calibration errors. Unacceptably low product yields or other product manufacturing problems could substantially increase overall production time and costs and adversely impact our operating results. Product yield losses will increase our costs and reduce our gross margin. In addition to significantly harming our results of operations and cash flow, poor yields may delay shipment of our products and harm our relationships with existing and potential customers.

The complexity of our products may lead to defects, which could negatively impact our reputation with customers and result in liability.

Products as complex as ours may contain defects when first introduced to customers or as new versions are released. Delivery of products with production defects or reliability, quality or compatibility problems could significantly delay or hinder market acceptance of the products or result in a costly recall and could damage our reputation and adversely affect our ability to retain existing customers and attract new customers. Defects could cause problems with the functionality of our products, resulting in interruptions, delays or cessation of sales of these products to our customers. We may also be required to make significant expenditures of capital and resources to resolve such problems. We cannot assure our stockholders that problems will not be found in new products, both before and after commencement of commercial production, despite testing by us, our suppliers or our customers. Any such problems could result in:

- delays in development, manufacture and roll-out of new products;
- additional development costs;
- loss of, or delays in, market acceptance;
- diversion of technical and other resources from our other development efforts;
- claims for damages by our customers or others against us; and
- loss of credibility with our current and prospective customers.

Any such event could have a material adverse effect on our business, financial condition and results of operations.

We may experience difficulties in transitioning to new wafer fabrication process technologies or in achieving higher levels of design integration, which may result in reduced manufacturing yields, delays in product deliveries and increased expenses.

We aim to use the most advanced manufacturing process technology appropriate for our solutions that is available from our third-party foundries. As a result, we periodically evaluate the benefits of migrating our solutions to other technologies to improve performance and reduce costs. These ongoing efforts require us from time to time to modify the manufacturing processes for our products and to redesign some products, which in turn may result in delays in product deliveries. We may face difficulties, delays and increased expense as we transition our products to new processes, and potentially to new foundries. We will depend on our third-party foundries as we transition to new processes. We cannot assure our stockholders that our third-party foundries will be able to effectively manage such transitions or that we will be able to maintain our relationship with our third-party foundries or develop relationships with new third-party foundries. If we or any of our third-party foundries experience significant delays in transitioning to new processes or fail to efficiently implement transitions, we could experience reduced manufacturing yields, delays in product deliveries and increased expenses, any of which could harm our relationships with our customers and our operating results.

As smaller line width geometry manufacturing processes become more prevalent, we intend to move our future products to increasingly smaller geometries to integrate greater levels of memory capacity and/or functionality into our products. This transition will require us and our third-party foundries to migrate to new designs and manufacturing processes for smaller geometry products. We may not be able to achieve smaller geometries with higher levels of design integration or to deliver new integrated products on a timely basis. We periodically evaluate the benefits, on a product-by-product basis, of migrating to smaller geometry process technologies to increase product value. We are dependent on our relationships with our third-party foundries to transition to smaller geometry processes successfully. We cannot assure our stockholders that our third-party foundries will be able to effectively manage any such transition. If we or our third-party foundries experience significant delays in any such transition or fail to implement a transition, our business, financial condition and results of operations could be materially harmed.

Changes to industry standards and technical requirements relevant to our products and markets could adversely affect our business, results of operations and prospects.

Our products are only a part of larger electronic systems. All products incorporated into these systems must comply with various industry standards and technical requirements created by regulatory bodies or industry participants to operate efficiently together. Industry standards and technical requirements in our markets are evolving and may change significantly over time. For our products, the industry standards are developed by the Joint Electron Device Engineering Council, an industry trade organization. In addition, large industry-leading semiconductor and electronics companies play a significant role in developing standards and technical requirements for the product ecosystems within which our products can be used. Our customers also may design certain specifications and other technical requirements specific to their products and solutions. These technical requirements may change as the customer introduces new or enhanced products and solutions.

Our ability to compete in the future will depend on our ability to identify and comply with evolving industry standards and technical requirements. The emergence of new industry standards and technical requirements could render our products incompatible with products developed by other suppliers or make it difficult for our products to meet the requirements of certain of our customers in automotive, transportation, industrial, storage and other markets. 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 and requirements. If our products are not in compliance with prevailing industry standards and technical requirements for a significant period of time, we could miss opportunities to achieve crucial design wins, our revenue may decline and we may incur significant expenses to redesign our products to meet the relevant standards, which could adversely affect our business, results of operations and prospects.

Failure to protect our intellectual property could substantially harm our business.

Our success and ability to compete depend in part upon our ability to protect our intellectual property. We rely on a combination of intellectual property rights, including patents, mask work protection, copyrights, trademarks, trade secrets and know-how, in the United States and other jurisdictions. The steps we take to protect our intellectual property rights may not be adequate, particularly in foreign jurisdictions such as China. Any patents we hold may not adequately protect our intellectual property rights or our products against competitors, and third parties may challenge the scope, validity or enforceability of our issued patents, which third parties may have significantly more financial resources with which to litigate their claims than we have to defend against them. In addition, other parties may independently develop similar or competing technologies designed around any patents or patent applications that we hold. Some of our products and technologies are not covered by any patent or patent application, as we do not believe patent protection of these products and technologies is critical to our business strategy at this time. A failure to timely seek patent protection on products or technologies generally precludes us from seeking future patent protection on these products or technologies.

In addition to patents, we also rely on contractual protections with our customers, suppliers, distributors, employees and consultants, and we implement security measures designed to protect our trade secrets and know-how. However, we cannot assure our stockholders that these contractual protections and security measures will not be breached, that we will have adequate remedies for any such breach or that our customers, suppliers, distributors, employees or consultants will not assert rights to intellectual property or damages arising out of such contracts.

We may initiate claims against third parties to protect our intellectual property rights if we are unable to resolve matters satisfactorily through negotiation. Litigation brought to protect and enforce our intellectual property rights could be costly, time-consuming and distracting to management. It could also result in the impairment or loss of portions of our intellectual property, as an adverse decision could limit our ability to assert our intellectual property rights, limit the value of our technology or otherwise negatively impact our business, financial condition and results of operations. Additionally, any enforcement of our patents or other intellectual property may provoke third parties to assert counterclaims against us. Our failure to secure, protect and enforce our intellectual property rights could materially harm our business.

We may face claims of intellectual property infringement, which could be time-consuming, costly to defend or settle, result in the loss of significant rights, harm our relationships with our customers and distributors, or otherwise materially adversely affect our business, financial condition and results of operations.

The semiconductor memory industry is characterized by companies that hold patents and other intellectual property rights and that vigorously pursue, protect and enforce intellectual property rights. These companies include patent holding companies or other adverse patent owners who have no relevant product revenue and against whom our own patents may provide little or no deterrence. From time to time, third parties may assert against us and our customers' patent and other intellectual property rights to technologies that are important to our business. We have in the past, and may in the future, face such claims.

Claims that our products, processes or technology infringe third-party intellectual property rights, regardless of their merit or resolution, could be costly to defend or settle and could divert the efforts and attention of our management and technical personnel. We may also be obligated to indemnify our customers or business partners in connection with any such litigation, which could result in increased costs. Infringement claims also could harm our relationships with our customers or distributors and might deter future customers from doing business with us. If any such proceedings result in an adverse outcome, we could be required to:

- cease the manufacture, use or sale of the infringing products, processes or technology;
- pay substantial damages for infringement;
- expend significant resources to develop non-infringing products, processes or technology, which may not be successful;
- license technology from the third-party claiming infringement, which license may not be available on commercially reasonable terms, or at all;
- cross-license our technology to a competitor to resolve an infringement claim, which could weaken our ability to compete with that competitor; or
- pay substantial damages to our customers to discontinue their use of or to replace infringing technology sold to them with non-infringing technology, if available.

Any of the foregoing results could have a material adverse effect on our business, financial condition and results of operations. Furthermore, our exposure to the foregoing risks may also be increased if we acquire other companies or technologies. For example, we may have a lower level of visibility into the development process with respect to intellectual property or the care taken to safeguard against infringement risks with respect to the acquired company or technology. In addition, third parties may make infringement and similar or related claims after we have acquired technology that had not been asserted prior to the acquisition.

We make significant investments in new technologies and products that may not achieve technological feasibility or profitability or that may limit our revenue growth.

We have made and will continue to make significant investments in research and development of new technologies and products, including new and more technically advanced versions of our MRAM technology.

Investments in new technologies are speculative and technological feasibility may not be achieved. Commercial success depends on many factors including demand for innovative technology, availability of materials and equipment, selling price the market is willing to bear, competition and effective licensing or product sales. We may not achieve significant revenue from new product investments for a number of years, if at all. Moreover, new technologies and products may not be profitable, and even if they are profitable, operating margins for new products and businesses may not be as high as the margins we have experienced historically or originally anticipated. Our inability to capitalize on or realize substantial revenue from our significant investments in research and development could harm our operating results and distract management, harming our business.

Our success depends on our ability to attract and retain key employees, and our failure to do so could harm our ability to grow our business and execute our business strategies.

Our success depends on our ability to attract and retain our key employees, including our management team and experienced engineers. Competition for personnel in the semiconductor memory technology field, and in the MRAM space in particular, is intense, and the availability of suitable and qualified candidates is limited. We compete to attract and retain qualified research and development personnel with other semiconductor companies, universities and research institutions. Given our experience as an early entrant in the MRAM space, our employees are frequently contacted by MRAM startups and MRAM groups within larger companies seeking to employ them. The members of our management and key employees are at-will. If we lose the services of any key senior management member or employee, we may not be able to locate suitable or qualified replacements, and may incur additional expenses to recruit and train new personnel, which could severely impact our business and prospects. The loss of the services of one or more of our key employees, especially our key engineers, or our inability to attract and retain qualified engineers, could harm our business, financial condition and results of operations.

We maintain operations outside of the United States, which exposes us to significant risks.

The success of our business depends, in large part, on our ability to operate successfully from geographically disparate locations and to further expand our international operations and sales. Operating in international markets requires significant resources and management attention and subjects us to regulatory, economic and political risks that are different from those we face in the United States. We cannot be sure that further international expansion will be successful. In addition, we face risks in doing business internationally that could expose us to reduced demand for our products, lower prices for our products or other adverse effects on our operating results. Among the risks we believe are most likely to affect us are:

- difficulties, inefficiencies and costs associated with staffing and managing foreign operations;
- longer and more difficult customer qualification and credit checks;
- greater difficulty collecting accounts receivable and longer payment cycles;
- the need for various local approvals to operate in some countries;
- difficulties in entering some foreign markets without larger-scale local operations;
- compliance with local laws and regulations;
- unexpected changes in regulatory requirements, including the elimination of tax holidays;
- reduced protection for intellectual property rights in some countries;

- adverse tax consequences as a result of repatriating cash generated from foreign operations to the United States;
- adverse tax consequences, including potential additional tax exposure if we are deemed to have established a permanent establishment outside of the United States;
- the effectiveness of our policies and procedures designed to ensure compliance with the Foreign Corrupt Practices Act of 1977 and similar regulations;
- fluctuations in currency exchange rates, which could increase the prices of our products to customers outside of the United States, increase the expenses of our international operations by reducing the purchasing power of the U.S. dollar and expose us to foreign currency exchange rate risk if, in the future, we denominate our international sales in currencies other than the U.S. dollar;
- new and different sources of competition; and
- political and economic instability, and terrorism.

Our failure to manage any of these risks successfully could harm our operations and reduce our revenue.

To comply with environmental laws and regulations, we may need to modify our activities or incur substantial costs, and if we fail to comply with environmental regulations, we could be subject to substantial fines or be required to have our suppliers alter their processes.

The semiconductor memory industry is subject to a variety of international, federal, state and local governmental regulations directed at preventing or mitigating environmental harm, as well as to the storage, discharge, handling, generation, disposal and labeling of toxic or other hazardous substances. Failure to comply with environmental regulations could subject us to civil or criminal sanctions and property damage or personal injury claims. Compliance with current or future environmental laws and regulations could restrict our ability to expand our business or require us to modify processes or incur other substantial expenses which could harm our business. In response to environmental concerns, some customers and government agencies impose requirements for the elimination of hazardous substances, such as lead (which is widely used in soldering connections in the process of semiconductor packaging and assembly), from electronic equipment. For example, the European Union adopted its Restriction on Hazardous Substance Directive which prohibits, with specified exceptions, the sale in the EU market of new electrical and electronic equipment containing more than agreed levels of lead or other hazardous materials and China has enacted similar regulations. Environmental laws and regulations such as these could become more stringent over time, causing a need to redesign technologies, imposing greater compliance costs and increasing risks and penalties associated with violations, which could seriously harm our business.

Increasing public attention has been focused on the environmental impact of electronic manufacturing operations. While we have not experienced any materially adverse effects on our operations from recently adopted environmental regulations, our business and results of operations could suffer if for any reason we fail to control the storage or use of, or to adequately restrict the discharge or disposal of, hazardous substances under present or future environmental regulations.

Some of the facilities of our suppliers are located near known earthquake fault zones, and the occurrence of an earthquake or other catastrophic disaster could damage our facilities, which could cause us to curtail our operations.

Some of our foundries and suppliers' facilities in Asia are located near known earthquake fault zones and, therefore, are vulnerable to damage from earthquakes. We are also vulnerable to damage from other types of disasters, such as power loss, fire, floods and similar events. If any such disaster were to occur, our ability to operate our business could be seriously impaired. In addition, we may not have adequate insurance to cover our losses resulting from disasters or other similar significant business interruptions. Any significant losses that are not recoverable under our insurance policies could seriously impair our business and financial condition.

Provisions of our credit facility may restrict our ability to pursue our business strategies.

Borrowings under our existing credit facility are secured by substantially all of our assets, except for intellectual property. Our term loan facility prohibits our ability to, among other things:

- dispose of or sell assets;
- consolidate or merge with other entities;
- incur additional indebtedness;
- create liens on our assets;
- pay dividends;
- make investments;
- enter into transactions with affiliates; and
- redeem subordinated indebtedness.

These restrictions are subject to certain exceptions. In addition, our existing credit facility requires that we meet certain operating covenants, such as maintaining insurance on the collateral and meeting certain financial covenants, such as a minimum liquidity ratio. The operating restrictions and covenants in the term loan facility, as well as any future financing agreements that we may enter into, may restrict our ability to finance our operations, engage in business activities or expand or fully pursue our business strategies. Our ability to comply with these covenants may be affected by events beyond our control, and we may not be able to meet those covenants. A breach of any of these covenants could result in an event of default under the credit facility. We are required to make mandatory prepayments of the outstanding loan upon the acceleration by lender following the occurrence of an event of default, along with a payment of the end of term fee, the prepayment fee and any other obligations that are due and payable at the time of prepayment. In the event of default, the interest rate in effect will increase by 5% per annum.

Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the U.S. Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses, or NOLs, to offset future taxable income, and tax credits to offset tax. As of December 31, 2019, we had gross federal net operating loss carryforwards of approximately $131.8 million, of which $99.8 million will expire in 2028 through 2037 if not utilized, and $32.0 million will carryover indefinitely. As of December 31, 2019, we had state net operating loss carryforwards of approximately $50.2 million, of which $48.5 million will expire in 2023 through 2039 if not utilized, and $1.7 million will carryover indefinitely. The federal NOLs generated prior to 2018 will continue to be governed by the NOL tax rules as they existed prior to the adoption of the 2017 Tax Act, which means that generally they will expire 20 years after they were generated if not used prior thereto. The 2017 Tax Act repealed the 20-year carryforward and two-year carryback of NOLs originating after December 31, 2017 and also limits the NOL deduction to 80% of taxable income for tax years beginning after December 31, 2017. Any NOLs generated in 2018 and forward will be carried forward and will not expire. There is no current impact as we continue to be in a tax loss position for US income tax purposes. Future changes in our stock ownership, many of which are outside of our control, could result in an ownership change under IRC Section 382 of the Code. The ability to utilize our net operating losses and tax credits could also be impaired under state law. As a result, we might not be able to utilize a material portion of our state NOLs and tax credits.

Interruptions in our information technology systems could adversely affect our business.

We rely on the efficient and uninterrupted operation of complex information technology systems and networks to operate our business. Any significant disruption to our systems or networks, including, but not limited to, new system implementations, computer viruses, security breaches, facility issues, natural disasters, terrorism, war, telecommunication failures or energy blackouts, could have a material adverse impact on our operations, sales and financial results. Such disruption could result in a loss of our intellectual property or the release of sensitive competitive information or supplier, customer or employee personal data. Any loss of such information could harm our competitive position, result in a loss of customer confidence, and cause us to incur significant costs to remedy the damages caused by any such disruptions or security breaches. Additionally, any failure to properly manage the collection, handling, transfer or disposal of personal data of employees and customers may result in regulatory penalties, enforcement actions, remediation obligations, litigation, fines and other sanctions.

We may experience attacks on our data, attempts to breach our security and attempts to introduce malicious software into our IT systems. If attacks are successful, we may be unaware of the incident, its magnitude, or its effects until significant harm is done. Any such attack or disruption could result in additional costs related to rebuilding of our internal systems, defending litigation, responding to regulatory actions, or paying damages. Such attacks or disruptions could have a material adverse impact on our business, operations and financial results.

Third-party service providers, such as wafer foundries, assembly and test contractors, distributors and other vendors have access to certain portions of our and our customers' sensitive data. In the event that these service providers do not properly safeguard the data that they hold, security breaches and loss of data could result. Any such loss of data by our third-party service providers could negatively impact our business, operations and financial results, as well as our relationship with our customers.

We have a material weakness in our internal control over financial control which we are currently remediating, but if we experience material weaknesses in the future or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to accurately report our financial condition or results of operations which may adversely affect investor confidence in us and, as a result, the value of our common stock.

We are required, under Section 404 of the Sarbanes-Oxley Act to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment includes disclosure of any material weaknesses identified by our management in our internal control over financial reporting. A material weakness is a deficiency or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual and interim financial statements will not be detected or prevented on a timely basis. Our management has determined that we have a material weakness in our internal control over financial reporting, as further described in Part II, Item 9A of this Report. If we are unable to remediate this material weakness, or experience additional weaknesses, we may not be able to accurately report our financial condition or results of operations, which may adversely affect investor confidence in the accuracy and completeness of our financial reports, which could cause the price of our common stock to decline.

If we fail to retain finance personnel and strengthen our financial reporting systems and infrastructure, we may not be able to timely and accurately report our financial results or comply with the requirements of being a public company, including compliance with the Sarbanes-Oxley Act and SEC reporting requirements.

We have accounting and finance staff members working to improve and maintain the effectiveness of our closing and financial reporting processes. Any inability to retain such personnel would have an adverse impact on our ability to accurately and timely prepare our financial statements. We may be unable to locate and hire qualified professionals with requisite technical and public company experience when and as needed. In addition, new employees will require time and training to learn our business and operating processes and procedures. If our finance and accounting organization is unable for any reason to respond adequately to the demands of being a public company, the quality and timeliness of our financial reporting may suffer, which could result in the identification of new material weaknesses in our internal controls. Any consequences resulting from inaccuracies or delays in our reported financial statements could cause the trading price of our common stock to decline and could harm our business, operating results and financial condition.

Regulations related to "conflict minerals" may force us to incur additional expenses, may make our supply chain more complex and may result in damage to our reputation with customers.

Pursuant to the Dodd-Frank Act, the SEC has adopted requirements for companies that use certain minerals and metals, known as conflict minerals, in their products, whether or not these products are manufactured by third parties. These requirements require companies to perform diligence and disclose and report whether or not such minerals originate from the Democratic Republic of Congo and adjoining countries. These requirements could adversely affect the sourcing, availability and pricing of minerals used in the manufacture of our products, and affect our costs and relationships with customers, distributors and suppliers as we must obtain additional information from them to ensure our compliance with the disclosure requirement. In addition, we incur additional costs in complying with the disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products. Since our supply chain is complex, we have not been able to sufficiently verify the origins for these minerals and metals used in our products through the due diligence procedures that we implement, which may harm our reputation. In such event, we may also face difficulties in satisfying customers who require that all of the components of our products are certified as conflict mineral free and these customers may discontinue, or materially reduce, purchases of our products, which could result in a material adverse effect on our results of operations and our financial condition may be adversely affected.

Risks Related to Our Common Stock

Our results of operations can fluctuate from period to period, which could cause our share price to fluctuate.

Our results of operations have fluctuated in the past and may fluctuate from period to period in the future due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include the following factors, as well as other factors described elsewhere in this report:

- the receipt, reduction, delay or cancellation of orders by large customers;
- the gain or loss of significant customers or distributors;
- the timing and success of our launch of new or enhanced products and those of our competitors;
- market acceptance of our products and our customers’ products;
- the level of growth or decline in the industrial, automotive, transportation, enterprise storage and other markets;
- the timing and extent of research and development and sales and marketing expenditures;
- the amount and timing of operating expenses related to the maintenance and expansion of our business, operations and infrastructure;
- changes in our product mix;
- our ability to reduce the manufacturing costs of our products;
- competitive pressures resulting in lower than expected average selling prices;
- fluctuations in sales by and inventory levels of OEMs and ODMs that incorporate our memory products in their products;
- cyclical and seasonal fluctuations in our markets;
- fluctuations in the manufacturing yields of our third-party manufacturers;
- quality issues that arise from manufacturing issues at our third-party manufacturers;
- events that impact the availability of production capacity at our third-party subcontractors and other interruptions in the supply chain including due to geopolitical events, natural disasters, materials shortages, bankruptcy or other causes;
- supply constraints for and changes in the cost of the other components incorporated into our customers’ products;
- the timing of expenses related to the acquisition of technologies or businesses;
- product rates of return or price concessions in excess of those expected or forecasted;
- costs associated with the repair and replacement of defective products;
- unexpected inventory write-downs or write-offs;
- costs associated with litigation over intellectual property rights and other litigation;
- changes in accounting standards, such as revenue recognition, which we were required to adopt beginning in 2018;

- changes in tax laws, such as the Tax Cuts and Jobs Act of 2017 recently enacted;
- the length and unpredictability of the purchasing and budgeting cycles of our customers;
- loss of key personnel or the inability to attract qualified engineers; and
- geopolitical events, such as war, threat of war or terrorist actions, or the occurrence of natural disasters.

The semiconductor memory industry is highly cyclical and our markets may experience significant cyclical fluctuations in demand as a result of changing economic conditions, budgeting and buying patterns of customers and other factors. As a result of these and other factors affecting demand for our products and our results of operations in any given period, the results of any prior quarterly or annual periods should not be relied upon as indicative of our future revenue or operating performance. Fluctuations in our revenue and operating results could also cause our stock price to decline.

We expect that the price of our common stock will fluctuate substantially.

The market price of our common stock is likely to be highly volatile and may fluctuate substantially due to many factors, including:

- the introduction of new products or product enhancements by us or others in our industry;
- disputes or other developments with respect to our or others' intellectual property rights;
- product liability claims or other litigation;
- quarterly variations in our results of operations or those of others in our industry;
- sales of large blocks of our common stock, including sales by our executive officers and directors;
- changes in earnings estimates or recommendations by securities analysts; and
- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

Stock markets generally have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may significantly affect the market price of our common stock, regardless of our actual operating performance. These fluctuations may be even more pronounced in the trading market for our common stock.

In addition, in the past, class action litigation has often been instituted against companies whose securities have experienced periods of volatility in market price, or for other reasons. Securities litigation brought against us following volatility in our stock price or otherwise, regardless of the merit or ultimate results of such litigation, could result in substantial costs, which would hurt our financial condition and operating results and divert management's attention and resources from our business.

These and other factors may make the price of our stock volatile and subject to unexpected fluctuation.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions include that:

- our board of directors has the right to expand the size of our board of directors and to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- our stockholders may not act by written consent or call special stockholders' meetings; as a result, a holder, or holders, controlling a majority of our capital stock would not be able to take certain actions other than at annual stockholders' meetings or special stockholders' meetings called by the board of directors, the chairman of the board, the chief executive officer or the president;
- our certificate of incorporation prohibits cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the affirmative vote of holders of at least 66-2/3% of the voting power of all of the then outstanding shares of voting stock, voting as a single class, will be required (a) to amend certain provisions of our certificate of incorporation, including provisions relating to the size of the board, special meetings, actions by written consent and cumulative voting and (b) to amend or repeal our bylaws, although our bylaws may be amended by a simple majority vote of our board of directors;
- stockholders must provide advance notice and additional disclosures to nominate individuals for election to the board of directors or to propose matters that can be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of our company; and
- our board of directors may issue, without stockholder approval, shares of undesignated preferred stock; the ability to issue undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Item 1B Unresolved Staff Comments.

None.

Item 2. Properties.

We lease office space for our corporate headquarters located in Chandler, Arizona and for our design facility located in Austin, Texas. The leases expire in January 2022.

We have an operating lease for our Arizona manufacturing facility, which includes a total of 18,327 square feet of office and fabrication space, which has a term through January 2022.

We have an operating lease for 27,974 square feet of office and laboratory space in Arizona, with an initial term that ends on January 31, 2022, with an option to renew the lease through August 31, 2024.

We believe our existing facilities are well maintained and in good operating condition and they are adequate for our foreseeable business needs.

Item 3. Legal Proceedings.

From time to time, we may become involved in legal proceedings arising from the ordinary course of our business. Management is currently not aware of any matters that will have a material adverse effect on our financial position, results of operations or cash flows.

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.

Trading Market for our Common Stock

Our common stock has been listed on the Nasdaq Global Market under the symbol "MRAM" since October 7, 2016. Prior to that date, there was no public trading market for our common stock.

Holders of Record

As of March 6, 2020, we had 27 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Item 6. Selected Financial Data.

Not required for a smaller reporting company.

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

You should read the following discussion and analysis of our financial condition and results of operations together with our audited financial statements and related notes included elsewhere in this report. This discussion and other parts of this report contain forward-looking statements that involve risk and uncertainties, such as statements of our plans, objectives, expectations and intentions. As a result of many factors, including those factors set forth in the "Risk Factors" section of this report, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

For an overview of our business, see "Part I – Item 1. Business"

Key Metrics

We monitor a variety of key financial metrics to help us evaluate trends, establish budgets, measure the effectiveness of our business strategies and assess operational efficiencies. These financial metrics include revenue, gross margin, operating expenses and operating income determined in accordance with GAAP. Additionally, we monitor and project cash flow to determine our sources and uses for working capital to fund our operations. We also monitor Adjusted EBITDA, a non-GAAP financial measure, and Design Wins. We define Adjusted EBITDA as net income or loss adjusted for interest expense, tax, depreciation and amortization, stock-based compensation expense, compensation expense related to the vesting of common stock held by GLOBALFOUNDRIES resulting from our joint development agreement, and restructuring costs.

EBITDA. Our management and board of directors use Adjusted EBITDA to understand and evaluate our operating performance and trends, to prepare and approve our annual budget and to develop short-term and long-term operating and financing plans. Accordingly, we believe that Adjusted EBITDA provides useful information for investors in understanding and evaluating our operating results in the same manner as our management and our board of directors. Adjusted EBITDA was $(8.4) million and $(12.0) million in 2019 and 2018, respectively. The following table presents a reconciliation of net loss, the most directly comparable GAAP measure, to Adjusted EBIDTA for the periods indicated:

	Year Ended December 31,	
	2019	**2018**
Adjusted EBITDA reconciliation:		
Net loss	$ (14,669)	$ (17,754)
Depreciation and amortization	1,694	1,450
Stock-based compensation expense	3,554	2,668
Compensation expense related to vesting of GLOBALFOUNDRIES common stock	—	753
Interest expense	747	890
Restructuring expense	782	—
Adjusted EBITDA	$ (7,892)	$ (11,993)

Design wins. To continue to grow our revenue, we must continue to achieve design wins for our MRAM products. We consider a design win to occur when an OEM or contract manufacturer notifies us that it has qualified one of our products as a component in a product or system for production. Because the life cycles for our customers' products can last for many years, if these products have successful commercial introductions, we expect to continue to generate revenues over an extended period of time for each successful design win. Any delay in the development of our products, or failure of our customers to adopt our products, could inhibit revenue growth or cause declines, which would significantly harm our business. New design wins in 2019 were consistent in the first and second quarters, with 14 qualified design wins in each quarter. We experienced significant growth in the third quarter, with 22 qualified design wins. Growth in the fourth quarter continued to accelerate with 34 qualified design wins.

Results of Operations

Below are factors we want to highlight for understanding our 2019 annual results and year over year comparison with proper historical perspective:

- 2019 represented a year of broad semiconductor market demand challenges driven by factors that included data center build cyclicality and international trade conflicts, which had a significant impact on our results;
- We ended our engagement with an automotive program at the end of 2018, which reduced our year over year Toggle revenue, but with minimal to no impact on our gross profit dollars;
- We received a significant amount of 2018 revenue in one-time licensing and royalty revenue that positively uplifted gross profit in 2018 but we did not expect to repeat in future periods; and
- Our manufacturing yields improved throughout 2019 resulting in much higher product margins compared to 2018.

The following table sets forth our results of operations for the periods indicated:

	Year Ended December 31,			
	2019	2018	2019	2018
	(In thousands)		(As a percentage of revenue)	
Product sales	$ 34,595	$ 39,514	92 %	80 %
Licensing, royalty, and other revenue	2,908	9,903	8	20
Total revenue	37,503	49,417	100	100
Cost of sales	19,172	24,083	51	49
Gross profit	18,331	25,334	49	51
Operating expenses[1]:				
Research and development	14,183	23,637	38	48
General and administrative	12,414	12,551	33	25
Sales and marketing	5,364	6,467	14	13
Restructuring	782	—	2	—
Total operating expenses	32,743	42,655	87	86
Loss from operations	(14,412)	(17,321)	(38)	(35)
Interest expense	(747)	(890)	(2)	(2)
Other income, net	490	457	1	1
Net loss	$ (14,669)	$ (17,754)	(39)%	(36)%

Comparison of the Years Ended December 31, 2019 and 2018

Revenue

We generated 66% and 71% of our revenue from products sold through distributors for the years ended December 31, 2019 and 2018, respectively.

We maintain a direct selling relationship, for strategic purposes, with several key customer accounts. We have organized our sales team and representatives into three primary regions: North America; Europe, Middle East and Africa (EMEA); and Asia-Pacific and Japan (APJ). We recognize revenue by geography based on the region in which our products are sold, and not to where the end products in which they are assembled are shipped. Our revenue by region for the periods indicated was as follows (in thousands):

	Year Ended December 31, 2019	Year Ended December 31, 2018
North America	$ 8,690	$ 9,124
EMEA	8,720	11,175
APJ	20,093	29,118
Total revenue	$ 37,503	$ 49,417

	Year Ended December 31, 2019	Year Ended December 31, 2018	Change Amount	Change %
	(Dollars in thousands)			
Product sales	$ 34,595	$ 39,514	$ (4,919)	(12.4)%
Licensing, royalty, and other revenue	2,908	9,903	(6,995)	(70.6)%
Total revenue	$ 37,503	$ 49,417	$ (11,914)	(24.1)%

Total revenue decreased by $11.9 million, or 24.1%, from $49.4 million during the year ended December 31, 2018, to $37.5 million during the year ended December 31, 2019. Product sales decreased by $4.9 million or 12.4% from $39.5 million to $34.6 million. The decrease was primarily due decreased sales volume from the loss of a customer, which was offset in part by new product sales.

Licensing, royalty, and other revenue is a highly variable revenue item characterized by a small number of transactions annually with revenue based on size and terms of each transaction. Licensing, royalty, and other revenue decreased by $7.0 million, from $9.9 million in 2018 to $2.9 million in 2019. The decrease was primarily due to a decrease of $5.0 million from a non-refundable license fee related to a cross-license agreement entered into with a customer in March 2018, a $1.3 million decrease in sales of our backend foundry services and a decrease of $1.1 million in milestone payments earned for research and development activity performed on behalf of GLOBALFOUNDRIES. These decreases were partially offset by a $0.5 million increase in royalty revenue.

Cost of Sales and Gross Margin

	Year Ended December 31, 2019	Year Ended December 31, 2018	Change Amount	Change %
	(Dollars in thousands)			
Cost of sales	$ 19,172	$ 24,083	$(4,911)	(20.4)%
Gross margin	48.9 %	51.3 %		

Cost of sales decreased by $4.9 million, or 20.4%, from $24.1 million during the year ended December 31, 2018, to $19.2 million during the year ended December 31, 2019. The decrease was due to higher yields on our MRAM products and a lower volume of wafers processed.

Our gross margin decreased from 51.3% during the year ended December 31, 2018 to 48.9% during the year ended December 31, 2019. Our product margins increased due to improvement of manufacturing yields throughout 2019. The increase was offset by a one-time licensing fee for our IP recognized in 2018 that was not repeated in 2019, as the licensing fee had no associated cost of sales.

Operating Expenses

Our operating expenses consist of research and development, general and administrative and sales and marketing expenses. Personnel-related expenses, including salaries, benefits, bonuses and stock-based compensation, are among the most significant component of each of our operating expense categories.

Research and Development Expenses. Our research and development expenses consist primarily of personnel-related expenses for the design and development of our products and technologies, development wafers required to validate and characterize our technology, and expenses associated with our joint development agreement with GLOBALFOUNDRIES. Research and development expenses also include consulting services, circuit design costs, materials and laboratory supplies, fabrication and new packaging technology, and an allocation of related facilities and equipment costs. We recognize research and development expenses as they are incurred.

	Year Ended December 31,		Change	
	2019	2018	Amount	%
	(Dollars in thousands)			
Research and development	$ 14,183	$ 23,637	$ (9,454)	(40.0)%
Research and development as a % of revenue	38 %	48 %		

Research and development expenses decreased by $9.5 million, or 40.0%, from $23.6 million during the year ended December 31, 2018, to $14.2 million during the year ended December 31, 2019. The decrease was partially due to a $4.0 million decrease in expenses incurred in connection with our joint development agreement with GLOBALFOUNDRIES due to the less spending on STT-MRAM process and product development, a $2.3 million decrease in spending on direct materials and supplies used in research and development activities due to the timing of purchases, a $0.8 million decrease in the amount attributable to the vesting of shares of common stock issued to GLOBALFOUNDRIES as all shares vested in 2018, a $0.8 million decrease in employee and contract labor related costs due to a decrease in headcount, a $0.7 million decrease in the costs to repair equipment, and a $0.6 million decrease in software costs.

	Year Ended December 31,		Change	
	2019	2018	Amount	%
	(Dollars in thousands)			
General and administrative	$ 12,414	$ 12,551	$ (137)	(1.1)%
General and administrative as a % of revenue	33 %	25 %		

General and Administrative Expenses. General and administrative expenses decreased by $0.1 million, from $12.6 million during the year ended December 31, 2018, to $12.4 million during the year ended December 31, 2019. The slight decrease was primarily due to a $0.6 million decrease in professional services and a $0.2 million decrease in contract labor costs partially offset by a $0.7 million increase in employee costs due to an increase in headcount and stock-based compensation costs.

	Year Ended December 31,		Change	
	2019	2018	Amount	%
	(Dollars in thousands)			
Sales and marketing	$ 5,364	$ 6,467	$(1,103)	(17.1)%
Sales and marketing as a % of revenue	14 %	13 %		

Sales and Marketing Expenses. Sales and marketing expenses decreased by $1.1 million, or 17.1%, from $6.5 million during the year ended December 31, 2018, to $5.4 million during the year ended December 31, 2019. The decrease was partially due to a $0.9 million decrease in employee and contract labor related costs due to lower commissions and a $0.1 million decrease in travel costs.

	Year Ended December 31,		Change	
	2019	2018	Amount	%
	(Dollars in thousands)			
Restructuring	$ 782	$ —	$ 782	*
Restructuring as a % of revenue	2 %	0 %		

* Not meaningful.

Restructuring expenses. Restructuring costs were $0.8 million during the year ended December 31, 2019. There were no restructuring expenses during the year ended December 31, 2018. During 2019, we implemented a corporate restructuring to further align strategy and long-term sustainability. As part of the restructuring, we reduced our workforce by approximately 15 positions across all functions. Restructuring expenses are costs associated with a formal restructuring plan and are related primarily to employee severance and benefit arrangements.

Interest Expense

	Year Ended December 31, 2019	2018	Change Amount	%
	(Dollars in thousands)			
Interest expense	$ 747	$ 890	$ (143)	(16.1)%

Interest expense decreased by $0.1 million, or 16.1%, from $0.9 million during the year ended December 31, 2018, to $0.7 million during the year ended December 31, 2019. The slight decrease was due in part to a decrease in non-cash interest related to the amortization of debt discounts derived from the issuance of a warrant, an end of term fee and debt issuance costs and interest paid on our credit facilities as a result of lower outstanding balance under our 2017 and 2019 credit facilities.

Other Income, Net

	Year Ended December 31, 2019	2018	Change Amount	%
	(Dollars in thousands)			
Other income, net	$ 490	$ 457	$ 33	7.2 %

Other income, net remained relatively flat at $0.5 million during the year ended December 31, 2019 and 2018.

Liquidity and Capital Resources

We have generated significant losses since our inception and had an accumulated deficit of $148.7 million as of December 31, 2019. We have financed our operations primarily through the sale of our common stock in our initial public offering (IPO) and follow-on public offering, sales of our common stock under our at-the-market sales agreement, sales of our redeemable convertible preferred stock, debt financing and the sale of our products. As of December 31, 2019, we had $14.5 million of cash and cash equivalents, compared to $23.4 million as of December 31, 2018.

In February 2018, we completed a follow-on underwritten public offering of our common stock under our Registration Statement filed in November 2017 (File No. 333-221331), selling 3,772,447 shares of our common stock at an offering price of $7.00 per share for proceeds of $24.5 million, net of $1.9 million of underwriting discounts and commissions and other offering costs.

In May 2017, we executed a Loan and Security Agreement (2017 Credit Facility) with Silicon Valley Bank for a $12.0 million term loan, which we subsequently amended in January 2019 and June 2019. In August 2019, we executed an Amended and Restated Loan and Security Agreement (the 2019 Credit Facility) providing for a formula revolving line of credit (Line of Credit) and a term loan (2019 Term Loan) with Silicon Valley Bank to refinance in full the outstanding principal balance under the 2017 Credit Facility. The 2019 Credit Facility amended and restated the 2017 Credit Facility. The 2017 Credit Facility and 2019 Credit Facility are described in “Credit Facilities” below.

In August 2019, we entered into an open market sale agreement (the 2019 Sales Agreement) with Jefferies, LLC (Jefferies) for the offer and sale of shares of our common stock having an aggregate offering of up to $25.0 million from time to time through Jefferies, acting as sales agent. The issuance and sale of these shares by us pursuant to the 2019 Sales Agreement were deemed an “at-the-market” offering under the Securities Act of 1933, as amended. Under the 2019 Sales Agreement, we agreed to pay Jefferies a commission of up to 3% of the gross proceeds of any sales made pursuant to the 2019 Sales Agreement. During the year ended December 31, 2019, we received net proceeds of $4.7 million after deducting commissions and expenses payable by us, from the sale of 888,987 shares of common stock pursuant to the 2019 Sales Agreement. As of December 31, 2019, we had an aggregate of $19.9 million available for future sales under the 2019 Sales Agreement.

As of December 31, 2019, and as of March 12, 2020, we believe that our existing cash and cash equivalents, coupled with the amount available under our Line of Credit entered into August 2019, our anticipated growth and sales levels will be sufficient to meet our anticipated cash requirements for at least the next 12 months. Our future capital requirements will depend on many factors, including our growth rate, the timing and extent of our spending to support research and development activities, the timing and cost of establishing additional sales and marketing capabilities, and the introduction of new products.

Cash Flows

The following table summarizes our cash flows for the periods indicated (in thousands):

	Year Ended December 31, 2019	Year Ended December 31, 2018
	(In thousands)	
Cash used in operating activities	$ (8,116)	$ (14,673)
Cash used in investing activities	(861)	(1,914)
Cash provided by financing activities	85	27,016

Cash Flows From Operating Activities

During the year ended December 31, 2019, cash used in operating activities was $8.1 million, which consisted of a net loss of $14.7 million, adjusted by non-cash charges of $5.6 million and a change of $1.0 million in our net operating assets and liabilities. The non-cash charges consisted of stock-based compensation of $3.6 million, depreciation and amortization of $1.7 million, and non-cash interest expense of $0.3 million. The change in our net operating assets and liabilities was primarily due to a decrease of $1.7 million in accounts receivable due to decreased sales volume and timing of cash receipts for outstanding balances, a decrease of $1.2 million in inventory due to adjusting purchasing practices to meet expected sales volumes, and an increase of $0.2 million in accounts payable due to the timing of payments. These were partially offset by a decrease of $2.2 million in accrued liabilities primarily due to timing of payments on inventory purchases.

During the year ended December 31, 2018, cash used in operating activities was $14.7 million, which consisted of a net loss of $17.8 million, adjusted by non-cash charges of $5.3 million and a change of $2.2 million in our net operating assets and liabilities. The non-cash charges consisted of stock-based compensation of $2.7 million, depreciation and amortization of $1.5 million, compensation expense related to vesting of common stock issued to GLOBALFOUNDRIES under our joint development agreement of $0.8 million, and non-cash interest expense of $0.4 million. The change in our net operating assets and liabilities was primarily due to an increase of $3.8 million in accounts receivable due to an increased sales volume and timing of cash receipts for outstanding balances and a decrease of $0.2 million in accounts payable due to the timing of payments. These were partially offset by an increase of $1.3 million in accrued liabilities primarily due to an increase in inventory purchases in connection with the joint development agreement with GLOBALFOUNDRIES, an increase in accrued payroll, and the timing of payments and a decrease of $0.7 million in inventory due to increased sales.

Cash Flows From Investing Activities

Cash used in investing activities during the years ended December 31, 2019 and 2018 was $0.9 million and $1.9 million, respectively, which consisted of capital expenditures primarily for the purchase of manufacturing equipment and purchased software.

Cash Flows From Financing Activities

During the year ended December 31, 2019, cash provided by financing activities was $0.1 million consisting of $4.7 million in net proceeds from the sale of our common stock in our at-the-market offering under our 2019 Sales Agreement with Jefferies, and $0.3 million in proceeds from stock option exercises and purchases of shares in our employee stock purchase plan, partially offset by payments on long-term debt of $4.8 million and payment of debt issuance costs of $0.1 million.

During the year ended December 31, 2018, cash provided by financing activities was $27.0 million consisting of net proceeds from the issuance of common stock in our February 2018 follow-on underwritten public offering of $24.5 million, proceeds of $1.0 million in borrowings, and $2.5 million from stock option exercises and purchases of shares in our employee stock purchase plan, offset in part by payments of long-term debt of $1.0 million.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements and do not have any holdings in variable interest entities.

Credit Facilities

2017 Credit Facility

On May 4, 2017, we entered into a Loan and Security Agreement with Silicon Valley Bank (2017 Credit Facility) for a $12.0 million term loan. The term loan provided for interest at a floating rate equal to the prime rate minus 0.75%. The term loan provided for a period of interest-only payments through April 30, 2018, followed by fixed principal and interest payments based on a 24-month amortization schedule. An end of term fee of 6% of the amount borrowed was required to be made when the loan is prepaid or repaid, whether at maturity or as a result of a prepayment or acceleration or otherwise.

On July 6, 2018, we entered into the First Amendment to the 2017 Credit Facility (the First Amendment). The First Amendment extended the period of interest-only payments through December 31, 2018, followed by fixed principal and interest payments based on either a 24-month or a 36-month amortization schedule if certain milestones were achieved. We determined we would not meet the milestones, therefore, the 2017 Credit Facility was based on a 24-month amortization schedule and was to mature in December 2020. The 2017 Credit Facility provided for interest at a floating rate equal to the prime rate minus 0.75%. The terms of the First Amendment included the refund of $1.0 million in principal payments we previously made. An end of term fee of 7% of the amount borrowed was required to be made when the loan was prepaid or repaid, whether at maturity or as a result of a prepayment or acceleration or otherwise. The additional payment was being accreted using the effective interest method.

In January 2019 and June 2019, we entered into the Second Amendment and the Third Amendment to the 2017 Credit Facility, respectively, which primarily modified the financial covenants under the 2017 Credit Facility.

In conjunction with the First Amendment, outstanding warrants held by SVB to purchase 9,229 shares of our common stock at $26.00 per share were cancelled. We subsequently issued a warrant to SVB for the purchase of 9,375 shares of common stock at an exercise price of $8.91 per share (the "SVB Warrant"). We estimated the fair value of the SVB Warrant as $43,000 on the date of issuance using the Black-Scholes option pricing model. The SVB Warrant was recorded as a discount to the debt and will be amortized into interest expense over the remaining term of the loan using the effective interest method.

2019 Credit Facility

In August 2019, we executed an Amended and Restated Loan and Security Agreement (the 2019 Credit Facility), which amended and restated the 2017 Credit Facility, providing for a formula revolving line of credit (Line of Credit) and a term loan (2019 Term Loan) with Silicon Valley Bank to refinance in full the outstanding principal balance of $8.0 million under the 2017 Credit Facility. In August 2019, we made the final payment of $0.8 million, which was due upon the refinancing of the 2017 Credit Facility.

The Line of Credit allows for a maximum draw of $5.0 million, subject to a formula borrowing base, has a two year term and bears interest at a floating rate equal to the Wall Street Journal (WSJ) prime rate plus 1.5%, per annum, subject to a floor of 6.75%. As of December 31, 2019, the interest rate was 6.75%. The Line of Credit provides for a commitment fee of 1.6% of the maximum availability of the Line of Credit, which was paid in August 2019 upon closing, and was accounted for as a debt discount. The Line of Credit also provides for a termination fee equal to 1% of the maximum availability under the Line of Credit, which is due in case of a termination of the Line of Credit prior to the scheduled maturity date, and an unused facility fee equal to 0.125% per annum of the average unused portion of the Line of Credit, which is expensed as incurred. At execution, $2.0 million from the Line of Credit was used to refinance a portion of the outstanding balance of the 2017 Credit Facility, and $3.0 million remains available under the Line of Credit, subject to borrowing base availability. As of December 31, 2019, the effective interest rate under the Line of Credit was 10.57% and the outstanding balance was $2.0 million.

The 2019 Term Loan provides for a $6.0 million term loan, which was used to refinance the remaining balance of the 2017 Credit Facility. The 2019 Term Loan has a term of 42 months, and a 12-month interest only period followed by 30 months of equal principal payments, plus accrued interest. The 2019 Term Loan bears interest at a floating rate equal to the WSJ prime rate minus 0.75%, subject to a floor of 4.75%. As of December 31, 2019, the interest rate was 4.75%. A final payment of 7% of the original principal amount of the 2019 Term Loan must be made when the 2019 Term Loan is prepaid or repaid, whether at maturity or as a result of a prepayment or acceleration or otherwise. The additional payment, which is accounted for as a debt discount, is being accreted using the effective interest method. The 2019 Term Loan has a prepayment fee equal to 2% of the total commitment, which is due only if the 2019 Term Loan is prepaid prior to the scheduled maturity date for any reason. As of December 31, 2019, the effective interest rate under the 2019 Term Loan was 8.66%.

In conjunction with entering into the 2019 Credit Facility, on August 5, 2019, we amended and restated the SVB Warrant to add an option by SVB to put the SVB Warrant back to us for $50,000 upon expiration or a liquidity event, to be prorated if SVB exercises a portion of the SVB Warrant. The SVB Warrant expires on July 6, 2023. As of August 5, 2019, the SVB Warrant was classified as a liability and recorded at fair value within other liabilities in our balance sheet. Due to the put right, the SVB Warrant is subject to fair value remeasurement at each subsequent reporting date until the exercise or expiration of the SVB Warrant. Any resulting change in the fair value of the SVB Warrant will be recorded as other income, net in our statement of operations and comprehensive loss.

Collateral for the 2019 Credit Facility includes all of our assets except for intellectual property. We are required to comply with certain covenants under the 2019 Credit Facility, including requirements to maintain a minimum liquidity ratio, and restrictions on certain actions without the consent of the lender, such as limitations on our ability to engage in mergers or acquisitions, sell assets, incur indebtedness or grant liens or negative pledges on our assets, make loans or make other investments. Under these covenants, we are prohibited from paying cash dividends with respect to its capital stock. We were in compliance with all covenants at December 31, 2019. The 2019 Credit Facility contains a material adverse effect clause which provides that an event of default will occur if, among other triggers, an event occurs that could reasonably be expected to result in a material adverse effect on our business, operations or condition, or on our ability to perform our obligations under the term loan. As of December 31, 2019, we do not believe that it is probable that the clause will be triggered within the next 12 months, and therefore the term loan is classified as long-term.

Critical Accounting Policies and Significant Judgements and Estimates

Our financial statements have been prepared in accordance with generally accepted accounting principles in the United States, or U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. We base our estimates on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Revenue Recognition

We recognize revenue when a customer obtains control of the promised products or services, in an amount that reflects the consideration we expect to receive in exchange for those products or services. We recognize revenue net of allowances for returns and price concessions, and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Topic 606 permits the application of certain practical expedients. Our billing practices approximate our performance as measured by an output method, where each output represents the completion of a performance obligation. Accordingly, we utilize the invoice practical expedient as defined in Topic 606, resulting in recognition of revenue in the amount that we have the right to invoice.

We incur direct and incremental costs of obtaining contracts and expense such costs as incurred, as the life of the underlying contract is less than one year. Accordingly, we have concluded, based on the structure of our contracts, no adjustments are necessary under Topic 606.

Nature of Products and Services

We derive our revenue from the sale of MRAM-based products in discrete unit form, licenses of and royalties on our MRAM and magnetic sensor technology, the sale of backend foundry services, and design services to third parties. We recognize sales of products in discrete unit form at a point in time, revenue related to licensing agreements when we have delivered control of the technology, revenue related to royalty agreements in the period in which sales generated from products sold using our technology occurs, sales of backend foundry services over time, and design services to third parties either at a point in time or over time, depending on the nature of the services.

Product Revenue

For products sold in their discrete form, we either sell our products directly to OEMs, original design manufacturers (ODMs), contract manufacturers (CMs), or through a network of distributors, who in turn sell to those customers. For sales directly to OEMs, ODMs and CMs, we recognize revenue when the OEM, ODM or CM obtains control of the product, which occurs at a point in time, generally upon shipment to the customer.

We sell a majority of our products to our distributors at a uniform list price. However, distributors may resell our products to end customers at a very broad range of individually negotiated price points. We provide distributors with price concessions subsequent to the delivery of product to them and such amounts are dependent on the end customer and product sales price. We base the price concessions on a variety of factors, including customer, product, quantity, geography and competitive differentiation. Price protection rights grant distributors the right to a credit in the event of declines in the price of our products. Under these circumstances, we remit back to the distributor a portion of their original purchase price after the resale transaction is completed in the form of a credit against the distributors' outstanding accounts receivable balance. The credits are on a per unit basis and are not given to the distributor until the distributor provides information regarding the sale to their end customer. We estimate these credits and record such estimates in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of an allowance for price concessions for amounts due to distributors. We estimate credits to distributors based on the historical rate of credits provided to distributors relative to sales. Revenue on shipments to distributors is recorded when control of the products has been transferred to the distributor.

We estimate the amount of our product sales that may be returned by our customers and record this estimate as a reduction of revenue in the period the related product revenue is recognized. We estimate our product return liability by analyzing our historical returns, current economic trends and changes in customer demand and acceptance of products. We have received insignificant returns to date and believe that returns of our products will continue to be minimal.

At the time of shipment to distributors, we record a trade receivable for the selling price as there is a legally enforceable obligation of the distributor to pay for the product delivered. We establish an allowance for estimated price concessions related to our distributor agreements. We estimate credits to distributors based on the historical rate of credits provided to distributors relative to sales.

License Revenue

For licenses of technology, recognition of revenue is dependent upon whether we have delivered rights to the technology, and whether there are future performance obligations under the contract. In some instances, the license agreements call for future events or activities to occur in order for milestones amounts to become due from the customer. The terms of such agreements include payment to us of one or more of the following: non-refundable upfront fees; and royalties on net sales of licensed products. Historically, these license agreements have not included other future performance obligations once the license has been transferred to the customer.

We allocate the transaction price in each agreement to the identified performance obligations based on the standalone selling price (SSP) of each distinct performance obligation. Judgment is required to determine SSP. In instances where SSP is not directly observable, such as when a license or service is not sold separately, SSP is determined using information that may include market conditions and other observable inputs.

We recognize revenue from non-refundable up-front payments when the license is transferred to the customer and we have no other performance obligations.

Royalties

We recognize revenue from sales-based royalties from licenses of our technology at the later of when (1) the sale occurs or (2) the performance obligation to which some or all of the sales-based royalty has been allocated is satisfied (in whole or in part).

Other Revenue

For certain revenue streams, we recognize revenue based on the pattern of transfer of the services. We use the input method of measuring costs incurred to date compared to total estimated costs to be incurred under the contract as this method most faithfully depicts its performance. We record an unbilled receivable (within accounts receivable, net) for the portion of the work that has been completed but not invoiced at the end of each reporting period.

Revenue from milestone payments must be estimated using either the expected value method or the most likely amount method. At the inception of each agreement that includes milestone payments, we evaluate whether the milestones are considered probable of being reached and estimate the amount to be included in the transaction price by using the most likely amount method. If it is probable that a significant reversal of cumulative revenue would not occur, the associated milestone value is included in the transaction price. At the end of each subsequent reporting period, we re-evaluate the probability or achievement of each such milestone and any related constraint, and if necessary, adjust our estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment.

Inventory

We record inventories at the lower of cost, determined on a first-in, first-out basis or specific identification method, or market. We routinely evaluate quantities and values of inventory on hand and inventory that may be returned from distributors in light of current market conditions and market trends, and record provisions for inventories in excess of demand and subject to obsolescence. This evaluation may take into consideration expected demand, the effect new products may have on the sale of existing products, technological obsolescence and other factors. We record inventory write-downs for the valuation of inventory when required based on the analysis of the information immediately above and inventory balances are not readjusted until sold. Unanticipated changes in technology or customer demand could result in a decrease in demand for our products, which may require additional inventory write-downs that could materially affect our results of operations.

Stock-based Compensation

We recognize compensation costs related to stock options granted to employees and directors based on the estimated fair value of the awards on the date of grant. We have made an accounting policy election to account for forfeitures as they occur, rather than estimate expected forfeitures. We estimate the grant date fair value and the resulting stock-based compensation expense using the Black-Scholes option-pricing model. We expense the grant date fair value of stock-based awards on a straight-line basis over the period during which the employee is required to provide service in exchange for the award (generally the vesting period).

We estimate the fair value of our stock-based awards using the Black-Scholes option-pricing model, which requires the input of highly subjective assumptions. Our assumptions are as follows:

Expected Term. The expected term represents the period we expect the stock-based awards to be outstanding. We use the simplified method to determine the expected term, which is calculated as the average of the time to vesting and the contractual life of the options.

Expected Volatility. Since we do not have a long trading history for our common stock, we derive the expected volatility from the average historical volatilities of publicly traded companies within our industry that we consider to be comparable to our business over a period approximately equal to the expected term for employees’ options and the remaining contractual life for non-employees’ options. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.

Risk-free Interest Rate. We base the risk-free interest rate on the U.S. Treasury yield with a maturity equal to the expected term of the option in effect at the time of grant.

Dividend Yield. We assume the expected dividend to be zero as we have never paid dividends and have no current plans to pay any dividends on our common stock.

In addition to the assumptions used in the Black-Scholes option-pricing model, we will continue to use judgment in evaluating the expected volatility and expected terms utilized for our stock-based compensation calculations on a prospective basis.

We recorded stock-based compensation expense of $3.6 million and $2.7 million for the years ended December 31, 2019 and 2018, respectively.

Historically, for all periods prior to the IPO, the fair value of the shares of common stock underlying our stock-based awards was estimated on each grant date by our board of directors. In order to determine the fair value of our common stock underlying option grants, our board of directors considered, among other things, contemporaneous valuations of our common stock prepared by an unrelated third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Given the absence of a public trading market for our common stock, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including: the rights, preferences and privileges of our preferred stock relative to those of our common stock; our operating results and financial condition; our levels of available capital resources; equity market conditions affecting comparable public companies; general U.S. market conditions; and the lack of marketability of our common stock.

After the completion of the IPO, our board of directors determined the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of grant.

JOBS Act Accounting Election

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act (the JOBS Act) and therefore we may take advantage of certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments. We may take advantage of these exemptions until we are no longer an “emerging growth company.” We will cease to be an “emerging growth company” upon the earliest of: (1) December 31, 2021, (2) the last day of the first fiscal year in which our annual gross revenues are $1.07 billion or more, (3) the date on which we have, during the previous rolling three-year period, issued more than $1.0 billion in non-convertible debt securities, and (4) the date on which we are deemed to be a “large accelerated filer” as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Recent Accounting Pronouncements

See Note 2 to our financial statements for more information about recent accounting pronouncements, the timing of their adoption, and our assessment, to the extent we have made one yet, of their potential impact on our financial condition of results of operations.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Not required for a smaller reporting company.

Item 8. Financial Statements and Supplementary Data.

EVERSPIN TECHNOLOGIES, INC.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Everspin Technologies, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Everspin Technologies, Inc. (the Company) as of December 31, 2019 and 2018, and the related statements of operations and comprehensive loss, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2019, and the related notes (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 at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

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 Public Company Accounting Oversight Board (United States) (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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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/ Ernst & Young LLP

We have served as the Company's auditor since 2008.

Phoenix, Arizona
March 12, 2020

EVERSPIN TECHNOLOGIES, INC.
Balance Sheets
(In thousands, except share and per share amounts)

	December 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 14,487	$ 23,379
Accounts receivable, net	5,799	7,522
Inventory	7,863	9,097
Prepaid expenses and other current assets	539	688
Total current assets	28,688	40,686
Property and equipment, net	3,479	4,286
Right-of-use assets	3,132	—
Other assets	73	73
Total assets	$ 35,372	$ 45,045
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 2,873	$ 2,637
Accrued liabilities	2,727	5,001
Current portion of long-term debt	670	5,977
Operating lease liabilities	1,582	—
Other liabilities	42	—
Total current liabilities	7,894	13,615
Long-term debt, net of current portion	7,149	6,509
Operating lease liabilities, net of current portion	1,840	—
Total liabilities	16,883	20,124
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.0001 par value per share; 5,000,000 shares authorized; no shares issued and outstanding as of December 31, 2019 and December 31, 2018	—	—
Common stock, $0.0001 par value per share; 100,000,000 shares authorized; 18,081,753 and 17,095,456 shares issued and outstanding as of December 31, 2019 and December 31, 2018	2	2
Additional paid-in capital	167,149	158,912
Accumulated deficit	(148,662)	(133,993)
Total stockholders' equity	18,489	24,921
Total liabilities and stockholders' equity	$ 35,372	$ 45,045

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

EVERSPIN TECHNOLOGIES, INC.
Statements of Operations and Comprehensive Loss
(In thousands, except share and per share amounts)

	Year Ended December 31,	
	2019	2018
Product sales	$ 34,595	$ 39,514
Licensing, royalty, and other revenue	2,908	9,903
Total revenue	37,503	49,417
Cost of sales	19,172	24,083
Gross profit	18,331	25,334
Operating expenses:[1]		
Research and development	14,183	23,637
General and administrative	12,414	12,551
Sales and marketing	5,364	6,467
Restructuring	782	—
Total operating expenses	32,743	42,655
Loss from operations	(14,412)	(17,321)
Interest expense	(747)	(890)
Other income, net	490	457
Net loss and comprehensive loss	$ (14,669)	$ (17,754)
Net loss per common share, basic and diluted	$ (0.85)	$ (1.08)
Weighted-average shares used to compute net loss per common share, basic and diluted	17,317,042	16,372,638

[1]Operating expenses includes stock-based compensation as follows:		
Research and development	$ 736	$ 492
General and administrative	2,460	1,811
Sales and marketing	358	365
Total stock-based compensation	$ 3,554	$ 2,668

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

EVERSPIN TECHNOLOGIES, INC.
Statements of Stockholders' Equity
(In thousands, except share amounts)

	Common Stock		Additional Paid-In	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Deficit	Equity
Balance at December 31, 2017	12,817,201	$ 1	$ 128,422	$ (117,539)	$ 10,884
Adjustment to opening balance for adoption of new accounting standard	—	—	—	1,300	1,300
Issuance of common stock in secondary offering, net of issuance costs	3,772,447	1	24,523	—	24,524
Issuance of common stock under stock incentive plans	505,808	—	2,503	—	2,503
Issuance of warrant	—	—	43	—	43
Compensation expense related to vesting of common stock issued to GLOBALFOUNDRIES	—	—	753	—	753
Stock-based compensation expense	—	—	2,668	—	2,668
Net loss	—	—	—	(17,754)	(17,754)
Balance at December 31, 2018	17,095,456	2	158,912	(133,993)	24,921
Issuance of common stock under stock incentive plans	97,310	—	282	—	282
Issuance of common stock in at-the- market offering, net of issuance costs (Note 7)	888,987	—	4,734	—	4,734
Modification of warrant in connection with 2019 Credit Facility	—	—	(19)	—	(19)
Stock-based compensation expense	—	—	3,240	—	3,240
Net loss	—	—	—	(14,669)	(14,669)
Balance at December 31, 2019	18,081,753	$ 2	$ 167,149	$ (148,662)	$ 18,489

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

EVERSPIN TECHNOLOGIES, INC.
Statement of Cash Flows
(In thousands)

	Year Ended December 31, 2019	2018
Cash flows from operating activities		
Net loss	$ (14,669)	$ (17,754)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,694	1,450
Loss on disposal of property and equipment	20	19
Stock-based compensation	3,554	2,668
Non-cash gain on warrant revaluation	(3)	—
Non-cash interest expense	290	375
Compensation expense related to vesting of common stock to GLOBALFOUNDRIES	—	753
Changes in operating assets and liabilities:		
Accounts receivable	1,723	(3,816)
Inventory	1,234	694
Prepaid expenses and other current assets	149	(98)
Accounts payable	202	(178)
Accrued liabilities	(2,210)	1,253
Operating lease liabilities	(100)	—
Shipping term reversal	—	(39)
Net cash used in operating activities	(8,116)	(14,673)
Cash flows from investing activities		
Purchases of property and equipment	(861)	(1,914)
Net cash used in investing activities	(861)	(1,914)
Cash flows from financing activities		
Proceeds from the issuance of common stock, net of offering costs	—	24,524
Proceeds from debt	—	1,000
Payments on debt	(4,840)	(1,000)
Payments of debt issuance costs	(80)	—
Payments on finance lease obligation	(11)	(11)
Proceeds from exercise of stock options and purchase of shares in employee stock purchase plan	282	2,503
Proceeds from issuance of common stock in at-the-market offering, net of issuance costs	4,734	—
Net cash provided by financing activities	85	27,016
Net (decrease) increase in cash and cash equivalents	(8,892)	10,429
Cash and cash equivalents at beginning of period	23,379	12,950
Cash and cash equivalents at end of period	$ 14,487	$ 23,379
Supplementary cash flow information:		
Interest paid	$ 480	$ 504
Cash paid for taxes	$ 48	$ 30
Operating cash flows paid for operating leases	$ 1,693	$ —
Financing cash flows paid for finance leases	$ 11	$ —
Non-cash investing and financing activities:		
Right-of-use assets obtained in exchange for new operating leases	$ 23	$ —
Increase of right-of-use asset and lease liability due to lease modification	$ 895	$ —
Purchase of property and equipment in accounts payable and accrued liabilities	$ 57	$ 11
Modification of warrant	$ 36	$ —
Issuance of warrant with debt	$ —	$ 43

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

EVERSPIN TECHNOLOGIES, INC.
Notes to Financial Statements

1. Organization and Operations

Everspin Technologies, Inc. (the Company) was incorporated in Delaware on May 16, 2008. The Company's magnetoresistive random access memory (MRAM) solutions offer the persistence of non-volatile memory with the speed and endurance of random access memory (RAM) and enable the protection of mission critical data particularly in the event of power interruption or failure. The Company's MRAM solutions allow its customers in the industrial, automotive, transportation, and enterprise storage markets to design high performance, power efficient and reliable systems without the need for bulky batteries or capacitors.

Ability to continue as a going concern

The Company believes that its existing cash and cash equivalents as of December 31, 2019, coupled with its anticipated growth and sales levels will be sufficient to meet its anticipated cash requirements for at least the next 12 months from the financial statement issuance date. The Company's future capital requirements will depend on many factors, including its growth rate, the timing and extent of its spending to support research and development activities, the timing and cost of establishing additional sales and marketing capabilities, and the introduction of new products. The Company may be required at some point in the future to seek additional equity or debt financing, to sustain operations beyond that point, and such additional financing may not be available on acceptable terms or at all. If the Company is unable to raise additional capital or generate sufficient cash from operations to adequately fund its operations, it will need to curtail planned activities to reduce costs. Doing so will likely harm its ability to execute on its business plan.

2. Summary of Significant Accounting Policies

Use of Estimates

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). The preparation of the financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates its estimates, including those related to revenue recognition, fair value of assets and liabilities, inventory, product warranty reserves, income taxes, and stock-based compensation. The Company believes its estimates and assumptions are reasonable; however, actual results may differ from the Company's estimates.

Segments

The Company's chief operating decision maker is its Chief Executive Officer who reviews financial information presented on a consolidated basis for purposes of allocating resources and evaluating financial performance for the entire Company. As a result, the Company has single operating and reportable segment.

Cash and Cash Equivalents

The Company considers all highly liquid, short-term investments with maturity dates of 90 days or less at the date of purchase to be cash equivalents. The Company's cash equivalents consist solely of money market funds.

Accounts Receivable

Accounts receivable are recorded at the invoiced amount and do not bear interest. The Company generally does not require collateral or other security in support of accounts receivable. The Company has no experience of uncollectible amounts, and therefore there was no allowance for doubtful accounts at December 31, 2019 and 2018. Allowances would be provided for individual accounts receivable when the Company becomes aware of a customer's inability to meet its financial obligations, such as in the case of bankruptcy, deterioration in the customer's operating results or change in financial position. If circumstances related to customers change, estimates of the recoverability of receivables would be further adjusted. The Company also considers a number of factors in evaluating the sufficiency of its allowance for doubtful accounts, including the length of time receivables are past due, significant one-time events, creditworthiness of customers and historical experience. Account balances would be charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

The Company establishes an allowance for product returns. The Company analyzes historical returns, current economic trends and changes in customer demand and acceptance of products when evaluating the adequacy of sales returns. Returns are processed as credits on future purchases, as a result, the allowance is recorded against the balance of trade accounts receivable. In addition, the Company establishes an allowance for estimated price concessions related to its distributer agreements. The Company estimates credits to distributors based on the historical rate of credits provided to distributors relative to sales. At December 31, 2019 and 2018, the allowance for product returns and price concessions was $231,000 and $713,000, respectively.

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

	December 31, 2019	December 31, 2018
Trade accounts receivable	$ 5,454	$ 7,297
Unbilled accounts receivable	576	938
Allowance for product returns and price concessions	(231)	(713)
Accounts receivable, net	$ 5,799	$ 7,522

Concentration of Credit Risk

Financial instruments that potentially expose the Company to a concentration of credit risk consist principally of cash and cash equivalents that are held by a financial institution in the United States and accounts receivable. Amounts on deposit with a financial institution may at times exceed federally insured limits. The Company maintains its cash accounts with high credit quality financial institutions and accordingly, minimal credit risk exists with respect to the financial institutions.

Significant customers are those which represent more than 10% of the Company's total revenue or net accounts receivable balance at each respective balance sheet date. For the purposes of this disclosure, the Company defines "customer" as the entity that is purchasing the products or licenses directly from the Company, which includes the distributors of the Company's products in addition to end customers that the Company sells to directly. For each significant customer, revenue as a percentage of total revenue and accounts receivable as a percentage of total accounts receivable, net are as follows:

	Revenue Year Ended December 31,		Accounts Receivable December 31,	
Customers	2019	2018	2019	2018
Customer A	21 %	*	41 %	23 %
Customer B	12 %	*	*	*
Customer C	12 %	*	*	*
Customer D	10 %	13 %	*	*
Customer E	*	*	*	11 %
Customer F	*	*	11 %	*
Customer G	*	11 %	*	*
Customer H	*	10 %	*	*
Customer I	*	*	*	21 %
Customer J	*	*	*	11 %

* Less than 10%

Inventory

Inventory is valued at the lower of cost, using the first-in, first-out or specific identification method, or market. The carrying value of inventory is adjusted for excess and obsolete inventory based on inventory age, shipment history and the forecast of demand over a specific future period. At the point of loss recognition, a new lower cost basis for that inventory is established and subsequent changes in facts and circumstances do not result in the restoration or increase in that new cost basis.

Fair Value of Financial Instruments

Fair value is defined as an exit price, representing the amount that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants. The framework for measuring fair value provides a three-tier hierarchy prioritizing inputs to valuation techniques used in measuring fair value as follows:

Level 1— Observable inputs such as quoted prices for identical assets or liabilities in active markets;

Level 2— Inputs, other than quoted prices for identical assets or liabilities in active markets, which are observable either directly or indirectly; and

Level 3— Unobservable inputs in which there is little or no market data requiring the reporting entity to develop its own assumptions.

The carrying value of accounts receivable, accounts payable, and other accruals readily convertible into cash approximate fair value because of the short-term nature of the instruments. As of December 31, 2019, based on Level 2 inputs and the borrowing rates available to the Company for loans with similar terms and consideration of the Company's credit risk, the carrying value of the Company's variable interest rate debt, excluding unamortized debt issuance costs, approximates fair value. The Company's financial instruments consist of Level 1 assets and a Level 3 liability. Where quoted prices are available in an active market, securities are classified as Level 1. Level 1 assets consist of highly liquid money market funds that are included in cash equivalents. The Company's Level 3 liability consists of a warrant issued in connection with the 2019 Credit Facility (Note 6). The change in the fair value of the warrant during the year ended December 31, 2019 was immaterial.

The following tables sets forth the fair value of the Company's financial assets and liabilities measured at fair value on a recurring basis (in thousands):

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ 12,367	$ —	$ —	$ 12,367
Total assets measured at fair value	$ 12,367	$ —	$ —	$ 12,367
Liabilities:				
Warrant liability	$ —	$ —	$ 33	$ 33
Total liabilities measured at fair value	$ —	$ —	$ 33	$ 33

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ 23,478	$ —	$ —	$ 23,478
Total assets measured at fair value	$ 23,478	$ —	$ —	$ 23,478

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation begins at the time the asset is placed in service. Maintenance and repairs are charged to operations as incurred. Depreciation is computed using the straight-line method over the following estimated useful lives of the assets:

	Useful Lives
Computer and network equipment	2 years
Manufacturing equipment	2 – 7 years
Furniture and fixtures	7 years
Software	3 years

Costs incurred to develop software for internal-use during the application development phase are capitalized and amortized over such software's estimated useful life. Costs related to the design or maintenance of internal-use software are included in operating expenses as incurred. During 2019 and 2018, we capitalized $238,000 and $356,000, respectively of such costs to property and equipment. Leasehold improvements are amortized over the shorter of the lease term or useful life. Upon sale or retirement of assets, the cost and related accumulated depreciation are removed from the balance sheet and the resulting gain or loss is reflected in operations. Amortization expense of assets acquired through finance leases is included in the statements of operations and comprehensive loss.

Impairment of Long-lived Assets

The Company evaluates its long-lived assets, including property and equipment, for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. Recoverability of these assets is measured by comparison of the carrying amount of each asset to the future undiscounted cash flows the asset is expected to generate over its remaining life. If the asset is considered to be impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset. There have been no impairments of the Company's long-lived assets during any of the periods presented.

Leases

The Company leases office, lab, manufacturing space and equipment in various locations with initial lease terms of up to five years. These leases require monthly lease payments that may be subject to annual increases throughout the lease term. The terms of these leases also include renewal options at the election of the Company to renew or extend the lease for a range of an additional two to five years. These optional periods have not been considered in the determination of the right-of-use-assets (ROU) or lease liabilities associated with these leases as the Company did not consider it reasonably certain it would exercise the options.

The Company determines if an arrangement is a lease at inception. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The classification of the Company's leases as operating or finance leases along with the initial measurement and recognition of the associated ROU assets and lease liabilities is performed at the lease commencement date. The measurement of lease liabilities is based on the present value of future lease payments over the lease term. The Company's uses its incremental borrowing rate, based on the information available at commencement date, to determine the present value of lease payments when its leases do not provide an implicit rate. The Company uses the implicit rate when readily determinable. The ROU asset is based on the measurement of the lease liability, includes any lease payments made prior to or on lease commencement and excludes lease incentives and initial direct costs incurred, as applicable. Lease expense for the Company's operating leases is recognized on a straight-line basis over the lease term. Amortization expense for ROU assets associated with finance leases is recognized on a straight-line basis over the shorter of the useful life of the asset or the lease term and interest expense associated with finance leases is recognized on the balance of the lease liability using the effective interest method based on the estimated incremental borrowing rate.

The Company has lease agreements with lease and non-lease components. The Company has elected to not separate lease and non-lease components for any leases involving real estate and office equipment classes of assets and, as a result, accounts for the lease and non-lease components as a single lease component. The Company has elected to separate lease and non-lease components for any leases involving manufacturing facility classes of assets. Further, the

Company elected the short-term lease exception policy, permitting it to not apply the recognition requirements of this standard to leases with terms of 12 months or less (short-term leases) for all classes of assets. As of December 31, 2019, the Company did not have any short-term leases.

Operating leases are included in right-of-use assets, lease liabilities, and lease liabilities, net of current portion in the Company's balance sheet. Finance leases are included in property and equipment, other current liabilities, and other long-term liabilities in the Company's balance sheet.

Debt Issuance Costs

The Company defers and amortizes issuance costs, underwriting fees, end of term payments, and related expenses incurred in connection with the issuance of debt instruments using the effective interest method over the terms of the respective instruments. Debt issuance costs are reflected as a direct reduction of the carrying amount of the related debt liability.

Revenue Recognition

The Company recognizes revenue when a customer obtains control of the promised products or services, in an amount that reflects the consideration the Company expects to receive in exchange for those products or services. Revenue is recognized net of allowances for returns and price concessions, and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Nature of Products and Services

The Company's revenue is derived from the sale of MRAM-based products in discrete unit form, licenses of and royalties on its MRAM and magnetic sensor technology, the sale of backend foundry services and design services to third parties. Sales of products in discrete unit form are recognized at a point in time, revenue related to licensing agreements is recognized when the Company has delivered control of the technology, revenue related to royalty agreements is recognized in the period in which sales generated from products sold using the Company's technology occurs, sales of backend foundry services are recognized over time, and design services to third parties are recognized either at a point in time or over time, depending on the nature of the services.

Product Revenue

For products sold in their discrete form, the Company either sells its products directly to original equipment manufacturers (OEMs), original design manufacturers (ODMs) and contract manufacturers (CMs), or through a network of distributors, who in turn sell to those customers. For sales directly to OEMs, ODMs and CMs, revenue is recognized when the OEM, ODM or CM obtains control of the product, which occurs at a point in time, generally upon shipment to the customer.

The Company sells the majority of its products to its distributors at a uniform list price. However, distributors may resell the Company's products to end customers at a very broad range of individually negotiated price points. Distributors are provided with price concessions subsequent to the delivery of product to them and such amounts are dependent on the end customer and product sales price. The price concessions are based on a variety of factors, including customer, product, quantity, geography and competitive differentiation. Price protection rights grant distributors the right to a credit in the event of declines in the price of the Company's products. Under these circumstances, the Company remits back to the distributor a portion of their original purchase price after the resale transaction is completed in the form of a credit against the distributors' outstanding accounts receivable balance. The credits are on a per unit basis and are not given to the distributor until the distributor provides information regarding the sale to their end customer. The Company estimates these credits and records such estimates in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of an allowance for price concessions due to distributors. The Company estimates credits to distributors based on the historical rate of credits provided to distributors relative to sales. Revenue on shipments to distributors is recorded when control of the products has been transferred to the distributor.

The Company estimates the amount of its product sales that may be returned by its customers and records this estimate as a reduction of revenue in the period the related product revenue is recognized. The Company estimates its product return liability by analyzing its historical returns, current economic trends and changes in customer demand and acceptance of products. The Company has received insignificant returns to date and believes that returns of its products will continue to be minimal.

Upon the transfer of control, generally at shipment, the Company records a trade receivable for the selling price as there is a legally enforceable obligation of the distributor to pay for the product delivered, an allowance is recorded for the estimated discount that will be provided to the distributor, and the net of these amounts is recorded as revenue on the statement of operations.

License Revenue

For licenses of technology, recognition of revenue is dependent upon whether the Company has delivered rights to the technology, and whether there are future performance obligations under the contract. In some instances, the license agreements call for future events or activities to occur in order for milestones amounts to become due from the customer. The terms of such agreements include payment to the Company of one or more of the following: non-refundable upfront fees; and royalties on net sales of licensed products. Historically, these license agreements have not included other future performance obligations for the Company once the license has been transferred to the customer.

Revenue from non-refundable up-front payments is recognized when the license is transferred to the customer and the Company has no other performance obligations.

Royalties

Revenue from sales-based royalties from licenses of the Company's technology are recognized at the later of when (1) the sale occurs or (2) the performance obligation to which some or all of the sales-based royalty has been allocated is satisfied (in whole or in part). The Company will record an unbilled receivable (within accounts receivable, net) for the portion of sales-based royalties that have been earned, but not invoiced at the end of each reporting period.

Other Revenue

For certain revenue streams, the Company recognizes revenue based on the pattern of transfer of the services. The Company uses the input method of measuring costs incurred to date compared to total estimated costs to be incurred under the contract as this method most faithfully depicts its performance. The Company will record an unbilled receivable (within accounts receivable, net) for the portion of the work that has been completed but not invoiced at the end of each reporting period.

Revenue from milestone payments must be estimated using either the expected value method or the most likely amount method. At the inception of each agreement that includes milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price by using the most likely amount method. If it is probable that a significant reversal of cumulative revenue would not occur, the associated milestone value is included in the transaction price. At the end of each subsequent reporting period, the Company re-evaluates the probability or achievement of each such milestone and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment.

Product Warranty

The Company generally sells products with a limited warranty of product quality and a limited indemnification of customers against intellectual property infringement claims related to the Company's products. The Company accrues for known warranty and indemnification issues if a loss is probable and can be reasonably estimated, and accrues for estimated losses incurred for unidentified issues based on historical experience. A warranty liability was not recorded at December 31, 2019 and 2018, as the estimated future warranty costs were not material based on the Company's historical experience.

Research and Development

Research and development expenses are incurred in support of internal development programs or as part of the Company's joint development agreement with GLOBALFOUNDRIES and joint collaboration agreement with Silterra Malaysia Sdn. Bhd. (see Note 10). Research and development expenses include personnel-related costs (including stock-based compensation), circuit design costs, purchases of materials and laboratory supplies, fabrication and packaging of experimental integrated circuit products, depreciation of research and development related capital equipment and overhead, and are expensed as incurred.

Stock-based Compensation

Stock-based compensation arrangements include stock option grants and restricted stock unit (RSU) awards under the Company's equity incentive plans, as well as shares issued under the Company's Employee Stock Purchase Plan (ESPP), through which employees may purchase the Company's common stock at a discount to the market price.

The Company measures its stock option grants based on the estimated fair value of the options as of the grant date using the Black-Scholes option-pricing model. Stock-based compensation expense is recognized over the requisite service period using the straight-line method. The Company has made an accounting policy election to account for forfeitures as they occur, rather than estimating expected forfeitures at the time of the grant.

Income Taxes

The Company uses the liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting and the tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company must then assess the likelihood that the resulting deferred tax assets will be realized. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

The Company recognizes benefits of uncertain tax positions if it is more likely than not that such positions will be sustained upon examination based solely on their technical merits, as the largest amount of benefit that is more likely than not to be realized upon the ultimate settlement. The Company's policy is to recognize interest and penalties related to the underpayment of income taxes as a component of income tax expense or benefit. The Company does not have any unrecognized tax benefits.

Net Loss per Common Share

Basic net loss per common share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding for the period less shares subject to repurchase, without consideration of potentially dilutive securities. Diluted net loss per common share is the same as basic net loss per common share since the effect of potentially dilutive securities is anti-dilutive.

Recently Adopted Pronouncements

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016 02, Leases (Topic 842), which establishes a comprehensive new lease accounting model. The new standard: (a) clarifies the definition of a lease; (b) requires a dual approach to lease classification similar to current lease classifications; and (c) causes lessees to recognize leases on the balance sheet as a lease liability with a corresponding ROU asset for leases with a lease-term of more than 12 months. This ASU is effective for fiscal years and interim periods within those years beginning after December 15, 2018. In July 2018, the FASB issued ASU 2018-10, Codification Improvements to Topic 842 Leases and ASU No. 2018-11, Leases (Topic 842) Targeted Improvements. ASU 2018-10 clarifies how to apply certain aspects of ASU 2016-02. The Company adopted this standard on January 1, 2019, using the modified retrospective method. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

Topic 842 permits the application of certain practical expedients, of which the Company elected the "package of three" expedient, that eliminated the requirements to reassess prior conclusions about lease identification, lease classification, and initial direct costs. Further, the Company elected the short-term lease exception policy, permitting it to not apply the recognition requirements of this standard to short-term leases.

Upon adoption of Topic 842, on January 1, 2019, the Company recorded an operating lease ROU asset of $3.6 million, operating lease liabilities of $4.0 million, and derecognized the deferred rent liability of $390,000. The accounting for the Company's finance leases remained substantially unchanged.

In June 2018, the FASB issued ASU No. 2018-07, Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting. ASU 2018-07 is intended to reduce the cost and complexity and to improve financial reporting for nonemployee share-based payments. The ASU expands the scope of Topic 718, (which currently only includes share-based payments to employees) to include share-based payments issued to nonemployees for goods or services. Consequently, the accounting for share-based payments to nonemployees and employees will be substantially aligned. The standard is effective for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted, but no earlier than a company's adoption date of Topic 606. The Company adopted this standard on January 1, 2019 and the impact of its adoption on the Company's financial statements was not material.

Recently Issued Pronouncements

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740). Simplifying the Accounting for Income Taxes. The new guidance eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of deferred tax liabilities for outside basis differences. It also clarifies and simplifies other aspects of the accounting for income taxes. ASU 2019-12 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early adoption is permitted. The adoption of ASU 2019-12 is not expected to have a material effect on the Company's consolidated financial statements and related disclosures

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, which amends the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. As the Company is a smaller reporting company, ASU 2016-13 is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2022, and requires a cumulative effect adjustment to the balance sheet as of the beginning of the first reporting period in which the guidance is effective. In April 2019, the FASB issued ASU No. 2019-04, Codification Improvements Financial Instruments-Credit Losses (Topic 326). The new ASU provides narrow-scope amendments to help apply ASU No. 2016-13. The Company is evaluating the impact of the adoption of ASU 2016-13 on its financial statements.

3. Revenue

The Company sells the majority of its products to its distributors, but also to OEMs. The Company also recognizes revenue under licensing and royalty agreements with some customers. The following table presents the Company's revenues disaggregated by sales channel (in thousands):

	Year Ended December 31,	
	2019	2018
Distributor	$ 24,724	$ 35,126
Non-distributor	12,779	14,291
Total revenue	$ 37,503	$ 49,417

The following table presents the Company's revenues disaggregated by timing of recognition (in thousands):

	Year Ended December 31,	
	2019	2018
Point in time	$ 35,665	$ 45,102
Over time	1,838	4,315
Total revenue	$ 37,503	$ 49,417

The following table presents the Company’s revenues disaggregated by type (in thousands):

	Year Ended December 31, 2019	Year Ended December 31, 2018
Product sales	$ 34,595	$ 39,514
License fees	—	5,000
Royalties	1,070	588
Other revenue	1,838	4,315
Total revenue	$ 37,503	$ 49,417

The Company recognizes revenue in three geographic regions: North America; Europe, Middle East and Africa (EMEA); and Asia-Pacific and Japan (APJ). The following table presents the Company’s revenues disaggregated by the geographic region to which the product is delivered or licensee is located (in thousands):

	Year Ended December 31, 2019	Year Ended December 31, 2018
North America	$ 8,690	$ 9,124
EMEA	8,720	11,175
APJ	20,093	29,118
Total revenue	$ 37,503	$ 49,417

4. Balance Sheet Components

Inventory

Inventory consisted of the following (in thousands):

	December 31, 2019	December 31, 2018
Raw materials	$ 119	$ 288
Work-in-process	6,329	6,759
Finished goods	1,415	2,050
Total inventory	$ 7,863	$ 9,097

Property and Equipment, Net

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

	December 31, 2019	December 31, 2018
Manufacturing equipment	$ 12,228	$ 11,723
Computer and network equipment	877	820
Furniture and fixtures	112	110
Software	925	680
Leasehold improvements	1,444	1,432
Total property and equipment, gross	15,586	14,765
Less: accumulated depreciation	(12,107)	(10,479)
Total property and equipment, net	$ 3,479	$ 4,286

Depreciation and amortization expense during the years ended December 31, 2019 and 2018 was $1.7 million and $1.5 million, respectively.

Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31, 2019	December 31, 2018
Accrued payroll-related expenses	$ 1,236	$ 1,558
Accrued joint development agreement expenses	170	661
Accrued inventory	87	1,678
Restructuring expenses	782	—
Deferred rent	—	390
Other	452	714
Total accrued liabilities	$ 2,727	$ 5,001

5. Commitments and Contingencies

Leases

Operating leases consist primarily of office space expiring at various dates through 2022.

The undiscounted future non-cancellable lease payments under the Company’s operating leases were as follows (in thousands):

As of December 31, 2019	Amount
2020	$ 1,736
2021	1,763
2022	133
Thereafter	—
Total undiscounted lease payments	3,632
Less: Present value adjustment	(210)
Total operating lease liabilities	3,422
Less: Current portion of operating lease liabilities	(1,582)
Total operating lease liabilities, net of current portion	$ 1,840

Other information related to the Company's operating lease liabilities was as follows:

As of December 31, 2019	
Weighted-average remaining lease term (years)	2.06
Weighted-average discount rate	6.00 %

Lease costs for the Company’s operating leases were $1.6 million and $1.6 million for the years ended December 31, 2019 and 2018, respectively. Variable lease payments for operating leases were immaterial for the years ended December 31, 2019 and 2018. Lease costs for the Company’s finance lease were immaterial for the years ended December 31, 2019 and 2018.

Legal Proceedings

From time to time, the Company may become involved in legal proceedings arising from the ordinary course of its business. Management is currently not aware of any matters that it expects will have a material adverse effect on the financial position, results of operations or cash flows of the Company.

Indemnifications

In the ordinary course of business, the Company enters into agreements that may include indemnification provisions. Pursuant to such agreements, the Company may indemnify, hold harmless and defend an indemnified party for losses suffered or incurred by the indemnified party. Some of the provisions will limit losses to those arising from third party actions. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amount of future payments the Company could be required to make under these provisions is not determinable. The Company has never incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. The Company has also entered into indemnification agreements with its directors and officers that may require the Company to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers to the fullest extent permitted by Delaware corporate law. The Company currently has directors' and officers' insurance.

6. Debt

2017 Credit Facility

On May 4, 2017, the Company entered into a Loan and Security Agreement with Silicon Valley Bank (2017 Credit Facility) for a $12.0 million term loan. The term loan provided for interest at a floating rate equal to the prime rate minus 0.75%. The term loan provided for a period of interest-only payments through April 30, 2018, followed by fixed principal and interest payments based on a 24-month amortization schedule. An end of term fee of 6% of the amount borrowed must be made when the loan is prepaid or repaid, whether at maturity or as a result of a prepayment or acceleration or otherwise.

On July 6, 2018, the Company entered into the First Amendment to the 2017 Credit Facility (the First Amendment). The First Amendment extended the period of interest-only payments through December 31, 2018, followed by fixed principal and interest payments based on either a 24-month or a 36-month amortization schedule if the Company achieves certain milestones. The Company determined it would not meet the milestones, therefore the 2017 Credit Facility was based on a 24-month amortization schedule and would mature in December 2020. The 2017 Credit Facility provided for interest at a floating rate equal to the prime rate minus 0.75%. The terms of the First Amendment included the refund of $1.0 million in principal payments previously made by the Company. An end of term fee of 7% of the amount borrowed must be made when the loan is prepaid or repaid, whether at maturity or as a result of a prepayment or acceleration or otherwise. The additional payment is was being accreted using the effective interest method.

In January 2019 and June 2019, the Company entered into the Second Amendment and the Third Amendment to the 2017 Credit Facility, respectively, which primarily modified the financial covenants under the 2017 Credit Facility.

The Company was permitted to make voluntary prepayments of the 2017 Credit Facility with a prepayment fee, calculated as of the effective date of the First Amendment, equal to (i) $240,000 during the first 12 months and (ii) $120,000 if prepaid in months 13-24. The Company was required to make mandatory prepayments of the outstanding loan upon the acceleration by lender following the occurrence of an event of default, along with a payment of the end of term fee, the prepayment fee and any other obligations that are due and payable at the time of prepayment. In the event of default, the interest rate in effect would increase by 5.0% per annum.

2019 Credit Facility

In August 2019, the Company executed an Amended and Restated Loan and Security Agreement (the 2019 Credit Facility), which amended and restated the 2017 Credit Facility, providing for a formula revolving line of credit (Line of Credit) and a term loan (2019 Term Loan) with Silicon Valley Bank to refinance in full the outstanding principal balance of $8.0 million under the 2017 Credit Facility. In August 2019, the Company paid the final payment of $0.8 million, which was due upon the refinancing of the 2017 Credit Facility.

The Line of Credit allows for a maximum draw of $5.0 million, subject to a formula borrowing base, has a two-year term and bears interest at a floating rate equal to the Wall Street Journal (WSJ) prime rate plus 1.5%, per annum, subject to a floor of 6.75%. As of December 31, 2019, the interest rate was 6.75%. The Line of Credit provides for a commitment fee of 1.6% of the maximum availability of the Line of Credit, which was paid in August 2019 upon closing, and was accounted for as a debt discount. The Line of Credit also provides for a termination fee equal to 1% of the maximum availability under the Line of Credit, which is due in case of a termination of the Line of Credit prior to the scheduled maturity date, and an unused facility fee equal to 0.125% per annum of the average unused portion of the Line of Credit, which is expensed as incurred. At execution, $2.0 million from the Line of Credit was used to refinance a portion of the outstanding balance of the 2017 Credit Facility, and $3.0 million remains available under the Line of

Credit, subject to borrowing base availability. As of December 31, 2019, the effective interest rate under the Line of Credit was 10.57% and the outstanding balance was $2.0 million.

The 2019 Term Loan provides for a $6.0 million term loan, which was used to refinance the remaining balance of the 2017 Credit Facility. The 2019 Term Loan has a term of 42 months, and a 12-month interest only period followed by 30 months of equal principal payments, plus accrued interest. The 2019 Term Loan bears interest at a floating rate equal to the WSJ prime rate minus 0.75%, subject to a floor of 4.75%. As of December 31, 2019, the interest rate was 4.75%. A final payment of 7% of the original principal amount of the 2019 Term Loan must be made when the 2019 Term Loan is prepaid or repaid, whether at maturity or as a result of a prepayment or acceleration or otherwise. The additional payment, which is accounted for as a debt discount, is being accreted using the effective interest method. The 2019 Term Loan has a prepayment fee equal to 2% of the total commitment, which is due only if the 2019 Term Loan is prepaid prior to the scheduled maturity date for any reason. As of December 31, 2019, the effective interest rate under the 2019 Term Loan was 8.66%.

Collateral for the 2019 Credit Facility includes all of the Company’s assets except for intellectual property. The Company is required to comply with certain covenants under the 2019 Credit Facility, including requirements to maintain a minimum liquidity ratio, and restrictions on certain actions without the consent of the lender, such as limitations on its ability to engage in mergers or acquisitions, sell assets, incur indebtedness or grant liens or negative pledges on its assets, make loans or make other investments. Under these covenants, the Company is prohibited from paying cash dividends with respect to its capital stock. The Company was in compliance with all covenants at December 31, 2019. The 2019 Credit Facility contains a material adverse effect clause which provides that an event of default will occur if, among other triggers, an event occurs that could reasonably be expected to result in a material adverse effect on the Company’s business, operations or condition, or on the Company’s ability to perform its obligations under the term loan. As of December 31, 2019, management does not believe that it is probable that the clause will be triggered within the next 12 months, and therefore the term loan is classified as long-term.

The carrying value of the Company’s 2019 Credit Facility at December 31, 2019, was as follows (in thousands):

	Current Portion	Long-Term Debt	Total
Credit Facility	$ 800	$ 7,620	$ 8,420
Unamortized debt discounts	(130)	(471)	(601)
Net carrying value	$ 670	$ 7,149	$ 7,819

The carrying value of the Company’s 2017 Credit Facility at December 31, 2018, was as follows (in thousands):

	Current Portion	Long-Term Debt	Total
Credit Facility	$ 6,000	$ 6,840	$ 12,840
Unamortized debt discounts	(33)	(341)	(374)
Net carrying value	$ 5,967	$ 6,499	$ 12,466

The table below includes the principal repayments due under the 2019 Credit Facility as of December 31, 2019 (in thousands):

2020	$ 800
2021	4,400
2022	2,400
2023	820
Total principal repayments	$ 8,420

7. Stockholders’ Equity

Common Stock

Common stockholders are entitled to dividends if and when declared by the board of directors. As of December 31, 2019, no dividends on common stock had been declared by the board of directors.

In February 2018, the Company completed a follow-on underwritten public offering of its common stock under its Registration Statement filed in November 2017 (File No. 333-221331), selling 3,772,447 shares of its common stock at an offering price of $7.00 per share for proceeds of $24.5 million, net of $1.9 million of underwriting discounts and commissions and other offering costs.

At-the-Market Sales Agreement

In August 2019, the Company entered into an Open Market Sale Agreement (the 2019 Sales Agreement) with Jefferies, LLC (Jefferies) for the offer and sale of shares of its common stock having an aggregate offering of up to $25.0 million from time to time through Jefferies, acting as the Company’s sales agent. The issuance and sale of these shares by the Company pursuant to the 2019 Sales Agreement are deemed an “at-the-market” offering under the Securities Act of 1933, as amended. Under the 2019 Sales Agreement, the Company agreed to pay Jefferies a commission of up to 3% of the gross proceeds of any sales made pursuant to the 2019 Sales Agreement. During the year ended December 31, 2019, the Company received net proceeds of $4.7 million after deducting commissions and expenses payable by the Company, from the sale of 888,987 shares of common stock pursuant to the 2019 Sales Agreement. As of December 31, 2019, the Company had an aggregate of $19.9 million available for future sales under the 2019 Sales Agreement.

Reserved Shares of Common Stock

The Company had reserved shares of common stock for future issuance as follows:

	December 31,	
	2019	2018
Options issued and outstanding	1,931,903	1,475,299
Shares available for future option grants	638,227	764,145
RSUs subject to future vesting	211,962	93,560
Common stock warrants	27,836	27,836
Total	2,809,928	2,360,840

Warrants

In connection with a credit facility, Silicon Valley Bank held warrants to purchase 9,229 shares of the Company's common stock at an exercise price of $26.00 per share. These warrants were cancelled when the Company entered into the Amended Credit Facility (see Note 6) and the Company subsequently issued a warrant to SVB for the purchase of 9,375 shares of the Company's common stock at an exercise price of $8.91 per share. The warrant can be exercised at any time and expires five years after the date of issuance. The Company estimated the fair value of the warrant as $43,000 on the date of issuance using the Black-Scholes option pricing model. The warrant was recorded as a discount to the debt to be amortized into interest expense over the remaining term of the loan using the effective interest method.

In conjunction with entering into the 2019 Credit Facility, on August 5, 2019, the Company and SVB amended and restated the warrant issued to SVB in connection with the First Amendment, to add an option by SVB to put the warrant back to the Company for $50,000 upon expiration or a liquidity event, to be prorated if SVB exercises a portion of the warrant. The warrant expires on July 6, 2023. As of August 5, 2019, the warrant was classified as a liability and recorded at fair value within other liabilities in the Company's balance sheet. Due to the put right, the warrant is subject to fair value remeasurement at each subsequent reporting date until the exercise or expiration of the warrant. The fair value of the warrant is estimated using a Black-Scholes valuation model. Any resulting change in the fair value of the warrant will be recorded as other income, net in the Company's statement of operations and comprehensive loss. The fair value adjustment was not material in 2019.

In connection with the 2015 Credit Facility, Ares Venture Finance holds a warrant to purchase 18,461 shares of the Company's common stock at an exercise price of $26.00 per share. The warrant can be exercised at any time and expires 10 years after the date of issuance.

8. Stock-Based Compensation

2016 Employee Incentive Plan

The Company's board of directors adopted the 2016 Equity Incentive Plan (the 2016 Plan) on April 25, 2016, which was subsequently approved on September 20, 2016 by the Company's stockholders. The 2016 Plan became effective on October 7, 2016, the date the Company's registration statement was declared effective by the SEC.

The Company's 2016 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based stock awards, and other forms of equity compensation to employees, directors and consultants. In addition, the Company's 2016 Plan provides for the grant of performance cash awards to employees, directors and consultants.

The maximum number of shares of common stock that may be issued under the Company's 2016 Plan is 500,000 subject to an automatic increase on January 1 of each year, beginning on January 1, 2017, and continuing through and including January 1, 2026, by 3% of the total number of shares of capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by the Company's board of directors.

2008 Employee Incentive Plan

The 2008 Equity Incentive Plan (the 2008 Plan) provided for the issuance of incentive stock options (ISO), nonqualified stock options, and other stock compensation awards. Under the terms of the 2008 Plan, the exercise price of an ISO shall be not less than 100% of the fair value of the stock at the date of grant, as determined by the board of directors, or in the case of certain ISOs, at 110% of the fair market value at the date of grant.

The term and vesting periods for options granted under the 2008 Plan were determined by the Company's board of directors. Options granted generally vest over four years. Options must be exercised within a 10-year period or sooner if so specified within the option agreement.

No further grants will be made under the Company's 2008 Plan. However, any outstanding stock awards granted under the 2008 Plan will remain outstanding, subject to the terms of the Company's 2008 Plan and the applicable stock award agreements, until such outstanding stock awards that are stock options are exercised or until they terminate or expire by their terms, or until such stock awards are fully settled, terminated or forfeited. At December 31, 2019, 386,554 options under the 2008 Plan remained outstanding.

Summary of Stock Option Activity

The following table summarizes the stock option and award activity for all grants under the 2008 Plan and 2016 Plan:

		Options Outstanding			
	Options and Awards Available for Grant	Number of Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life (years)	Aggregate Intrinsic Value
					(In thousands)
Balance—December 31, 2018	764,145	1,475,299	$ 7.60	7.8	$ 284
Authorized	512,864				
RSUs granted	(183,402)				
RSUs cancelled/forfeited	22,450				
Options granted	(660,852)	660,852	$ 6.58		
Options exercised	—	(10,416)	$ 4.69		$ 24
Options cancelled/forfeited	183,022	(193,832)	$ 8.57		
Balance—December 31, 2019	638,227	1,931,903	$ 7.17	6.5	$ 188
Options exercisable—December 31, 2019		961,162	$ 7.11	5.4	$ 187

During the years ended December 31, 2019 and 2018, the Company granted options with a weighted-average grant date fair value of $4.06 and $4.45 per share, respectively.

The total fair value of options vested during the year was $2.3 million and $1.9 million, for the years ended December 31, 2019, and 2018, respectively.

2016 Employee Stock Purchase Plan

The Company's board of directors adopted the 2016 Employee Stock Purchase Plan (the ESPP) on April 25, 2016, which was subsequently approved on September 20, 2016 by the Company's stockholders. The Company had 396,000 shares available for issuance under the Company's ESPP as of December 31, 2019. Employees purchased 44,344 shares for $232,000 during the year ended December 31, 2019 and 42,327 shares for $266,000 during the year ended December 31, 2018.

The following table summarizes the assumptions used in the Black-Scholes option-pricing model to determine fair value of the Company's common shares issued under the ESPP:

	Year Ended December 31,	
	2019	2018
Expected volatility	39.6 – 74.2 %	59.5 – 87.8 %
Risk-free interest rate	1.67 – 2.66 %	0.94 – 2.11 %
Expected term (in years)	0.5 – 1.0	0.5 – 1.0
Dividend yield	— %	— %

Modification of Stock-Based Awards

In February 2018, the Company modified the terms of 400,000 vested and unvested stock option awards granted to the Chief Executive Officer, by reducing their exercise price from $16.25 per share to $7.64 per share. There was no change to any of the other terms of the option awards. The modification resulted in an incremental value of $600,000 being allocated to the options, of which $63,000 was recognized to expense immediately based on options that were vested at the time of the modification. The remaining incremental value of $537,000 attributable to unvested options will be recognized over the remaining vesting term through September 2021.

Restricted Stock Units

In September 2017, the Company's board of directors authorized the issuance of Restricted Stock Units (RSUs), under the 2016 Plan and adopted a form of Restricted Stock Unit Award Agreement, which is intended to serve as a standard form agreement for RSU grants issued to employees, executive officers, directors and consultants. The fair value of the RSUs is recognized as expense ratably over the vesting period, as determined by the board of directors on the date of grant.

The following table summarizes RSU activity for the year ended December 31, 2019:

	RSUs Outstanding	
	Number of Restricted Stock Units	Weighted-Average Grant Date Fair Value Per Share
Balance—December 31, 2018	93,560	$ 8.38
Granted	183,402	6.64
Vested	(42,550)	8.04
Cancelled/forfeited	(22,450)	8.02
Balance—December 31, 2019	211,962	$ 6.97

The fair value of RSUs is determined on the date of grant based on the market price of the Company's common stock on that date. As of December 31, 2019, there was $1.0 million of unrecognized stock-based compensation expense related to RSUs to be recognized over a weighted-average period of 2.4 years.

Stock-based Compensation Expense

As of December 31, 2019, there was $4.5 million of total unrecognized compensation expense related to unvested options which is expected to be recognized over a weighted-average period of 2.5 years. Compensation cost capitalized within inventory at December 31, 2019 and 2018 was not material.

The Company estimated the fair value of each option grant using the Black-Scholes option-pricing model. The fair value of employee stock options is being amortized on a straight-line basis over the requisite service period of the awards. The fair value of employee stock options was estimated using the assumptions below.

	Year Ended December 31,	
	2019	2018
Expected volatility	65.1 – 74.4 %	51.9 – 56.6 %
Risk-free interest rate	1.46 – 2.52 %	2.64 – 2.94 %
Expected term (in years)	5.3 – 6.1	5.7 – 6.1
Dividend yield	— %	— %

Expected volatility. The Company determines the expected stock price volatility based on the historical volatility of its common stock and the historical volatilities of a peer group. Industry peers consist of several public companies in the technology industry similar in size, stage of life cycle and financial leverage. The Company intends to continue to consistently apply this process using the same or similar public companies until a sufficient trading history of our common stock becomes available. If circumstances change such that the identified companies are no longer similar, the Company will revise its peer group to substitute more suitable companies in this calculation.

Risk-free interest rate. The risk-free interest rate is based on the U.S. Treasury yield with a maturity equal to the expected term of the option in effect at the time of grant.

Expected term. The expected term represents the period that the stock-based awards are expected to be outstanding. The Company used the simplified method to determine the expected term, which is calculated as the average of the time to vesting and the contractual life of the options.

Dividend yield. The Company has never paid dividends on its common stock and is prohibited from paying dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

9. 401(k) Plan

The Company has a defined contribution employee benefit plan pursuant to Section 401(k) of the Internal Revenue Code. The plan allows eligible employees to defer a portion of their annual compensation up to certain statutory limits. At the election of the Board of Directors, the Company may elect to match employee contributions but has not done so to date.

10. Significant Agreements

GLOBALFOUNDRIES, Inc. Joint Development Agreement

Since October 17, 2014, the Company has participated in a joint development agreement with GLOBALFOUNDRIES Inc., a semiconductor foundry, for the joint development of STT-MRAM technology to produce of a family of discrete and embedded MRAM technologies. The term of the agreement is until the completion, termination, or expiration of the last statement of work entered into pursuant to the joint development agreement. The agreement was extended on December 31, 2019 to include a new phase of support for 12nm MRAM development.

Under the current JDA extension terms, each party licenses its relevant intellectual property to the other party. For certain jointly developed works, the parties have agreed to follow an invention allocation procedure to determine ownership. In addition, GF possesses the exclusive right to manufacture the Company’s discrete and embedded STT-MRAM devices developed pursuant to the agreement until the earlier of three years after the qualification of the MRAM device for a particular technology node or four years after the completion of the relevant statement of work under which the device was developed. For the same exclusivity period associated with the relevant device, GF agreed not to license intellectual property developed in connection with the JDA to named competitors of the Company.

Generally, unless otherwise specified in the agreement or a statement of work, the Company and GF share project costs, which do not include personnel or production qualification costs, under the JDA. If GF manufactures, sells or transfers to customers wafers containing production quantified STT-MRAM devices that utilize certain design information, GF will be required to pay the Company a royalty.

The Company incurred project costs, recognized as research and development expense, of $1.8 million and $5.8 million during the years ended December 31, 2019 and 2018, respectively. The Company entered into a Statement of Work (SOW) and an Amendment to the SOW, under the JDA with GF effective August 2016 and June 2018 respectively. The Company is entitled to revenues under the SOW and its Amendment upon delivery and acceptance of product. The Company did not recognize any revenue from GF for the year ended December 31, 2019. The Company recognized revenue from GF of $1.0 million for the year ended December 31, 2018.

On October 21, 2014, GF participated, along with other investors, in the Company’s Series B redeemable convertible preferred stock financing and purchased 192,307 shares at $26.00 per share. Contemporaneously, the Company sold 461,538 shares of its common stock to GF at a discounted price of $0.00026 per share. The common shares vest upon the achievement of a goal as set forth in the Statement of Work #1 (the SOW) under the JDA. The Company has determined that the issuance of these shares of common stock to GF represents compensation for services to be provided under the JDA. Accordingly, the shares are accounted for similar to a stock award granted to a non-employee of the Company and are remeasured to their fair value as they vest. A total of 211,538 shares of common stock became vested on August 21, 2016, the designated Initial Measurement Date. The remaining shares vested on a monthly basis through October 21, 2018. During the year ended 2018, the Company recognized non-cash compensation expense of $0.8 million, in research and development expense, related to the vesting of the shares of common stock. As of December 31, 2018, all shares issued to GF were fully vested.

Silterra Malaysia Sdn. Bhd. Joint Collaboration Agreement

In September 2018, the Company entered into a Joint Collaboration Agreement (JCA) with Silterra Malaysia Sdn. Bhd. (Silterra), and another third party. The JCA will create additional manufacturing capacity for the Company’s Toggle MRAM products. Initial production is expected to start in 2020. Under the JCA the Company will pay nonrecurring engineering costs of $1.0 million. During the years ended December 31, 2019 and 2018, the Company paid $200,000 and $400,000 of JCA costs, respectively.

11. Restructuring

During the year ended December 31, 2019, the Company implemented a corporate restructuring to ensure long-term sustainability. As part of the restructuring, the Company will reduce its workforce by approximately 15 positions across all functions. The restructuring expense of $782,000 during the year ended December 31, 2019 represented all cash consideration of the restructuring, and primarily related to employee severance and benefit arrangements to be paid in 2020.

12. Geographic Information

Property and equipment, net by country was as follows (in thousands):

	December 31,	
	2019	2018
United States	$ 2,235	$ 2,714
Singapore	789	912
Other	455	660
	$ 3,479	$ 4,286

Revenue from customers is designated based on the geographic region or country to which the product is delivered or licensee is located. Revenue by country was as follows (in thousands):

	Year Ended December 31,	
	2019	2018
Hong Kong	$ 10,144	$ 2,453
Germany	6,423	6,724
Japan	5,660	10,254
United States	4,915	6,746
China	1,361	5,083
All other	9,000	18,157
Total revenue	$ 37,503	$ 49,417

13. Income Taxes

For the years ended December 31, 2019 and 2018, the Company recorded no provision or benefit for income taxes primarily due to losses incurred. The Company has incurred net operating losses for all the periods presented.

The reconciliation of the statutory federal income tax rate to the Company’s effective tax rate is as follows:

	Year Ended December 31,	
	2019	2018
Tax at statutory federal rate	(21.0)%	(21.0)%
State taxes, net of federal benefit	(0.8)	(1.7)
Stock-based compensation	2.0	1.5
Nondeductible executive compensation	—	0.9
Change in valuation allowance	18.9	20.6
Other	0.9	(0.3)
Provision for income taxes	0.0 %	0.0 %

The tax effects of temporary differences and carryforwards that give rise to significant portions of the deferred tax assets are as follows (in thousands):

	December 31, 2019	December 31, 2018
Deferred tax assets:		
Net operating loss carryforwards	$ 29,684	$ 25,359
Inventory	874	1,442
Accruals	430	760
Depreciation and amortization	143	88
Limitation on business interest	186	96
Stock-based compensation	546	1,416
Right of use liability	776	—
Gross deferred tax assets	32,639	29,161
Valuation allowance	(31,840)	(29,073)
Deferred tax assets	799	88
Deferred tax liabilities:		
Right of use asset	(710)	—
Other	(89)	(88)
Deferred tax liabilities	(799)	(88)
Net deferred tax assets	$ —	$ —

The Company is required to reduce its deferred tax assets by a valuation allowance if it is more likely than not that some or all of its deferred tax assets will not be realized. Management must use judgment in assessing the potential need for a valuation allowance, which requires an evaluation of both negative and positive evidence. The weight given to the potential effect of negative and positive evidence should be commensurate with the extent to which it can be objectively verified. In determining the need for and amount of the valuation allowance, if any, the Company assesses the likelihood that it will be able to recover its deferred tax assets using historical levels of income, estimates of future income and tax planning strategies. As a result of historical cumulative losses, the Company determined that, based on all available evidence, there was substantial uncertainty as to whether it will recover recorded net deferred taxes in future periods. Accordingly, the Company recorded a valuation allowance against all of its net deferred tax assets as of December 31, 2019 and 2018. The net valuation allowance increased by $2.8 million in 2019.

As of December 31, 2019, the Company had federal net operating loss carryforwards of approximately $131.8 million, of which $99.8 million will begin to expire in the year of 2028 through 2037 if not utilized, and $32.0 million will carryover indefinitely. In addition, the Company had state net operating loss carryforwards of approximately $50.2 million, of which $48.5 million will begin to expire in 2023 through 2039 if not utilized, and $1.7 million will carryover indefinitely.

The Tax Reform Act of 1986 (the Act) provides for a limitation on the annual use of net operating loss and research and development tax credit carryforwards following certain ownership changes (as defined by the Act and codified under IRC Section 382) that could limit the Company's ability to utilize these carryforwards. Should the limitation apply, the related net operating loss deferred tax asset and the valuation allowance would be reduced by the same amount.

The Company files income tax returns in the U.S. federal and various state jurisdictions. The Company is subject to U.S. federal and state income tax examinations by authorities for all tax years beginning in 2008, due to the accumulated net operating losses that are carried forward.

The Company has not identified any unrecognized tax benefits as of December 31, 2019 and 2018. The Company does not expect the amount of unrecognized tax benefits to materially change in the next twelve months.

14. Net Loss Per Common Share

The following table sets forth the computation of basic and diluted net loss per share (in thousands, except share and per share amounts):

	Year Ended December 31,	
	2019	2018
Numerator:		
Net loss	$ (14,669)	$ (17,754)
Denominator:		
Weighted-average common shares outstanding	17,317,042	16,413,733
Less: weighted-average unvested common shares subjected to repurchase	—	(41,095)
Weighted-average common shares outstanding used to calculate net loss per common share, basic and diluted	17,317,042	16,372,638
Net loss per common share, basic and diluted	$ (0.85)	$ (1.08)

The following outstanding shares of potentially dilutive securities have been excluded from diluted net loss per common share for the periods presented, because their inclusion would be anti-dilutive:

	Year Ended December 31,	
	2019	2018
Options to purchase common stock	1,931,903	1,475,299
Restricted stock units	211,962	93,560
Common stock warrants	27,836	27,836
Total	2,171,701	1,596,695

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

None.

Item 9A. Controls and Procedures.

Evaluation of disclosure controls and procedures.

Our management, with the participation of our management team, including our Chief Executive Officer (CEO) and Chief Financial Officer (CFO) evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of December 31, 2019.

Based on this evaluation, our CEO and CFO concluded that, our disclosure controls and procedures were not effective at the reasonable assurance level as of December 31, 2019, based on the material weakness described below.

Management's Annual Report on Internal Control Over Financial Reporting

This Annual Report on Form 10-K includes a report of management's assessment regarding internal control over financial reporting. This Annual Report on Form 10-K does not include an attestation report of our independent registered public accounting firm because, as an "emerging growth company" under the JOBS Act, our independent registered public accounting firm is not required to issue such an attestation report.

The following report is provided by management in respect of our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act):

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our management used the Committee of Sponsoring Organizations of the Treadway Commission Internal Control - Integrated Framework (2013), or the COSO framework, to evaluate the effectiveness of internal control over financial reporting. Management believes that the COSO framework is a suitable framework for its evaluation of financial reporting because it is free from bias, permits reasonably consistent qualitative and quantitative measurements of our internal control over financial reporting, is sufficiently complete so that those relevant factors that would alter a conclusion about the effectiveness of our internal control over financial reporting are not omitted and is relevant to an evaluation of internal control over financial reporting. Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2019 and has concluded that such internal control over financial reporting was not effective, based on the material weakness described below.

Material weakness in internal control over financial reporting.

In connection with the preparation of our unaudited condensed financial statements for the quarter ended September 30, 2018, we identified an error in the previously filed financial statements that caused us to restate and amend our previously issued condensed financial statements and related financial information as of and for the three and six months ended June 30, 2018. This error was the result of a material weakness in our internal control over financial reporting, which continued to exist at December 31, 2019. Specifically, (i) our information technology systems did not provide management the ability to accurately monitor inventory movements and quantities at third-party locations, (ii) internal processes to provide for clear communication between operational and financial personnel within the company were insufficient, and (iii) we had insufficient personnel with the appropriate level of experience to prevent and detect errors on a timely basis in our financial statements.

To remediate this material weakness, we are taking the following actions:

- We are currently updating our information technology tools, including our ERP system to enhance our ability to monitor inventory and its movement through our manufacturing process and provide checks and balances to third-party reports. The new inventory system implementation and adoption of new costing processes is planned to be completed in Q1 2020.

- We have, and continue to put in place, management dashboard tools to alert all involved as to the performance of inventory against our business goals.
- We are establishing multi-discipline processes to actively manage and make decisions regarding our inventory to support our business objectives. In 2019, we have established a sales and operations planning process to optimize inventory management.
- We are providing additional training to our Operations Teams and updating procedures with our third-party Assembly Houses.
- We have hired additional qualified personnel to assist management with its financial statement close process and provide oversight of our financial reporting.

Changes in internal control over financial reporting.

Except for the actions to remediate the material weakness described above, there were no changes in our internal control over financial reporting (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) that occurred during the year ended December 31, 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent limitation on the effectiveness of internal control.

The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurances. In addition, 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. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

Item 9B. Other Information.

On March 10, 2020, our Compensation Committee (the "***Committee***") of our Board of Directors approved an Executive Severance and Change in Control Plan (the "***CIC Plan***"). Pursuant to the CIC Plan, in the event the employment of our Chief Executive Officer (the "***CEO***") or Vice President of Technology R&D (the "***VP of Technology R&D***") is terminated by the us or any acquirer or successor without Cause or for Good Cause (as such terms are defined therein) during the period commencing three months prior to a Change in Control and ending 12 months—or in the case of the CEO, 18 months—following a Change in Control (the "***Change in Control Period***"), then, subject to his execution and non-revocation of a general release of claims in favor of us within 45 days following the date of such termination, we will be obligated to provide the following payments and benefits to each of the CEO and VP of Technology R&D:

- provide a lump sum cash payment equal to 12 months of the executive officer's then-current base salary;
- provide a payment of the executive officer's target incentive bonus payouts in the amounts equal to 100% of the executive officer's incentive bonus target;
- payment of an amount equal to the monthly employer contribution we would have made to provide the executive officer with health insurance if he had remained employed by we until 12 months following the date of termination; and
- accelerate the vesting of the shares subject to any Equity Awards (as defined in the CIC Plan) held by the executive officer on the date of termination such that the then unvested Equity Awards shall vest and become exercisable if the executive officer had completed an additional 12 months of employment following the termination date.

In addition, pursuant to the CIC Plan, in the event the employment of any of our other Vice Presidents is terminated by us or any acquirer or successor without Cause or for Good Reason within during the Change in Control Period, then, subject to his or her execution and non-revocation of a general release of claims in favor of us within 45 days following the date of such termination, we will be obligated to provide the following payments and benefits to each of the other Vice Presidents:

- provide a lump sum cash payment equal to 6 months of the Vice President's then-current base salary;
- provide a payment of the Vice President's target incentive bonus payouts in the amounts equal to 100% of the Vice President's incentive bonus target for the year in which the closing of the sale event occurred;
- if the Vice President elects to continue his or her group healthcare benefits, payment of an amount equal to the monthly employer contribution we would have made to provide the Vice President with health insurance if he or she had remained employed by us until 6 months following the date of termination; and
- accelerate the vesting of the shares subject to any Equity Awards held by the Vice President on the date of termination such that the then unvested Equity Awards shall vest and become exercisable if the Vice President completed an additional 6 months of employment following the termination date.

The foregoing description of the CIC Plan does not purport to be complete and is qualified in its entirety by reference to the Executive Severance and Change in Control Plan, a copy of which is filed herewith as Exhibit 10.36.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Information required by this item will be contained in our definitive proxy statement to be filed with the Securities and Exchange Commission on Schedule 14A in connection with our 2020 Annual Meeting of Stockholders, or the Proxy Statement, which will be filed not later than 120 days after the end of our fiscal year ended December 31, 2019, under the headings “Management,” “Proposal 1 - Election of Directors,” “Board Committees and Meetings,” and “Delinquent Section 16(a) Reports,” and is incorporated herein by reference.

We have adopted a Code of Business Conduct and Ethics that applies to our officers, directors and employees which is available on our website at www.everspin.com. The Code of Business Conduct and Ethics is intended to qualify as a “code of ethics” within the meaning of Section 406 of the Sarbanes-Oxley Act of 2002 and Item 406 of Regulation S-K. In addition, we intend to promptly disclose (1) the nature of any substantive amendment to our Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions and (2) the nature of any waiver, including an implicit waiver, from a provision of our code of ethics that is granted to one of these specified officers, the name of such person who is granted the waiver and the date of the waiver, on our website in the future.

Item 11. Executive Compensation.

The information required by this item regarding executive compensation is incorporated by reference to the information set forth in the sections titled “Executive Compensation” and “Compensation of Non-Employee Board Members” in our Proxy Statement.

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

The information required by this item regarding security ownership of certain beneficial owners and management is incorporated by reference to the information set forth in the sections titled “Security Ownership of Certain Beneficial Owners and Management” and “Securities Authorized for Issuance Under Equity Compensation Plans” in our Proxy Statement.

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

The information required by this item regarding certain relationships and related transactions and director independence is incorporated by reference to the information set forth in the sections titled “Certain Relationships and Related Party Transactions” and “Proposal 1 - Election of Directors”, respectively, in our Proxy Statement.

Item 14. Principal Accounting Fees and Services.

The information required by this item regarding principal accountant fees and services is incorporated by reference to the information set forth in the section titled “Principal Accountant Fees and Services” in our Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of this report:

1. Financial Statements

Information in response to this Item is included in Part II, Item 8 of this Annual Report on Form 10-K.

2. Financial Statement Schedules

All schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

3. Exhibits

EXHIBIT INDEX

Exhibit Number	Description	Incorporation By Reference Form	SEC File No.	Exhibit	Filing Date
3.1	Amended and Restated Certificate of Incorporation.	8-K	001-37900	3.1	10/13/2016
3.2	Amendment to Amended and Restated Certificate of Incorporation.	8-K	001-37900	3.1	5/22/2019
3.3	Bylaws.	8-K	001-37900	3.2	5/22/2019
4.1	Form of Common Stock Certificate of the registrant.	S-1	333-213569	4.1	9/09/2016
4.2	Amended and Restated Warrant to Purchase Common Stock, dated as of August 5, 2019, between the Company and Silicon Valley Bank.	10-Q	001-37900	4.2	11/07/2019
4.3*	Description of Common Stock				
4.4	Reference is made to Exhibits 3.1 and 3.2.				
10.1†	Form of Indemnity Agreement between the registrant and its directors and officers.	S-1	333-213569	10.1	9/09/2016
10.2†	2008 Equity Incentive Plan, as amended, and Form of Stock Option Grant Notice, Option Agreement and Form of Notice of Exercise.	S-1/A	333-213569	10.2	9/26/2016
10.3†	Amended and Restated 2016 Equity Incentive Plan.	8-K	001-37900	10.1	5/22/2018
10.4†	Form of Stock Option Grant Notice, Option Agreement and Form of Notice of Exercise used with the 2016 Equity Incentive Plan.	S-1/A	333-213569	10.3	9/26/2016
10.5†	Form of Restricted Stock Unit Award Agreement under the 2016 Equity Incentive Plan.	10-Q	001-37900	10.3	11/13/2017
10.6†	2016 Employee Stock Purchase Plan.	S-1/A	333-213569	10.4	9/26/2016
10.7	Lease, dated as of June 6, 2008, by and between the registrant and Freescale Semiconductor, Inc.	S-1	333-213569	10.5	9/09/2016
10.8	Amendment No. 1 to Lease, dated as of February 2, 2009, by and between the registrant and Freescale Semiconductor, Inc.	S-1	333-213569	10.6	9/09/2016

10.9	Amendment No. 2 to Lease, dated as of February 18, 2010, by and between the registrant and Freescale Semiconductor, Inc.	S-1	333-213569	10.7	9/09/2016
10.10	Amendment No. 3 to Lease, dated as of July 20, 2011, by and between the registrant and Freescale Semiconductor, Inc.	S-1	333-213569	10.8	9/09/2016
10.11	Amendment No. 4 to Lease, dated as of June, 2014 by and between the registrant and Freescale Semiconductor, Inc.	S-1	333-213569	10.9	9/09/2016
10.12	Amendment No. 5 to Lease, dated as of March 22, 2017 by and between the registrant and Freescale Semiconductor, Inc.	8-K	001-37900	10.1	3/28/2017
10.13	Amendment No. 6 to Lease, dated as of October 31, 2017 by and between the registrant and NXP USA, Inc. (formerly Freescale Semiconductor, Inc.)	10-K	001-37900	10.40	3/15/2018
10.14	Amendment No. 7 to Lease, effective as of June 30, 2018 by and between the registrant and NXP USA, Inc. (formerly Freescale Semiconductor, Inc.)	10-Q	001-37900	10.1	11/14/2018
10.15*	Amendment No. 8 to Lease, effective as of November 30, 2019 by and between the registrant and NXP USA, Inc. (formerly Freescale Semiconductor, Inc.)				
10.16	Amended and Restated Loan and Security Agreement, dated as of August 5, 2019, between the Company and Silicon Valley Bank.	10-Q	001-37900	10.1	11/7/2019
10.17	Commercial Industrial Lease Agreement, dated as of May 18, 2012 by and between the registrant and Principal Life Insurance Company.	S-1	333-213569	10.17	9/09/2016
10.18	Amendment No. 1 to Commercial Industrial Lease Agreement, dated August 12, 2016 by and between the registrant and Legacy Stonelake JV-T, LLC, successor in interest to Principal Life Insurance Company.	S-1	333-213569	10.22	9/09/2016
10.19	Sublease Agreement, dated January 31, 2017 by and between the registrant and NXP USA, Inc. and Consent to of Landlord to Sublease, dated March 10, 2017, by and among the registrant, NXP USA, Inc. and VWP-BV CM 5670, LLC.	8-K	001-37900	10.1	3/28/2017

10.20	First Amendment to Sublease Agreement, dated February 13, 2017, by and between the registrant and NXP USA, Inc. and Consent to of Landlord to Amendment to Sublease, dated March 10, 2017, by and among the registrant, NXP USA, Inc. and VWP-BV CM 5670, LLC.	8-K	001-37900	10.2	3/28/2017
10.21	Second Amendment to Sublease Agreement dated March 2, 2017 by and between the Company and NXP USA, Inc. and Consent of Landlord to Sublease, dated March 10, 2017, by and among the registrant, NXP USA, Inc. and VWP-BV CM 5670, LLC.	8-K	001-37900	10.3	3/28/2017
10.22	Third Amendment to Sublease Agreement, dated October 17, 2017 by and between the registrant and NXP USA, Inc. and Consent of Landlord to Sublease, dated March 10, 2017, by and among the registrant, NXP USA, Inc. and VWP-BV CM 5670, LLC.	10-K	001-37900	10.39	3/15/2018
10.23+	STT-MRAM Joint Development Agreement, dated as of October 17, 2014 by and between the registrant and GLOBALFOUNDRIES Inc.	S-1	333-213569	10.18	9/09/2016
10.24+	Amendment No. 1 to the STT-MRAM Joint Development Agreement, dated as of May 27, 2016 by and between the registrant and GLOBALFOUNDRIES Inc.	S-1	333-213569	10.19	9/09/2016
10.25+	Amendment No. 3 to the STT-MRAM Joint Development Agreement, effective as of January 1, 2018 by and between the registrant and GLOBALFOUNDRIES Inc.	10-K	001-37900	10.27	3/15/2019
10.26+	Manufacturing Agreement, dated as of October 23, 2014 by and between the registrant and GLOBALFOUNDRIES Singapore Pte. Ltd.	S-1	333-213569	10.20	9/09/2016
10.27	Restricted Stock Purchase Agreement, dated as of October 21, 2014 by and between the registrant and GLOBALFOUNDRIES Inc.	S-1	333-213569	10.21	9/09/2016
10.28	Common Stock Purchase Agreement, dated as of September 23, 2016 by and between the registrant and GigaDevice (HK) Limited.	S-1/A	333-213569	10.23	9/26/2016
10.29†	Non-employee Director Compensation.	10-Q	001-37900	10.2	8/7/2019

10.30†	Compensation arrangements with certain executive officers.	8-K	001-37900	Item 5.02	1/25/2019
10.31†	Executive Employment Agreement, dated as of April 25, 2016 by and between the registrant and Dr. Jon Slaughter.	10-K	001-37900	10.25	3/29/2017
10.32†	Executive Employment Agreement, dated as of April 25, 2016 by and between the registrant and Jeff Winzeler.	10-Q	001-37900	10.2	5/8/2019
10.33†	Executive Employment Agreement, dated as of August 18, 2017 between the registrant and Kevin Conley.	8-K	001-37900	10.1	8/23/2017
10.34†	Offer Letter, dated as of March 6, 2019 by and between the registrant and Troy Winslow.	10-Q	001-37900	10.3	5/8/2019
10.35†*	Offer Letter, dated as of July 10, 2019 by and between the registrant and Matthew Tenorio.				
10.36†*	Executive Severance and Change in Control Plan				
23.1*	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.				
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended.				
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended.				
32.1**	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS	XBRL Instance Document				
101.SCH	XBRL Taxonomy Extension Schema Document				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				

101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.

** Furnished herewith. Exhibit 32.1 is being furnished and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, nor shall such exhibit be deemed to be incorporated by reference in any registration statement or other document filed under the Securities Act of 1933, as amended, or the Exchange Act, except as otherwise specifically stated in such filing.

\+ Confidential treatment has been granted for certain portions of this exhibit.

† Indicates a management contract or compensatory plan.

(b) We have filed, or incorporated into this Annual Report on Form 10-K by reference, the exhibits listed on the Exhibit Index immediately above.

(c) See Item 15(a)2 above.

Item 16. Form 10-K Summary

Not provided.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, in Chandler, Arizona, on March 12, 2020.

Everspin Technologies, Inc.

By: /s/ Kevin Conley
Kevin Conley
President and Chief Executive Officer
(Duly Authorized Officer and Principal Executive Officer)

By: /s/ Matthew Tenorio
Matthew Tenorio
Interim Chief Financial Officer
(Principal Financial and Accounting Officer)

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kevin Conley and Matthew Tenorio, and each of them, as his true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him and in his name, place or stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ Kevin Conley Kevin Conley	President and Chief Executive Officer (Principal Executive Officer)	March 12, 2020
/s/ Matthew Tenorio Matthew Tenorio	Interim Chief Financial Officer (Principal Financial and Accounting Officer)	March 12, 2020
/s/ Lawrence G. Finch Lawrence G. Finch	Director	March 12, 2020
/s/ Ronald C. Foster Ronald C. Foster	Director	March 12, 2020
/s/ Stephen J. Socolof Stephen J. Socolof	Director	March 12, 2020
/s/ Peter Hébert Peter Hébert	Director	March 12, 2020
/s/ Geoffrey R. Tate Geoffrey R. Tate	Director	March 12, 2020
/s/ Mike Gustafson Mike Gustafson	Director	March 12, 2020
/s/ Darin Billerbeck Darin Billerbeck	Director, Chairman of the Board	March 12, 2020
/s/ Geoff Ribar Geoff Ribar	Director	March 12, 2020

Exhibit 4.3

DESCRIPTION OF EVERSPIN TECHNOLOGIES, INC. COMMON STOCK

The following is a description of the common stock, $0.0001 par value (the "***Common Stock***"), of Everspin Technologies, Inc. (the "***Company***"), which is the only security of the Company registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "***Exchange Act***").

General

The Company is authorized to issue up to 100,000,000 shares of Common Stock. The following description summarizes selected information regarding the Common Stock, as well as relevant provisions of (i) the Company's Amended and Restated Certificate of Incorporation, as amended and currently in effect (as so amended, the "***Certificate of Incorporation***"), (ii) the Company's Amended and Restated Bylaws, as currently in effect (the "***Bylaws***"), and (iii) the Delaware General Corporation Law (the "***DGCL***"). The following summary description of the Common Stock of the Company is qualified in its entirety by reference to the provisions of the Certificate of Incorporation and By-Laws, copies of which have been filed as exhibits to the Company's periodic reports under the Exchange Act, and the applicable provisions of the DGCL.

Common Stock

Voting Rights**.** Each holder of Common Stock is entitled to one vote for each share of Common Stock held on all matters submitted to a vote of stockholders, except as otherwise expressly provided in the Certificate of Incorporation or required by applicable law. Cumulative voting for the election of directors is not provided for in the Certificate of Incorporation, which means that the holders of a majority of the shares of Common Stock can elect all of the directors then standing for election.

Dividends and Distributions. Subject to preferences that may apply to any shares of convertible preferred stock outstanding at the time, the holders of outstanding shares of Common Stock are entitled to receive dividends out of funds legally available at the times and in the amounts that the Company's Board of Directors (the "***Board***") may determine.

Liquidation Rights. Upon the liquidation, dissolution or winding-up of the Company, the assets legally available for distribution to the holders of Common Stock would be distributable ratably among the holders of Common Stock and any participating convertible preferred stock outstanding at that time after payment of liquidation preferences, if any, on any outstanding shares of convertible preferred stock and payment of other claims of creditors.

The rights, preferences, and privileges of holders of Common Stock are subject to, and may be adversely affected by, the rights of holders of shares of any series of convertible preferred stock that the Board may designate and issue in the future.

Preemptive or Similar Rights. The Common Stock is not entitled to preemptive rights and is not subject to conversion, redemption or sinking fund provisions.

Anti-takeover Effects of Provisions of the Certificate of Incorporation and Bylaws and Delaware Law

Certificate of Incorporation and Bylaws Provisions. Because holders of Common Stock do not have cumulative voting rights, stockholders holding a majority of the voting power of the shares of Common Stock outstanding are able to elect all of the Company's directors. The Certificate of Incorporation and amended and restated bylaws provide that all stockholder actions must be effected at a duly called meeting of stockholders and not by consent in writing. A special meeting of stockholders may be called only by a majority of the whole Board, the chair of the Board, or the Company's chief executive officer.

The Certificate of Incorporation further provides that the affirmative vote of holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then outstanding shares of voting stock, voting as a single class, is required to amend certain provisions of the Certificate of Incorporation, including provisions relating to the size of the board, removal of directors, special meetings, actions by written consent and cumulative voting. The affirmative vote of holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then outstanding shares of voting stock, voting as a single class, is required to amend or repeal the Bylaws, although the Bylaws may be amended by a simple majority vote of the Board.

The foregoing provisions make it more difficult for existing stockholders to replace the Board as well as for another party to obtain control of the Company by replacing the Board. Since the Board has the power to retain and discharge the Company's officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for the Board to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change the control of the Company.

These provisions are intended to enhance the likelihood of continued stability in the composition of the Board and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of the Company. These provisions are also designed to reduce the Company's vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy rights. However, these provisions could have the effect of discouraging others from making tender offers for shares of Common Stock and may have the effect of deterring hostile takeovers or delaying changes in control of the Company or the Company's management. As a consequence, these provisions also may inhibit fluctuations in the market price of the Common Stock that could result from actual or rumored takeover attempts.

The Certificate of Incorporation provides that stockholder litigation alleging certain claims against the Company or the Board may only be brought in the courts located within the State of Delaware.

Delaware Law. The Company is governed by the provisions of Section 203 of the DGCL regulating corporate takeovers. This section prevents some Delaware corporations from engaging, under some circumstances, in a business combination, which includes a merger or sale of at least 10% of the corporation's assets with any interested stockholder, meaning a stockholder who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of the corporation's outstanding voting stock, unless:

- the transaction is approved by the board of directors prior to the time that the interested stockholder became an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- subsequent to such time that the stockholder became an interested stockholder the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders by at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares. The Company has not opted out of these provisions. As a result, mergers, or other takeover or change in control attempts of the Company may be discouraged or prevented.

AMENDMENT NO. 8 TO LEASE

This **AMENDMENT No. 8 TO LEASE** ***("Amendment No. 8"),*** effective as of November 30, 2019, ***("Amendment No. 8 Effective Date")*** is entered into by and between **NXP USA, Inc.** (formerly FREESCALE SEMICONDUCTOR, INC.), a Delaware corporation and 100% affiliated company of NXP Semiconductors N.V. ***("Landlord"),*** and **EVERSPIN TECHNOLOGIES, INC.,** a Delaware corporation ***("Tenant"),*** with reference to the following facts:

A. Landlord and Tenant are parties to that certain Lease dated as of June 5, 2008 ***("Original Lease")***, as amended by Amendment No. 1 to Lease executed by Tenant on February 2, 2009 ***("Amendment No. 1")***, Amendment No. 2 to Lease dated March 1, 2010 ***("Amendment No. 2")***, Amendment No. 3 to Lease dated July 20, 2011 ***("Amendment No. 3")***, Amendment No. 4 to Lease dated June 10, 2014 ***("Amendment No. 4")***, Amendment No. 5 dated January 13, 2017 ***("Amendment No. 5")***, Amendment No.6 dated October 31, 2017 **("Amendment No. 6")**, and Amendment No. 7 dated August 2, 2018 ***("Amendment No. 7")***, (the Original Lease, as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5, Amendment No. 6, and Amendment No. 7, is referred to as the ***"Lease"***), pursuant to which Landlord leases to Tenant certain space ***("Premises")*** located at 1300 North Alma School Road, Chandler Arizona as further described in the Lease.

B. As of the Amendment No. 8 Effective Date, the parties desire to amend the Lease to extend the Term.

NOW, THEREFORE, in consideration of the above recitals which are hereby incorporated herein, the mutual covenants and conditions contained herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree, effective as of the Amendment No. 8 Effective Date, to amend the Lease as follows:

1. **Term.** Section 2 of the Lease (as modified by Amendment No. 7) is deleted in its entirety and replaced with the following:

> "A. The tem1 of this Lease shall commence on June 5, 2008 (the ***"Commencement Date"***) and end on January 31, 2022 (the ***"Term"***). Tenant will continue processing on Landlord's tool, FJ01PVS. In the event the Landlord elects to terminate Tenant's use of the FJ01PVS, the Landlord will give Tenant six (6) months prior written notice."

2. **Exhibit J.** Exhibit **J** to the Lease (as modified by Amendment No. 4) is deleted in its entirety and replaced with the new Exhibit J as attached hereto as Schedule **1** to this Amendment No. 8.

3. **Brokers.** Tenant hereby represents to Landlord that Tenant has dealt with no broker in connection with this Amendment No. 8. Tenant agrees to indemnify and hold Landlord harmless from all claims of any brokers claiming to have represented Tenant in connection with this Amendment No. 8. Landlord agrees to indemnify and hold Tenant harmless from all claims of any broker claiming to have represented Landlord in connection with this Amendment No. 8.

4. **Miscellaneous.** This Amendment No. 8 sets forth the entire agreement between the parties with respect to the matters set forth herein. There have been no additional oral or written representations or agreements. Except as herein modified or amended, the provisions, conditions and terms of the Lease shall remain unchanged an in full force and effect. In the case of any inconsistency between the provisions of the Lease and this Amendment No. 8, the provisions of this Amendment No. 8 shall govern and control. Each signatory of this Amendment No. 8 represents hereby that he or she has the authority to execute and deliver the same on behalf of the party hereto for which such signatory is acting. This Amendment No. 8 may be executed in multiple counterparts each of which is deemed an original but together constitute one and the same instrument. This Amendment No. 8 may be executed in so called “PDF” format, and each party has the right to rely upon a PDF counterpart of this Amendment No. 8 signed by the other party to the same extent as if such party had received an original counterpart.

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this Amendment No.8.

LANDLORD:

NXP USA, INC.

A Delaware corporation

By:	______________________	By:	
Name:	Katherine Haight	Name:	Mark Kroeker
Its:	Authorized Representative	Its:	Authorized Representative
Date:	December 18, 2019	Date:	December 18, 2019

TENANT:

EVERSPIN TECHNOLOGIES, INC.,

A Delaware corporation

By:

Name: Jeff Winzeler

Its: CFO

Date: 12/09/2019

Schedule 1

EXHIBIT J

Additional Rent@ Up to 75wspw MRAM Module Equivalent

Manufacturing Services			
1.	Manufacturing consumables	$7,337.57/mo
	Includes: - Bulk gases and chemicals for up to 75wspw MRAM Module equivalent. Bulk gases are: Oxygen, nitrogen, helium, argon and hydrogen supplied from factory bulk delivery systems to Tenant-owned equipment. Bulk Chemicals are: Sulfuric acid, hydrogen peroxide, hydrochloric acid, ammonium hydroxide, hydrofluoric acid, isopropyl alcohol, tetramethylammonium hydroxide, PGMEA, ACT930, EKC830, PLA224 slurry, SS2SE slurry, W2000b slurry, NOE, Ethylene glycol, Super-Q and NMP supplied from factory bulk delivery systems to Tenant-owned equipment - NXP to notify Everspin within 72 hours of detection of any excursion in bulk gases or chemicals. - Additional Rent will be pro-rated for consumption exceeding 75wspw MRAM Module equivalent.	
2.	Manufacturing support services	$23,901/mo
	Includes: - Sustaining support for factory manufacturing execution, equipment integration and analysis systems in CH-FAB Note: Sustaining support does not include Tenant's use of factory manufacturing execution, equipment integration and analysis software. - Chandler Analytical Lab services (PALAZ TEM, SEM, etc. Maximum 42 samples/mo.) - Failure analysis services provided by Global Yield and Device Lab (Maximum 4 samples/mo.) - Tenant may requisition incidental ("open stock") equipment parts and supplies from CH-FAB with a total value not to exceed $1,000 per month at no charge. "Open stock" items are: Tubing, tie wraps, fittings, valves, terminals, fuses, wire connectors, screws, heal shrink tubing, washers, nuts, bolts, retaining rings, silencers/mufflers, filter regulators, O-rings.	
3.	Items not included:	Tenant Expense
	-Use of factory manufacturing execution, equipment integration and analysis software -Maintenance of Tenant-owned equipment -Shipping costs -Parts ordering and stocking -Operator staffing to run Tenant-owned tools -Specialty gases and chemicals that are not provided as part of factory bulk delivery systems -Product or package reliability, stress or failure analysis services or support -Services performed by CH-FAB machine shop -References to wafer quantities in this exhibit do not constitute a capacity commitment by Landlord -From time to time, and for the purposes of efficient repair or maintenance of tools and equipment on Premises, the Tenant may request to procure goods or services from Landlord, whether provided or performed by Landlord or Landlord's vendor. In such an event, Landlord will invoice Tenant cost plus I 0%. Tenant acknowledges services performed by a Landlord vendor which result in damage to Tenant's property are not caused by Landlord, and therefore, Landlord is not liable for any such damages. The foregoing statement does not represent a commitment by the Landlord to support the repair or maintenance of Tenant's tools and equipment on the Premises."	
	The rate for each of the above items will increase on June 7, 2020 (and each anniversary thereafter) of the Lease Term by an amount equal to four percent (4.0%) of the rate for such item for the preceding period.	

EVERSPIN TECHNOLOGIES

July 10, 2019

Mr. Matthew Tenorio

Dear Matt,

I am pleased to provide you this offer to join Everspin Technologies, Inc. as Manufacturing Finance Controller, reporting to Jeff Winzeler, Chief Financial Officer.

Your annual base salary to start will be $187,500.00 annually, payable bi-weekly, and subject to deductions for taxes and other withholdings as required by US law or the policies of the company.

Upon approval by the Everspin Board of Directors, you will receive 15,000 shares of Everspin Technologies, Inc., stock options subject to the Everspin Stock Option Plan. The stock options will vest over a 4-year period as follows: an initial 25% of the shares shall become exercisable on the first anniversary of the date of grant and an additional 1148th exercisable each month thereafter until all such shares will have vested. This grant is subject to repurchase, transferability restrictions, and such other terms as may be set forth in the Everspin Stock Option Plan or your individual stock option agreement. You will also receive 3750 Everspin Restricted Stock Units. These RSU's vest at the rate of 25% per year on the anniversary date of the grant. Due to the taxable nature of Restricted Stock Units, there is a sell to cover provision requirement with the RSU's to cover tax liability at each vesting date. These grants are subject to continued employment with Everspin, transferability restrictions, and such other terms as may be set forth in the Everspin Stock Option Plan or your individual stock option agreement.

You will also be eligible to participate in the Director Bonus Program with a target eligibility of up to 25% of your annual base pay.

Benefits: The detailed components of the Company's benefit plan are attached. Major benefits include:

- Comprehensive Medical, Dental, and Vision Care Coverage
- Prescription Drug Program
- Short-term and Long-term Disability Coverage
- Flexible Spending Accounts and Health Savings Accounts
- Supplemental Life and Disability Insurance
- 401(k) participation (if eligible)
- Paid Time Off and Holidays, consistent with Company policy
- Eligibility to participate in Everspin’s Employee Stock Purchase Plan

Your employment with Everspin Technologies is "at will", meaning that you may terminate your employment at any time and for any reason whatsoever. likewise, Everspin Technologies may terminate your employment at any time and for any reason, with or without cause or advance notice.

Other Arrangements: This offer of employment is contingent on your agreement to and execution of an Employee Proprietary Information and Inventions Assignment Agreement (copy attached), and successfully passing a criminal background investigation. This offer
will terminate if not accepted in writing by _ (5 days from issuance) , 2019.

This offer is considered accepted with your signature below. We welcome you to Everspin Technologies, Inc., and are excited about the contribution you can make to its success.

Sincerely,

/s/ Jim Everett
Jim Everett
Vice President of Global Human Resources
Everspin Technologies, Inc.

Accepted;

/s/ Matthew Tenorio	07/11/2019
Matthew Tenorio	Date

Anticipated Start Date: 07/22/2019

EXHIBIT 10.36

EVERSPIN TECHNOLOGIES, INC.

EXECUTIVE CHANGE IN CONTROL PLAN

ADOPTED: March 2020

Executive Group	Executive CIC Benefits in connection with a Change in Control
CEO and Vice President of Technology R&D	12 months base salary Full performance-based bonus at target 12 months COBRA benefits continuation 12 month double trigger vesting acceleration
All other Vice Presidents	6 months base salary Full performance-based bonus at target 6 months COBRA benefits continuation 6 month double trigger vesting acceleration

Definitions

"Board" shall mean the board of directors of the Company.

"Cause" shall mean your termination for any one or more of the following reasons:

- your indictment or conviction of any felony or any crime involving dishonesty or moral turpitude under the laws of the United States or any state thereof;
- your refusal to abide by or comply with any reasonable, lawful directives of the Chief Executive Officer or the Board;
- your willful dishonesty, fraud, or material misconduct with respect to the business or affairs of the Company;
- your intentional, material violation of any contract or agreement with the Company or of any statutory duty owed to the Company; or
- conduct by which you demonstrate gross unfitness to serve.

"Change in Control" shall mean (a) any Exchange Act Person becomes the Owner of securities of the company representing more than 50% of the combined voting power of the then outstanding securities other than by virtue of a merger, consolidation or similar transaction, (b) a consolidation or merger of the Company with or into any other corporation or other entity or person, or any corporate reorganization in which the stockholders of the Company immediately prior to such consolidation, merger or reorganization, own less than 50% of the voting power of the surviving entity immediately after such consolidation, merger or reorganization, provided, however, that the outstanding voting securities representing more than 50% of the combined voting power of the surviving Entity or its parent are not owned by the IPO entities, (c) a sale or other disposition of all or substantially all of the assets of the Company, or (d) a complete dissolution or liquidation of the Company, except for a liquidation into a parent corporation. A Change in Control shall not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company and the definition of Change in Control in an individual written agreement.

"Company" shall mean Everspin Technologies, Inc., or any acquirer or successor in interest thereof.

"Double Trigger" shall be achieved if your employment is terminated by the Company without Cause or by you for Good Reason at any time during the period commencing three months prior to a Change in Control and ending 12 months—or in the case of the CEO, 18 months—following the Change in Control.

"Equity Awards" shall mean any equity awards, including but not limited to options, restricted stock and restricted stock units.

"Vesting Acceleration" shall mean the vesting of the Shares subject to any Equity Awards held by you on the date of your termination shall be accelerated such that the then unvested Equity Awards shall vest and become exercisable as to the number of shares subject to such equity award that would have vested if (i) in the case of the CEO and VP of Technology R&D, such executive had completed an additional 12 months of employment following the termination date or (ii) in the case of all other Participants, such Participant had completed an additional 6 months of employment following the termination date.

"***Good Reason***" shall mean if one of the following events occurs without your written consent: (i) a material reduction in the amount of aggregate cash compensation which you have the opportunity to earn, or failure by the company to pay such compensation; (ii) you are required by the Company to relocate your Primary Work Location (as set forth on **EXHIBIT A**) by more than 50 miles; (iii) a material adverse reduction in your duties, authority or responsibilities, but excluding any change to your reporting responsibilities or any change in title that does not represent a material adverse reduction in your duties, authority or responsibilities as existed immediately prior to such change in title and (iv) a material breach by the Company under this agreement or any written agreement between the executive and the company.

For purposes of clause (iii) above, if the Company is operated as a separate subsidiary or business unit following a Change in Control, such officers will be deemed to have suffered a material reduction in duties, authority or responsibilities if such duties, authority or responsibilities—excluding reporting responsibilities—with respect to such subsidiary or separate business unit are materially changed following such Change in Control. For example, if you were the CFO of the Company, and then the CFO of a subsidiary after the Change in Control such that the only change to your responsibilities were that you no longer had reporting responsibilities, that would not fit within the definition of Good Reason.

In order to effect a Resignation for Good Reason, you must notify the Board within 30 days after the first occurrence of the event described above, the Company must fail to cure such event within 30 days after receiving written notice, and your resignation date must be no later than 60 days after the expiration of the Company's cure period.

"Participant" means each individual who (i) is employed by the Company as a Vice President or above and (ii) has received and returned a signed Participation Notice attached hereto as **EXHIBIT A**.

"Separation from Service" shall mean any termination of employment is terminated by the Company without Cause or resignation for Good Reason, whether or not a Change in Control has occurred, and such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)).

"Severance Benefits" shall mean the acceleration of vesting, continuation of benefits, bonus payments and base salary payments described above and below.

General

As a condition of your receipt of any Severance Benefits or Vesting Acceleration as set forth in this Agreement, you will be required to execute and allow to become effective a general release of claims in favor of the Company, with such changes as may be required due to intervening changes in applicable law (a "***General Release***") within 45 days following your employment termination. Unless the Release is timely signed by you, is delivered to the Company, and becomes effective within the required period (the date on which the Release becomes effective, the "***Release Date***"), you will not be entitled to any Severance Benefits pursuant to this Agreement, and any Vesting Acceleration as provided in this Agreement shall not apply and each Equity Awards may be exercised following the date of your termination only to the extent provided under its original terms.

The Salary Continuation will be paid in equal installments on the Company's regular payroll schedule and will be subject to applicable tax withholdings over the 6- or 12-month period, as applicable, outlined above following the date of your Separation from Service; provided, however, that no payments will be made prior to the first payroll date following the effective date of the General Release (the "***Initial Payment Date***"). On the Initial Payment Date, the Company will pay you in a lump sum the Salary Continuation that you would have received on or prior to such date under the original schedule but for the delay while waiting for Initial Payment Date in compliance with Section 409A and the effectiveness of the General Release, with the balance of the Salary Continuation being paid as originally scheduled. Notwithstanding the foregoing, the Company may pay the Salary Continuation in the form of a lump sum, which amount will be paid on the Initial Payment Date, but such lump sum payment shall be made only if the Company, in consultation with its advisors, determines that such payment will not result in adverse taxation under Section 409A (as defined below). The Pro Rata Bonus will be paid to you in a lump sum on the date on which the Salary Continuation commences.

Section 409A

Notwithstanding any provision to the contrary in this Agreement, if you are deemed by the Company at the time of your Separation from Service to be a "specified employee" for purposes of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations and guidance promulgated thereunder ("***Section 409A***") then to the extent delayed commencement of any portion of the severance benefits to which you are entitled under this Agreement is required in order to avoid adverse taxation under Section 409A, such portion of your benefits shall not be provided to you prior to the earlier of (i) the expiration of the six-month period measured from the date of your Separation from Service with the Company or (ii) the date of your death. Upon the first business day after such earlier date, all payments deferred pursuant to this paragraph shall be paid in a lump sum to you, and any remaining payments due under this Agreement shall be paid as otherwise provided herein. For purposes Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive installment payments under this Agreement shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment. Notwithstanding any other provision of this Agreement, with respect to payments to be made upon execution of an effective release, if the release revocation period spans two calendar years, payments will be made in the second of the two calendar years to the extent necessary to avoid adverse taxation under Section 409A.

Section 280G

Notwithstanding anything in the foregoing to the contrary, if any of the payments to you (prior to any reduction described in this paragraph) provided for in this Agreement, together with any other payments which you have the right to receive from the Company, any acquiror, their affiliates or otherwise (the "***Payments***") would constitute a "parachute payment" (as defined in Section 280G(b)(2) of the Internal Revenue Code of 1986, as amended (the "***Code***")) and if the Safe Harbor Amount, as defined below, is greater than the Taxed Amount, as defined below, then the total amount of such Payments shall be reduced to the Safe Harbor Amount. The "***Safe Harbor Amount***" is the largest portion of the Payments that would result in no portion of the Payments being subject to the excise tax set forth at Section 4999 of the Code ("***Excise Tax***"). The "***Taxed Amount***" is the total amount of the Payments (prior to any reduction as described in this paragraph) notwithstanding that all or some portion of the Payments may be subject to the Excise Tax. Solely for the purpose of comparing which of the Safe Harbor Amount and the Taxed Amount is greater, the determination of each such amount, shall be made on an after-tax basis, taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax. If a reduction of the Payments to the Safe Harbor Amount is necessary, then the reduction shall occur in the following order: reduction of cash payments; cancellation of accelerated vesting of stock awards; and reduction of employee benefits. In the event that acceleration of vesting of a stock award is to be reduced, such acceleration of vesting shall be cancelled in the reverse order of the date of grant of your stock awards. In applying the foregoing principle with respect to reductions, the reduction shall be made in a manner consistent with the requirements of Section 409A of the Code and the regulations promulgated thereunder, and if more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata. The accounting firm engaged by the Company for general audit purposes as of the day prior to the effective date of the Change in Control transaction shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the Change in Control, or the Company otherwise determines such accounting firm should not be engaged for purposes of making the determinations required hereunder, the Company may appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The accounting firm engaged to make the determinations hereunder shall provide its calculations, together with detailed supporting documentation, to the Company and you within 15 calendar days after the date on which your right to a Payment is triggered (if requested at that time by the Company or you) or such other time as requested by the Company or you upon written notice that a payment related to a Change in Control of the Company has been or is to be made.

For the avoidance of doubt, in connection with a Change in Control, if there is a conflict in terms between this Executive Change in Control Plan and your existing employment agreement, then the terms of this Executive Change in Control Plan shall govern.

EXHIBIT A

PARTICIPATION NOTICE

EVERSPIN TECHNOLOGIES, INC.

EXECUTIVE SEVERANCE AND CHANGE IN CONTROL PLAN

To:

Date:

Everspin Technologies, Inc. (the "***Company***") has adopted the Everspin Technologies, Inc. Executive Severance and Change in Control Plan (the "***Plan***"). The Company is providing you this Participation Notice to inform you that you have been designated as a Participant in the Plan, and you shall be entitled to the benefits set forth in the Plan in connection with your termination without Cause upon a Change in Control or your resignation with Good Reason upon a Change in Control. A copy of the Plan document is attached to this Participation Notice. The terms and conditions of your participation in the Plan are as set forth in the Plan and this Participation Notice, which together constitute the Summary Plan Description for the Plan.

By accepting participation, you represent that you have either consulted your personal tax or financial planning advisor about the tax consequences of your participation in the Plan, or you have knowingly declined to do so.

Please return a signed copy of this Participation Notice to the Company's [TITLE] and retain a copy of this Participation Notice, along with the Plan document, for your records.

EVERSPIN TECHNOLOGIES, INC.:

(Signature)

By: [NAME]

[TITLE]

PARTICIPANT:

(Signature)

By:

Primary Work Location:

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-214018) pertaining to the Everspin Technologies, Inc. 2008 Equity Incentive Plan, 2016 Equity Incentive Plan and the 2016 Employee Stock Purchase Plan,

(2) Registration Statement (Form S-8 No. 333-219938) pertaining to the Everspin Technologies, Inc. 2016 Equity Incentive Plan and the 2016 Employee Stock Purchase Plan,

(3) Registration Statement (Form S-3 No. 333-221331) of Everspin Technologies, Inc.,

(4) Registration Statement (Form S-8 No. 333-225119) pertaining to the Everspin Technologies, Inc. 2016 Equity Incentive Plan and the 2016 Employee Stock Purchase Plan;

(5) Registration Statement (Form S-8 No. 333-230349) pertaining to the Everspin Technologies, Inc. 2016 Equity Incentive Plan and the 2016 Employee Stock Purchase Plan;

of our report dated March 12, 2020, with respect to the financial statements of Everspin Technologies, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Phoenix, Arizona
March 12, 2020

Exhibit 31.1

Certification of the Principal Executive Officer

I, Kevin Conley, certify that:

1. I have reviewed this Form 10-K of Everspin Technologies, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: March 12, 2020

/s/ Kevin Conley

Kevin Conley
President and Chief Executive Officer
(Principal Executive Officer)

Certification of Principal Financial Officer

I, Matthew Tenorio, certify that:

1. I have reviewed this Form 10-K of Everspin Technologies, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: March 12, 2020

/s/ Matthew Tenorio

Matthew Tenorio
(Interim Chief Financial Officer)
(Principal Financial Officer)

Exhibit 32.1

Certification Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of Everspin Technologies, Inc. (the "Company") on Form 10-K for the year ended December 31, 2019 (the "Report"), Kevin Conley, President and Chief Executive Officer of the Company, and Matthew Tenorio, Interim Chief Financial Officer of the Company, each hereby certifies, pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. Section 1350), as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

1. The Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 12, 2020

/s/ Kevin Conley
Kevin Conley
President and Chief Executive Officer
(*Principal Executive Officer)*

/s/ Matthew Tenorio
Matthew Tenorio
Interim Chief Financial Officer
(*Principal Financial Officer)*

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Everspin Technologies, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.