

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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL YEAR ENDED JANUARY 3, 2021

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____
Commission File Number: 000-22671

QUICKLOGIC CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

77-0188504
(I.R.S. Employer
Identification Number)

2220 Lundy Avenue, San Jose, CA 95131
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code:
(408) 990-4000

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

<u>Title of Each Class</u>	<u>Trading Symbol</u>	<u>Name of Exchange on which Registered</u>
Common Stock, \$0.001 par value	QUIK	The Nasdaq Capital Market

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange 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, or a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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

The aggregate market value of voting stock held by non-affiliates of the registrant as of June 28, 2020, the registrant's most recently completed second fiscal quarter, was \$33,481,698 based upon the last closing price reported for such date on the Nasdaq Capital Market. For purposes of this disclosure, shares of common stock held by persons who hold more than 5% of the outstanding shares of common stock and shares held by executive officers and directors of the registrant have been excluded in that such persons may be deemed to be affiliates. This determination is not necessarily conclusive.

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As of March 15, 2021, the registrant had 11,270,290 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Item 1 of Part 1 of this Form 10-K, Item 5 of Part II of this Form 10-K and Items 10, 11, 12, 13 and 14 of Part III of this Form 10-K incorporate information by reference from the Proxy Statement for the registrant's Annual Meeting of Stockholders to be held on or about May 12, 2021, the "Proxy Statement". Except with respect to the information specifically incorporated by reference in this Form 10-K, the Proxy Statement is not deemed to be filed as part hereof.

QUICKLOGIC CORPORATION

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FORWARD-LOOKING STATEMENT

This Annual Report on Form 10-K, including the information contained in "Management's Discussion and Analysis of Financial Condition and Results of Operations", as well as information contained in "Risk Factors" in Item 1A and elsewhere in this Annual Report on Form 10-K, contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 regarding our business, financial condition, results of operations and prospectus. We intend that these forward-looking statements be subject to the safe harbors created by those provisions. Forward-looking statements are generally written in the future tense and/or are preceded by words such as "will," "may," "should," "forecast," "could," "expect," "suggest," "believe," "anticipate," "intend," "plan," "future," "potential," "target," "seek," "continue," "if" or other similar words.

The forward-looking statements contained in this Annual Report involve a number of risks and uncertainties, many of which are outside of our control. Factors that could cause actual results to differ materially from projected results include, but are not limited to, risks associated with (i) the conversion of our design opportunities into revenue; (ii) the commercial and technical success of our new products and our successful introduction of products and solutions incorporating emerging technologies or standards; (iii) our dependence on our relationships with third parties to manufacture our products and solutions; (iv) our dependence upon single suppliers to fabricate and assemble our products; (v) the liquidity required to support our future operating and capital requirements; (vi) our ability to accurately estimate quarterly revenue; (vii) our expectations about market and product trends; (viii) our future plans for partnerships and collaborations; (ix) our dependence upon a few customers for a significant portion of our total revenue; (x) our ability to forecast demand for our products; (xi) our dependence on our international business operations; (xii) our ability to attract and retain key personnel; (xiii) our ability to remain competitive in our industry; (xiv) our ability to achieve the expected benefits from our acquisition of SensiML Corporation; (xv) our ability to protect our intellectual property rights; (xvi) our ability to prevent cyberattacks and protect our data; and (xvii) our ability to handle natural disasters and epidemics, such as the recent outbreak of the COVID-19 virus. Although we believe that the assumptions underlying the forward-looking statements contained in this Annual Report are reasonable, any of the assumptions could be inaccurate, and therefore there can be no assurance that such statements will be accurate. The risks, uncertainties and assumptions referred to above that could cause our results to differ materially from the results expressed or implied by such forward-looking statements include, but are not limited to, those discussed under the heading "Risk Factors" in Part I, Item 1A hereto and the risks, uncertainties and assumptions discussed from time to time in our other public filings and public announcements. All forward-looking statements included in this document are based on information available to us as of the date hereof. In light of the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of such information should not be regarded as a representation by us or any other person that the results or conditions described in such statements or our objectives and plans will be achieved. Furthermore, past performance in operations and share price is not necessarily indicative of future performance. We disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

As used herein, "QuickLogic", the "Company", "we", "our" and similar terms include QuickLogic Corporation and its subsidiaries, unless the context indicates otherwise.

PART I

ITEM 1. BUSINESS

General

QuickLogic Corporation, or the Company, was founded in 1988 and reincorporated in Delaware in 1999. Our vision is to transform the way people and devices interact with each other and their surroundings. Our mission is to provide innovative silicon and software platforms to successfully enable our customers to develop products that fundamentally change the end-user experience. Specifically, we are a fabless semiconductor company that develops a full stack platform for artificial intelligence or AI, voice and sensor processing. The platform is based on our embedded FPGA, or eFPGA, intellectual property or IP, low power, multi-core semiconductor system-on-chips or SoCs, and AI software. Our customers can use our eFPGA IP for hardware acceleration and pre-processing, our SoCs to build their hardware around. The Analytics Toolkit from SensiML Corporation, or SensiML, our wholly-owned subsidiary, provides an end-to-end solution with accurate sensor algorithms using AI technology. The full range of platforms, software tools and eFPGA IP enables the practical and efficient adoption of AI, voice and sensor processing across mobile, wearable, hearable, consumer, industrial, edge and endpoint IoT, aerospace and defense.

Our new products include our EOS™, QuickAI™, SensiML Analytics Toolkit, ArcticLink® III, PolarPro®3, PolarPro II, PolarPro, and Eclipse II products (which together comprise our new product category). Our mature products include primarily FPGA families named pASIC®3 and QuickRAM® as well as programming hardware and design software. In addition to delivering our own semiconductor solutions, we have an IP business that licenses our eFPGA technology for use in other semiconductor companies SoCs. We began delivering our eFPGA IP product ArcticPro™ in 2017, which is included in the new product revenue category. Through the acquisition of SensiML, we now have an AI software platform that includes Software-as-a-Service (SaaS) subscriptions for development, per unit license fees when deployed in production, and proof-of-concept services, all of which are also included in the new product revenue category.

Our solutions typically fall into one of three categories: Sensor Processing, Display and Visual Enhancement, and Smart Connectivity. Our solutions include a unique combination of our silicon platforms, IP cores, software drivers, and in some cases, firmware and application software. All of our silicon platforms are standard devices and must be programmed to be effective in a system. Our IP that enables always-on context-aware sensor applications includes our Flexible Fusion Engine, our Sensor Manager and Communications Manager technologies as well as IP that (i) improves multimedia content, such as our Visual Enhancement Engine, or VEE, technology, and Display Power Optimizer, or DPO, technology; and (ii) implements commonly used mobile system interfaces, such as Low Voltage Differential Signaling, or LVDS, Mobile Industry Processor Interface, or MIPI, and Secure Digital Input Output, or SDIO.

Through the acquisition of SensiML, in January 2019, our core IP also includes the SensiML Analytics Toolkit that enables OEMs to develop AI software for a broad array of resource-constrained time-series sensor endpoint applications. These include a wide range of consumer and industrial sensing applications.

We also work with mobile processor manufacturers, sensor manufacturers, and voice recognition, sensor fusion and context awareness algorithm developers, and embedded systems companies in the development of reference designs. Through reference designs that incorporate our solutions, we believe mobile processor manufacturers, sensor manufacturers, and sensor and voice algorithm companies can expand the available market for their respective products. Furthermore, should a solution developed for a processor manufacturer or sensor and/or sensor algorithm company be applicable to a set of common OEMs or Original Design Manufacturers or ODMs, we can amortize our Research and Development, or R&D, investment over that set of OEMs or ODMs. There may also be cases when platform providers that intend to use always-on voice recognition will dictate certain performance requirements for the combined software/hardware solution before the platform provider certifies and/or qualifies our product for use by end customers.

We have changed our manufacturing strategies to reduce the cost of our silicon solution platforms to enable their use in high volume, mass customization products. Our EOS S3, EOS S3AI, QuickAI and ArcticLink III silicon platforms combine mixed signal physical functions and hard-wired logic alongside programmable logic. Our EOS S3, EOS S3AI and ArcticLink III solution platforms are manufactured on an advanced process node where we can benefit from smaller die sizes. We typically implement sophisticated logic blocks and mixed signal functions in hard-wired logic because it is very cost-effective and energy efficient. We use small form factor packages, which are less expensive to manufacture and include smaller pin counts. Reduced pin counts result in lower costs for our customer's printed circuit board space and routing. Furthermore, our SRAM reprogrammable silicon platforms can be programmed in-system by our customers, and therefore we do not incur programming cost, lowering the overall cost of ownership to our customers. We expect to continue to invest in silicon solution platforms and manufacturing technologies that make us cost and power consumption effective for high-volume, markets and applications.

In addition to working directly with our customers, we partner with other companies that are experts in certain technologies to develop additional IP, reference platforms and system software to provide application solutions, particularly in the area of hardware acceleration for AI-type applications. We also work with mobile processor and communications semiconductor device manufacturers and companies that supply sensor, algorithms and applications. For our sensor processing solutions, we collaborate with sensor manufacturers to ensure interface compatibility. We also collaborate with sensor and voice/audio software companies, helping them optimize their software technology on our silicon platforms in terms of performance, power consumption and user experience.

Our eFPGA IP are currently developed on 250nm, 130nm, 130nm, 65nm, 40nm, 28nm and 22nm process nodes. The licensable IP is generated by a compiler tool that enables licensees to create an eFPGA block that they can integrate into their SoC without significant involvement by QuickLogic. We believe this flow enables a scalable support model for QuickLogic. For our eFPGA strategy, we typically work with semiconductor manufacturing partners prior to the IP being licensed to an SoC company.

In order to grow our revenue from its current level, we depend upon increased revenue from our new products including existing new product platforms, eFPGA IP and platforms currently in development. We expect our business growth to be driven mainly by our silicon solutions, eFPGA IP and SensiML AI Software. Therefore, our revenue growth needs to be strong enough to enable us to sustain profitability while we continue to invest in the development, sales and marketing of our new solution platforms, IP and software.

COVID-19 - Impact on Business

On January 30, 2020, the World Health Organization, or WHO, declared a global emergency due to the COVID-19 pandemic, and on February 28, 2020, the WHO raised its assessment of the threat from high to very high at a global level. The social and economic impact of the COVID-19 outbreak has continued to increase exponentially since this declaration. The outbreak has resulted in significant governmental measures being implemented to control the spread of COVID-19, including, among others, restrictions on travel, business operations and the movement of people in many regions of the world in which the Company operates, and the imposition of shelter-in-place or similarly restrictive work-from-home orders impacting many of the Company's offices and employees, including those located in the United States. As a result, the Company has temporarily closed or substantially limited the presence of personnel in its offices in several impacted locations, implemented travel restrictions and withdrawn from various industry events. The Company has also experienced some disruption and delays in its supply chain, customer deployment plans, and logistics challenges, including certain limitations on its ability to access customer fulfillment and service sites.

As such, while COVID-19 has had an impact on the Company's financial results for the 12 months ended January 3, 2021, -the COVID-19 pandemic and its potential effects on the Company's business remains dynamic, and the broader implications for its business and future results of operations remain uncertain. These implications could include further disruptions or restrictions on the Company's ability to source, manufacture or distribute its products, including temporary disruptions to the facilities of its contract manufacturers in China, Taiwan, Philippines and Singapore, or the facilities of its suppliers and their contract manufacturers globally. Additionally, multiple countries have imposed and may further impose restrictions on business operations and movement of people and products to limit the spread of COVID-19. Delays in production or delivery of components or raw materials that are part of the Company's global supply chain due to restrictions imposed to limit the spread of COVID-19 could delay or inhibit its ability to obtain the supply of components and finished goods. If COVID-19 becomes more prevalent in the locations where the Company, its customers or suppliers conduct business, or the Company experiences more pronounced disruptions in its operations, the Company may experience constrained supply or curtailed demand that may materially adversely impact its business and results of operations. In addition, any other widespread health crisis that could adversely affect global and regional economies, financial markets and overall demand environment for the Company's products could have a material adverse effect on the Company's business, cash flows or results of operations. It is difficult to accurately predict the full impact that COVID-19 has and will have on the Company's future results from operations, financial condition, liquidity and cash flows due to numerous uncertainties, including the duration and severity of the pandemic and related containment measures. The Company will continue to closely monitor the pandemic's associated effects on all aspects of the business.

Available Information

Our corporate headquarters are located at 2220 Lundy Avenue, San Jose, California 95131. We can be reached at (408) 990-4000, and our website address is www.quicklogic.com. The information on our website is not incorporated herein by reference and is not a part of this Form 10-K. Our common stock trades on the Nasdaq under the symbol "QUIK." Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to such reports are available, free of charge, on our website home page as soon as reasonably practicable after we electronically file such materials with, or furnish them to, the Securities and Exchange Commission, or SEC. Copies of the materials filed by the Company with the SEC are also available on the SEC's website at www.sec.gov. A copy of our Code of Conduct and Ethics is posted on your website at <http://www.quicklogic.com/corprate/about-us/management>. Any changes to or waiver from, this Code of Conduct and Ethics will be posted on that website.

Fiscal Year

Our fiscal year ends on the Sunday closest to December 31. References to fiscal years 2020, 2019 and 2018 refer to the fiscal years ended January 3, 2021, December 29, 2019 and December 30, 2018, respectively.

Industry Background

Consumer Electronics, or CE, products are a strong growth market for semiconductor products and sensor software algorithms, and the needs of this market bring a unique set of requirements. Three important trends in this market are (i) toward mobile devices, either handheld or worn on the body, (ii) an increasing adoption of sensors, and (iii) devices with wireless connectivity to the cloud. Important industry trends affecting the large market for mobile devices include the need for high bandwidth that enables the same user experience consumers are accustomed to on the personal computer, or PC, such as internet browsing, social networking and streaming video, product miniaturization and the need to increase battery life. Increased local computing power in mobile devices, coupled with more ubiquitous wireless access to the cloud and lower cost sensors has been enabling the development of more intelligent software applications and consumer use cases. Many of these product requirements were, and continue to be, driven by innovations from the Smartphone, Wearables and Hearables solutions that OEMs are launching in conjunction with Google Android and Real-Time operating systems, as well as Apple iPhone, Apple iPad, Apple Watch and Apple AirPods.

While advances in cost-effective cloud storage and power-efficient wireless technology have enabled consumer device manufacturers to enhance device connectivity and offload some processing to the cloud, there continues to be a trend for feature-rich mobile devices to suffer from shorter battery lives. This challenge places a burden on the designers and manufacturers of these mobile CE products as they try to tailor multiple products with limited engineering resources. Lastly, the fast pace at which consumer taste for these features changes exacerbates the development challenges and risks in launching successful products to the marketplace.

Another important trend is shrinking product life cycles. This drives a need for faster and lower risk product development. There is intense pressure on the bill of materials, or BOM, cost of these devices, including per unit component costs and non-recurring development costs. As more people experience the advantages of a mobile lifestyle at home, they demand the same advantages in their professional lives. We believe that the trend toward mobile, handheld products that have a PC-like and cloud user experience, small form factor and maximize battery life will be prominent in the computing, industrial, medical and military markets. One such example is the trend of Smartphone and Tablet makers to offer the new, smaller form factor Wearables.

We believe these industry trends are shifting the demand among different classes of core silicon. The following are the four main classes of non-memory core silicon:

- Microcontrollers, or MCUs, are typically small, low-power devices on a single integrated circuit that contain a processor core, memory and a number of peripherals. They are designed to be programmed with software for embedded applications;
- Application Specific Standard Products, or ASSPs, other than processors, are fixed function devices designed to address a relatively narrow set of applications. These devices typically integrate a number of common peripherals or functions and the functionality of these devices is fixed prior to wafer fabrication;
- Programmable Logic Devices, or PLDs, are general-purpose devices, which can be used by a variety of electronic systems manufacturers and are customized after purchase for a specific application. FPGAs are a subset of PLDs and are typically used to implement complex system functions; and
- Application Specific Integrated Circuits, or ASICs, are custom devices designed and fabricated to meet the needs of one specific application for one end-customer. Structured ASICs, a sub-category of ASICs, provide a limited amount of custom content to broaden the applicability of a device for additional applications.

ASSPs are offered broadly to the market, making it challenging for a system designer to create differentiated products from these devices alone. In many situations, the available ASSPs may not directly implement the desired function and the system designer is required to use a combination of ASSPs to achieve the desired result at the expense of increased cost, product size and power consumption. As standards evolve or new standards are developed, ASSPs may not be available to implement desired functions.

System designers can customize their products using programmable logic ASICs or MCUs. The competitive dynamic between these classes of core silicon are well understood. High development risks, development costs and opportunity costs are incurred when using ASICs to produce custom devices with very low unit production cost. Suppliers of programmable logic devices, which have lower development and market risks and development costs relative to ASICs, have aggressively reduced the unit cost of their products over time, making programmable logic devices the solution of choice for custom products unless the volume is very high. These cost reduction efforts have significantly increased the volume required to justify the total cost of an ASIC.

Consumer devices incorporate complex, rapidly changing technology, require rapid product proliferation, and have short product life and development cycles. Therefore, most mobile designers design their products from a base platform, or reference design, provided to them by the vendor of the processor they have selected for their design. To differentiate their products from their competition, OEMs and ODMs may require some level of customization at either the hardware or software level. Designers have only a few viable options to modify the base platform for their needs. Since mobile system designers require very low power consumption to maximize battery life in their applications, the high power consumption of conventional FPGAs is incompatible with their design goals. This effectively limits the average mobile system designer to ASSPs, small PLDs, mobile-oriented FPGAs, and MCUs to create a virtual level playing field among mobile system designers, and makes product proliferation and differentiation extremely hard to achieve. ASICs with their long development cycles, long lead times and high non-recurring development costs are only used in very high volume mainstream consumer products.

The traditional military and industrial markets are well served by existing core silicon. Much of this market uses complex ASSPs since price, power and size are not particularly critical design considerations. When there is a strong need for a custom solution in high volume applications, designers turn to an ASIC and, in low to medium volume applications, they use FPGAs. QuickLogic FPGAs have a loyal following in certain segments of these markets, particularly when instant-on, energy efficiency, high reliability or intellectual property security is important. These markets are expected to follow a typical mature product trend, as compared with the predicted growth in our business in the consumer market.

Markets and Product Technology

We market our solutions primarily to consumer and industrial device OEMs and ODMs. We have complete solutions incorporating our silicon platforms, IPs, software drivers, SensiML Analytics Toolkit and our system architecture expertise. A solution can be based on our programmable technology, which enables customized designs, low power, flexibility, rapid time-to-market, longer time-in-market and lower total cost of ownership. We are capable of providing complete solutions because of our investment in developing the low power IP and software required to implement specific functions, along with sensor software algorithms optimized for our architecture. In some cases, we develop the IPs and either software or firmware ourselves and, in other cases, we utilize third parties to develop the mixed signal physical layers, logic and/or software.

We market our solutions to OEMs and ODMs offering differentiated mobile products, to processor vendors wishing to expand their served available market, and to sensor manufacturers and sensor processing software companies wishing to expand their ecosystems. Our target mobile markets include Tablets, Wearables, Hearables, Smartphones, Consumer Electronics and Consumer/Industrial IoT. Our solutions typically fall into one of three categories: Sensor Processing, Display and Visual Enhancement, or Smart Connectivity.

By using our silicon platforms, our IPs, our software, and our in-depth architecture knowledge, we can deliver energy efficient custom solutions that blend the benefits of traditional ASSPs with the flexibility, product proliferation, differentiation and low total cost of ownership advantages of programmable logic.

Our product technology consists of five major elements:

First, our programmable logic allows us to hardware customize our platforms. We have two distinct types of programmable logic. We have an SRAM-reprogrammable logic architecture that utilizes a standard CMOS-logic process to meet the specific needs of the sensor and I/O subsystems of mobile devices: very low standby power, low dynamic power, and in-system reprogrammable technology. Our SRAM-reprogrammable logic is the basis of our ArcticPro eFPGA IP Licensing initiative, and is the logic used in our EOS S3, EOS S3 LV, and EOS S3AI products.

We also have our ViaLink programmable logic that uses proprietary and patented technology to meet the specific smart connectivity needs when the characteristics of non-volatility and instant-on, very low standby power, low dynamic power, small form factor, single chip solutions that power cycle easily and quickly are required. Hardware customization gives our devices the ability to execute key actions faster than software implementations, and at lower power.

Second, our ArcticLink and EOS S3, EOS S3 LV, and EOS S3AI platforms combine mixed signal physical functions, hard-wired logic and programmable logic on one device. Mixed signal capability supports the trend toward serial connectivity in mobile applications, where designers benefit from lower pin counts, simplified printed circuit board, or PCB, layouts, simplified PCB interconnect and reduced signal noise. Adding hard-wired IP enables us to deliver more logic at lower cost and lower power while the programmable logic allows us to provide solutions that can be rapidly customized to differentiate products, add features and reduce system development costs. This combination of mixed signal, hard-wired logic and programmable logic enables us to deliver low cost, small form factor solutions that can be customized for particular customer or market requirements while lowering the total cost of ownership.

Third, we develop and integrate innovative IP cores, intelligent data processing IP cores, or standard interfaces used in mobile products. In addition to standards-based IP, we also offer proprietary IP such as:

- *Sensor Processing IPs* such as Flexible Fusion Engine, or FFE, Sensor Manager, or Communications Manager;
- *Hardware Acceleration / Processor Offloading IPs* such as various digital filter and matrix multiplication functions.

Fourth, we develop and optimize a software framework for use in conjunction with our sensor processing silicon platforms.

Fifth, through SensiML, we develop and optimize an end-to-end software suite that provides developers a practical means for developing IoT sensor algorithms using AI. Each component of the software suite handles specific steps to progress from initial raw sensor data collection using prototype hardware to optimized firmware code generation, validation and testing, and post-ship algorithm updates and continuous learning enhancements. SensiML Data Capture Lab is a full-featured client tool that enables rapid, efficient, and collaborative multi-user data collection, cleansing, labeling, and metadata annotation of custom application datasets. SensiML Analytics Studio is a cloud service component that uses labeled datasets to deliver device-optimized firmware for a chosen endpoint product. SensiML Test App is used to quickly and efficiently validate final device firmware and test for the proper behavior, accuracy, and performance of the algorithm empirically on actual endpoint hardware. Lastly, the SensiML Application Programmer's Interface (API) is a simplified interface to extend the SensiML algorithms and manage advanced features like edge model tuning and continuous learning updates to the cloud.

Marketing, Sales and Customers

We monetize our technology through silicon sales, eFPGA IP licensing and SensiML Analytics Toolkit subscriptions and per unit royalties. We specialize in enhancing the user experience in leading edge mobile devices and products. For our customers, we enable hardware and sensor algorithmic differentiation quickly, cost-effectively and at low power. For our partners, we expand their reach into new segments and new use cases thereby expanding the served available market for their existing devices.

Our vision is to transform the way people and devices interact with each other and their surroundings. Our mission is to provide innovative platforms to successfully enable our customers to develop products that fundamentally change the end-user experience. Specifically, we develop low power SoCs, FPGAs, embedded FPGA intellectual property and the SensiML Analytics Toolkit for AI Software. QuickLogic's products enable smartphone, wearable, hearable, tablet, Consumer Electronics, and Consumer/Industrial IoT device OEMs to deliver highly differentiated, immersive user experiences and long battery life for their customers.

Our multi-core sensor processing products such as ArcticLink 3 S1, ArcticLink 3 S2, EOS 3, EOS S3 LV, and EOS S3AI accomplish this result with general purpose and targeted cores, which provide an extremely power-efficient approach for real-time multi-modal (vision, motion, voice, location, biometric and environmental) sensor processing independently of the cloud. Our embedded FPGA technology gives SoC developers targeting IoT endpoint applications the flexibility to make design changes post-production while keeping power consumption low. Our SensiML Analytics Toolkit is cutting-edge software that enables ultra-low power IoT endpoints that implement AI to transform raw sensor data into meaningful insight at the device itself. The Toolkit also provides an end-to-end development platform spanning data collection, labeling, algorithm and firmware auto generation, and testing.

Market leading companies need to deliver new products quickly and cost-effectively. We believe our programmable technology allows us to deliver customizable solutions with low power consumption and high IP security, while meeting system performance and BOM cost requirements. We believe our solutions allow OEMs and ODMs to rapidly bring new and differentiated products to market quickly and cost-effectively. Our solutions enable energy and cost-efficient solutions on design platforms from which a range of products can be introduced.

We recognize that our markets require a range of solutions, and we intend to work with market leading companies to combine silicon solution platforms, packaging technology, sensor software algorithms, software drivers and firmware, to meet the product proliferation, high bandwidth, time-to-market, time-in-market and form factor requirements of mobile device manufacturers. We expect solutions to range from devices that include mixed signal and visual enhancement capability to devices that provide off-load engines from the host processor to save power and extend system battery life. We intend to continue to define and implement compelling solutions for our target customers and partners.

Our business model is targeted on ensuring our products are easy-to-use for the broad electronics market, particularly ones that are focused on enabling their products with AI solutions. This go-to-market strategy focuses on a broader sales and marketing approach. The IoT market for AI solutions is made up of hundreds, if not thousands, of individual customers. We have identified reference designs, evaluation systems and evaluation software kits that we can enable our channel sales partners to sell to these customers. We believe our solutions are resonating with our target customers who value the differentiated user experience, lower power consumption, platform design capability, rapid time-to-market, longer time-in-market and low total cost of ownership available through the use of our solutions.

We sell our products through a network of sales managers in North America, Europe and Asia. In addition to our corporate headquarters in San Jose, California, we have international sales operations in China, Japan, Taiwan, South Korea and the United Kingdom. Our sales personnel and independent sales representatives are responsible for sales and application support for a given region, focusing on major strategic accounts, and managing our channel sales partners such as distributors.

Our customers typically order our products through our distributors. Currently, we have two distributors in North America and a network of sixteen distributors and sales representative throughout Europe and Asia to support our international business.

We also have a military, industrial and mobile product customer base that purchases our mature silicon products. We expect to continue to offer silicon devices to these customers.

Three customers represented approximately 19%, 16% and 10% of our total revenue for the year ended January 3, 2021 and two customers represented 13% and 10% for the year ended December 29, 2019, respectively. In addition, a significant portion of our revenue comes from sales to customers located outside of the United States. See Note 14 to the Consolidated Financial Statements for information on our revenue by geography, market segment and key customers.

In the past, there has not been a predictable seasonal pattern to our business. However, we may experience seasonal patterns in the future due to global economic conditions, the overall volatility of the semiconductor industry and the inherent seasonality of the mobile and consumer markets.

Backlog

We do not believe that backlog as of any particular date is indicative of future results. A majority of our quarterly shipments typically are booked during the quarter. Our sales are made primarily pursuant to standard purchase orders issued by OEM customers and distributors.

Competition

A number of companies offer products that compete with one or more of our semiconductor products and solutions. Our semiconductor competitors include: (i) suppliers of ASSPs such as DSP Group; (ii) suppliers of mobile and/or application processors; (iii) suppliers of ASICs; (iv) suppliers of mobile-oriented FPGAs such as Lattice; and (v) suppliers of low power microcontrollers such as ST Microelectronics and NXP. Our existing competitors for conventional FPGAs include suppliers of low power CPLDs and FPGAs such as Lattice, Xilinx, Intel and MicroSemi (a subsidiary of Microchip Technology).

ASSPs offer proven functionality which reduces development time, risk and cost, but it is difficult to offer a differentiated product using standard devices, and ASSPs that meet the system design objectives are not always available. Conventional programmable logic may be used to create custom functions that provide product differentiation or make up for deficiencies in available ASSPs. PLDs require more designer input since the designer has to develop and integrate the IP and may have to develop the software to drive the IP. PLDs are more expensive and consume more power than ASSPs or ASICs, but they offer fast time-to-market and are typically reprogrammable. OEMs have adopted mobile-oriented FPGAs in the mobile product market, but offer very little in terms of hard logic blocks that may decrease power consumption or selling price to the OEM. ASICs have a large development cost and risk and a long time to market. As a result, ASICs are generally only used for single designs with very high volumes. MCUs offer extensive software flexibility, but often do not offer sensor software algorithms, the lowest power, nor any hardware flexibility. Our solutions enable custom functions and system designs with fast time-to-market and longer time-in-market since they are customized by us using our solution platforms that contain programmable logic. In addition, because they are complete solutions, they reduce the system development cost and risk.

Since the AI software market is nascent, particularly for the edge and endpoint applications, there are no direct competitors to the SensiML analytics software platform at this point.

Competitors for our eFPGA IP licensing product include a few of startup companies.

Research and Development

We are focused on developing our solutions and platforms. Our solutions combine our silicon platforms with our IPs, software drivers, and other system software, and may include SensiML software for AI applications. Our future success will depend largely on our ability to rapidly develop, enhance and introduce our platform solutions that meet emerging industry standards and satisfy changing customer requirements. We have made and expect to continue to make substantial investments in research and development. Our research and development expenses for the years ended January 3, 2021, December 29, 2019 and December 30, 2018 were \$7.5 million (87% of revenue), \$12.4 million (120% of revenue), and \$9.9 million (79% of revenue), respectively. Our research and development expenses for the year ended January 3, 2021 and December 29, 2019 included the expenses of our recently acquired SensiML Corporation.

As of January 3, 2021, our research and development staff consist of 18 employees located in California, India, and Oregon.

- Our system software group creates the drivers and other system code required to connect our silicon devices to Application Processors, drivers and microcode to support our sensor hubs.
- Our platform engineering group develops low power programmable devices and system IP that can be used in standalone solution platforms such as PolarPro 3E, or combined in solution platforms such as EOS S3.
- Our EDA software group collaborates with the open source software community to ensure the design libraries, interface routines and place and route software that allow our customer to take their own designs and target them to programmable devices, and develops the design tools that support algorithm development for our sensor hubs.
- Our hardware group develops and verifies IP Blocks that can be programmed into our programmable logic and develops primarily open source hardware reference designs to showcase and verify our solutions.
- Our product engineering group oversees product manufacturing and process development with our third party foundries, and is involved in ongoing process improvements to increase yields and optimize device characteristics.
- The Office of the CTO investigates future trends and requirements in order to define the next generation of solutions and platforms.
- Our SensiML group develops and maintains all software with respect to the SensiML Analytics Software Suite.

Manufacturing

We have close relationships with third-party manufacturers for our wafer fabrication, package assembly, and testing requirements to help us ensure stability in the supply of our products and to allow us to focus our internal efforts on product and solution design and sales.

We currently outsource our wafer manufacturing, primarily to GLOBALFOUNDRIES and Taiwan Semiconductor Manufacturing Company Limited, or TSMC. We outsource our product packaging primarily to Amkor Technology, Inc. and STATS-ChipPAC. GLOBALFOUNDRIES manufactures our EOS S3, EOS S3 LV, and EOS S3AI Sensor Platform in a 40 nm CMOS process, and PolarPro 3E, ArcticLink III VX and BX, and ArcticLink 3 S2 Sensor Hub, in a 65 nm CMOS process. TSMC manufactures our pASIC 3, QuickRAM and certain QuickPCI products, using a 0.35 micron complementary metal oxide semiconductor, or CMOS, process. TSMC also manufactures our Eclipse products on 0.25 micron CMOS process, and other mature products using a 65nm CMOS process on twelve-inch wafers. We purchase products from GLOBALFOUNDRIES, and TSMC on a purchase order basis.

Outsourcing of wafer manufacturing enables us to take advantage of the high volume economies of scale offered by these suppliers. We may establish additional foundry relationships as such arrangements become economically useful or technically necessary.

Employees and Human Capital

As of January 3, 2021, we had 48 employees worldwide. We believe our future success depends in part on our continued ability to attract, hire and retain qualified personnel. None of our employees are represented by a labor union and we believe our employee relations are favorable. We recognize that in order to drive innovation and operational excellence, we must attract, develop, motivate and retain highly qualified talent. The well-being of employees is a key priority and includes a dynamic and welcoming workplace that promotes inclusive diversity, fosters collaboration and encourages employees to bring their best ideas to work every day, and promotes work-life balance. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase shareholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Intellectual Property

We believe that it is important to maintain a large patent portfolio to protect our innovations. We currently hold nineteen active U.S. patents and have two pending applications for additional U.S. patents. Our patents contain claims covering various aspects of programmable integrated circuits, programmable interconnect structures and programmable metal devices. In Europe and Asia, we have been granted nine patents and have four pending applications. Our issued patents expire between 2021 and 2037.

In most cases, revenue will decline from a decrease in demand for our mature products long before the expiration of pending or issued patents relating to the underlying technology in such products. The decision to cease maintaining a patent is made based on the importance of the patent in our current or future product offerings.

We have seven trademarks registered with the U.S. Patent and Trademark Office.

Information About Our Executive Officers and Directors

Our executive officers are appointed by, and serve at the discretion of, our Board of Directors. There are no family relationships among our directors and officers.

The following table sets forth certain information concerning our current executive officers and directors as of March 15, 2021:

Name	Age	Position
Brian C. Faith	46	President and Chief Executive Officer; Director
Anthony Contos *	57	Interim Chief Accounting Officer and Principal Financial Officer
Rajiv Jain	60	Vice President, Worldwide Operations
Timothy Saxe	65	Senior Vice President Engineering and Chief Technology Officer
Michael R. Farese	74	Chairman of the Board
Andrew J. Pease	70	Director
Arturo Krueger	81	Director
Daniel A. Rabinovitsj	56	Director
Christine Russell	70	Director
Gary H. Tauss	66	Director

Brian C. Faith joined QuickLogic in June 1996. Mr. Faith has served as our President and Chief Executive Officer since June 2016 after having served as Vice President of Worldwide Marketing and Vice President of Worldwide Sales & Marketing between 2008 and 2016. Mr. Faith during the last 21 years has held a variety of managerial and executive leadership positions in engineering, product line management, marketing and sales. Mr. Faith has also served as the board member of the Global Semiconductor Alliance (GSA), the Chairman of the Marketing Committee for the CE-ATA Organization. He holds a B.S. degree in Computer Engineering from Santa Clara University and was an Adjunct Lecturer at Santa Clara University for Programmable Logic courses.

Anthony Contos joined QuickLogic in January 2021, first serving as the Company's Corporate Controller. He was appointed QuickLogic's Interim Chief Accounting Officer effective January 28, 2021, subsequent to the notice of resignation received by Dr. Sue Cheung on January 28, 2021, effective February 17, 2021. Mr. Contos brings more than 30 years of Accounting and Financial management experience with many publicly traded companies. Prior to joining QuickLogic, Mr. Contos served as the Interim Corporate Controller for Natera, Inc., a bio-pharmaceutical company based in San Carlos, CA. Previously, Mr. Contos served as the Vice President, Corporate Controller for DASAN Zhong Solutions, Interim Director of External Reporting and Reporting for Extreme Networks, and Chief Financial Officer for Optoma Technology, and has served other senior level positions, including Chief Financial Officer of Asante Technologies, Inc. Mr. Contos holds a B.S. degree in Mathematical Science - Operations Research and a B.A. in Business Economics with a focus in Accounting from the University of California, Santa Barbara.

Rajiv Jain joined QuickLogic in August 1992. Mr. Jain has served as our Vice President of Worldwide Operations since April 2014. Prior to this role, Mr. Jain served as QuickLogic's Senior Director of Operations and Development Engineering from 2011 to 2014, Senior Director of System Solutions and Process Technology from 2009 to 2011, Director of Process Technology from 1997 to 2009, and Senior Process Technologist from 1992 to 1997. Prior to joining QuickLogic, Mr. Jain was a Senior Yield Engineer at National Semiconductor from 1991 to 1992, where he focused on BiCMOS product yield improvements, and at Monolithic Memories from 1985 to 1988, where he focused on BiPolar product yield and engineering wafer sort improvements. Mr. Jain holds a Master's degree in Chemical Engineering from the University of California, Berkeley and a B.S. degree in Chemical Engineering from the University of Illinois, Champaign/Urbana.

Timothy Saxe (Ph.D.) joined QuickLogic in May 2001. Dr. Saxe has served as our Senior Vice President of Engineering and Chief Technology Officer since August 2016 and Senior Vice President and Chief Technology Officer since November 2008. Previously, Dr. Saxe has held a variety of executive leadership positions in QuickLogic including Vice President of Engineering and Vice President of Software Engineering. Dr. Saxe was Vice President of FLASH Engineering at Actel Corporation, a semiconductor manufacturing company, from November 2000 to February 2001. Dr. Saxe joined GateField Corporation, a design verification tools and services company formerly known as Zycad, in June 1983 and was a founder of their semiconductor manufacturing division in 1993. Dr. Saxe became GateField's Chief Executive Officer in February 1999 and served in that capacity until Actel Corporation acquired GateField in November 2000. Dr. Saxe holds a B.S.E.E. degree from North Carolina State University, and an M.S.E.E. degree and a Ph.D. in Electrical Engineering from Stanford University.

On January 28, 2021, Dr. Sue Cheung resigned her position as Chief Financial Officer with the Company effective February 17, 2021.

Information regarding the backgrounds of our directors is incorporated by reference from our definitive Proxy Statement relating to the 2021 Annual Meeting of Stockholders, which Proxy Statement is anticipated to be filed within 120 days after the end of the fiscal year covered by this Report.

ITEM 1A. RISK FACTORS

In addition to other information in this Annual Report on Form 10-K and in other filings we make with the Securities and Exchange Commission, the following risk factors should be carefully considered in evaluating our business as they may have a significant impact on our business, operating results and financial condition. If any of the following risks actually occurs, our business, financial condition, results of operations and future prospects could be materially and adversely affected. Because of the following factors, as well as other variables affecting our operating results, past financial performance should not be considered as a reliable indicator of future performance and investors should not use historical trends to anticipate results or trends in future periods.

Summary Risk Factors

Some of the factors that could materially and adversely affect our business, financial condition, results of operations and cash flows, but are not limited to, the following:

Risks Related to Our Business, Industry and Global and Economic Conditions

- *We have incurred losses in the past years since 2011 and anticipate that we will incur continued losses through at least the next two to three years, we may not be able to generate sufficient revenue or raise additional financing to fund future losses, and we may not be able to sustain sufficient liquidity to continue to operate as a going concern.*
- *The COVID-19 pandemic could have a material adverse effect on our business, cash flows and results of operations.*
- *We may be unable to accurately estimate quarterly revenue, which could adversely affect the trading price of our stock.*
- *Our future operating results are likely to fluctuate and therefore may fail to meet expectations, which could cause our stock price to decline.*
- *We may not be able to achieve the anticipated synergies and benefits from business acquisitions, including our acquisition of SensiML Corporation.*
- *Cyberattacks through security vulnerabilities could lead to disruption of business, reduced revenue, increased costs, liability claims, or harm to our reputation or competitive position.*

Risk Related to Our Products

- *If we fail to successfully develop, introduce and sell new products, eFPGA IP Product, SensiML Software subscriptions/licenses, and other new solutions or if our design opportunities do not generate the revenue we expect, we may be unable to compete effectively in the future and our future gross margins and operating results will be lower.*
- *Two of our products target new unproven markets, and if these markets do not develop, or if our products do not meet their needs, the loss of or reduction in orders could adversely affect our revenue and harm our business financial condition, operating results and cash flows.*
- *If our AI products are not low touch, the cost of addressing the fragmented AI market will be high which will delay market penetration, result in reduced revenues or require increased expenses, any of which could adversely affect our revenue and harm our business financial condition, operating results and cash flows.*
- *Our products are subject to a lengthy sales cycle and our customers may cancel or change their product plans after we have expended substantial time and resources in the design of their products.*
- *If we fail to adequately forecast demand for our products, we may incur product shortages or excess product inventories.*

Risk Related to Our Customers and Partners

- *We currently depend on a limited number of significant customers, for a significant portion of our revenue and the loss of or reduction in orders from such significant customers could adversely affect our revenue and harm our business financial condition, operating results and cash flows.*
- *We depend upon partnering with other companies to offer voice, motion, and other solutions into our platform.*
- *We depend on our relationships with third parties to manufacture our new products.*
- *We depend upon third parties for silicon IP, detailed registered-transfer level, or RTL, design, physical design, verification and assembly of our silicon platforms and any failure to meet our requirements in a timely fashion may adversely affect our time to market and revenue.*
- *We depend upon partnering with other companies to develop IP, reference platforms, algorithm and system software.*
- *We depend upon third parties to fabricate, assemble, test and program our products, and to provide logistics services. Any problems at these third parties could adversely affect our business, results of operations and financial condition.*
- *We entered into informal partnerships with certain third parties for the development of solutions. Our business could be adversely affected if such informal partnerships fail to grow as we expected.*

Risks Related to Our Business, Industry and Global and Economic Conditions

We have incurred losses in the past years since 2011 and anticipate that we will incur continued losses through at least the next two to three years, we may not be able to generate sufficient revenue or raise additional financing to fund future losses, and we may not be able to sustain sufficient liquidity to continue to operate as a going concern.

We have experienced net losses in the past years and expect losses to continue through at least fiscal year 2021, as we continue to develop new products, applications and technologies. Our new products and products currently under development have been generating lower gross margin as a percentage of revenue than our mature products due to the markets that we have targeted and the larger order quantities associated with these applications. Whether we can achieve cash flow levels sufficient to support our operations cannot be accurately predicted, and our investment portfolio is subject to a degree of interest rate and liquidity risk. Unless such cash flow levels are achieved, in addition to the proceeds that we received in June 2019 and June 2020 from the sale of our equity securities, proceeds from the Paycheck Protection Program Loan, or PPP Loan, received in May 2020, and the credit line we may be able to draw down from Heritage Bank of Commerce, we may need to obtain additional funds through strategic divestiture, or sell debt or equity securities, or some combination thereof, to provide funding for our operations. Such additional funding may not be available on commercially reasonable terms, or at all.

If we are unable to generate sufficient sales from its new products or adequate funds are not available when needed, our liquidity, financial condition and operating results would be materially and adversely affected, and we may not be able to operate our business without significant changes in our operations or at all.

The COVID-19 pandemic could have a material adverse effect on our business, cash flows and results of operations.

On January 30, 2020, the World Health Organization, or WHO, declared a global emergency due to the COVID-19 pandemic, and on February 28, 2020, the WHO raised its assessment of the threat from high to very high at a global level. The outbreak has resulted in significant governmental measures being implemented to control the spread of COVID-19, including, among others, restrictions on travel, business operations and the movement of people in many regions of the world in which the Company operates, and the imposition of shelter-in-place or similarly restrictive work-from-home orders impacting many of the Company's offices and employees, including those located in the United States.

As a result, the Company has temporarily closed or substantially limited the presence of personnel in its offices in several impacted locations, implemented travel restrictions and withdrawn from various industry events. The impact of the Company's work-from-home policy that was implemented to protect its global workforce has contributed to delays in certain operational processes, including its routine quarterly financial statement close process. The Company has also experienced some disruption and delays in its supply chain, customer deployment plans, and logistics challenges, including certain limitations on its ability to access customer fulfillment and service sites. The Company believes these conditions had an adverse impact on its revenue and results of operations for the twelve months of fiscal 2020 and, expects these conditions to continue to have an adverse impact in future quarters during the next fiscal year.

The COVID-19 pandemic and its potential effects on the Company's business in its fiscal 2021 remain dynamic, and the broader implications for its business and results of operations remain uncertain. These implications could include further disruptions or restrictions on the Company's ability to source, manufacture or distribute its products, including temporary disruptions to the facilities of its contract manufacturers in China, Taiwan, Philippines and Singapore, or the facilities of its suppliers and their contract manufacturers globally. Additionally, multiple countries have imposed and may further impose restrictions on business operations and movement of people and products to limit the spread of COVID-19. Delays in production or delivery of components or raw materials that are part of the Company's global supply chain due to restrictions imposed to limit the spread of COVID-19 could delay or inhibit its ability to obtain the supply of components and finished goods. If COVID-19 becomes more prevalent in the locations where the Company, its customers or suppliers conduct business, or the Company experiences more pronounced disruptions in its operations, the Company may experience constrained supply or curtailed demand that may materially adversely impact its business and results of operations. In addition, any other widespread health crisis that could adversely affect global and regional economies, financial markets and overall demand environment for the Company's products could have a material adverse effect on the Company's business, cash flows or results of operations.

We may be unable to accurately estimate quarterly revenue, which could adversely affect the trading price of our stock.

Due to our relatively long product delivery cycle and the inability of our customers in the rapidly evolving end markets to confirm product requirements on a timely basis, we may have low visibility to product demand or estimated revenue in any given quarter. If our customers cannot provide us with accurate delivery lead times, we may not be able to deliver product to our customers in a timely fashion. Furthermore, our ability to respond to increased demand is limited to inventories on hand or on order, the capacity available at our contract manufacturers and our capacity to program products to customer specifications. If we fail to accurately estimate customer demand, or if our available capacity is less than needed to meet customer demand, we may not be able to accurately estimate our quarterly revenue, which may have a material adverse effect on our results of operations and financial condition, and our stock price could be materially fluctuate as a result.

Our future operating results are likely to fluctuate and therefore may fail to meet expectations, which could cause our stock price to decline.

Our operating results have varied widely in the past and are likely to do so in the future. In addition, our past operating results may not be an indicator of future operating results.

Factors that could cause our operating results to fluctuate include, without limitation: (i) successful development and market acceptance of our products and solutions; (ii) our ability to accurately forecast product volumes and mix, and to respond to rapid changes in customer demand; (iii) changes in sales volume or expected sales volume, product mix, average selling prices or production variances that affect gross profit; (iv) the effect of end-of-life programs; (v) a significant change in sales to, or the collectability of accounts receivable from, our largest customers; (vi) our ability to adjust our product features, manufacturing capacity and costs in response to economic and competitive pressures; (vii) our reliance on subcontract manufacturers for product capacity, yield and quality; (viii) our competitors' product portfolio and product pricing policies; (ix) timely implementation of efficient manufacturing technologies; (x) errors in applying or changes in accounting and corporate governance rules; (xi) the issuance of equity compensation awards or changes in the terms of our stock plan or employee stock purchase plan; (xii) mergers or acquisitions; (xiii) the impact of import and export laws and regulations; (xiv) the cyclical nature of the semiconductor industry and general economic, market, political and social conditions in the countries where we sell our products and the related effect on our customers, distributors and suppliers; and (xv) our ability to obtain capital, debt financing and insurance on commercially reasonable terms. Although certain of these factors are out of our immediate control, unless we can anticipate and be prepared with contingency plans that respond to these factors, our business, results of operations and financial condition could be materially adversely affected, which could cause our stock price to significantly fluctuate or decline.

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In particular, since we derived in 2020 and expect to continue to derive a significant portion of our revenue from China, our business development plans, results of operations and financial condition may be materially adversely affected by significant political, social and economic developments in China. A slowdown in economic growth in China, such as due to the outbreak of the COVID-19 virus could adversely impact our customers, prospective customers, suppliers, distributors and partners in China, which could have a material adverse effect on our results of the operations and financial condition. There is no guarantee that economic downturns, whether actual or perceived, any further decrease in economic growth rates or an otherwise uncertain economic outlook in China will not occur or persist in the future, that they will not be protracted or that governments will respond adequately to control and reverse such conditions, any of which could materially and adversely affect our business, financial condition and results of operations.

We may also encounter periods of industry wide semiconductor oversupply, resulting in pricing pressure, as well as undersupply, resulting in a risk that we could be unable to fulfill our customers' requirements. The semiconductor industry has historically been characterized by wide fluctuations in the demand for, and supply of, its products. These fluctuations have resulted in circumstances when supply of and demand for semiconductors has been widely out of balance. An industry wide semiconductor oversupply could result in severe downward pricing pressure from customers. In a market with undersupply of manufacturing capacity, we would have to compete with larger foundry and assembly customers for limited manufacturing resources. In such an environment, we may be unable to have our products manufactured in a timely manner, at a cost that generates adequate gross profit or in sufficient quantities. Since we outsource all of our manufacturing and generally have a single source of wafer supply, test, assembly and programming for our products, we are particularly vulnerable to such supply shortages and capacity limitations. As a result, we may be unable to fulfill orders and may lose customers. Any future industry wide oversupply or undersupply of semiconductors could therefore have a material adverse effect on our business, results of operations and financial condition.

We may be unable to successfully grow our business if we fail to compete effectively with others to attract and retain our executive officers, and other key management or technical personnel.

We believe our future success depends upon our ability to attract and retain highly competent personnel. Our employees are at-will and not subject to employment contracts. We could potentially lose the services of any of our senior management personnel at any time due to a variety of factors that could include, without limitation, death, incapacity, military service, personal issues, retirement, resignation or competing employers. Our ability to execute current plans could be adversely affected by such a loss. We may fail to attract and retain qualified technical, sales, marketing and managerial personnel required to continue to operate our business successfully. Personnel with the expertise necessary for our business are scarce and competition for personnel with proper skills is intense.

In addition, new hires frequently require extensive training before they achieve desired levels of productivity. Additionally, attrition in personnel can result from, among other things, changes related to acquisitions, retirement and disability. We may not be able to retain existing key technical, sales, marketing and managerial employees or be successful in attracting, developing or retaining other highly-qualified technical, sales, marketing and managerial personnel, particularly at such times in the future as we may need to fill a key position. If we are unable to continue to develop and retain existing executive officers or other key employees or are unsuccessful in attracting new highly-qualified employees, our financial condition, cash flows, and results of operations could be materially and adversely affected.

We may have increasing difficulty attracting and retaining qualified outside board members.

The directors and management of publicly traded corporations are increasingly concerned with the extent of their personal exposure to lawsuits and shareholder claims, as well as governmental and creditor claims that may be made against them in connection with their positions with publicly held companies. Outside directors are becoming increasingly concerned with the availability of directors' and officers' liability insurance to pay on a timely basis the costs incurred in defending shareholder claims. Directors' and officers' liability insurance is expensive and difficult to obtain. The SEC and the Nasdaq Capital Market have also imposed higher independence standards and certain special requirements on directors of public companies. Accordingly, it may become increasingly difficult to attract and retain qualified outside directors to serve on our board of directors.

Our company's global operations are subject to risks and uncertainties.

Most of our products are manufactured outside of the United States at manufacturing facilities operated by our suppliers in Asia and South Asia.

A significant portion of our total revenue comes from sales to customers located outside the United States. We anticipate that sales to customers located outside the United States will continue to represent a significant portion of our total revenue in future periods. In addition, most of our domestic customers sell their products outside of North America, thereby indirectly exposing us to risks associated with foreign commerce and economic instability. In addition to overseas sales offices, we have significant research and development activities in India.

International operations are subject to certain risks inherent in conducting business outside the U.S., such as changes in currency exchange rates, tax laws, price and currency exchange controls, export and import restrictions, environmental regulations, protection of intellectual property rights, nationalization, expropriation and other governmental action. Accordingly, our operations and revenue are subject to a number of risks associated with foreign commerce, including the following: (i) staffing and managing foreign offices; (ii) managing foreign distributors; (iii) collecting amounts due; (iv) political and economic instability; (v) foreign currency exchange fluctuations; (vi) changes in tax laws, import and export regulations, tariffs and freight rates; (vii) timing and availability of export licenses; (viii) supplying products that meet local environmental regulations; and (ix) inadequate protection of intellectual property rights. In addition, we incur costs in foreign countries that may be difficult to reduce quickly because of employee related laws and practices in those foreign countries. Our global operations also may be adversely affected by political events and domestic or international terrorist events and hostilities. Current events, including potential disruption caused by the COVID-19 virus outbreak first identified in China in December 2019, the United Kingdom's exit from the European Union, potential changes in immigration policies and tax reform proposals, create a level of uncertainty for multi-national companies. As U.S. companies continue to expand globally, increased complexity exists due to the possibility of renegotiated trade deals, revised international tax law treaties, and changes to the U.S. corporate tax code. These uncertainties could have a material adverse effect on our business and our results of operations and financial condition. As we continue to expand our business globally, our success will depend, in part, on our ability to anticipate and effectively manage these and other risks.

The semiconductor business is subject to downward price pressure.

The market for our products has been characterized by declining selling prices, and we anticipate that our average selling prices will decrease in future periods, although the timing and amount of these decreases cannot be predicted with any certainty. The pricing pressure in the semiconductor industry in past years has been due to a large number of factors, many of which were not easily foreseeable, such as currency crisis, industry-wide excess manufacturing capacity, weak economic growth, the slowdown in capital spending that followed the "dot-com" collapse, the reduction in capital spending by telecom companies and satellite companies, and the effects of the terrorism since September 11, 2001. Similar to past years, recent unfavorable economic conditions have resulted in a tightening of the credit markets. If signs of improvement in the global economy do not progress as expected and global economic conditions worsen, we may experience a decline in our average selling prices. In addition, our competitors have in the past, and may again in the future, lower prices in order to increase their market share. Continued downward price pressure in the industry may harm our competitive position and materially and adversely affect our financial condition, cash flows, and results of operations.

We may not be able to achieve the anticipated synergies and benefits from business acquisitions, including our acquisition of SensiML Corporation.

Part of our business strategy is to acquire businesses that we believe can complement our current business activities, both financially and strategically. Acquisitions, including the SensiML Acquisition, involve many complexities, including, but not limited to, risks associated with the acquired business' past activities, difficulties in integrating personnel and human resource programs, integrating technology systems and other infrastructures under the Company's control, unanticipated expenses and liabilities, and the impact on our internal controls and compliance with the regulatory requirements under the Sarbanes-Oxley Act of 2002. There is no guarantee that our acquisitions will increase the profitability and cash flow of the Company, and our efforts could cause unforeseen complexities and additional cash outflows, including financial losses. As a result, the realization of anticipated synergies or benefits from acquisitions may be delayed or substantially reduced.

Litigation could adversely impact our consolidated financial position.

We have been and may be in the future involved in various litigation matters arising in the ordinary course of business, including, but not limited to, litigation relating to employment matters, commercial transactions, intellectual property matters, contracts, environmental matters and matters related to compliance with governmental regulations. Litigation is inherently uncertain and unpredictable. The potential risks and uncertainties include, but are not limited to, such factors as the costs and expenses of litigation and the time and attention required of management to attend to litigation. An unfavorable resolution of any particular legal claim or proceeding, and/or the costs and expenses incurred in connection with a legal claim or proceeding, could have a material and adverse effect on our results of operations and financial condition.

We may be unable to adequately protect our intellectual property rights and may face significant expenses as a result of future litigation.

Protection of intellectual property rights is crucial to our business, since that is how we keep others from copying our innovations and those of third parties that are central to our existing and future products. From time to time, we receive letters alleging patent infringement or inviting us to license other parties' patents. We evaluate these requests on a case-by-case basis. These situations may lead to litigation if we reject the offer to obtain the license.

In the past, we have been involved in litigation relating to our alleged infringement of third party patents or other intellectual property rights. This type of litigation is expensive and consumes large amounts of management time and attention.

Because it is critical to our success that we continue to prevent competitors from copying our innovations, we intend to continue to seek patent and trade secret protection for our products. The process of seeking patent protection can be long and expensive, and we cannot be certain that any currently pending or future applications will actually result in issued patents or that, even if patents are issued, they will be of sufficient scope or strength to provide meaningful protection or any commercial advantage to us. Furthermore, others may develop technologies that are similar or superior to our technology or design around the patents we own. We also rely on trade secret protection for our technology, in part through confidentiality agreements with our employees, consultants and other third parties. However, these parties may breach these agreements and we may not have adequate remedies for any breach. In any case, others may come to know about or determine our trade secrets through a variety of methods. In addition, the laws of certain territories in which we develop, manufacture or sell our products may not protect our intellectual property rights to the same extent as the laws of the United States.

The market price of our common stock may fluctuate significantly and could lead to securities litigation.

Stock prices for many companies in the technology and emerging growth sectors have experienced wide fluctuations that have often been unrelated to the operating performance of such companies. In the past, securities class action litigation has often been brought against companies following periods of volatility in the market price of its securities. In the future, we may be the subject of similar litigation. Securities litigation could result in substantial costs and divert management's attention.

If we do not maintain compliance with the listing requirements of the Nasdaq Capital Market, our common stock could be delisted, which could, among other things, reduce the price of our common stock and the levels of liquidity available to our stockholders.

Our common stock was originally listed on the Nasdaq Global Market and was transferred to the Nasdaq Capital Market (the "Nasdaq") on July 22, 2019. In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards, including those regarding director independence and independent committee requirements, minimum stockholders' equity, minimum share price, and certain corporate governance requirements.

On January 18, 2019, we were notified in writing by the Nasdaq Stock Market LLC that the average closing bid price of our common stock was below the criteria of the continued listing standards of the Nasdaq Global Market, as the average per share closing price of our common stock over a consecutive 30-trading day period was less than \$1.00. To regain compliance, we undertook steps to obtain shareholder approval and the approval of our Board of Directors to effect a reverse stock split of our outstanding shares of common stock, at a ratio of 1-for-14. The Reverse Stock Split was effected on December 23, 2019. On January 9, 2020, the Company received a letter from Nasdaq stating that the Company had regained compliance with the Bid Price Rule and it considered the matter closed.

There can be no assurances that we will be able to maintain compliance with the applicable listing standards of Nasdaq. In the event that our common stock is delisted from Nasdaq and is not eligible for quotation on another market or exchange, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities, such as the Pink Sheets or the OTC Markets. In such event, it could become more difficult to dispose of, or obtain accurate price quotations for, our common stock, and there would likely also be a reduction in our coverage by securities analysts and the news media, which could cause the price of our common stock to decline further. Also, it may be difficult for us to raise additional capital if we are not listed on a major exchange.

Our business is subject to political, economic and health risks, natural disasters and other catastrophic events, which could have a material adverse effect on our business operations.

Our operations and the operations of our suppliers are vulnerable to interruption by fire, earthquake, power loss, flood, terrorist acts and other catastrophic events beyond our control. In particular, our headquarters are located near earthquake fault lines in the San Francisco Bay Area. In addition, we rely on certain suppliers to manufacture our products and would not be able to qualify an alternate supplier of our products for several quarters. Our suppliers often hold significant quantities of our inventories, which, in the event of a disaster, could be destroyed. If there is an earthquake or other catastrophic event near our headquarters, our customers' facilities, our distributors facilities or our suppliers' facilities, our business could be seriously harmed.

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In addition, any catastrophic event, such as the recent COVID-19 virus outbreak first identified in China, the failure of our computer systems or networks, including due to computer viruses, security breaches, war or acts of terrorism, could significantly disrupt our operations. Specifically, any prolonged health threat globally could adversely affect the economies and financial markets of many countries, resulting in an economic downturn that could impact our operating results. The occurrence of any of these events could also affect our customers, distributors and suppliers and produce similar disruptive effects upon their business, which would likely impact our sales and cause a decline in our revenue.

We do not maintain sufficient business interruption and other insurance policies to compensate us for all losses that may occur. Any losses or damages incurred by us as a result of a catastrophic event or any other significant uninsured loss could have a material adverse effect on our business.

There may be some potential effects of system outages or data security breaches, which could adversely affect our operations, financial results or reputation.

We face risks from electrical or telecommunications outages, computer hacking or other general system failure. We rely heavily on our internal information and communications systems and on systems or support services from third parties to manage our operations efficiently and effectively. Any of these are subject to failure. System-wide or local failures that affect our information processing could have a material adverse effect on our business, financial condition, results of operations and cash flows. In addition, a system failure or data security breach could also result in the unintentional disclosure of confidential information about us, our customers or our employees, which could result in our incurring costs for remedial or preventative actions, damage our reputation with customers and reduce demand for our products and services. Further, insurance coverage does not generally protect from normal wear and tear, which can affect system performance. Any applicable insurance coverage for an occurrence could prove to be inadequate. Coverage may be or become unavailable or inapplicable to any risks then prevalent.

Cyberattacks through security vulnerabilities could lead to disruption of business, reduced revenue, increased costs, liability claims, or harm to our reputation or competitive position.

Security vulnerabilities may arise from our hardware, software, employees, contractors or policies we have deployed, which may result in external parties gaining access to our networks, datacenters, cloud datacenters, corporate computers, manufacturing systems, and or access to accounts we have at our suppliers, vendors, and customers. They may gain access to our data or our users' or customers' data, or attack the networks causing denial of service or attempt to hold our data or systems in ransom. The vulnerability could be caused by inadequate account security practices such as failure to timely remove employee access when terminated. To mitigate these security issues, we have implemented measures throughout our organization, including firewalls, backups, encryption, employee information technology policies and user account policies. However, there can be no assurance these measures will be sufficient to avoid cyberattacks. If any of these types of security breaches were to occur and we were unable to protect sensitive data, our relationships with our business partners and customers could be materially damaged, our reputation could be materially harmed, and we could be exposed to a risk of litigation and possible significant liability.

Further, if we fail to adequately maintain our infrastructure, we may have outages and data loss. Excessive outages may affect our ability to timely and efficiently deliver products to customers or develop new products and solutions. Such disruptions and data loss may adversely impact our ability to fulfill orders, patent our intellectual property or protect our source code, and interrupt other processes. Delayed sales or lost customers resulting from these disruptions could adversely affect our financial results, stock price and reputation.

Effective May 25, 2018, the European Union, or EU, implemented the General Data Protection Regulation, or GDPR, a broad data protection framework that expands the scope of current EU data protection law to non-European Union entities that process, or control the processing of, the personal information of EU subjects. The GDPR allows for the imposition of fines and corrective action on entities that improperly use or disclose the personal information of EU subjects, including through a data security breach. The State of California enacted the California Consumer Privacy Act of 2018, or CCPA, effective on January 1, 2020, which contains requirements similar to GDPR for the handling of personal information of California residents, commencing on January 1, 2020. Additional security legislation and regulations are constantly being considered and any such laws enacted may have an adverse impact on our business if we are not able to comply or if compliance requires time and resources for implementation.

Our and our collaborators' and contractors' failure to fully comply with GDPR, CCPA and other laws could lead to significant fines and require onerous corrective action. In addition, data security breaches experienced by us, our collaborators or contractors could result in the loss of trade secrets or other intellectual property, public disclosure of sensitive commercial data, and the exposure of personally identifiable information (including sensitive personal information) of our employees, customers, collaborators and others.

Unauthorized use or disclosure of, or access to, any personal information maintained by us or on our behalf, whether through breach of our systems, breach of the systems of our suppliers or vendors by an unauthorized party, or through employee or contractor error, theft or misuse, or otherwise, could harm our business. If any such unauthorized use or disclosure of, or access to, such personal information was to occur, our operations could be seriously disrupted, and we could be subject to demands, claims and litigation by private parties, and investigations, related actions, and penalties by regulatory authorities. In addition, we could incur significant costs in notifying affected persons and entities and otherwise complying with the multitude of foreign, federal, state and local laws and regulations relating to the unauthorized access to, or use or disclosure of, personal information. Finally, any perceived or actual unauthorized access to, or use or disclosure of, such information could harm our reputation, substantially impair our ability to attract and retain customers and have an adverse impact on our business, financial condition and results of operations.

Our Certificate of Incorporation, Bylaws and Delaware law contain provisions that could discourage a takeover that is beneficial to stockholders.

Provisions of our Certificate of Incorporation, our Bylaws and Delaware law could have the effect of discouraging takeover attempts that certain stockholders might deem to be in their interest. These anti-takeover provisions may make us a less attractive target for a takeover bid or merger, potentially depriving shareholders of an opportunity to sell their shares of common stock at a premium over prevailing market prices as a result of a takeover bid or merger.

Changes to existing accounting pronouncements or taxation rules or practices may cause adverse revenue fluctuations, affect our reported financial results or how we conduct our business.

Generally accepted accounting principles in the United States, or GAAP, are promulgated by, and are subject to the interpretation of the Financial Accounting Standards Board, or FASB, and the SEC. New accounting pronouncements or taxation rules and varying interpretations of accounting pronouncements or taxation practices have occurred and may occur in the future. Any future changes in accounting pronouncements or taxation rules or practices may have a significant effect on how we report our results and may even affect our reporting of transactions completed before the change is effective. In addition, a review of existing or prior accounting practices may result in a change in previously reported amounts. This change to existing rules, future changes, if any, or the questioning of current practices may adversely affect our reported financial results, our ability to remain listed on the Nasdaq, or the way we conduct our business and subject us to regulatory inquiries or litigation.

If, in the future, we conclude our internal control over financial reporting is not effective, investors could lose confidence in the reliability of our financial statements, which could result in a decrease in the value of our common stock.

As directed by Section 404 of the Sarbanes-Oxley Act of 2002, the SEC adopted rules requiring public companies to include a report of management on the companies' internal control over financial reporting in their annual reports on Form 10-K, including an assessment by management of the effectiveness of the filing company's internal control over financial reporting. In addition, the independent registered public accounting firm auditing a public company's financial statements must attest to the effectiveness of the Company's internal control over financial reporting. There is a risk that in the future we may identify internal control deficiencies that suggest that our controls are no longer effective. This could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements, which could cause the market price of our common stock to decline and make it more difficult for us to finance our operations

Risk Related to Our Products

If we fail to successfully develop, introduce and sell new products, eFPGA IP Product, SensiML Software subscriptions/licenses, and other new solutions or if our design opportunities do not generate the revenue we expect, we may be unable to compete effectively in the future and our future gross margins and operating results will be lower.

The market for differentiated consumer devices is highly competitive and dynamic, with short end market product life cycles and rapid obsolescence of existing products. To compete successfully, we must obtain access to advanced fabrication capacity and dedicate significant resources to specify, design, develop, manufacture and sell new or enhanced solutions that provide increasingly higher levels of performance, low power consumption, new features, meeting current and emerging industry standards, reliability and/or cost savings to our customers. Due to the short product life cycle of these devices, our revenue is subject to fluctuation in a short period of time and our ability to grow our business depends on accelerating our design win activity. We often make significant investments in solutions, sensor algorithm software and silicon platform development, selling and marketing, long before we generate revenue, if any, from our efforts. The markets we are targeting typically have higher volumes and greater price pressure than our traditional business. In addition, we quote opportunities in anticipation of future cost reductions and may aggressively price products to gain market share. In order to react quickly to opportunities or to obtain favorable wafer prices, we make significant investments in and commitments to purchase inventories and capital equipment before we have firm commitments from customers.

We expect our business growth to be driven by new products, which currently include EOS™, Quick AI, SensiML, ArcticLink® III, PolarPro®3, PolarPro II, PolarPro, Eclipse II products. We also launched a business that licenses our FPGA technology for use in other semiconductor companies' SoCs and delivered our first eFPGA IP product ArcticPro™ in 2017. The new product revenue growth of our new products and eFPGA IP product needs to be strong enough to achieve profitability. The gross margin associated with our new products is generally lower than the gross margin of our mature products, due primarily to the price-sensitive nature of the higher volume mobile consumer opportunities that we are pursuing with new products and eFPGA IP product. Because the product life cycle of mobile products is short, we must replace revenue at the end of a product life cycle with sales from new design opportunities. While we expect revenue and gross profit growth from new products and eFPGA IP product will offset the expected decline in revenue and gross profit from our mature products, there is no assurance whether or when this will occur. In order to increase our revenue from its current level, we depend upon increased revenue from our existing new products, especially solutions based on our EOS S3, ArcticLink and PolarPro solution platforms, the eFPGA IP product and the development of additional new products and solutions.

If (i) we are unable to design, produce and sell new products, eFPGA IP, SensiML and other products and solutions that meet design specifications, address customer requirements and generate sufficient revenue and gross profit; (ii) market demand for our new products, eFPGA IP product and other products fails to materialize; (iii) we are unable to obtain adequate fabrication capacity on a timely basis; (iv) we are unable to develop new silicon platforms or solutions in a timely manner; or (v) our customers do not successfully introduce products incorporating our devices, or choose a competing offering, our revenue and gross margin of the new products and eFPGA IP product will be materially harmed, which could have an overall adverse and potentially disproportionate effect on our business, results of operations and financial condition.

Two of our products target new unproven markets, and if these markets do not develop, or if our products do not meet their needs, the loss of or reduction in orders could adversely affect our revenue and harm our business financial condition, operating results and cash flows.

eFPGA: We have history and experience in developing, selling and supporting FPGA products and incorporating FPGA IP developed by us into our platform solutions. The eFPGA market is a developing market with unknown requirements and demand. Our current FPGA architectures and their performance may not be a good fit for the eFPGA Market. eFPGA IP is designed for specific foundry/process node combinations, and the ones we have chosen to target may be different from what our customers require. The software developed by us for eFPGA may be delayed or may not meet the needs of the eFPGA Market. The support required by a customer to incorporate the eFPGA may be much higher than expected which may delay new engagements or lead to high costs. The incorporated eFPGA IP may have an unexpected result in the customer's chip leading to compensation demands. The expected NRE and royalty rates we expect to charge for the eFPGA may not be competitive, which may have a material adverse effect on our business, results of operations and financial condition.

SensiML: Mainstream AI runs on powerful processors and large FPGAs. SensiML's AI solution targets end point solutions that use low power processors. The end point AI market is a developing market with unknown requirements and demand. The current SensiML solution may not be a good fit to the evolving needs of the end-point AI market. The support required for customer evaluations and implementation may be higher than expected which may delay engagements and lead to higher costs. The expected SaaS licensing fees and royalty rates we expect to charge for the SensiML solutions may not be competitive, which may have a material adverse effect on our business, results of operations and financial condition.

If our AI products are not low touch, the cost of addressing the fragmented AI market will be high which will delay market penetration, result in reduced revenues or require increased expenses, any of which could adversely affect our revenue and harm our business financial condition, operating results and cash flows.

The end point AI market consists of many different use cases, with each individual use case having a modest volume even though the aggregate volume is large. This is quite different from the mobile consumer market which consists of a few large customers and use cases. In order to scale in the fragmented AI end point market, our products will have to be extremely low touch so that the cost of support is low and scalable across many customers. The current EOS S3AI solution and SensiML solutions may not be sufficiently low touch to address this market in a cost-effective manner, or in the volume required. Higher than expected costs, or lower than expected volume may have a material adverse effect on our business, results of operations and financial condition.

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Our products are subject to a lengthy sales cycle and our customers may cancel or change their product plans after we have expended substantial time and resources in the design of their products.

Our customers often evaluate our products for six months or more before designing them into their systems, and they may not commence volume shipments for up to an additional six to twelve months, if at all. During this lengthy sales cycle, our potential customers may cancel or change their product plans. Customers may also discontinue products incorporating our devices at any time or they may choose to replace our products with lower cost semiconductors. In addition, we are working with leading customers in our target markets to define our future products. If customers cancel, reduce or delay product orders from us, or choose not to release products that incorporate our devices after we have spent substantial time and resources developing products or assisting customers with their product design, our revenue levels may be less than anticipated and our business, results of operations and financial condition may be materially adversely affected.

If we fail to adequately forecast demand for our products, we may incur product shortages or excess product inventories.

Our agreements with certain suppliers require us to provide forecasts of our anticipated manufacturing orders, and place binding manufacturing commitments in advance of receiving purchase orders from our customers. We are limited in our ability to increase or decrease our forecasts under such agreements. Other manufacturers supply us with product on a purchase order basis. The allocation of capacity is determined solely by our suppliers, over which we have no direct control. Additionally, we may place orders with our suppliers in advance of customer orders to allow us to quickly respond to changing customer demand or to obtain favorable product costs. Furthermore, we provide our suppliers with equipment that is used to program our products to customer specifications. The programming equipment is manufactured to our specifications and has significant order lead times. These factors may result in product shortages or excess product inventories. Obtaining additional supply in the face of product, programming equipment or capacity shortages may be costly, or not possible, especially in the short-term since most of our products and programming equipment are supplied by a single supplier. If we fail to adequately forecast demand for our products, our business, the relationship with our customers, our results of operations and financial condition could be materially adversely affected.

Our business could be adversely affected by undetected errors or defect in our products.

Difficulties encountered during the complex semiconductor manufacturing process can render a substantial percentage of semiconductor devices nonfunctional. New manufacturing techniques or fluctuations in the manufacturing process may change the performance distribution and yield of our products. We have, in the past, experienced manufacturing runs that have contained substantially reduced or no functioning devices, or that generated devices with below normal performance characteristics. Our reliance on third party suppliers may extend the period of time required to analyze and correct these problems. Once corrected, our customers may be required to redesign or re-qualify their products. As a result, we may incur substantially higher manufacturing costs, shortages of inventories or reduced customer demand.

Yield fluctuations frequently occur in connection with the manufacture of newly introduced products, with changes in product architecture, with manufacturing at new facilities, on new fabrication processes or in conjunction with new backend manufacturing processes. Newly introduced solutions and products are often more complex and more difficult to produce, increasing the risk of manufacturing related defects. New manufacturing facilities or processes are often more complex and take a period of time to achieve expected quality levels and manufacturing efficiencies. While we test our products, including our software development tools, they may still contain errors or defects that are found after we have commenced commercial production. Undetected errors or defects may also result from new manufacturing processes or when new intellectual property is incorporated into our products. If our products or software development tools contain undetected or unresolved defects, we may lose market share, experience delays in or loss of market acceptance, reserve or scrap inventories or be required to issue a product recall. In addition, we would be at risk of product liability litigation if defects in our products were discovered. Although we attempt to limit our liability to end users through disclaimers of special, consequential and indirect damages and similar provisions, we cannot assure you that such limitations of liability will be legally enforceable.

We will be unable to compete effectively if we fail to anticipate product opportunities based upon emerging technologies and standards or fail to develop products and solutions that incorporate these technologies and standards in a timely manner.

We spend significant resources designing and developing silicon solution platforms, IP and software and reference designs, and adopting emerging technologies. We intend to develop additional products and solutions and to adopt new technologies in the future. If system manufacturers adopt alternative standards or technologies, if an industry standard or emerging technology that we have targeted fails to achieve broad market acceptance, if customers choose low power offerings from our competitors, or if we are unable to bring the technologies or solutions to market in a timely and cost-effective manner, we may be unable to generate significant revenue from our research and development efforts. As a result, our business, results of operations and financial condition could be materially adversely affected, and we may be required to write-off related inventories and long-lived assets.

Rising concern of international tariffs, including tariffs applied to goods traded between the United States and China, as well as potential export restrictions, could materially and adversely affect our business and results of operations.

Regulatory activity, such as enforcement of U.S. export control and sanctions laws, and the imposition of tariffs and export regulations, have in the past and may materially limit our ability to make sales to customers in China, which may harm our results of operations and financial condition. Since the beginning of 2018, there have been several rounds of U.S. tariffs on Chinese goods taking effect in 2018 and 2019, some of which prompted retaliatory Chinese tariffs on U.S. goods. Approximately \$56,000, or 1%, of our total revenue for the year ended January 3, 2021, and approximately \$1.1 million, or 11%, of our total revenue for the year ended December 29, 2019, consisted of sales of our EOS S3 and FPGA products to both OEMs and ODMs in China.

The institution of trade tariffs both globally and between the U.S. and China specifically carries the risk of negatively affecting China's overall economic condition, which could have a negative impact on us as we derived and expect to continue to derive a significant amount of revenue from China. Further escalations of trade conflicts between the United States and China, or other countries where we have operations, may have a material adverse effect on our gross margin.

In addition to recent trade tariffs, if U.S. export controls expand to place new restrictions on the exportation of our products or a subset of our products, such controls could have a material adverse effect on our operating results. Moreover, concerns that U.S. companies may not be reliable suppliers may in the future cause some of our customers to replace our products in favor of products from other suppliers.

Imposition of tariffs or sustained export restrictions could cause a decrease in the sales of our products to customers located in China or other customers selling to Chinese end users, which would directly impact our business and operating results. Further, changes in United States trade policy could trigger retaliatory actions by affected countries, which could impose restrictions on our ability to do business in or with affected countries or prohibit, reduce, or discourage purchases of our products by foreign customers, leading to increased costs of products that contain our components, increased costs of manufacturing our products, and higher prices of our products in foreign markets. Changes in, and responses to, United States trade policy could reduce the competitiveness of our products and cause our sales and revenues to drop, which could materially and adversely impact our business and results of operations.

Exchange rate fluctuations could adversely affect our company's results of operations and financial condition.

We denominate sales of our products to foreign countries exclusively in U.S. dollars. As a result, any increase in the value of the U.S. dollar relative to the local currency of a foreign country will increase the price of our products in that country so that our products become relatively more expensive to customers in their local currency which may cause sales of our products in that foreign country to decline. If the local currency of a foreign country in which we conduct business strengthens against the U.S. dollar, our payroll and other local expenses will be higher, and since sales are transacted in U.S. dollars, would not be offset by any increase in revenue. To the extent any such risks materialize, our business, results of operations and financial condition could be materially adversely affected.

We have implemented import and export control procedures to comply with United States regulations but we are still exposed to potential risks from import and export activity.

Our products, solutions, technology and software are subject to import and export control laws and regulations, which, in some instances, may impose restrictions on business activities, or otherwise require licenses or other authorizations from agencies such as the U.S. Department of State, U.S. Department of Commerce and U.S. Department of the Treasury. These restrictions may impact deliveries to customers or limit development and manufacturing alternatives. We have import and export licensing and compliance procedures in place for purposes of conducting our business consistent with U.S. and applicable international laws and regulations, and we periodically review these procedures to maintain compliance with the requirements relating to import and export regulations. If we are not able to remain in compliance with import and export regulations, we might be subject to investigation, sanctions or penalties by regulatory authorities. Such penalties can include civil, criminal or administrative remedies such as loss of export privileges. We cannot be certain as to the outcome of an evaluation, investigation, inquiry or other action or the impact of these items on our operations. Any such action could adversely affect our financial results and the market price of our common stock.

Risk Related to Our Customers and Partners

We currently depend on a limited number of significant customers, for a significant portion of our revenue and the loss of or reduction in orders from such significant customers could adversely affect our revenue and harm our business financial condition, operating results and cash flows.

A small number of end-customers represented a significant portion our total revenue in our fiscal year ended January 3, 2021. During our fiscal year ended January 3, 2021, three customers accounted for 19%, 16% and 10%, respectively, of our total revenue. We expect to maintain this high level of customer concentration as we continue to market our solutions to leading manufacturers of high-volume mobile applications. As in the past, future demand from these customers may fluctuate significantly from quarter to quarter. These customers typically order products with short requested delivery lead times, and do not provide a commitment to purchase product past the period covered by purchase orders, which may be rescheduled or canceled. In addition, our manufacturing lead times are longer than the delivery lead times requested by these customers, and we make significant purchases of inventory and capital expenditures in anticipation of future demand. If revenue from any significant customer were to decline substantially, we may be unable to offset this decline with increased revenue and gross margin from other customers and we may purchase excess inventories. These factors could have a material adverse impact on our business, results of operations and financial condition.

We may make a significant investment in long-lived assets for the production of our products based upon historical and expected demand. If demand for our products or gross margin generated from our products does not meet our expectations or if we are unable to collect amounts due from significant customers, we may be required to write-off inventories, provide for uncollectible accounts receivable or incur charges against long-lived assets, which may have a material adverse effect on our business, results of operations and financial condition.

We depend upon partnering with other companies to offer voice, motion, and other solutions into our platform.

In addition to working directly with our customers, we partner with other companies that are experts in certain technologies to create more complete solutions. The depth of these relationships varies depending on the partner and the dynamics of the end market being targeted, but these relationships are typically a co-marketing relationship that includes joint account calls, promotional activities and/or engineering collaboration and developments. The propriety code provided by these partners may be an integral part of the solutions that we offer our customers. If we are unable to obtain competitive pricing (NRE, royalty) and prompt quality support by our partner, our solution may not be competitive. In addition, if the quality of our partner's solution does not meet our customer's requirements, it may delay or prevent the incorporation of our product by the customer. There may also be delays and additional expenses to improve or update the partner's solution to meet current market needs. If we are unable to maintain a close working relationship with our partners it would hinder our ability to continue to develop and introduce leading solutions effectively in the future, which may have a material adverse effect on our business, results of operations and financial condition.

We depend on our relationships with third parties to manufacture our new products.

We depend upon GLOBALFOUNDRIES, TSMC, Amkor and STAT-chipPAC to manufacture our new products. The inability of any one of these companies to continue manufacture of our new products for any reason would require us to identify and qualify a new foundry to manufacture our new products. This would be time consuming, difficult and result in unforeseen operational problems. Alternate foundries might not be available to fabricate our new products, or if available, might be unwilling or unable to offer services on acceptable terms and our ability to operate our business or deliver our products to our customers could be severely impaired.

We depend upon third parties for silicon IP, detailed registered-transfer level, or RTL, design, physical design, verification and assembly of our silicon platforms and any failure to meet our requirements in a timely fashion may adversely affect our time to market and revenue.

Our move to a variable cost or outsourced engineering development model allows us access to the best design resources for developing new silicon platforms. This includes access to leading edge silicon IP as well as RTL design and physical design expertise. However, outsourcing the design of a complex silicon platform typically involves multiple companies in multiple locations, which may increase the risk of costly design errors. Any delays or errors in the design of our new silicon platforms could significantly increase the cost of development as well as adversely affect our time to market, which may have a material adverse effect on our business, results of operations and financial condition.

We depend upon partnering with other companies to develop IP, reference platforms, algorithm and system software.

In addition to working directly with our customers, we partner with other companies that are experts in certain technologies to develop additional intellectual property, reference platforms, algorithms and system software to provide application solutions. We also work with mobile processor manufacturers and companies that supply sensor, storage, networking or graphics components for embedded systems. The depth of these relationships varies depending on the partner and the dynamics of the end market being targeted, but is typically a co-marketing relationship that includes joint account calls, promotional activities and/or engineering collaboration and developments, such as reference designs. If we are unable to license new technologies, maintain a close working relationship with our partners, fail to continue to develop and introduce leading technologies or if these technologies fail to generate the revenue we expect, we may not be able to compete effectively in the future, which may have a material adverse effect on our business, results of operations and financial condition.

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We depend upon third parties to fabricate, assemble, test and program our products, and to provide logistics services. Any problems at these third parties could adversely affect our business, results of operations and financial condition.

We contract with third parties to fabricate, assemble, test and program our devices, and vendors for logistics. In general, each of our devices is fabricated, assembled and programmed by a single supplier, and the loss of a supplier, transfer of manufacturing to a new location, expiration of a supply agreement or the inability of our suppliers to manufacture our products to meet volume, performance, quality and cost targets could have a material adverse effect on our business. Our relationship with our suppliers could change as a result of a merger or acquisition. If for any reason these suppliers or any other vendor becomes unable or unwilling to continue to provide services of acceptable quality, at acceptable costs and in a timely manner, our ability to operate our business or deliver our products to our customers could be severely impaired. We would have to identify and qualify substitute suppliers, which could be time consuming, difficult and result in unforeseen operational problems, or we could announce an end-of-life program for these products. Alternate suppliers might not be available to fabricate, assemble, test and program our devices or, if available, might be unwilling or unable to offer services on acceptable terms. In addition, if competition for wafer manufacturing capacity increases, if we need to migrate to more advanced wafer manufacturing technology, or if competition for assembly services increases, we may be required to pay or invest significant amounts to secure access to this capacity. The number of companies that provide these services is limited and some of them have limited operating histories and financial resources. In the event our current suppliers refuse or are unable to continue to provide these services to us, or if we are unable to secure sufficient capacity from our current suppliers on commercially reasonable terms, we may be unable to procure services from alternate suppliers in a timely manner, if at all. Moreover, our reliance on a limited number of suppliers subjects us to reduced control over delivery schedules, quality assurance and costs. This lack of control may cause unforeseen product shortages or may increase our cost to manufacture and test our products.

We utilize third party logistics services, including transportation, warehouse and shipping services. These service providers are subject to interruptions that affect their ability to service us, including the availability of transportation services, disruptions related to work stoppages, volatility in fuel prices and security incidents or natural events at manufacturing, shipping or receiving points or along transportation routes.

In the event any of our third party suppliers or vendors were to experience financial, operational, production or quality assurance difficulties resulting in a reduction or interruption in supply or providing services to us, our business, results of operations and financial condition may be materially adversely affected.

We entered into informal partnerships with certain third parties for the development of solutions. Our business could be adversely affected if such informal partnerships fail to grow as we expected.

Our approach to developing solutions for potential customers involves developing solutions for and aligning our roadmap with application processor, sensor, and flash memory vendors. We have entered into informal partnerships with other parties that involve the development of solutions that interface with their devices or standards. These informal partnerships also may involve joint marketing campaigns and sales calls. If the informal partnerships do not grow as expected or if they are significantly reduced or terminated by acquisition or other means, our business, results of operations and financial condition could be materially adversely affected and we may be required to write-off related inventories and long-lived assets.

Our solutions face competition from suppliers of ASSPs, suppliers of integrated application processors, low power FPGAs, low power MCUs, suppliers of ASICs, suppliers of eFPGA IP, and suppliers of sensor algorithm software whose software is running on competitors' devices.

We face competition from companies that offer ASSPs. While it is difficult to provide a unique solution through the use of ASSPs, ASSPs generally are cost-effective standard products with short lead times. In certain design opportunities, ASSPs can be combined to achieve system design objectives. Manufacturers of integrated application processors often integrate new features when they introduce new products. A system designer could elect the use of an integrated processor that includes the features offered in our solutions and/or a widely accepted feature of our solutions could be integrated into a competitor's ASSP. Some vendors offer low power FPGAs that can be adopted by a mobile device for hardware differentiation that is similar in functionality, physical size, power consumption and price to what we offer with our programmable logic-based solutions. We also face competition from low power MCU companies. While MCUs cannot be customized at the hardware level for product differentiation, they do have the ability to run custom software algorithms written in standard C code, which may yield similar functionality as what we can provide with our products. Companies that supply ASICs, which may be purchased for a lower price at higher volumes and typically have greater logic capacity, additional features and higher performance than our products. In addition, we face competition from companies that provide sensor algorithm software, which may be licensed directly by an OEM, or licensed for use through an MCU company. If we are unable to successfully compete with companies that supply ASSPs, lower power FPGAs, MCUs, ASICs, eFPGA IP, or sensor algorithm software in any of the following areas, our business, results of operations and financial condition will be materially adversely affected: (i) the development of new products, solutions and advanced manufacturing technologies; (ii) the quality, power characteristics, performance characteristics, price and availability of devices, programming hardware and software development tools; (iii) the ability to engage with companies that provide synergistic products and services, including algorithms that may be preloaded into our device at configuration; (iv) the incorporation of industry standards in our products and solutions; (v) the diversity of product offerings available to customers; and (vi) the quality and cost-effectiveness of design, development, manufacturing and marketing efforts.

We may engage in manufacturing, distribution or technology agreements that involve numerous risks, including the use of cash, erosion of margins due to royalty obligations or revenue sharing and diversion of resources.

We have entered into and, in the future, intend to enter into agreements that involve numerous risks, including the use of significant amounts of our cash; royalty obligations or revenue sharing; diversion of resources from other development projects or market opportunities; our ability to collect amounts due under these contracts; and market acceptance of related products and solutions. If we fail to recover the cost of these or other assets from the cash flow generated by the related products, our assets will become impaired and our results of operations and financial condition could be materially adversely affected.

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Both our customers and we are subject to laws, regulations and similar requirements, changes to which may adversely affect our business, results of operations and financial condition.

Both our customers and we are subject to laws, regulations and similar requirements that affect our business, results of operations and financial condition, including, but not limited to, the areas of commerce, import and export control, financial disclosures, intellectual property, income and other taxes, anti-trust, anti-corruption, labor, environmental, health and safety. Our compliance in these areas may be costly, especially in areas where there are inconsistencies between the various jurisdictions in which we operate. While we have implemented policies and procedures to comply with laws and regulations, there can be no assurance that our employees, contractors, suppliers or agents will not violate such laws and regulations or our policies. Any such violation or alleged violation could materially and adversely affect our business, financial condition, cash flows and results of operations. Any changes or potential changes to laws, regulations or similar requirements, or our ability to respond to these changes, may significantly increase our costs to maintain compliance or result in our decision to limit our business, products or jurisdictions in which we operate, any of which could materially and adversely affect our results of operations and financial condition. Federal and state regulatory agencies, including the United States Federal Communications Commission and the various state public utility commissions and public service commissions, regulate most of our domestic telecommunications customers. Similar government oversight also exists in the international market. While we may not be directly affected by this legislation, such regulation of our customers may negatively impact our business. For instance, the sale of our products may be affected by the imposition upon certain of our customers of common carrier tariffs and the taxation of telecommunications services. These regulations are continuously reviewed and changed by the various governmental agencies. Changes in current or future laws or regulations, in the United States or elsewhere, could materially and adversely affect our results of operations and financial condition.

The Dodd-Frank Wall Street Reform and Consumer Protection Act includes provisions regarding certain minerals and metals, known as conflict minerals, mined from the Democratic Republic of Congo and adjoining countries. These provisions require companies to undertake due diligence procedures and report on the use of conflict minerals in its products, including products manufactured by third parties. Compliance with these provisions has caused and will continue to cause us to incur costs to determine whether our supply chain is conflict free and we may face difficulties if our suppliers are unwilling or unable to verify the source of their materials. Our ability to source these minerals and metals may also be adversely impacted. In addition, our customers may require that we provide them with a certification and our inability to do so may disqualify us as a supplier.

We have entered and will continue to enter into strategic licensing and collaborative partnerships and relationships with third parties. The anticipated benefits of these partnerships and relationships may never materialize and these partnerships and relationships may instead disrupt our business and harm our financial condition.

We have entered into strategic licensing and collaborative partnerships and relationships with third parties and will continue to enter into such partnerships and relationships with the goal of acquiring or gaining access to new and innovative semiconductor products and technologies, as well as other technologies which can be used to add to the differentiation of our emerging products, on a timely basis. Negotiating and performing under these arrangements involves significant time and expense, and we cannot assure you that the anticipated benefits of these arrangements will ever materialize or that the products or technologies involved will ever be commercialized or that, as a result, we will not have written down a portion or all of our investment. The arrangements with some third parties contain conditions and contingencies (such as a condition to raise a certain amount of capital), and we cannot assure you that we will meet all the conditions under these arrangements. We may end up with owing various obligations and commitments to third parties related to these arrangements. Such arrangements can magnify several risks for us, including loss of control over the development and development timeline of products being developed with third parties. Accordingly, we face increased risk that development activities may result in products that are not commercially successful or that are not available in a timely fashion. In addition, any third party with whom we enter into a development, product collaboration or technology licensing arrangement may fail to commit sufficient resources to the project, change its policies or priorities and abandon or fail to perform its obligations related to the collaboration. The failure to timely develop commercially successful products through our development projects or strategic investment activities as a result of any of these and other challenges could have a material adverse effect on our business, results of operations and financial condition. Other challenges and risks presented by use of strategic partnerships include the acquisition of a partner with which we have a strategic relationship by an unaffiliated third party that either delays or jeopardizes the original intent of the partnering relationship or investment.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal administrative, sales, marketing, research and development and final testing facility is located in a building of approximately 24,164 square feet of premises located at 2220 Lundy Avenue, San Jose, California for a period of five years, effective April 15, 2019. Until April 14, 2019, the Company's principal administrative, sales, marketing, research and development and final testing facility was located at 1277 Orleans Drive, Sunnyvale, CA 94089. The Company exited Sunnyvale premises lease in July 2019.

In October 2018, the Company leased a facility for Research and Development in San Diego, California, the lease of which expired in July 2020. The Company did not renew the lease agreement and closed the San Diego office. On February 28, 2019, SensiML Corporation, our newly acquired subsidiary, entered into an agreement to lease approximately 925 square feet of facility space in Beaverton, Oregon, which expires in March 2021. The Company is currently considering several options including negotiating with the landlord of its Oregon location for an extension. Additionally, we lease a 9,400 square foot facility in Bangalore, India for the purpose of software development, which is leased through June 2021. On July 10, 2020, the Company's Indian subsidiary leased a smaller office premises of 1,100 square feet for a period of 11 months to accommodate the reduced headcount resulting from our restructuring in 2020. Subsequently, we deemed the 9,400 square foot location to be abandoned and we recognized the rent expense of that facility in restructuring charges in December 2020. We also lease office space in Shanghai, China; in London, England; in Taipei, Taiwan; and in Seongnam City, South Korea. We believe that our existing facilities are adequate for our current needs.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we are involved in legal actions arising in the ordinary course of business, including but not limited to intellectual property infringement and collection matters. Absolute assurance cannot be given that third-party assertions will be resolved without costly litigation in a manner that is not adverse to our financial position, results of operations or cash flows or without requiring royalty or other payments in the future, which may adversely impact gross profit. We are not currently a party to any material pending legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR THE REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Common Stock Information

Our common stock is currently traded on the Nasdaq Capital Market under the symbol QUIK. From October 15, 1999, the date of our initial public offering to July 21, 2019, our common stock was traded on the Nasdaq Global Market under the same symbol.

The closing price of our common stock on the Nasdaq was \$8.41 per share on March 15, 2021. As of March 15, 2021, there were 11,270,290 shares of common stock outstanding that were held of record by 120 stockholders. The actual number of stockholders is greater than this number of holders of record since this number does not include stockholders whose shares are held in trust by other entities.

Dividend Policy

We have never declared or paid any dividends on our capital stock. We currently expect to retain future earnings, if any, for use in the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future.

Equity Compensation Plan Information

The information required by this item regarding equity compensation plans is set forth under the caption "Equity Compensation Plan Summary" in our Proxy Statement which information is incorporated by reference herein.

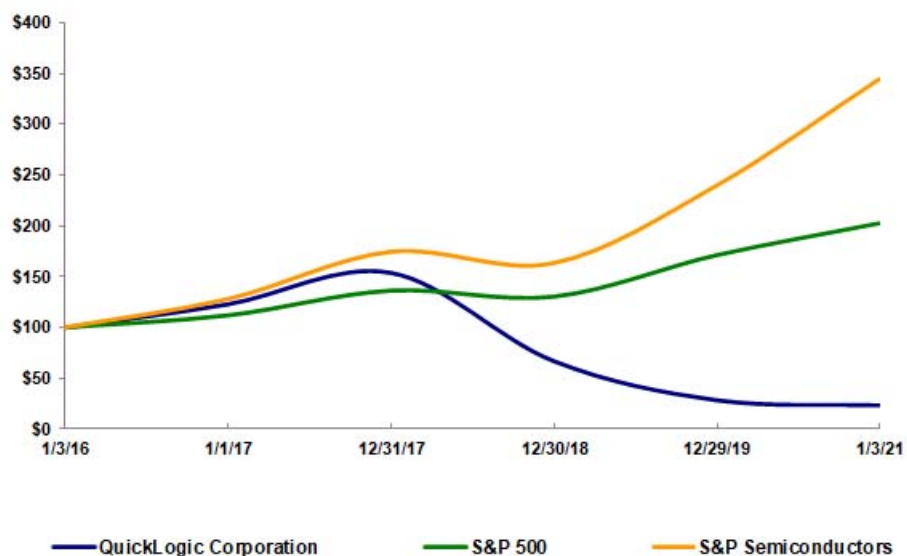
Stock Performance Graph

The following graph compares the cumulative total return to stockholders of our common stock from January 3, 2016 to January 3, 2021 to the cumulative total return over such period of (i) the S&P 500 Index and (ii) the S&P Semiconductors Index. The graph assumes that \$100 was invested on January 3, 2016 in QuickLogic’s common stock and in each of the other two indices and the reinvestment of all dividends, if any, through January 3, 2021

The information contained in the Performance Graph shall not be deemed to be “soliciting material” or to be “filed” with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that QuickLogic specifically incorporates it by reference into any such filing. The graph is presented in accordance with SEC requirements. Stockholders are cautioned against drawing any conclusions from the data contained therein, as past results are not necessarily indicative of future performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among QuickLogic Corporation, the S&P 500 Index
and the S&P Semiconductors Index



*\$100 invested on 1/3/16 in stock or 12/31/15 in index, including reinvestment of dividends.
Indexes calculated on month-end basis.

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	1/1/2017	12/31/2017	12/30/2018	12/29/2019	1/3/2021
QuickLogic Corporation	123.01	153.98	67.33	28.95	23.96
S&P 500	111.96	136.40	130.42	171.49	203.04
S&P Semiconductor	127.95	174.43	163.29	239.64	344.43

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

ITEM 6. SELECTED FINANCIAL DATA

	Fiscal Years				
	2020	2019	2018	2017	2016
	(in thousands, except per share amount)				
Statements of Operations:					
Revenue	\$ 8,634	\$ 10,310	\$ 12,629	\$ 12,149	\$ 11,421
Cost of revenue	4,386	4,405	6,295	6,627	7,648
Gross profit	4,248	5,905	6,334	5,522	3,773
Operating expenses:					
Research and development	7,544	12,350	9,948	9,572	12,265
Selling, general and administrative	6,820	8,918	9,982	9,900	10,310
Restructuring costs(1)	753	—	—	—	—
Loss from operations	(10,869)	(15,363)	(13,596)	(13,950)	(18,802)
Interest expense	(328)	(350)	(108)	(115)	(175)
Interest income and other expense, net	97	189	77	21	(106)
Loss before income taxes	(11,100)	(15,524)	(13,627)	(14,044)	(19,083)
Provision for (benefit from) income taxes	51	(80)	152	87	65
Net loss	<u>\$ (11,151)</u>	<u>\$ (15,444)</u>	<u>\$ (13,779)</u>	<u>\$ (14,131)</u>	<u>\$ (19,148)</u>
Net loss per share:					
Basic and diluted	<u>\$ (1.14)</u>	<u>\$ (2.02)</u>	<u>\$ (2.16)</u>	<u>\$ (2.56)</u>	<u>\$ (4.10)</u>
Weighted average shares: (2)					
Basic and diluted	<u>9,781</u>	<u>7,663</u>	<u>6,365</u>	<u>5,521</u>	<u>4,670</u>
	January 3, 2021	December 29, 2019	December 30, 2018	December 31, 2017	January 1, 2017
	(in thousands)				
Balance Sheet Data:					
Cash and cash equivalents	\$ 22,748	\$ 21,548	\$ 26,463	\$ 16,527	\$ 14,870
Working capital	\$ 10,178	\$ 10,366	\$ 15,576	\$ 12,619	\$ 9,042
Total assets	\$ 32,888	\$ 33,404	\$ 36,086	\$ 24,636	\$ 21,844
Long-term obligations, excluding current portion	\$ 2,389	\$ 1,583	\$ 124	\$ 369	\$ 49
Total stockholders' equity	\$ 12,487	\$ 13,823	\$ 17,255	\$ 14,878	\$ 11,988

(1) We incurred restructuring costs of \$753,000 in 2020. In 2020, we implemented a restructuring plan to lower annual operating expenses.

(2) Net loss per share and weighted average shares, basic and diluted are adjusted to reflect 1-for-14 reverse stock split effected on December 23, 2019.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with the financial statements and related notes included in this Annual Report on Form 10-K. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties including those discussed under Part I, Item 1A, "Risk Factors." These risks and uncertainties may cause actual results to differ materially from those discussed in the forward-looking statements.

Overview

We develop low power, multi-core semiconductor platforms and IP for AI, voice and sensor processing. The solutions include an eFPGA for hardware acceleration and pre-processing, and heterogeneous multi-core SoCs that integrate eFPGA with other processors and peripherals. The SensiML Analytics Toolkit from our recently acquired wholly owned subsidiary, SensiML completes the "full stack" end-to-end solution with accurate sensor algorithms using AI technology. The full range of platforms, software tools and eFPGA IP enables the practical and efficient adoption of AI, voice and sensor processing across mobile, wearable, hearable, consumer, industrial, edge and endpoint IoT applications.

Our new products include our EOS™, QuickAI™, SensiML Analytics Studio, ArcticLink® III, PolarPro®3, PolarPro II, PolarPro, and Eclipse II products (which together comprise our new product category). Our mature products include primarily FPGA families named pASIC®3 and QuickRAM® as well as programming hardware and design software. In addition to delivering our own semiconductor solutions, we have an IP business that licenses our eFPGA technology for use in other semiconductor companies SoCs. We began delivering our eFPGA IP product ArcticPro™ in 2017, which is included in the new product revenue category. Through the acquisition of SensiML, we now have an IoT AI software platform that includes SaaS subscriptions for development, per unit license fees when deployed in production, and proof-of-concept services – all of which are also included in the new product revenue category.

Our semiconductor solutions typically fall into one of three categories: Sensor Processing, Display and Visual Enhancement, and Smart Connectivity. Our solutions include a unique combination of our silicon platforms, IP cores, software drivers, and in some cases, firmware and application software. All of our silicon platforms are standard devices and must be programmed to be effective in a system. Our IP that enables always-on context-aware sensor applications includes our Flexible Fusion Engine, our Sensor Manager and Communications Manager technologies as well as IP that (i) improves multimedia content, such as our Visual Enhancement Engine, or VEE, technology, and Display Power Optimizer, or DPO, technology; and (ii) implements commonly used mobile system interfaces, such as Low Voltage Differential Signaling, or LVDS, Mobile Industry Processor Interface, or MIPI, and Secure Digital Input Output, or SDIO.

Through the acquisition of SensiML, our core IP also includes the SensiML AI Toolkit that enables OEMs to develop AI software for a broad array of resource-constrained time-series sensor endpoint applications. These include a wide range of consumer and industrial sensing applications.

We also work with mobile processor manufacturers, sensor manufacturers, and voice recognition, sensor fusion and context awareness algorithm developers in the development of reference designs. Through reference designs that incorporate our solutions, we believe mobile processor manufacturers, sensor manufacturers, and sensor and voice algorithm companies can expand the available market for their respective products. Furthermore, should a solution developed for a processor manufacturer or sensor and/or sensor algorithm company be applicable to a set of common OEMs or Original Design Manufacturers, or ODMs, we can amortize our Research and Development, or R&D, investment over that set of OEMs or ODMs. There may also be cases when platform providers that intend to use always-on voice recognition will dictate certain performance requirements for the combined software/hardware solution before the platform provider certifies and/or qualifies our product for use by end customers.

In addition to working directly with our customers, we partner with other companies that are experts in certain technologies to develop additional IP, reference platforms and system software to provide application solutions, particularly in the area of hardware acceleration for AI-type applications. We also work with mobile processor and communications semiconductor device manufacturers and companies that supply sensor, algorithms and applications. For our sensor processing solutions, we collaborate with sensor manufacturers to ensure interface compatibility. We also collaborate with sensor and voice/audio software companies, helping them optimize their software technology on our silicon platforms in terms of performance, power consumption and user experience.

Our ArcticPro eFPGA IP are currently developed on 65nm, 40nm and 22nm process nodes. The licensable IP is generated by a compiler tool that enables licensees to create an eFPGA block that they can integrate into their SoC without significant involvement by QuickLogic. We believe this flow enables a scalable support model for QuickLogic. For our eFPGA strategy, we work with semiconductor manufacturing partners to ensure our eFPGA IP is proven for a given foundry and process node before it is licensed to a SoC company.

In order to grow our revenue from its current level, we depend upon increased revenue from our new products including existing new product platforms, eFPGA IP and platforms currently in development. We expect our business growth to be driven mainly by our silicon solutions, eFPGA IP and SensiML AI Software. Therefore, our revenue growth needs to be strong enough to enable us to sustain profitability while we continue to invest in the development, sales and marketing of our new solution platforms, IP and software. We are expecting revenue growth from EOS S3, SensiML AI SaaS, and eFPGA IP licensing in fiscal year 2021.

We continue to seek to expand our revenue, including pursuing high-volume sales opportunities in our target market segments, by providing solutions incorporating IP, or industry standard interfaces. Our industry is characterized by intense price competition and by lower margins as order volumes increase. While winning large volume sales opportunities will increase our revenue, we believe these opportunities may decrease our gross profit as a percentage of revenue.

During 2020 we generated total revenue of \$8.6 million, which represents a 16% decrease from \$10.3 million in fiscal 2019. Our new product revenue during fiscal 2020 was \$2.8 million, which represents an 11% decrease from fiscal 2019, while our mature product revenue during 2020 was \$5.9 million, which represents a 19% decrease from 2019. We shipped our new products into four of our targeted mobile market segments: Smartphones, Wearables, Mobile Enterprise, Tablets, and SaaS revenue from the new Artificial Intelligence or AI market beginning in 2019. Overall, with the improvements in reduced operating expenses achieved by our restructuring activities, offset partially by the impact of the COVID-19 pandemic beginning in early fiscal 2020, we reported a net loss of \$11.2 million for 2020 compared to a net loss of \$15.4 million for 2019

We have experienced net losses in the recent years and expect losses to continue through at least fiscal year 2021, as we continue to develop new products, applications and technologies. Whether we can achieve cash flow levels sufficient to support our operations cannot be accurately predicted. Unless such cash flow levels are achieved in addition to the proceeds we received from our recent sale of our equity securities, we may need to borrow additional funds or sell debt or equity securities, or some combination thereof, to provide funding for our operations, and such additional funding may not be available on commercially reasonable terms, or at all.

On December 6, 2019, the Board of Directors of the Company approved a 1-for-14 reverse stock split of the Company's outstanding Common Stock, which became effective on December 23, 2019, which was approved by the Company's shareholders in a special meeting held on November 26, 2019. At the effective time of the Reverse Stock Split, every 14 issued and outstanding shares of the Company Common Stock were automatically combined into one issued and outstanding share of Common Stock without any change in the par value per share. Stockholders who would have otherwise been entitled to fractional shares of Common Stock as a result of the Reverse Stock Split received a cash payment in lieu of receiving fractional shares. All share, equity award, and per share amounts contained in this Form 10-K and the accompanying Consolidated Financial Statements have been adjusted to reflect the Reverse Stock Split for all prior periods presented.

COVID-19 Response

The COVID-19 pandemic and its effects on the Company's business in its fiscal 2020, and potential effects on fiscal 2021 and beyond remain uncertain. There have been further restrictions by the governmental authorities as a result of a surge in COVID-19 cases during the winter of 2020 and continuing into fiscal 2021. These restrictions and other impacts from COVID-19 could cause further disruptions or restrictions on the Company's ability to source, manufacture or distribute its products, including temporary disruptions to the facilities of its contract manufacturers in China, Taiwan, Philippines and Singapore, or the facilities of its suppliers and their contract manufacturers globally. Additionally, multiple countries have imposed and may further impose restrictions on business operations and movement of people and products to limit the spread of COVID-19. This might cause delays in production or delivery of components or raw materials that are part of the Company's global supply chain. If COVID-19 cases surge and the Company experiences more pronounced disruptions in its operations, the Company may experience constrained supply or curtailed demand that may materially adversely impact its business and results of operations.

The extent of the impact of COVID-19 on our operational and financial performance will depend on future developments, including the duration and spread of the pandemic, restrictions on travel, transportation and other containment measures, the success and availability of the recent vaccine, our compliance with these measures and the impact on our employees, customers, contractors and supply chain, all of which are uncertain and cannot be predicted.

Restructuring

In January 2020, the Company implemented a restructuring plan to lower annual operating expenses. The restructuring plan was approved by the Company's Board of Directors on January 24, 2020. Pursuant to the restructuring plan, the Company recorded \$753,000 of restructuring charges during the twelve months of fiscal year 2020, consisting primarily of employee severance related costs and facilities costs. See Note 1 to the Condensed Consolidated Financial Statements for details.

Our employees and customers

Our top priority during the ongoing COVID-19 pandemic remains the health and safety of our employees and their families, as well as our customers. As global governments institute restrictions on commercial operations, we are working to ensure our compliance while also maintaining business continuity for operations.

Most of our personnel continue to work from home except few personnel, who are required for minimum operations. We only allow employees in our facilities who are essential to the facilities' operations under best practices guidelines on maintaining physical distancing, utilizing enhanced cleaning protocols and usage of personal protective equipment.

We are committed to our customers to enable the support they need to continue providing vital services and tools. Our global offices remain operational to meet customer needs during the pandemic in compliance with the orders and restrictions imposed by local authorities in each of our locations, and we are working with our customers to meet their specific shipment needs. While the pandemic has created delays on the inbound supply chain at our partners and our own facilities and both inbound and outbound logistical challenges, we have been able to identify alternative solutions such that none of the issues have had a material impact on our ability to fulfill demand.

Critical Accounting Policies and Estimates

The methods, estimates and judgments we use in applying our most critical accounting policies have a significant impact on the results we report in our consolidated financial statements. The SEC has defined critical accounting policies as those that are most important to the portrayal of our financial condition and results of operations and require us to make our most difficult and subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain. Based on this definition, our critical policies include revenue recognition including determination of the Stand-Alone Selling Price, or SSP, for each distinct performance obligation, sales returns and allowances, valuation of inventories including identification of excess quantities and product obsolescence, allowance for doubtful accounts, valuation of long-lived assets, measurement of stock-based compensation and accounting for income taxes. We believe that we apply judgments and estimates in a consistent manner and that such consistent application results in consolidated financial statements and accompanying notes that fairly represent all periods presented. However, any factual errors or errors in these judgments and estimates may have a material impact on our financial statements.

Revenue Recognition

We supply standard products that must be programmed before they can be used in an application. Our products may be programmed by us, distributors, end-customers or third parties.

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We recognize revenue in accordance with ASC Topic No. 606 and related ASUs, which provide supplementary guidance, and clarifications. The results for the reporting period beginning after January 1, 2018, are presented in accordance with the new standard, although comparative information for the prior years have not been restated and continue to be reported under the accounting standards and policies in effect for those periods. Under the new standard revenue is recognized as follows:

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services.

We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer,
- Identification of the performance obligations in the contract,
- Determination of the transaction price,
- Allocation of the transaction price to the performance obligations in the contract, and
- Recognition of revenue when, or as, we satisfy a performance obligation.

As part of its assessment of each contract, the Company evaluates certain factors including the customer's ability to pay, or credit risk. For each contract, the Company considers the promise to transfer products, each of which is distinct, to be the identified performance obligations. In determining the transaction price, the price stated on the purchase order is typically fixed and represents the net consideration to which the Company expects to be entitled, and therefore there is no variable consideration. As the Company's standard payment terms are less than one year, the Company has elected, as a practical expedient, to not assess whether a contract has a significant financing component. The Company allocates the transaction price to each distinct product based on its relative standalone selling price. The product price as specified on the purchase order is considered the standalone selling price as it is an observable source that depicts the price as if sold to a similar customer in similar circumstances.

Product Revenue

We generate most of our revenue by supplying standard hardware products, which must be programmed before they can be used in an application. Our contracts with customers are generally for products only, and do not include other performance obligations such as services, extended warranties or other material rights.

We recognize hardware product revenue at the point of time when control of products is transferred to the customers, when our performance obligation is satisfied, which typically occurs upon shipment from our manufacturing site or our headquarters.

Intellectual Property and Software License Revenue

We also generate revenue from licensing IP, software tools and royalty from licensing our technology.

We recognize IP and Software License revenue at the point of time when the control of IP or software license has been transferred.

Some of the IP and Software Licensing contracts with customers contain multiple performance obligations. For these contracts, we account for individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. We determine the standalone selling prices based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, type of the customer, customer tier, type of the technology used, customer demographics, geographic locations, and other factors.

Software as a Service Revenue, or SaaS Revenue

Software products that are offered to the customers with a right to use the hosted software over the contract period without taking the possession of it are billed on a subscription basis. Revenue that are billed on a subscription basis is recognized ratably over the contract period.

Maintenance Revenue

We recognize revenue from maintenance ratably over the term of the underlying maintenance contract term. Renewals of maintenance contracts create new performance obligations that are satisfied over the term with the revenues recognized ratably over the term.

Royalty Revenue

We recognize royalty revenue when the later of the following events occurs: a) The subsequent sale or usage occurs; b) The performance obligation to which some or all of the sales-based royalty has been allocated has been satisfied.

Deferred Revenue

Receivables are recognized in the period we ship the product. Payment terms on invoiced amounts are based on contractual terms with each customer. When we receive consideration, or such consideration is unconditionally due, prior to transferring goods or services to the customer under the terms of a sales contract, we record deferred revenue, which represents a contract liability. We recognize deferred revenue as net sales once control of goods and/or services have been transferred to the customer and all revenue recognition criteria have been met and any constraints have been resolved. We defer the product costs until recognition of the related revenue occurs.

Assets Recognized from Costs to Obtain a Contract with a Customer

We recognize an asset for the incremental costs of obtaining a contract with a customer if we expect the benefit of those costs to be longer than one year. We have concluded that none of the costs we have incurred to obtain and fulfill our FASB Accounting Standards Codification, or ASC, 606 contracts meet the capitalization criteria, and as such, there are no costs deferred and recognized as assets on the consolidated balance sheet at January 3, 2021.

Practical Expedients and Exemptions

- (i) Taxes collected from customers and remitted to government authorities and that are related to the sales of our products are excluded from revenues.
- (ii) Sales commissions are expensed when incurred because the amortization period would have been one year or less. These costs are recorded in Selling, general and administrative expense in the Condensed Consolidated Statements of Income.
- (iii) We do not disclose the value of unsatisfied performance obligations for (i) contracts with original expected lengths of one year or less or (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for the services performed.

We record allowance for sales returns. Amounts recorded for sales returns for the year ended January 3, 2021 and December 29, 2019 were \$30,000 and \$60,000, respectively.

Cost of Revenue

We record all costs associated with its product sales in cost of revenue. These costs include the cost of materials, contract manufacturing fees, shipping costs and quality assurance. Cost of revenue also includes indirect costs such as warranty, excess and obsolete inventory charges, general overhead costs and depreciation.

Valuation of Inventories

Inventories are stated at the lower of standard cost or net realizable value. Standard cost approximates actual cost on a first-in, first-out basis. We routinely evaluate quantities and values of our inventories in light of current market conditions and market trends and record reserves for quantities in excess of demand and product obsolescence. The evaluation may take into consideration historic usage, expected demand, anticipated sales price, the stage in the product life cycle of our customers' products, new product development schedules, the effect new products might have on the sale of existing products, product obsolescence, customer design activity, customer concentrations, product merchantability and other factors. Market conditions are subject to change. Actual consumption of inventories could differ from forecasted demand and this difference could have a material impact on our gross margin and inventory balances based on additional provisions for excess or obsolete inventories or a benefit from inventories previously written down. We also regularly review the cost of inventories against estimated market value and record a lower of cost or market reserve for inventories that have a cost in excess of estimated market value, which could have a material impact on our gross margin and inventory balances based on additional write-downs to net realizable value or a benefit from inventories previously written down.

Our semiconductor products have historically had an unusually long product life cycle and obsolescence has not been a significant factor in the valuation of inventories. However, as we pursue opportunities in the mobile market and continue to develop new products, we believe our new product life cycle will be shorter, which could increase the potential for obsolescence. A significant decrease in demand could result in an increase in excess inventory on hand. Although we make every effort to ensure the accuracy of our forecasts of future product demand, any significant unanticipated changes in demand or frequent new product developments could have a significant impact on the value of our inventory and our results of operations.

Leases

We account for operating and finance leases in accordance with ASU, No. 2016-02, *Leases (Topic 842)*, or *ASC 842, Leases*. Under Topic 842, all significant lease arrangements are generally recognized at lease commencement. Operating lease right-of-use, or ROU, assets and lease liabilities are recognized at the commencement date. A ROU asset and corresponding lease liability is not recorded for leases with an initial term of 12 months or less (short term leases) and the Company recognizes lease expense for these leases as incurred over the lease term.

ROU assets represent the Company's right to use an underlying asset during the reasonably certain lease terms and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company primarily uses its incremental borrowing rate, based on the information available at commencement date, in determining the present value of lease payments. The operating lease ROU asset also includes any lease payments related to initial direct cost and prepayments and excludes lease incentives. Lease expense is recognized on a straight-line basis over the lease term. The Company has lease agreements with lease and non-lease components, which are generally accounted for separately.

Upon adoption of the ASU No. 2016-02, the Company recognized right-of-use assets of approximately \$975,000 and lease liabilities of approximately \$939,000 on the Company's Consolidated Balance Sheet as of March 31, 2019, with no material impact to its Consolidated Statements of Operations.

Business Combinations

The Company recognizes assets acquired (including goodwill and identifiable intangible assets) and liabilities assumed at fair value on the acquisition date. Subsequent changes to the fair value of such assets acquired and liabilities assumed are recognized in earnings, after the expiration of the measurement period, a period not to exceed 12 months from the acquisition date. Acquisition-related expenses and acquisition-related restructuring costs are recognized in earnings in the period in which they are incurred.

Goodwill and Intangible Assets

Goodwill represents the excess fair value of consideration transferred over the fair value of net assets acquired in business combinations. The carrying value of goodwill and indefinite lived intangible assets are not amortized, but are annually tested for impairment and more often if there is an indicator of impairment.

Intangible assets with finite useful lives are amortized on a straight-line basis over the periods benefited. The Company reviews the recoverability of its long-lived assets when events or changes in circumstances occur that indicate that the carrying value of the asset or asset group may not be recoverable. The assessment of possible impairment is based on the Company's ability to recover the carrying value of the asset or asset group from the expected future pre-tax cash flows (undiscounted and without interest charges) of the related operations. If these cash flows are less than the carrying value of such asset, an impairment loss is recognized for the difference between estimated fair value and carrying value. The measurement of impairment requires management to estimate future cash flows and the fair value of long-lived assets.

Valuation of Long-Lived Assets

We assess annually whether the value of identifiable long-lived assets, including property and equipment, have been impaired and when events or changes in circumstances indicate that the carrying value of an asset or asset group may not be recoverable. Our assessment of possible impairment is based on our ability to recover the carrying value of an asset or asset group from their expected future pre-tax cash flows, undiscounted and without interest charges, of the related operations. If these cash flows are less than the carrying value of the asset or asset group, we recognize an impairment loss for the difference between estimated fair value and carrying value, and the carrying value of the related assets is reduced by this difference. The measurement of impairment requires management to estimate future cash flows and the fair value of long-lived assets. Based on this analysis, there are no significant impairments to our long-lived assets.

Measurement of Stock-Based Compensation

We account for stock-based compensation under the provisions of the amended authoritative guidance and related interpretations, which require the measurement and recognition of expense related to the fair value of stock-based compensation awards. The fair value of stock-based compensation awards is measured at the grant date and re-measured upon modification, as appropriate. Determining the appropriate fair value model and calculating the fair value of stock-based awards at the date of grant require judgment.

We use the Black-Scholes option pricing model to estimate the fair value of employee stock options and rights to purchase shares under our 2019 Stock Plan, 2009 Stock Plan and 2009 Employee Stock Purchase Plan, or ESPP, consistent with the provisions of the amended authoritative guidance. This fair value is expensed on a straight-line basis over the requisite service period of the award. Using the Black-Scholes pricing model requires us to develop highly subjective assumptions, including the expected term of awards, expected volatility of our stock, expected risk-free interest rate and expected dividend rate over the term of the award. Our expected term of awards is based primarily on our historical experience with similar grants. Our expected stock price volatility for both stock options and ESPP shares is based on the historic volatility of our stock, using the daily average of the opening and closing prices and measured using historical data appropriate for the expected term. The risk-free interest rate assumption approximates the risk-free interest rate of a Treasury Constant Maturity bond with a maturity approximately equal to the expected term of the stock option or ESPP shares.

In addition to the assumptions used in the Black-Scholes pricing model, the amended authoritative guidance requires that we recognize compensation expense only for awards ultimately expected to vest; therefore, we are required to develop an estimate of the historical pre-vest forfeiture experience and apply this to all stock-based awards. The fair value of restricted stock awards, or RSAs, and restricted stock units, or RSUs, is based on the closing price of our common stock on the date of grant. RSA and RSU awards which vest with service are expensed over the requisite service period. RSAs and RSU awards that are expected to vest based on the achievement of a performance goal are expensed over the estimated vesting period. We regularly review the assumptions used to compute the fair value of our stock-based awards and we revise our assumptions as appropriate. In the event that assumptions used to compute the fair value of our stock-based awards are later determined to be inaccurate or if we change our assumptions significantly in future periods, stock-based compensation expense and our results of operations could be materially impacted. See Note 13 to the Consolidated Financial Statements.

Accounting for Income Taxes

As part of the process of preparing our financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves estimating our actual current tax exposure together with assessing temporary differences resulting from different tax and accounting treatment of items, such as deferred revenue, allowance for doubtful accounts, the impact of equity awards, depreciation and amortization, and employee-related accruals. These differences result in deferred tax assets and liabilities, which are included on our balance sheets. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income. To the extent we believe that recovery is not likely, we must establish a valuation allowance. To the extent we establish a valuation allowance or increase this allowance in a period, we must include an expense within the tax provision in the statements of operations.

Significant management judgment is required in determining our provision for income taxes, deferred tax assets, liabilities and any valuation allowance recorded against our net deferred tax assets. Our deferred tax assets net of deferred tax liabilities relating to an ROU asset of \$0.5 million, consisted primarily of net operating loss carryforwards, depreciation and amortization, amounted to approximately \$61.0 million, tax effected, as of the end of 2020. In evaluating our ability to recover our deferred tax assets within the jurisdiction from which they arise, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, uncertainty of projecting future taxable income and results of recent operations. As of January 3, 2021, we had federal and state income tax net operating loss, or NOL, carryforwards of approximately \$181.1 million and \$80.9 million, respectively, which will expire at various dates from 2020 through 2038. Federal net operating losses generated in 2018 and forward of \$39.2 million can be carried forward indefinitely. We had research credit carryforwards of approximately \$4.1 million for federal and \$4.6 million for state income tax purposes as of January 3, 2021. If not utilized, the federal carryforwards will expire at various dates from 2021. The California credit can be carried forward indefinitely. We believe that it is more likely than not that the deferred tax assets and benefits from these federal and state NOL and credit carryforwards will not be realized. In recognition of this risk, we have recorded a valuation allowance of \$60.5 million, tax-effected, as of the end of 2020, due to uncertainties related to our ability to utilize our U.S. deferred tax assets before they expire.

Results of Operations

The following table sets forth the percentage of revenue for certain items in our statements of operations for the periods indicated:

	Fiscal Years		
	2020	2019	2018
Statements of Operations:			
Revenue	100%	100%	100%
Cost of revenue	51%	43%	50%
Gross profit	49%	57%	50%
Operating expenses:			
Research and development	87%	120%	79%
Selling, general and administrative	79%	86%	79%
Restructuring costs	9%	—%	—%
Loss from operations	(126)%	(149)%	(108)%
Interest expense	(4)%	(3)%	(1)%
Interest income and other expense, net	1%	2%	1%
Loss before income taxes	(129)%	(150)%	(108)%
Provision for (benefit from) income taxes	(1)%	1%	1%
Net loss	(128)%	(151)%	(109)%

Impact of inflation and product price changes on our revenue and on income was immaterial in 2020, 2019 and 2018.

Comparison of Fiscal Years 2020 and 2019

Revenue. The table below sets forth the changes in revenue for fiscal year ended January 3, 2021, as compared to fiscal year ended December 29, 2019 (in thousands, except percentage data):

	Fiscal Years				Year-Over-Year Change	
	2020		2019			
	Amount	% of Total Revenues	Amount	% of Total Revenues		
Revenue by product family (1):						
New products	\$ 2,782	32%	\$ 3,123	30%	\$ (341)	(11)%
Mature products	5,852	68%	7,187	70%	(1,335)	(19)%
Total revenue	\$ 8,634	100%	\$ 10,310	100%	\$ (1,676)	(16)%

(1) New products include all products manufactured on 180 nanometer or smaller semiconductor processes, eFPGA IP license, QuickAI and SensiML AI software as a service (SaaS) revenues. Mature products include all products produced on semiconductor processes larger than 180 nanometer.

The 11% decrease in new product revenue in 2020 was primarily due to lower sales from Display Bridge Solution, eFPGA license and connectivity products, which was partially offset by an increase in AI SaaS revenue. In 2020, mature product revenue was 68% of total revenue compared to 70% in the prior year. Mature product revenue decreased by 19% compared to 2019. The decrease in mature product revenue was due primarily to decreases in most mature product categories, offset by QuickPCI product orders.

Gross Profit. The table below sets forth the changes in gross profit for fiscal year ended January 3, 2021, as compared to fiscal year ended December 29, 2019 (in thousands, except percentage data):

	Fiscal Years				Year-Over-Year Change	
	2020		2019			
	Amount	% of Total Revenues	Amount	% of Total Revenues		
Revenue	\$ 8,634	100%	\$ 10,310	100%	\$ (1,676)	(16)%
Cost of revenue	4,386	51%	4,405	43%	(19)	(0)%
Gross profit	\$ 4,248	49%	\$ 5,905	57%	\$ (1,657)	(28)%

The decrease in gross profit and gross profit percentage was primarily due to (i) product and customer mix, (ii) increased inventory write downs on older product, and (iii) lower volume of revenue partially due to the effects and uncertainties caused by the global Covid-19 Pandemic in 2020. The sale of inventories that were previously written-off was \$65,000 and \$121,000 in 2020 and 2019, respectively. Inventory written-down in 2020 was approximately \$199,000 compared to \$94,000 in 2019.

Our semiconductor products have historically had a long product life cycle and obsolescence has not been a significant factor in the valuation of inventories. However, as we pursue opportunities in the mobile market and continue to develop new CSSPs and products, we believe our product life cycle will be shorter, which will increase the potential for obsolescence. In general, our standard manufacturing lead times are longer than the binding forecasts we receive from customers.

Operating Expenses. The table below sets forth the changes in operating expenses for fiscal year ended January 3, 2021, as compared to fiscal year ended December 29, 2019 (in thousands, except percentage data):

	Fiscal Years				Year-Over-Year Change	
	2020		2019			
	Amount	% of Total Revenues	Amount	% of Total Revenues	Amount	Percentage
R&D expenses	\$ 7,544	87%	\$ 12,350	120%	\$ (4,806)	(39)%
SG&A expenses	\$ 6,820	79%	\$ 8,918	86%	\$ (2,098)	(24)%
Restructuring costs	753	9%	—	—%	\$ 753	100%
Total operating expenses	\$ 15,117	(175)%	\$ 21,268	(206)%	\$ (6,151)	(29)%

Research and Development Expenses. Our research and development, or R&D, expenses consist primarily of personnel, overhead and other costs associated with System on Chip (SoC) and software development, programmable logic design, AI and eFPGA development. R&D expenses were \$7.5 million and \$12.4 million in 2020 and 2019, respectively, which represented 87% and 120%, respectively, of revenue for those periods. The \$4.8 million decrease in R&D expenses in 2020 as compared to 2019 was primarily attributable to lower compensation costs, including stock-based compensation due to the restructuring plan implemented in January 2020. Lower outside service costs and lower travel expenses due to COVID-19 also contributed to the decrease of R&D expenses. In 2020, the Company capitalized costs of \$801,000 associated with internal-use software.

Selling, General and Administrative Expenses. Our selling, general and administrative, or SG&A, expenses consist primarily of personnel and related overhead costs for sales, marketing, finance, administration, human resources and general management. SG&A expenses were \$6.8 million and \$8.9 million in 2020 and 2019, respectively, which represented 79% and 86% of revenue for those periods. The \$2.1 million decrease in SG&A expenses in 2020 as compared to 2019 was primarily attributable to lower compensation costs, including stock-based compensation, due to the restructuring plan implemented in January 2020. Lower outside services costs and lower facilities costs due to cost reduction measures and lower travel costs due to COVID-19 also contributed to the decrease of SG&A expenses.

Restructuring. In January 2020, the Company implemented a restructuring plan to lower annual operating expenses. The restructuring plan was approved by the Company's Board of Directors on January 24, 2020. Pursuant to the restructuring plan, the Company recorded \$753,000 of restructuring charges during fiscal year 2020, consisting primarily of employee severance related costs and facilities costs. See Note 1 to the Condensed Consolidated Financial Statements for details.

Interest Expense and Interest Income and Other Expense, net. The table below sets forth the changes in interest expense and interest income and other expense, net, for the fiscal year ended January 3, 2021, as compared to fiscal year ended December 29, 2019 (in thousands, except percentage data):

	Fiscal Years		Year-Over-Year Change	
	2020	2019	Amount	Percentage
	Interest expense	\$ (328)	\$ (350)	\$ 22
Interest income and other expense, net	97	189	(92)	(49)%
	\$ (231)	\$ (161)	\$ (70)	43%

Interest expense relates primarily to our line of credit facility and our PPP Loan. Interest income and other expenses, net, relates to the interest earned on our money market accounts and foreign exchange gain or losses recorded.

Provision for Income Taxes. The table below sets forth the changes in provision for income taxes in the fiscal year ended January 3, 2021, as compared to the fiscal year ended December 29, 2019 (in thousands, except percentage data):

	Fiscal Years		Year-Over-Year Change	
	2020	2019	Amount	Percentage
	(Benefit from)/ income tax provision	\$ 51	\$ (80)	\$ 131

Income tax benefit for 2020 relates primarily to foreign income tax provision on our foreign entities, primarily India and the UK. The income tax expense for 2019 primarily relates to the deferred tax liability arising from intangible assets acquired from the acquisition of SensiML which offsets and released a portion of the Company's valuation allowance outside of acquisition accounting.

As of the end of 2020, our ability to utilize our U.S. deferred tax assets in future periods is uncertain and, accordingly, we have recorded a full valuation allowance against the related U.S. deferred tax assets. We will continue to assess the realizability of deferred tax assets in future periods.

Comparison of Fiscal Years 2019 and 2018

For discussion related to the results of operations and changes in financial condition for fiscal 2019 compared to fiscal 2018, please refer to "Part II, Item 7. Management's Discussion and Analysis of Financial Conditions and Results of Operations" in our fiscal 2019 Form 10-K, which was originally filed with the SEC on March 13, 2020.

Liquidity and Capital Resources

We have financed our operating losses and capital investments through sales of common stock, capital and operating leases, a revolving line of credit and cash flows from operations. As of January 3, 2021, the Company's principal sources of liquidity consisted of cash, cash equivalents and restricted cash of \$22.7 million, including \$15.0 million drawn down from its revolving line of credit, or Revolving Facility, with Heritage Bank of Commerce, or Heritage Bank.

Credit Agreement

On September 28, 2018, we entered into a Loan and Security Agreement, or Loan Agreement, with Heritage Bank. The Loan Agreement provided for, among other things, the Revolving Facility, with aggregate commitments of \$9.0 million.

On December 21, 2018, we entered into an Amended and Restated Loan and Security Agreement, or the Amended and Restated Loan Agreement, with Heritage Bank to replace in its entirety the Loan Agreement. The Amended and Restated Loan Agreement increased the Revolving Facility from \$9.0 million to \$15.0 million. The Amended and Restated Loan Agreement requires the Company to maintaining at least \$3.0 million in unrestricted cash at Heritage Bank.

On November 6, 2019, we Company entered into a First Amendment to the Amended and Restated Loan Agreement with Heritage Bank to extend the maturity date of the Revolving Facility for one year through September 28, 2021. Under this amendment, the Revolving Facility advances shall bear interest, on the outstanding daily balance thereof, at a rate per annum equal to the greater of (i) one half of one percentage point (0.50%) above the prime rate, or (ii) five and one half of one percentage points (5.50%).

On December 11, 2020, we entered into a Second Amendment, or Second Amendment, to the Amended and Restated Loan Agreement with Heritage Bank. The Second Amendment extended the loan maturity date for one year through September 28, 2022 and amended the interest rate to a rate per annum equal to one half of one percentage point (0.50%) above the prime rate.

As of January 3, 2021 and December 29, 2019, we had \$15.0 million of revolving debt outstanding with an interest rates of 3.75% and 5.50% per annum, respectively.

We were in compliance with all loan covenants under the Amended and Restated Loan Agreement, as amended as of the end of the current reporting period.

Common Stock Offerings

On June 21, 2019, we closed an underwritten public offering of 1.3 million shares of common stock, \$0.001 par value per share at a price of \$7.00 per share, which included 171,429 of common stock shares issued pursuant to the underwriters' full exercise of their over-allotment option. The Company received net proceeds from the offering of approximately \$8.0 million, net of underwriter's commission and other offering expenses. See Note 11 to the Consolidated Financial Statements for details.

On June 22, 2020, we closed an underwritten public offering of 2.5 million shares of common stock, \$0.001 par value per share at a price of \$3.50 per share, which included 141,733 additional shares pursuant to the underwriters' exercise of their over-allotment option. We received net proceeds from the offering of approximately \$8.1 million, net of underwriter's commission and other offering expenses. See Note 11 to the Consolidated Financial Statements for details.

Paycheck Protection Program

On May 6, 2020, we entered into a loan agreement with Heritage Bank for a loan of \$1.2 million pursuant to the Paycheck Protection Program, or PPP Loan under the Coronavirus Aid, Relief, and Economic Security Act enacted on March 27, 2020, or CARES Act. On June 5, 2020, the President of the United States of America signed into law the Paycheck Protection Flexibility Act ("PPFPA") to address many concerns expressed by the small business community around the Paycheck Protection. As of September 27, 2020, we fully utilized the loan proceeds in compliance with PPFPA guidelines. We applied for the full loan forgiveness in the fourth quarter of 2020. On January 26, 2021, subsequent to our fiscal year end, we received a notice from Heritage Bank that amounts under the PPP Loan had been forgiven. See Note 16 to the Consolidated Financial Statements for details.

Cash Flows

As of January 3, 2021, most of our cash and cash equivalents were invested in a Heritage Bank Money Market account. As of January 3, 2021, our interest-bearing debt consisted of \$670,000 outstanding under finance leases, \$1.2 million related to the PPP Loan which was subsequently forgiven on January 26, 2021, and \$15.0 million outstanding under our Revolving Facility. See Note 7 to the Consolidated Financial Statements for details.

Cash balances held at our foreign subsidiaries were approximately \$342,000 and \$548,000 at January 3, 2021 and December 29, 2019, respectively. Earnings from our foreign subsidiaries are currently deemed to be indefinitely reinvested. We do not expect such reinvestment to affect our liquidity and capital resources, and we continually evaluate our liquidity needs and ability to meet global cash requirements as a part of our overall capital deployment strategy. Factors which affect our liquidity, capital resources and global capital deployment strategy include anticipated cash flows, the ability to repatriate cash in a tax efficient manner, funding requirements for operations and investment activities, acquisitions and divestitures and capital market conditions.

In summary, our cash flows were as follows (in thousands):

	Fiscal Year		
	2020	2019	2018
Net cash (used in) operating activities	\$ (6,744)	\$ (11,594)	\$ (12,638)
Net cash (used in) investing activities	(1,054)	(921)	(288)
Net cash provided by financing activities	8,998	7,600	22,862

Net Cash from Operating Activities

In 2020, net cash used in operating activities was \$6.7 million, which was primarily due to a net loss of \$11.2 million, adjusted for non-cash charges of \$2.8 million. Non-cash charges consisted primarily stock-based compensation expense of \$1.7 million and depreciation and amortization of long-lived assets and certain definite-lived intangible assets of \$0.8 million. In addition, changes in working capital accounts provided cash of \$1.6 million as a result of decreases in accounts receivable \$0.3 million, inventory of \$0.4 million and other assets of \$0.5 million, and increases in accounts payable of \$0.3 million and accrued liabilities of \$0.2 million, partially offset by cash inflow from a decrease in deferred revenue of \$0.1 million.

In 2019, net cash used in operating activities was \$11.6 million, which was primarily due to a net loss of \$15.4 million, adjusted for non-cash charges of \$4.3 million. Non-cash charges consisted primarily stock-based compensation expense of \$3.1 million and depreciation and amortization of long-lived assets and certain definite-lived intangible assets of \$1.2 million. In addition, changes in working capital accounts used cash of \$392,000 as a result of a decrease in accounts payable and accrued liabilities of \$1.5 million, partially offset by cash inflow from a decrease in inventory of \$483,000, a decrease in accounts receivable of \$218,000, a decrease in other assets of \$229,000 and an increase in deferred revenue of \$158,000.

Net Cash from Investing Activities

Net cash used for investing activities in 2020 was approximately \$1.1 million, which was primarily attributable to the capitalization of internal use software of \$801,000 and capital expenditures primarily related to computer equipment of \$253,000.

Net cash used for investing activities in 2019 was \$921,000, which was primarily attributable to the leasehold improvements and computer equipment at the new office premises of \$576,000 and capitalization of internal use software of \$365,000.

Net Cash from Financing Activities

In 2020, net cash provided by financing activities was \$9.0 million, primarily attributable to the net proceeds of \$8.1 million from the issuance of 2.5 million shares of common stock in June 2020 and over allotment of 141,733 share to underwriters in July 2020, and proceeds from the PPP Loan of \$1.2 million, partially offset by \$0.3 million for scheduled repayments of finance lease obligations and tax payments related to net settlement of stock awards.

In 2019, net cash provided by financing activities was \$7.6 million, primarily attributable to the net proceeds from the issuance of 1.3 million shares of common stock in June 2019. These inflows were partially offset by scheduled repayments of finance lease obligations and tax payments related to net settlement of stock awards.

We require substantial cash to fund our business. However, we believe that our existing cash and cash equivalents, together with available financial resources from the Revolving Facility will be sufficient to satisfy our operations and capital expenditures over the next twelve months. Our Revolving Facility will expire in September 2022. Further, any violations of debt covenants may restrict our access to any additional cash draws from the revolving line of credit, and may require our immediate repayment of the outstanding debt amounts. After the next twelve months, our cash requirements will depend on many factors, including our level of revenue and gross profit, the market acceptance of our existing and new products, the levels at which we maintain inventories and accounts receivable, costs of securing access to adequate manufacturing capacity, new product development efforts, capital expenditures and the level of our operating expenses. In order to satisfy our longer term liquidity requirements, we may be required to raise additional equity or debt financing. There can be no assurance that financing will be available at commercially acceptable terms or at all.

Contractual Obligations and Commercial Commitments

The following table summarizes our non-cancelable contractual obligations and commercial commitments as of the end of 2020 and the effect such obligations and commitments are expected to have on our liquidity and cash flows in future fiscal periods (in thousands):

	Payments Due by Period				More than 5 Years
	Total	Less than 1 year	1-3 Years	4-5 Years	
<i>Contractual cash obligations:</i>					
Operating leases	\$ 1,339	\$ 402	\$ 831	\$ 106	\$ —
Finance software lease obligations	671	347	324	—	—
Wafer purchases (1)	60	60	—	—	—
Other purchase commitments	692	692	—	—	—
Total contractual cash obligations	2,762	1,501	1,155	106	—
<i>Other commercial commitments</i>					
Revolving line of credit (2)	15,000	15,000	—	—	—
Total commercial commitments	15,000	15,000	—	—	—
Total contractual obligations and commercial commitments (3) (4)	\$ 17,762	\$ 16,501	\$ 1,155	\$ 106	\$ —

(1) Certain of our wafer manufacturers require us to forecast wafer starts several months in advance. We are committed to take delivery of and pay for a portion of forecasted wafer volume.

(2) The current maturity date on our Revolving line of credit is September 2022. See Note 7 of the Consolidated Financial Statements.

(3) Does not include unrecognized tax benefits of \$2.2 million as of the end of 2020. See Note 10 of the Consolidated Financial Statements.

(4) Our PPP Loan amounting to approximately \$1.2 million, was excluded from the above table as it has been forgiven as of due to the confirmation through Heritage that it had been forgiven as of January 26, 2021.

Concentration of Suppliers

We depend on a limited number of contract manufacturers, subcontractors, and suppliers for wafer fabrication, assembly, programming and testing of our devices, and for the supply of programming equipment. These services are typically provided by one supplier for each of our devices. We generally purchase these single or limited source services through standard purchase orders. Because we rely on independent subcontractors to perform these services, we cannot directly control product delivery schedules, costs or quality levels. Our future success also depends on the financial viability of our independent subcontractors. These subcontract manufacturers produce products for other companies and we must place orders in advance of expected delivery. As a result, we have only a limited ability to react to fluctuations in demand for our products, which could cause us to have an excess or a shortage of inventories of a particular product, and our ability to respond to changes in demand is limited by these suppliers' ability to provide products with the quantity, quality, cost and timeliness that we require. The decision not to provide these services to us or the inability to supply these services to us, such as in the case of a natural or financial disaster, would have a significant impact on our business. Increased demand from other companies could result in these subcontract manufacturers allocating available capacity to customers that are larger or have long-term supply contracts in place and we may be unable to obtain adequate foundry and other capacity at acceptable prices, or we may experience delays or interruption in supply. Additionally, volatility of economic, market, social and political conditions in countries where these suppliers operate may be unpredictable and could result in a reduction in product revenue or increase our cost of revenue and could adversely affect our business, financial condition and results of operations.

Off-Balance Sheet Arrangements

We do not maintain any off-balance sheet partnerships, arrangements or other relationships with unconsolidated entities or others, often referred to as structured finance or special purpose entities, which are established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Recently Issued Accounting Pronouncements

See Note 2 to the Consolidated Financial Statements for a full description of recent accounting pronouncements, including the expected dates of adoption and estimated effects on financial condition and results of operations, which is incorporated herein by reference.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of
QuickLogic Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of QuickLogic Corporation (the “Company”) as of January 3, 2021 and December 29, 2019, the related consolidated statements of operations, stockholders’ equity, and cash flows for each of the three years in the period ended January 3, 2021, and the related notes and schedules (collectively referred to as the “consolidated financial statements”).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company as of January 3, 2021 and December 29, 2019, and the consolidated results of its operations and its cash flows for each of the three years in the period ended January 3, 2021, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated 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 consolidated 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 consolidated financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements, and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of Inventory

As described in Notes 2 and 4 to the consolidated financial statements, the Company’s inventories balance was \$2.7 million as of January 3, 2021. The Company values its inventories at lower of standard cost or net realizable value. Standard cost approximates actual cost on a first-in, first-out basis. The Company writes down inventory that has become obsolete, inventory that has a cost basis in excess of its expected net realizable value, and inventory in excess of expected requirements. The estimate of excess quantities is subjective and primarily dependent on the estimates of future demand for a particular product. As disclosed by management, if the estimate of future demand is too high, the Company may have to increase the reserve for excess inventory for that product and record a charge to the cost of revenues.

The valuation of inventories requires management to make significant assumptions and complex judgments about the future salability of the inventory and the value of obsolete and unmarketable inventory. These assumptions include the assessment of market conditions and trends, sales forecasts, historic usage, expected demand, anticipated sales price, the stage in the product life cycle of its customers’ products, new product development schedules, the effect new products might have on the sale of existing products, product obsolescence, customer design activity, customer concentrations, product merchantability and other factors.

We identified the evaluation of inventory excess and obsolescence as a critical audit matter due to the significant estimates and assumptions management makes to quantify and to record the reserve, including the determination of expected demand. This required a high degree of auditor judgment and an increased extent of effort when performing audit procedures to evaluate the methodology and the reasonableness of assumptions including expected demand.

The primary procedures we performed to address this critical audit matter included:

- Evaluating the appropriateness of management’s approach for developing the provisions for excess and obsolete inventories by:
 - Evaluating the methodology, including management’s identification of the significant assumptions, utilized to calculate the adjustment
 - Testing the mathematical accuracy and the appropriateness of the formulaic calculation
- Evaluating the reasonableness of the significant assumptions used by management including those related to future demand by:
 - Evaluating management’s ability to accurately forecast sales by comparing prior period sales forecasts to actual results
 - Performing inquiries with appropriate nonfinancial personnel, including sales and production employees, regarding obsolete or discontinued inventory items and other factors to corroborate management’s assertions regarding qualitative judgments about excess and obsolete inventories
- Testing the completeness, accuracy, and relevance of the underlying data used in management’s estimate and calculations related to the application of the methodology to specific inventory categories.

/s/ Moss Adams LLP

San Francisco, California
March 23, 2021

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

QUICKLOGIC CORPORATION
CONSOLIDATED BALANCE SHEETS
(in thousands, except par value amount)

	January 3, 2021	December 29, 2019
ASSETS		
Current assets:		
Cash and cash equivalents and restricted cash	\$ 22,748	\$ 21,548
Accounts receivable, net of allowances for doubtful accounts of \$0	1,688	1,991
Inventories	2,688	3,260
Other current assets	1,066	1,565
Total current assets	<u>28,190</u>	<u>28,364</u>
Property and equipment, net	548	830
Capitalized internal-use software, net	986	333
Right of use assets, net	1,839	2,370
Intangible assets, net	860	1,008
Goodwill	185	185
Other assets	280	314
TOTAL ASSETS	<u>\$ 32,888</u>	<u>\$ 33,404</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Revolving line of credit	\$ 15,000	\$ 15,000
Trade payables	935	1,003
Accrued liabilities	1,340	1,133
Deferred revenue	52	158
Lease liabilities, current	685	704
Total current liabilities	<u>18,012</u>	<u>17,998</u>
Long-term liabilities:		
Lease liabilities, non-current	1,197	1,583
Paycheck Protection Program loan	1,192	—
Total liabilities	<u>20,401</u>	<u>19,581</u>
Commitments (Note 15)		
Stockholders' equity:		
Preferred stock, \$0.001 par value; 10,000 shares authorized; no shares issued or outstanding	—	—
Common stock, \$0.001 par value; 200,000 shares authorized; 11,094 and 8,331 shares issued and outstanding as of January 3, 2021 and December 29, 2019, respectively	11	8
Additional paid-in capital	306,885	297,073
Accumulated deficit	(294,409)	(283,258)
Total stockholders' equity	<u>12,487</u>	<u>13,823</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 32,888</u>	<u>\$ 33,404</u>

The accompanying notes form an integral part of these Consolidated Financial Statements.

QUICKLOGIC CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Fiscal Years		
	2020	2019	2018
Statements of Operations:			
Revenue	\$ 8,634	\$ 10,310	\$ 12,629
Cost of revenue	4,386	4,405	6,295
Gross profit	4,248	5,905	6,334
Operating expenses:			
Research and development	7,544	12,350	9,948
Selling, general and administrative	6,820	8,918	9,982
Restructuring costs	753	—	—
Loss from operations	(10,869)	(15,363)	(13,596)
Interest expense	(328)	(350)	(108)
Interest income and other expense, net	97	189	77
Loss before income taxes	(11,100)	(15,524)	(13,627)
Provision for (benefit from) income taxes	51	(80)	152
Net loss	\$ (11,151)	\$ (15,444)	\$ (13,779)
Net loss per share: (1)			
Basic and diluted	\$ (1.14)	\$ (2.02)	\$ (2.16)
Weighted average shares: (1)			
Basic and diluted	9,781	7,663	6,365

Note: Net loss equals to comprehensive loss for all years presented.

(1) Net loss per share and weighted average shares, basic and diluted are adjusted to reflect 1-for-14 reverse stock split effected on December 23, 2019.

The accompanying notes form an integral part of these Consolidated Financial Statements.

QUICKLOGIC CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Fiscal Years		
	2020	2019	2018
Cash flows from operating activities:			
Net loss	\$ (11,151)	\$ (15,444)	\$ (13,779)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	817	1,201	1,276
Stock-based compensation	1,739	3,144	1,901
Write-down of inventories	199	94	386
Write-off of equipment	44	4	5
Tax benefit from acquisition	—	(185)	—
Gain on disposal of assets	—	—	(62)
Changes in operating assets and liabilities:			
Accounts receivable	303	218	(1,284)
Inventories	373	483	(662)
Other assets	533	229	(879)
Trade payables	298	(456)	223
Accrued liabilities	207	(1,024)	235
Deferred income	(106)	158	—
Other long-term liabilities	—	(16)	2
Net cash used in operating activities	<u>(6,744)</u>	<u>(11,594)</u>	<u>(12,638)</u>
Cash flows from investing activities:			
Capital expenditures for property and equipment	(253)	(576)	(351)
Capitalized internal-use software	(801)	(365)	—
Cash received from business acquisition	—	20	—
Proceeds from sale of assets	—	—	63
Net cash used in investing activities	<u>(1,054)</u>	<u>(921)</u>	<u>(288)</u>
Cash flows from financing activities:			
Payment of finance lease obligations	(270)	(365)	(407)
Proceeds from Paycheck Protection Program loan	1,191	—	—
Proceeds from line of credit	57,000	46,000	36,000
Repayment of line of credit	(57,000)	(46,000)	(27,000)
Proceeds from issuance of common stock	9,296	9,437	16,215
Stock issuance costs	(1,147)	(1,181)	(1,638)
Taxes paid related to net settlement of equity awards	(72)	(291)	(308)
Net cash provided by financing activities	<u>8,998</u>	<u>7,600</u>	<u>22,862</u>
Net (decrease) increase in cash, cash equivalents and restricted cash	1,200	(4,915)	9,936
Cash, cash equivalents and restricted cash at the beginning of the period	21,548	26,463	16,527
Cash, cash equivalents, and restricted cash at the end of the period	<u>\$ 22,748</u>	<u>\$ 21,548</u>	<u>\$ 26,463</u>
Supplemental disclosures of cash flow information:			
Interest paid	\$ 277	\$ 300	\$ 89
Income taxes paid	\$ 24	\$ 126	\$ 171
Supplemental schedule of non-cash investing and financing activities:			
Fair value of common stock issued as consideration for business acquisition	\$ —	\$ 903	\$ —
Finance lease obligation to finance capital expenditures	\$ 670	\$ 471	\$ 424
Purchase of equipment included in accounts payable	\$ —	\$ —	\$ 5

The accompanying notes form an integral part of these Consolidated Financial Statements.

QUICKLOGIC CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands)

	Common Stock			Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Equity
	Par Value (1)					
	Shares	Amount				
Balance at December 31, 2017	5,753	\$ 6	\$	268,907	\$ (254,035)	\$ 14,878
Common stock issued under stock plans and employee stock purchase plans	105	—		353	—	353
Common stock offering, net of issuance costs	965	1		13,901	—	13,902
Stock-based compensation	—	—		1,901	—	1,901
Net loss	—	—		—	(13,779)	(13,779)
Balance at December 30, 2018	6,823	7	\$	285,062	(267,814)	17,255
Common stock issued under stock plans and employee stock purchase plans	110	—		(37)	—	(37)
Common stock offering, net of issuance costs	1,314	1		8,001	—	8,002
Common stock issued for SensiML acquisition	84	—		903	—	903
Stock-based compensation	—	—		3,144	—	3,144
Net loss	—	—		—	(15,444)	(15,444)
Balance at December 29, 2019	8,331	8	\$	297,073	(283,258)	13,823
Common stock issued under stock plans and employee stock purchase plans	121	—		(24)	—	(24)
Common stock offering, net of issuance costs	2,642	3		8,097	—	8,100
Stock-based compensation	—	—		1,739	—	1,739
Net loss	—	—		—	(11,151)	(11,151)
Balance at January 3, 2021	11,094	11	\$	306,885	(294,409)	12,487

(1) Common stock, par value and additional paid-in capital amounts are adjusted to reflect 1-for-14 reverse stock split effected on December 23, 2019.

The accompanying notes form an integral part of these Consolidated Financial Statements.

NOTE 1-THE COMPANY AND BASIS OF PRESENTATION

QuickLogic Corporation, ("QuickLogic" or, the "Company"), was founded in 1988 and reincorporated in Delaware in 1999. The Company enables Original Equipment Manufacturers or OEMs, to maximize battery life for highly differentiated, immersive user experiences with Smartphone, Wearable, Hearable, Tablet and Internet-of-Things or IoT devices. QuickLogic delivers these benefits through industry leading ultra-low power customer programmable System on Chip or SoC semiconductor solutions, embedded software, and algorithm solutions for always-on voice and sensor processing, and enhanced visual experiences. The Company is a fabless semiconductor provider of comprehensive, flexible sensor processing solutions, ultra-low power display bridges, and ultra-low power Field Programmable Gate Arrays, or FPGAs. The Company's wholly owned subsidiary, SensiML Corporation, or SensiML, provides Analytics Toolkit, which is used in many of the applications where the Company's ArcticPro™, eFPGA intellectual property, or IP plays a critical role. SensiML Analytics toolkit is an end-to-end software suite that provides OEMs a straightforward process for developing pattern matching sensor algorithms using machine learning technology that are optimized for ultra-low power consumption.

QuickLogic's fiscal year ends on the Sunday closest to December 31. Fiscal years 2020, 2019 and 2018 ended on January 3, 2021, December 29, 2019 and December 30, 2018, respectively.

COVID-19 - Impact on Business

On January 30, 2020, the World Health Organization ("WHO") declared a global emergency due to the COVID-19 pandemic, and on February 28, 2020, the WHO raised its assessment of the threat from high to very high at a global level. The social and economic impact of the COVID-19 outbreak has continued to increase exponentially since this declaration. The outbreak has resulted in significant governmental measures being implemented to control the spread of COVID-19, including, among others, restrictions on travel, business operations and the movement of people in many regions of the world in which the Company operates, and the imposition of shelter-in-place or similarly restrictive work-from-home orders impacting many of the Company's offices and employees, including those located in the United States. As a result, the Company has temporarily closed or substantially limited the presence of personnel in its offices in several impacted locations, implemented travel restrictions and withdrawn from various industry events. The Company has also experienced some disruption and delays in its supply chain, customer deployment plans, and logistics challenges, including certain limitations on its ability to access customer fulfillment and service sites.

As such, while COVID-19 has had an impact on the Company's financial results on the 12 months ended January 3, 2021, the COVID-19 pandemic and its potential effects on the Company's business remains dynamic, and the broader implications for its business and future results of operations remain uncertain. These implications could include further disruptions or restrictions on the Company's ability to source, manufacture or distribute its products, including temporary disruptions to the facilities of its contract manufacturers in China, Taiwan, Philippines and Singapore, or the facilities of its suppliers and their contract manufacturers globally. Additionally, multiple countries have imposed and may further impose restrictions on business operations and movement of people and products to limit the spread of COVID-19. Delays in production or delivery of components or raw materials that are part of the Company's global supply chain due to restrictions imposed to limit the spread of COVID-19 could delay or inhibit its ability to obtain the supply of components and finished goods. If COVID-19 becomes more prevalent in the locations where the Company, its customers or suppliers conduct business, or the Company experiences more pronounced disruptions in its operations, the Company may experience constrained supply or curtailed demand that may materially adversely impact its business and results of operations. In addition, any other widespread health crisis that could adversely affect global and regional economies, financial markets and overall demand environment for the Company's products could have a material adverse effect on the Company's business, cash flows or results of operations. It is difficult to accurately predict the full impact that COVID-19 has and will have on the Company's future results from operations, financial condition, liquidity and cash flows due to numerous uncertainties, including the duration and severity of the pandemic and related containment measures. The Company will continue to closely monitor the pandemic's associated effects on all aspects of the business.

Restructuring

In January 2020, the Company implemented a restructuring plan to lower annual operating expenses. The restructuring plan was approved by the Company's Board of Directors on January 24, 2020. Pursuant to the restructuring plan, the Company recorded \$753,000 of restructuring charges during the twelve months of fiscal year 2020, consisting primarily of employee severance related costs and facilities costs.

Liquidity

The Company has financed its operations and capital investments through sale of common stock, capital and operating leases, a revolving line of credit and cash flows from operations. As of January 3, 2021, the Company's principal sources of liquidity consisted of cash and cash equivalents of \$22.6 million including \$15.0 million drawn down from its line of credit, or Revolving Facility with Heritage Bank of Commerce, ("Heritage Bank").

On September 28, 2018, the Company entered into a Loan and Security Agreement (the "Loan Agreement"), with Heritage Bank. The Loan Agreement provided for, among other things, a revolving line of credit facility (the "Revolving Facility") with aggregate commitments of \$9.0 million.

On December 21, 2018, the Company entered into the Amended and Restated Loan Agreement with Heritage Bank to replace in its entirety the Loan Agreement (the "Amended and Restated Loan Agreement"). The Amended and Restated Loan Agreement with Heritage Bank increased the Revolving Facility from \$9.0 million to \$15.0 million. The Amended and Restated Loan Agreement requires the Company to maintain at least \$3.0 million in unrestricted cash at Heritage Bank.

On November 6, 2019, the Company entered into a First Amendment to the Amended and Restated Loan Agreement to extend the maturity date for one year through September 28, 2021. Under this amendment the Revolving Facility advances shall bear interest, on the outstanding daily balance thereof, at a rate per annum equal to the greater of (i) one half of one percentage point (0.50%) above the prime rate, or (ii) five and one half of one percentage points (5.50%).

On December 11, 2020, the "Company entered into a Second Amendment (the "Second Amendment") to the "Amended and Restated Loan Agreement with Heritage Bank. The Second Amendment extended the loan maturity date for one year through September 28, 2022 and amended the interest to a rate per annum equal to one half of one percentage point (0.50%) above the prime rate.

The Company was in compliance with all loan covenants as of the end of the current reporting period. As of January 3, 2021, the Company had \$15.0 million of outstanding revolving line of credit with an interest rate of 3.75%.

On June 21, 2019, the Company closed its underwritten public offering of 1.3 million shares of common stock, \$0.001 par value per share at a price of \$7.00 per share, which included 171,429 shares issued pursuant to the underwriters' full exercise of their over-allotment option. The Company received net proceeds of approximately \$8.0 million, after deducting underwriting commissions and other offering-related expenses. See Note 11 to the Consolidated Financial Statements for the details.

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On June 22, 2020, the Company closed an underwritten public offering of 2.5 million shares of common stock, \$0.001 par value per share at a price of \$3.50 per share, which included 141,733 additional shares pursuant to the underwriters' exercise of their over-allotment option. The Company received net proceeds from the offering of approximately \$8.1 million, net of underwriter's commission and other offering expenses. See Note 11 to the Consolidated Financial Statements for details.

The Company currently uses its cash to fund its working capital, to accelerate the development of next generation products and for general corporate purposes. Based on past performance and current expectations, the Company believes that its existing cash and cash equivalents, together with available financial resources from the Revolving Facility with Heritage Bank will be sufficient to fund its operations and capital expenditures and provide adequate working capital for the next twelve months.

Various factors affect the Company's liquidity, including, among others: the level of revenue and gross profit as a result of the cyclicity of the semiconductor industry; the conversion of design opportunities into revenue; market acceptance of existing and new products including solutions based on its ArcticLink® and PolarPro® platforms, eFPGA, EOS S3 SoC, Quick AI solution, and SensiML software; fluctuations in revenue as a result of product end-of-life; fluctuations in revenue as a result of the stage in the product life cycle of its customers' products; costs of securing access to and availability of adequate manufacturing capacity; levels of inventories; wafer purchase commitments; customer credit terms; the amount and timing of research and development expenditures; the timing of new product introductions; production volumes; product quality; sales and marketing efforts; the value and liquidity of its investment portfolio; changes in operating assets and liabilities; the ability to obtain or renew debt financing and to remain in compliance with the terms of existing credit facilities; the ability to raise funds from the sale of equity in the Company; the ability to capitalize on synergies with our newly acquired subsidiary SensiML; the issuance and exercise of stock options and participation in the Company's employee stock purchase plan; and other factors related to the uncertainties of the industry and global economics.

Over the longer term, the Company anticipates that sales generated from its new product offerings, existing cash and cash equivalents, together with financial resources from its Revolving Facility with Heritage Bank, assuming renewal of the Revolving Facility or the Company entering into a new debt agreement with an alternative lender prior to the expiration of the revolving line of credit in September 2022, and its ability to raise additional capital in the public capital markets will be sufficient to satisfy its operations and capital expenditures. However, the Company cannot provide any assurance that it will be able to raise additional capital, if required, or that such capital will be available on terms acceptable to the Company. The inability of the Company to generate sufficient sales from its new product offerings and/or raise additional capital if needed could have a material adverse effect on the Company's operations and financial condition, including its ability to maintain compliance with its lender's financial covenants.

Principles of Consolidation

The consolidated financial statements have been prepared in accordance with Generally Accepted Accounting Principles, in the United States of America or US GAAP, and the applicable rules and regulations of the Securities and Exchange Commission, or SEC, and include the accounts of QuickLogic and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

Foreign Currency

The functional currency of the Company's non-U.S. operations is the U.S. dollar. Accordingly, all monetary assets and liabilities of these foreign operations are translated into U.S. dollars at current period-end exchange rates and non-monetary assets and related elements of expense are translated using historical exchange rates. Income and expense elements are translated to U.S. dollars using the average exchange rates in effect during the period. Gains and losses from the foreign currency transactions of these subsidiaries are recorded as interest income and other expense, net in the statements of operations.

Use of Estimates

The preparation of these consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosures of contingent assets and liabilities and the reported amounts of revenue and expenses during the period. Actual results could differ from those estimates, particularly in relation to revenue recognition; the allowance for doubtful accounts; sales returns; valuation of long-lived assets including mask sets; valuation of goodwill; capitalized internal-use software and related amortizable lives and intangibles related to the acquisition of SensiML, including the estimated useful lives of acquired intangible assets, valuation of inventories including identification of excess quantities, market value and obsolescence; measurement of stock-based compensation awards; accounting for income taxes and estimating accrued liabilities.

Contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment.

Judgment is required to determine the Stand-alone Selling Price, or SSP, for each distinct performance obligation. The Company uses a range of amounts to estimate SSP when each of the products and services are sold separately and determines the discount to be allocated based on the relative SSP of the various products and services when products and services sold are bundled. In instances where SSP is not directly observable, such as when the Company does not sell the product or service separately, it determines the SSP using information that may include market conditions and other observable inputs. The Company typically has more than one SSP for individual products and services due to the stratification of those products and services by customers. In these instances, the Company may use information such as the size of the customer, customer tier, type of the technology used, customer demographics, geographic region and other factors in determining the SSP.

Concentration of Risk

The Company's accounts receivable are denominated in U.S. dollars and are derived primarily from sales to customers located in North America, Asia Pacific, and Europe. The Company performs ongoing credit evaluations of its customers and generally does not require collateral. See Note 14 for information regarding concentrations associated with accounts receivable and revenue.

Reverse Stock Split

On November 26, 2019, shareholders of the Company approved an amendment to our Amended and Restated Certificate of Incorporation to effect a reverse stock split of our outstanding shares of common stock, at a reverse stock split ratio from 1-for-5 to 1-for-15 (the "Reverse Stock Split"), as determined by the Board of Directors. On December 6, 2019, our Board of Directors approved the implementation of the Reverse Stock Split at a ratio of 1-for-14. The Reverse Stock Split was intended to bring the Company into compliance with the \$1.00 minimum average closing share price requirement for continued listing ("Bid Pricing Rule") on the Nasdaq Capital Market (the "Nasdaq"). On January 9, 2020, the Company received a letter from Nasdaq Stock Market LLC stating that the Company had regained compliance with the Bid Price Rule and it considered the matter closed.

NOTE 2-SIGNIFICANT ACCOUNTING POLICIES

Cash Equivalents

The Company considers all short-term, highly liquid investments with an original or a remaining maturity at purchase of ninety days or less to be cash equivalents. The Company's investment portfolio included in cash equivalents is generally comprised of investments that meet high credit quality standards. The Company's investment portfolio consists of money market accounts and funds. Restricted cash represents amounts pledged as cash security related to the use of credit cards.

Fair Value

The guidance for the fair value option for financial assets and financial liabilities provides companies the irrevocable option to measure many financial assets and liabilities at fair value with changes in fair value recognized in earnings or equity. The Company has not elected to measure any financial assets or liabilities at fair value that were not previously required to be measured at fair value.

Foreign Currency Transactions

All of the Company's sales and cost of manufacturing are transacted in U.S. dollars. The Company conducts a portion of its research and development activities in India and has sales and marketing activities in various countries outside of the United States. Most of these international expenses are incurred in local currency. Foreign currency transaction gains and losses, which are not significant, are included in interest income and other expense, net, as they occur. Operating expenses denominated in foreign currencies were approximately 18%, 19% and 27% of total operating expenses in 2020, 2019 and 2018 respectively. The Company incurred a majority of these foreign currency expenses in India, the United Kingdom, China, Japan, Taiwan and Korea in 2020, 2019 and 2018. The Company has not used derivative financial instruments to hedge its exposure to fluctuations in foreign currency and, therefore, is susceptible to fluctuations in foreign exchange gains or losses in its results of operations in future reporting periods.

Inventories

Inventories are stated at the lower of standard cost or net realizable value. Standard cost approximates actual cost on a first-in, first-out basis. The Company routinely evaluates quantities and values of its inventories in light of current market conditions and market trends and records reserves for quantities in excess of demand and product obsolescence. The evaluation, which inherently involves judgments as to assumptions about expected future demand and the impact of market conditions on these assumptions, takes into consideration historic usage, expected demand, anticipated sales price, the stage in the product life cycle of its customers' products, new product development schedules, the effect new products might have on the sale of existing products, product obsolescence, customer design activity, customer concentrations, product merchantability and other factors. Market conditions are subject to change. Actual consumption of inventories could differ from forecast demand, and this difference could have a material impact on the Company's gross margin and inventory balances based on additional provisions for excess or obsolete inventories or a benefit from inventories previously written down. The Company also regularly reviews the cost of inventories against estimated net realizable value and records a lower of cost or net realizable value write downs for inventories that have a cost in excess of estimated net realizable value, which could have a material impact on the Company's gross margin and inventory balances based on additional write-downs to net realizable value or a benefit from inventories previously written down.

The Company's semiconductor products have historically had an unusually long product life cycle and obsolescence has not been a significant factor in the valuation of inventories. However, as the Company pursues opportunities in the mobile market and continues to develop new solutions and products, the Company believes its product life cycle will be shorter which could increase the potential for obsolescence. A significant decrease in demand could result in an increase in excess inventory on hand. Although the Company makes every effort to ensure the accuracy of its forecasts of future product demand, any significant unanticipated changes in demand or frequent new product developments could have a significant impact on the value of its inventory and its results of operations.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, generally one to seven years. Amortization of leasehold improvements is computed on a straight-line basis over the shorter of the lease term or the estimated useful lives of the assets, generally one to seven years.

Capitalized Internal-Use Software

The Company capitalizes costs related to development of hosted services that the Company provides to its customers and internal use of enterprise-level business and finance software in support of the Company's operational needs. Costs incurred in the application development phase are capitalized and amortized on a straight-line basis over their useful lives, which are generally five years. Costs related to planning and other preliminary project activities and post-implementation activities are expensed as incurred. The Company tests these assets for impairment whenever events or changes in circumstances occur that could impact their recoverability.

Long-Lived Assets

The Company reviews the recoverability of its long-lived assets, such as property and equipment, annually and when events or changes in circumstances occur that indicate that the carrying value of the asset or asset group may not be recoverable. The assessment of possible impairment is based on the Company's ability to recover the carrying value of the asset or asset group from the expected future pre-tax cash flows, undiscounted and without interest charges, of the related operations. If these cash flows are less than the carrying value of the asset or asset group, an impairment loss is recognized for the difference between the estimated fair value and the carrying value, and the carrying value of the related assets is reduced by this difference. The measurement of impairment requires management to estimate future cash flows and the fair value of long-lived assets. During 2020, 2019 and 2018 the Company wrote-off equipment with a net book value of \$44,000, \$4,000 and \$5,000, respectively. Approximately \$35,000 of the equipment written-off was included in Restructuring costs on the Company's Statements of Operations for year ended January 3, 2021

Licensed Intellectual Property

The Company licenses intellectual property that is incorporated into its products. Costs incurred under license agreements prior to the establishment of technological feasibility are included in research and development expense as incurred. Costs incurred for intellectual property once technological feasibility has been established and that can be used in multiple products are capitalized as a long-term asset. Once a product incorporating licensed intellectual property has production sales, the amount is amortized over the estimated useful life of the asset, generally up to five years.

Revenue Recognition

The Company recognizes revenue in accordance with ASC Topic No. 606 and related ASUs, which provide supplementary guidance, and clarifications. Revenue is recognized as follows:

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration the Company expects to receive in exchange for those products or services.

The Company determines revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when, or as, the Company satisfies a performance obligation.

As part of its assessment of each contract, the Company evaluates certain factors including the customer's ability to pay, or credit risk. For each contract, the Company considers the promise to transfer products, each of which is distinct, to be the identified performance obligations. In determining the transaction price, the price stated on the purchase order is typically fixed and represents the net consideration to which the Company expects to be entitled, and therefore there is no variable consideration. As the Company's standard payment terms are less than one year, the Company has elected, as a practical expedient, to not assess whether a contract has a significant financing component. The Company allocates the transaction price to each distinct product based on its relative standalone selling price. The product price as specified on the purchase order is considered the standalone selling price as it is an observable source that depicts the price as if sold to a similar customer in similar circumstances.

Product Revenue

The Company generates most of its revenue by supplying standard hardware products, which must be programmed before they can be used in an application. The Company's contracts with customers are generally for product only, and do not include other performance obligations such as services, extended warranties or other material rights.

The Company recognizes hardware product revenue at the point of time when control of products is transferred to the customers, when the Company's performance obligation is satisfied, which typically occurs upon shipment from the Company's manufacturing site or its headquarters.

Intellectual Property and Software License Revenue

The Company also generates revenue from licensing their intellectual property or IP, software tools and royalty from licensing its technology.

The Company recognizes IP and Software License revenue at the point of time when the control of IP or software license has been transferred.

Some of the IP and Software Licensing contracts with customers contain multiple performance obligations. For these contracts, the Company accounts for individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. The Company determines the standalone selling prices based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, type of the customer, customer tier, type of the technology used, customer demographics, geographic locations, and other factors.

Software as a Service Revenue, or SaaS Revenue

Software products that are offered to customers with a right to use the hosted software over the contract period without taking the possession of it are billed on a subscription basis. Revenue that are billed on a subscription basis is recognized ratably over the contract period.

Maintenance Revenue

The Company recognizes revenue from maintenance ratably over the term of the underlying maintenance contract term. Renewals of maintenance contracts create new performance obligations that are satisfied over the term with the revenues recognized ratably over the term.

Royalty Revenue

The Company recognizes royalty revenue when the later of the following events occurs: (a) The subsequent sale or usage occurs. (b) The performance obligation to which some or all of the sales-based royalty has been allocated has been satisfied.

Deferred Revenue

Receivables are recognized in the period the Company ships the product. Payment terms on invoiced amounts are based on contractual terms with each customer. When the Company receives consideration, or such consideration is unconditionally due, prior to transferring goods or services to the customer under the terms of a sales contract, the Company records deferred revenue, which represents a contract liability. The Company recognizes deferred revenue as net sales once control of goods and/or services have been transferred to the customer and all revenue recognition criteria have been met and any constraints have been resolved. The Company defers the product costs until recognition of the related revenue occurs.

Assets Recognized from Costs to Obtain a Contract with a Customer

The Company recognizes an asset for the incremental costs of obtaining a contract with a customer, if it expects the benefit of those costs to be longer than one year. The Company has concluded that none of the costs it has incurred to obtain and fulfill its ASC 606 contracts meet the capitalization criteria, and as such, there are no costs deferred and recognized as assets on the consolidated balance sheet at January 3, 2021.

Practical expedients and exemptions

(i) Taxes collected from customers and remitted to government authorities and that are related to the sales of the Company's products are excluded from revenues.

(ii) Sales commissions are expensed when incurred because the amortization period would have been one year or less. These costs are recorded in Selling, general and administrative expense in the Condensed Consolidated Statements of Income.

(iii) The Company does not disclose the value of unsatisfied performance obligations for (i) contracts with original expected lengths of one year or less or (ii) contracts for which the Company recognizes revenue at the amount to which it has the right to invoice for the services performed.

The Company records allowance for sales returns. Amounts recorded for sales returns for the year ended January 3, 2021 and December 29, 2019 were \$30,000 and \$60,000 respectively.

The Company accounts for its Intellectual Property or IP license revenues and related services in accordance with Financial Accounting Standard Board or FASB Accounting Standards Codification or ASC No. 985-605, *Software Revenue Recognition*. Revenues are recognized when persuasive evidence of an arrangement exists and no further obligation exists, delivery has occurred, the license fee is fixed or determinable, and collection is reasonably assured. A license may be perpetual or time limited in its application. The Company's IP license agreement contains multiple elements including post-contract customer support. For multiple element arrangements involving software and other software-related deliverables, vendor-specific objective evidence of fair value ("VSOE") must exist to allocate the total fee among all delivered and non-essential undelivered elements of the arrangement. If undelivered elements of the arrangement are essential to the functionality of the product, revenue is deferred until the essential elements are delivered. If VSOE does not exist for one or more non-essential undelivered elements, revenue is deferred until such evidence exists for the undelivered elements, or until all elements are delivered, whichever is earlier. VSOE of each element is based on historical evidence of stand-alone sales of these elements to third parties including substantive renewal rate as stated in the agreement. When VSOE does not exist for undelivered items, the entire arrangement fee is recognized ratably over the performance period.

Cost of Revenue

The Company records all costs associated with its product sales in cost of revenue. These costs include the cost of materials, contract manufacturing fees, shipping costs and quality assurance. Cost of revenue also includes indirect costs such as warranty, excess and obsolete inventory charges, general overhead costs and depreciation.

Accounts Receivable Allowance

The Company estimates the amount of uncollectible accounts receivable at the end of each reporting period based on the aging of the receivable balance, current and historical customer trends, and communications with its customers. Amounts are written off only after considerable collection efforts have been made and the amounts are determined to be uncollectible.

Warranty Costs

The Company warrants finished goods against defects in material and workmanship under normal use for twelve months from the date of shipment. The Company's liability is limited to the cost of repair or replacement of the defective part. The Company does not consider activities related to such warranties to be a separate performance obligation under ASC 606. The terms and conditions of sale generally do not allow for refunds or product returns other than for warranty repairs. The Company does not have significant product warranty related costs or liabilities.

Leases

The Company adopted ASU No. 2016-02, *Leases (Topic 842)* and related ASUs, which provide supplementary guidance and clarifications on December 31, 2018, utilizing the modified retrospective transition method. There was no cumulative-effect adjustment required upon adoption. Additionally, the Company elected the practical expedient approach and did not reassess whether any contracts that existed prior to adoption have or contain leases or the classification of our existing leases.

Under Topic 842, all significant lease arrangements are generally recognized at lease commencement. Operating lease right-of-use, or ROU, assets and lease liabilities are recognized at the commencement date. A ROU asset and corresponding lease liability is not recorded for leases with an initial term of 12 months or less (short term leases) and the Company recognizes lease expense for these leases as incurred over the lease term.

ROU assets represent the Company's right to use an underlying asset during the reasonably certain lease terms and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company primarily uses its incremental borrowing rate, based on the information available at commencement date, in determining the present value of lease payments. The operating lease ROU asset also includes any lease payments related to initial direct cost and prepayments and excludes lease incentives. Lease expense is recognized on a straight-line basis over the lease term. The Company has lease agreements with lease and non-lease components, which are generally accounted for separately.

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In accordance with ASU No. 2016-02, the Company recognized right-of-use assets of approximately \$975,000 and lease liabilities of approximately \$939,000 on the Company's Consolidated Balance Sheet as of March 31, 2019, with no material impact to its Consolidated Statements of Operations. In 2020, pursuant to its restructuring activities, the Company impaired the remaining right-of-use asset associated with its prior India location amounting to approximately \$93,000, which is included with Restructuring costs on the Company's Consolidated Statements of Operations. As of January 3, 2021, the Company's right-of-use assets was approximately \$1.8 million and lease liability was approximately \$1.9 million as presented on the Company's Consolidated Balance Sheet. See Note 8 to the Consolidated Financial Statements for more details.

Business Combinations

The Company recognizes assets acquired (including goodwill and identifiable intangible assets) and liabilities assumed at fair value on the acquisition date. Subsequent changes to the fair value of such assets acquired and liabilities assumed are recognized in earnings, after the expiration of the measurement period, a period not to exceed 12 months from the acquisition date. Acquisition-related expenses and acquisition-related restructuring costs are recognized in earnings in the period in which they are incurred.

Goodwill and Intangible Assets

Goodwill represents the excess fair value of consideration transferred over the fair value of net assets acquired in business combinations. The carrying value of goodwill and indefinite lived intangible assets are not amortized but are annually tested for impairment and more often if there is an indicator of impairment. The Company recognized total Goodwill of \$185,000 in fiscal 2019 due to tax benefits that arose from intangible assets acquired in the SensiML acquisition including measurement period adjustments, occurring within 12 months from the date of acquisition, and therefore, accounted for under acquisition accounting.

Intangible assets with finite useful lives are amortized on a straight-line basis over the periods benefited. The Company reviews the recoverability of its long-lived assets when events or changes in circumstances occur that indicate that the carrying value of the asset or asset group may not be recoverable. The assessment of possible impairment is based on the Company's ability to recover the carrying value of the asset or asset group from the expected future pre-tax cash flows (undiscounted and without interest charges) of the related operations. If these cash flows are less than the carrying value of such asset, an impairment loss is recognized for the difference between estimated fair value and carrying value. The measurement of impairment requires management to estimate future cash flows and the fair value of long-lived assets. No impairment has been recognized to-date.

Restricted cash

Restricted cash represents amounts pledged as cash security related to the Company's credit cards.

Advertising

Costs related to advertising and promotion expenditures are charged to "Selling, general and administrative" expense in the consolidated statements of operations as incurred. Costs related to advertising and promotion expenditures were \$76,000 in 2020, \$146,000 in 2019, and \$93,000 in 2018.

Stock-Based Compensation

The Company accounts for stock-based compensation under the provisions of the amended authoritative guidance, and related interpretations which require the measurement and recognition of expense related to the fair value of stock-based compensation awards. The fair value of stock-based compensation awards is measured at the grant date and re-measured upon modification, as appropriate. The Company uses the Black-Scholes option pricing model to estimate the fair value of employee stock options and rights to purchase shares under the Company's 1999 Employee Stock Purchase Plan, or ESPP, consistent with the provisions of the amended authoritative guidance. The fair value of restricted stock awards, or RSAs, and restricted stock units, or RSUs, is based on the closing price of the Company's common stock on the date of grant. Equity compensation awards which vest with service are expensed on a straight-line basis over the requisite service period. Service based performance awards are expensed on a straight-line basis over the vesting period. If performance conditions are other than service, an accelerated method of amortization is used, which treats each vesting tranche as a separate award over the expected life of the unit. The Company regularly reviews the assumptions used to compute the fair value of its stock-based awards and it will revise its assumptions as appropriate. In the event that assumptions used to compute the fair value of its stock-based awards are later determined to be inaccurate or if the Company changes its assumptions significantly in future periods, stock-based compensation expense and the results of operations could be materially impacted. See Note 13 to the Consolidated Financial Statements for further details.

Accounting for Income Taxes

The Company is required to estimate its income taxes in each of the jurisdictions in which the Company operates. This process involves estimating the Company's actual current tax exposure together with assessing temporary differences resulting from different tax and accounting treatment of items, such as deferred revenue, allowance for doubtful accounts, the impact of equity awards, depreciation and amortization and employee related accruals. These differences result in deferred tax assets and liabilities, which are included on the Company's balance sheets. The Company must then assess the likelihood that its deferred tax assets will be recovered from future taxable income and to the extent the Company believes that recovery is not likely, it must establish a valuation allowance.

Significant management judgment is required in determining the Company's provision for income taxes, the Company's deferred tax assets and liabilities and any valuation allowance recorded against the Company's net deferred tax assets. The Company's deferred tax assets, consisting primarily of net operating loss carryforwards, amounted to \$61 million tax effected as of the end of 2020. The Company has also recorded a valuation allowance of \$60 million, tax effected, as of the end of 2020 due to uncertainties related to the Company's ability to utilize its U.S. deferred tax assets before they expire. In making such determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, ability to project future taxable income, and results of recent operations. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of its net recorded amount, the Company would make an adjustment to the deferred tax assets valuation allowance, which would reduce its provision for income taxes.

The Company accounts for uncertainty in income taxes using a two-step approach for recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon settlement. The Company classifies the liability for unrecognized tax benefits as current to the extent that it anticipates payment (or receipt) of cash within one year. Interest and penalties related to uncertain tax positions are recognized in the provision for income taxes. Accrued interest and penalties are included within the related tax liability line in the Consolidated Balance Sheet.

Concentrations of Credit and Suppliers

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash and cash equivalents and accounts receivable. Cash and cash equivalents are maintained with high quality institutions. The Company's accounts receivables are denominated in U.S. dollars and are derived primarily from sales to customers located in North America, Europe and Asia Pacific. The Company performs ongoing credit evaluations of its customers and generally does not require collateral. See Note 14 for information regarding concentrations associated with accounts receivable.

The Company depends on a limited number of contract manufacturers, subcontractors, and suppliers for wafer fabrication, assembly, programming and test of its devices, and for the supply of programming equipment, and these services are typically provided by one supplier for each of the Company's devices. The Company generally purchases these single or limited source services through standard purchase orders. Because the Company relies on independent subcontractors to perform these services, it cannot directly control its product delivery schedules, costs or quality levels. The Company's future success also depends on the financial viability of its independent subcontractors.

Comprehensive Income (Loss)

Comprehensive income (loss) includes all temporary changes in equity (net assets) during a period from non-owner sources. The Company's comprehensive loss equaled to net loss for all periods presented.

Recently Adopted New Accounting Pronouncements:

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement*. This new standard modifies certain disclosure requirements on fair value measurements. This new standard was effective for the Company beginning January 1, 2020. The Company adopted this standard prospectively effective December 30, 2019 with no impact on the Consolidated Financial Statements.

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementations Costs Incurred in a Cloud Computing Arrangement That is a Service Contract*. Under the new standard, implementations costs related to a cloud computing arrangement will be deferred or expensed as incurred, in accordance with the existing internal-use software guidance for similar costs. The new standard also prescribes the balance sheet, income statement and cash flow classification of the capitalized implementation costs and related amortizations expenses. The effective date for public companies was for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company adopted this standard prospectively effective December 30, 2019 with no impact on the Consolidated Financial Statements.

In June 2016, FASB issued ASU No. 2016-13 ("ASU 2016-13") *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss model which requires the use of forward-looking information to calculate credit loss estimates. It also eliminates the concept of other-than-temporary impairment and requires credit losses related to certain available-for-sale debt securities to be recorded through an allowance for credit losses rather than as a reduction in the amortized cost basis of the securities. These changes result in earlier recognition of credit losses. The Company adopted ASU 2016-13 using the modified retrospective approach on December 30, 2019 with no impact on the Condensed Consolidated Financial Statements.

New Accounting Pronouncements

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes*, which removes certain exceptions to the general principles of ASC 740, in order to reduce the cost and complexity of its application. These changes include elimination of the exceptions for (1) Intra-period tax allocation, (2) Deferred tax liabilities related to outside basis differences, and (3) Year-to-date losses in interim periods. This standard is effective for the fiscal years beginning after December 15, 2020. The Company adopted ASU 2019-12, as of January 4, 2021, and does not expect significant impact on its Consolidated Financial Statements.

In August 2020, the FASB issued ASU No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*, which address issues identified as a result of the complexity associated with applying generally accepted accounting principles for certain financial instruments with characteristics of liabilities and equity. This amendment is effective for public business entities that meet the definition of a Securities and Exchange Commission ("SEC") filer, excluding entities eligible to be smaller reporting companies as defined by the SEC, for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. The Company does not expect the adoption of ASU No. 2020-06 to have a significant impact on its Consolidated Financial Statements.

NOTE 3-NET LOSS PER SHARE

Basic net loss per share is computed by dividing net loss available to common stockholders by the weighted average number of common shares outstanding during the period. Diluted net loss per share was computed using the weighted average number of common shares outstanding during the period plus potentially dilutive common shares outstanding during the period under the treasury stock method. In computing diluted net loss per share, the weighted average stock price for the period is used in determining the number of shares assumed to be purchased from the exercise of stock options and warrants.

For 2020, 2019 and 2018, 921,000 shares, 563,000 shares, and 435,000 shares, respectively, associated with equity awards outstanding and the estimated number of shares to be purchased under the current offering period of the 2009 Employee Stock Purchase Plan were not included in the calculation of diluted net loss per share, as they were considered antidilutive due to the net loss the Company experienced during those years. Warrants to purchase up to 386,000 shares were issued in connection with May 29, 2018 stock offering were also not included in the diluted loss per share calculation for the year ended January 3, 2021 and December 29, 2019 as they were also considered anti-dilutive due to the net loss the Company experienced during these periods.

On December 6, 2019, the Board of Directors of the Company approved a 1-for-14 reverse stock split of the Company's outstanding common stock, which became effective on December 23, 2019. The reverse stock split was previously approved by the Company's shareholders in a special meeting held on November 26, 2019. Accordingly, all share, equity award, and per share amounts have been adjusted to reflect the reverse stock split for all periods presented.

NOTE 4-BALANCE SHEET COMPONENTS

	January 3, 2021	December 29, 2019
	(in thousands)	
Inventories:		
Raw material	\$ 191	\$ 222
Work-in-process	1,842	2,370
Finished goods	655	668
	<u>\$ 2,688</u>	<u>\$ 3,260</u>
Other current assets:		
Prepaid expenses	\$ 884	\$ 1,296
Other	182	269
	<u>\$ 1,066</u>	<u>\$ 1,565</u>
Property and equipment:		
Equipment	\$ 10,471	\$ 10,694
Software	1,783	1,789
Furniture and fixtures	33	36
Leasehold improvements	466	474
	12,753	12,993
Accumulated depreciation and amortization	(12,205)	(12,163)
	<u>\$ 548</u>	<u>\$ 830</u>
Capitalized internal-use software:		
Capitalized software held for internal use	\$ 1,166	\$ 365
Accumulated amortization	(180)	(32)
	<u>\$ 986</u>	<u>\$ 333</u>
Accrued liabilities:		
Employee compensation related accruals	762	713
Other	578	420
	<u>\$ 1,340</u>	<u>\$ 1,133</u>

The Company recorded depreciation and amortization expense of \$817,000, \$1.2 million and \$1.3 million for the fiscal years 2020, 2019 and 2018, respectively. No interest was capitalized for any period presented. Fiscal year, 2020 and 2019 depreciation and amortization of \$817,000 and \$1.2 million, respectively, includes approximately \$148,000 and \$32,000, respectively, of amortization of capitalized internal-use software.

NOTE 5-BUSINESS ACQUISITION*SensiML Acquisition*

On January 3, 2019, the Company entered into a stock purchase agreement, or the Stock Purchase Agreement, with SensiML for the purchase of all of its issued and outstanding common stock in exchange for the Company's common stock, or the SensiML Acquisition.

SensiML has a software toolkit enabling IoT developers to quickly and easily create smart devices, transforming rich sensors into actionable event detectors.

SensiML's Analytics Toolkit is an end-to-end software suite that provides OEMs a straightforward process for developing pattern matching sensor algorithms using machine learning technology that are optimized for ultra-low power consumption. The SensiML Analytics Toolkit enables OEMs to quickly and easily leverage the power of local AI in edge, endpoint and wearable designs without the need for significant Data Science or Firmware Engineering resources.

The results of operations for the Company for the fiscal year ended January 3, 2021 include operating activity for SensiML since its acquisition date of January 3, 2019. For the fiscal years ended January 3, 2021 and December 29, 2019 revenues attributable to SensiML included in the condensed consolidated statement of operations were \$175,000 and \$126,000, respectively. For the years ended January 3, 2021 and December 29, 2019 charges of \$148,000 and \$148,000, respectively were attributable to the amortization of purchased intangible assets, were included in the statements of operations for respective periods. Costs related to the acquisition were \$104,000 in fiscal 2019.

Purchase Price Allocation

Under the purchase accounting method, the total purchase price was allocated to SensiML's net tangible and intangible assets based upon their estimated fair values as of the acquisition date. The excess purchase price over the value of the net tangible and identified intangible assets was recorded as goodwill. During the measurement period, which can be no more than one year from the date of acquisition, the Company obtained information to determine the final fair value of the net assets acquired at the acquisition date. Assets acquired and liabilities assumed are recorded based on valuations derived from estimated fair value assessments and assumptions used by the Company. The Company recorded goodwill related to the acquisition of \$185,000 in fiscal 2019.

Intangible assets associated with the acquisition is primarily attributable to the future technology, market presence and knowledgeable and experienced workforce. The fair value assigned to identifiable intangible assets acquired was determined using the income approach taking into account the Company's consideration of a number of inputs, including an independent third-party analysis that was based upon estimates and assumptions provided by the Company. These estimates and assumptions were determined through established and generally accepted valuation techniques. The estimated fair value of the tangible and intangible assets acquired was allocated at SensiML's acquisition date. Goodwill is not amortized for financial accounting purposes and is not expected to be deductible for income tax purposes.

The Stock Purchase Agreement contains customary representations and warranties between the Company and SensiML, who agreed to indemnify each other for certain breaches of representations, warranties, covenants and other specified matters. Approximately \$200,000 in value of the Company's common stock of the purchase price was placed in escrow as security for post-closing working capital adjustments, which expired on January 2, 2020.

NOTE 6-INTANGIBLE ASSETS

The following table provides the details of the carrying value of intangible assets recorded from the acquisition of SensiML as of January 3, 2021 (in thousands):

	Useful Life	January 3, 2021		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Developed technology	10	\$ 959	\$ (192)	\$ 767
Customer relationships	2	81	(81)	—
Trade names and trade marks	10	116	(23)	93
Total acquired identifiable intangible assets		\$ 1,156	\$ (296)	\$ 860

The following table provides the details of the carrying value of intangible assets recorded from the acquisition of SensiML as of December 29, 2019 (in thousands):

	Useful Life	December 29, 2019		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Developed technology	10	\$ 959	\$ (96)	\$ 863
Customer relationships	2	81	(40)	41
Trade names and trade marks	10	116	(12)	104
Total acquired identifiable intangible assets		\$ 1,156	\$ (148)	\$ 1,008

The following table provides the details of future annual amortization of intangible assets, based upon the current useful lives as of January 3, 2021 (in thousands):

Annual Fiscal Years	Amount
2021	107
2022	107
2023	107
2024	107
2025	107
Thereafter	325
Total	\$ 860

NOTE 7-DEBT OBLIGATIONS

Revolving Line of Credit

On September 28, 2018, the Company entered into a Loan and Security Agreement (the "Loan Agreement"), with Heritage Bank. The Loan Agreement provided for, among other things, the Revolving Facility with aggregate commitments of \$9.0 million.

On December 21, 2018, the Company entered into an Amended and Restated Loan and Security Agreement (the "Amended and Restated Loan Agreement") with Heritage Bank to replace in its entirety the Loan Agreement. The Amended and Restated Loan Agreement increased the Revolving Facility from \$9.0 million to \$15.0 million (the "Revolving Facility"). The Amended and Restated Loan Agreement requires the Company to maintain at least \$3.0 million in unrestricted cash at Heritage Bank. The Company was in compliance with all loan covenants under the Amended and Restated Loan Agreement as of the end of the current reporting period.

On November 6, 2019 the Company entered into a First Amendment to the Amended and Restated Loan Agreement to extend the maturity date of the Revolving Facility for one year through September 28, 2021. Under this amendment, the Revolving Facility advances shall bear interest, on the outstanding daily balance thereof, at a rate per annum equal to the greater of (i) one half of one percentage point (0.50%) above the prime rate, or (ii) five and one half of one percentage points (5.50%).

On December 11, 2020, the Company entered into a Second Amendment (the "Second Amendment") to their Amended and Restated Loan Agreement with Heritage Bank of Commerce. The Second Amendment amends the Amended and Restated Loan Agreement to, among other things, i) extend the loan maturity date for one year through September 28, 2022 and ii) loan advances will bear interest, on the outstanding daily balances thereof, at a rate per annum equal to one half of one percentage point (0.50%) above the prime rate.

As of January 3, 2021 and December 29, 2019, the Company had \$15.0 million of revolving debt outstanding with an interest rates of 3.75% and 5.50% per annum, respectively.

The Bank has a first priority security interest in substantially all of the Company's tangible and intangible assets to secure any outstanding amounts under the Amended and Restated Loan Agreement.

Payroll Protection Program Loan

On May 6, 2020, the Company entered into a loan agreement with Heritage Bank (“PPP Loan”) for a loan of \$1.2 million pursuant to the PPP under the CARES Act, as implemented by the U.S. Small Business Administration.

The PPP Loan is evidenced by a promissory note (“Note”) dated May 6, 2020, and matures two years from the disbursement date. The Note bears interest at a rate of 1.00% per annum, with the first six months of interest deferred. Principal and interest are payable monthly commencing six months after the disbursement date and may be prepaid by the Company at any time prior to maturity with no prepayment penalties. The Note contains customary events of default relating to, among other things, payment defaults or breaches of the terms of the Note. Upon the occurrence of an event of default, the lender may require immediate repayment of all amounts outstanding under the Note. The Company applied for loan forgiveness in the fourth quarter of fiscal 2020, in accordance with the terms under the CARES Act. On January 26, 2021, subsequent to its fiscal year end, the Company received a notice from Heritage Bank that it had amounts under that Note had been forgiven. Refer to Note 16, Subsequent Events.

NOTE 8-LEASES

The Company entered into operating leases for office space for its headquarters, domestic and foreign subsidiaries and sales offices. Finance leases are primarily for engineering design software. Operating leases generally have lease terms of 1 year to 5 years. Finance leases are generally 2 years to 3 years. For the year ended January 3, 2021 the Company recognized right-of-use assets and lease liability of approximately 1.8 million and \$1.9 million, respectively, related to the operating and finance leases signed for the premises of its headquarters in San Jose and its subsidiary SensiML in Oregon. For the year ended December 29, 2019 the Company recognized right-of-use assets and lease liability of approximately \$2.4 million and \$2.3 million, respectively, relating to the operating and finance leases signed for the premises of its headquarters in San Jose, and its subsidiary SensiML in Oregon.

In October 2018, the Company leased a facility for research and development in San Diego, California, the lease of which expired in July 2020. The Company did not renew the lease agreement in San Diego and the office was closed.

On February 13, 2019, the Company entered into an agreement to lease approximately 24,164 square feet of premises located at 2220 Lundy Avenue, San Jose, CA 95131 for a period of five years, effective April 15, 2019 to relocate its headquarters.

In April 2019, the Company leased a facility for its SensiML subsidiary in Beaverton, Oregon, the lease of which expires in March 2021. The Company is currently considering several options including negotiating with the Landlord of its Oregon location for an extension.

The Company leases a 9,400 square foot facility in Bangalore, India for the purpose of software development, which is leased through June 2021. On July 10, 2020, the Company's Indian subsidiary leased a smaller office premises of 1,100 square feet for a period of 11 months to accommodate the reduced headcount resulting from our restructuring in 2020. Subsequently, the Company deemed the 9,400 square foot location to be abandoned and the Company recognized the rent expense of that facility in restructuring charges in December 2020. The remaining lease liability related to the prior office is classified within other accrued liabilities as of January 3, 2021

In addition, the Company rents sales offices in Europe and Asia. Total rent expense during 2020, 2019 and 2018 was approximately \$493,000, \$798,000 and \$881,000 respectively.

The following table provides the activity related to operating and finance leases (in thousands):

	Fiscal Year Ended January 3, 2021	Fiscal Year Ended December 29, 2019
Operating lease costs:		
Fixed	\$ 473	\$ 757
Variable	—	—
Short term	20	40
Total	<u>493</u>	<u>797</u>
Finance lease costs:		
Amortization of ROU asset	315	388
Interest	38	18
Total	<u>\$ 353</u>	<u>\$ 406</u>

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The following table provides the details of supplemental cash flow information (in thousands):

	Fiscal Year Ended January 3, 2021	Fiscal Year Ended December 29, 2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows used for operating leases	\$ 497	\$ 791
Operating cash flows used for finance leases	38	24
Financing cash flows used for financing leases	270	365
Total	\$ 805	\$ 1,180
Right-of-use assets obtained in exchange for obligations:		
Operating leases	\$ —	\$ 2,200
Finance leases	914	170
Total	\$ 914	\$ 2,370

The following table provides the details of right-of-use assets and lease liabilities as of January 3, 2021 (in thousands):

	January 3, 2021	December 29, 2019
Right-of-use assets:		
Operating leases	\$ 1,134	\$ 2,200
Finance leases	705	170
Total	\$ 1,839	\$ 2,370
Lease liabilities:		
Operating leases	1,212	1,816
Finance leases	670	471
Total	\$ 1,882	\$ 2,287

The following table provides the details of future lease payments for operating and finance leases as of January 3, 2021 and (in thousands):

Annual Fiscal Years	Operating	Finance
2021	\$ 402	\$ 375
2022	409	335
2023	422	—
2024	106	—
Total lease payments	1,339	710
Less: Interest	(127)	(40)
Present value of lease liabilities	\$ 1,212	\$ 670

The following table provides the details of lease terms and discount rates as of January 3, 2021:

	January 3, 2021
Right-of-use assets:	
Weighted-average remaining lease term (years)	
Operating leases	3.24
Finance leases	2.21
Weighted-average discount rates:	
Operating leases	6.00%
Finance leases	5.50%

NOTE 9-FAIR VALUE MEASUREMENTS

Pursuant to the accounting guidance for fair value measurements and its subsequent updates, fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, the Company considers the principal or most advantageous market and it considers assumptions that market participants would use when pricing the asset or liability.

The accounting guidance for fair value measurement also specifies a hierarchy of valuation techniques based upon whether the inputs to those valuation techniques reflect assumptions other market participants would use based upon market data obtained from independent sources (observable inputs) or reflect the Company's own assumption of market participant valuation (unobservable inputs). The fair value hierarchy consists of the following three levels:

- *Level 1* – Inputs are quoted prices in active markets for identical assets or liabilities.
- *Level 2* – Inputs are quoted prices for similar assets or liabilities in an active market, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable and market-corroborated inputs which are derived principally from or corroborated by observable market data.
- *Level 3* – Inputs are derived from valuation techniques in which one or more significant inputs or value drivers are unobservable.

Our cash and cash equivalents include money market account balances of \$22.0 million and \$20.9 million as of January 3, 2021 and December 29, 2019, respectively. Investment in money market funds was classified within level 1 of the fair value hierarchy because they were valued using quoted market prices for identical assets. Fair value of the money market account balance with Heritage Bank equals to book value.

NOTE 10-INCOME TAXES

The following table presents the U.S. and foreign components of consolidated loss before income taxes and the provision for (benefit from) income taxes (in thousands):

	Fiscal Years		
	2020	2019	2018
Loss before income taxes:			
U.S.	\$ (11,170)	\$ (15,813)	\$ (13,982)
Foreign	70	289	355
Loss before income taxes	<u>\$ (11,100)</u>	<u>\$ (15,524)</u>	<u>\$ (13,627)</u>
Provision for (benefit from) income taxes:			
Current:			
Federal	\$ —	\$ —	\$ (19)
State	3	3	2
Foreign	39	108	169
Subtotal	<u>42</u>	<u>111</u>	<u>152</u>
Deferred:			
Federal	—	(141)	—
State	—	(44)	—
Foreign	9	(6)	—
Subtotal	<u>9</u>	<u>(191)</u>	<u>—</u>
Provision for (benefit from) income taxes	<u>\$ 51</u>	<u>\$ (80)</u>	<u>\$ 152</u>

The following table presents the rate reconciliation between income tax provisions at the U.S. federal statutory rate and the effective rate reflected in the consolidated statements of operations:

	Fiscal Years		
	2020	2019	2018
Income tax (benefit) at statutory rate	\$ (2,331)	\$ (3,260)	\$ (2,862)
State taxes	3	(42)	2
Stock compensation and other permanent differences	99	187	252
Foreign taxes	34	42	95
Future benefit of deferred tax assets not recognized	2,246	3,133	2,684
Other	—	(140)	(19)
Provision for (benefit from) income taxes	<u>\$ 51</u>	<u>\$ (80)</u>	<u>\$ 152</u>

Based on the available objective evidence, management believes it is more likely than not that the U.S. net deferred tax assets will not be fully realizable. Accordingly, the Company has provided a full valuation allowance against its U.S. federal and state deferred tax assets at January 3, 2021. Any future release of the valuation allowance may be recorded as a tax benefit increasing net income. The Company believes it is more likely than not it will be able to realize its foreign deferred tax assets. Deferred tax balances are comprised of the following (in thousands):

	January 3, 2021	December 29, 2019
Deferred tax assets:		
Net operating losses	\$ 43,703	\$ 40,717
Accruals and reserves	1,239	1,345
Credits carryforward	5,860	5,765
Depreciation and amortization	9,240	9,760
Stock-based compensation	485	637
Operating lease liability	469	529
Gross deferred tax assets	60,996	58,753
Deferred tax liabilities:		
Right-of-use asset	(458)	(552)
Gross deferred tax assets	(458)	(552)
Net deferred tax assets	60,538	58,201
Valuation allowance	(60,486)	(58,140)
Total deferred tax asset	\$ 52	\$ 61

As of January 3, 2021, the Company had net operating loss carryforwards of approximately \$181.1 million for federal and \$81.0 million for state income tax purposes. If not utilized, the federal net operating loss for years beginning before January 1, 2018 of \$141.6 million will expire beginning in 2021 through 2038, and federal net operating losses beginning after January 1, 2018 of \$39.2 million will be carried forward indefinitely (subject to certain limitations). If not utilized, the state net operating losses will expire beginning in 2021 through 2040.

The Company has research credit carryforwards of approximately \$4.1 million for federal and \$4.6 million for state income tax purposes as of January 3, 2021. If not utilized, the federal carryforwards will expire in various amounts beginning in 2021. The California credit can be carried forward indefinitely.

The Tax Cuts and Jobs Act (the "TCJA") was enacted on December 22, 2017. The Act reduces the US federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings. In December 2017, the SEC issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provides guidance on accounting for the income tax effects of the TCJA. SAB 118 provides a measurement period that should not extend beyond one year from the TCJA enactment date for companies to complete the accounting relating to the TCJA under Accounting Standards Codification Topic 740, "Income Taxes" ("ASC 740"). In accordance with SAB 118, the TCJA-related income tax effects that the Company initially reported as provisional estimates were refined as additional analysis was performed. There was no material impact to the balance sheet and income statement recorded when the analysis was completed in the 2018 fourth quarter. The TCJA also includes a provision to tax global intangible low-taxed income ("GILTI") of foreign subsidiaries. In accordance with U.S. GAAP, the Company has made an accounting policy election to treat taxes due under the GILTI provision as a current period expense.

Events which may restrict utilization of a company's net operating loss and credit carryforwards include, but are not limited to, certain ownership change limitations as defined in Internal Revenue Code Section 382 and similar state provisions. In the event the Company has had a change of ownership, utilization of carryforwards could be restricted to an annual limitation. The annual limitation may result in the expiration of net operating loss carryforwards and credit carryforwards before utilization.

The Company has not undertaken a study to determine if its net operating losses are limited. In the event the Company previously experienced an ownership change, or should experience an ownership change in the future, the amount of net operating losses and research and development credit carryovers available in any taxable year could be limited and may expire unutilized.

Foreign withholding taxes associated with the repatriation of earnings of foreign subsidiaries were not provided for on the undistributed earnings of certain foreign subsidiaries as of the end of fiscal 2020. The Company intends to reinvest these earnings indefinitely in the Company's foreign subsidiaries. The Company believes that future domestic cash generation will be sufficient to meet future domestic cash needs. The Company has not recorded a deferred tax liability on the undistributed earnings of non-U.S. subsidiaries. The foreign withholding taxes would not have a material impact on the Company's financial position and results of operation.

Uncertain Tax Positions

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	January 3, 2021	December 29, 2019	December 30, 2018
Beginning balance of unrecognized tax benefits	\$ 2,117	\$ 2,161	\$ 2,107
Additions (subtractions) for tax positions related to the prior year	38	(46)	(2)
Additions for tax positions related to the current year	114	88	125
Lapse of statutes of limitations	(93)	(86)	(69)
Ending balance of unrecognized tax benefits	\$ 2,176	\$ 2,117	\$ 2,161

Out of \$2.2 million of unrecognized tax benefits, there are no unrecognized tax benefits that would result in a change in the Company's effective tax rate if recognized in future years. The accrued interest and penalties related to uncertain tax positions was not significant for January 3, 2021, December 29, 2019 and December 30, 2018.

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security (CARES) Act was signed into law. The CARES Act includes provisions relating to refundable payroll tax credits, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to the tax depreciation methods for qualified improvement property. The CARES Act has an immaterial impact on our income tax positions.

The Company is not currently under tax examination in the U.S. and the Company's historical net operating loss and credit carryforwards may be adjusted by the Internal Revenue Service, and other tax authorities until the statute closes on the year in which such tax attributes are utilized. The Company estimates that its unrecognized tax benefits will not change significantly within the next twelve months.

The Company is subject to U.S. federal income tax as well as income taxes in many U.S. states and foreign jurisdictions in which the Company operates. The U.S. tax years from 1999 forward remain effectively open to examination due to the carryover of unused net operating losses and tax credits.

NOTE 11-STOCKHOLDERS' EQUITY

Common and Preferred Stock

As of January 3, 2021, the Company is authorized to issue 200 million shares of common stock and has 10 million shares of authorized but unissued undesignated preferred stock. Without any further vote or action by the Company's stockholders, the Board of Directors has the authority to determine the powers, preferences, rights, qualifications, limitations or restrictions granted to or imposed upon any wholly unissued shares of undesignated preferred stock.

Reverse Stock Split

On December 6, 2019, the Board of Directors of the Company approved a 1-for-14 reverse stock split of the Company's outstanding common stock, which became effective on December 23, 2019. The reverse stock split was previously approved by the Company's shareholders in a special meeting held on November 26, 2019. At the effective time of the reverse stock split, every 14 issued and outstanding shares of common stock of the Company were automatically combined into one issued and outstanding share of common stock without any change in the par value per share. Stockholders who would have otherwise been entitled to fractional shares of common stock as a result of the reverse stock split received a cash payment in lieu of receiving fractional shares. All share, equity awards, and per share amounts contained in this Form 10-K and the accompanying Consolidated Financial Statements have been adjusted to reflect the reverse stock split for all prior periods presented. Warrants issued in connection with the May 2018 stock issuance were also adjusted to reflect the reverse stock split for all the periods presented.

Issuance of Common Stock

On June 22, 2020, the Company closed an underwritten public offering of 2.5 million shares of common stock, \$0.001 par value per share at a price of \$3.50 per share. The Company received gross proceeds from the offering of approximately \$8.8 million and incurred stock issuance costs of approximately \$1.1 million. Under the terms of the underwriting agreement, the Company granted the underwriter a 30-day option to purchase up to an additional 375,000 shares of common stock to cover overallotments. On July 21, 2020 the underwriter's partially exercised the option to purchase 141,733 additional shares of common stock in connection with the offering, resulting in additional gross proceeds to the Company of approximately \$496,000 and incurred additional stock issuance costs of approximately \$52,000. Total gross proceeds received from this offering was approximately \$9.3 million and incurred total stock issuance costs of approximately \$1.2 million. Net proceeds received from this offering after deducting stock issuance costs was approximately \$8.1 million.

On June 21, 2019, the Company closed an underwritten public offering of 1.3 million shares of common stock, \$0.001 par value per share at a price of \$ 7.00 per share, which included 171,429 shares issued pursuant to the underwriters' full exercise of their over-allotment option. The Company received net proceeds from the offering of approximately \$8.0 million, net of underwriter's commission and other offering expenses paid as of the third quarter of 2019.

On March 15, 2019, the Company filed a shelf registration statement on Form S-3, under which the Company may, from time to time, sell securities in one or more offerings up to a total amount of \$75 million. The Company's shelf registration statement was declared effective on March 29, 2019.

In May 2018, the Company issued an aggregate of 965,251 shares of common stock, \$0.001 par value and warrants to purchase up to an aggregate of 386,100 shares of common stock in an underwritten public offering. The common stock and warrants were issued in units, with each unit consisting of (i) one share of common stock and (ii) a warrant to purchase 0.40 of a share of common stock, at a price of \$16.10 per Unit. The Company received total net proceeds from the offering of \$13.9 million.

The warrants are exercisable any time for a period of 60 months from the date of issuance on May 29, 2018, and are exercisable at an exercisable price of \$19.32 per share. The estimated grant date fair value was \$7.98 per warrant and was calculated based on the following assumptions used in the Black-Scholes model: expected term of 5 years, risk-free interest rate of 2.58%, expected volatility of 52.75% and expected dividend of zero.

As of January 3, 2021, warrants exercisable for 386,100 shares of common stock at an exercise price of \$19.32 per share remain outstanding.

NOTE 12-EMPLOYEE STOCK PLANS

2009 Stock Plan

The 2009 Stock Plan, or 2009 Plan, was amended and restated by the Board of Directors in January 2015, in February 2017, and in March 15, 2018 and approved by the Company's stockholders on April 23, 2015, on April 26, 2017 and on April 25, 2018 to, among other things, reserve an additional 178,571, 107,143 and 285,714 shares of common stock, respectively, for issuance under the 2009 Plan. On April 24, 2019, 2009 Plan was replaced by 2019 Stock Plan with an extended term of ten years through March 15, 2028. The remaining balance of available shares under the 2009 Plan of 299,070 were cancelled as of April 24, 2019.

2019 Stock Plan

On April 24, 2019, the Company's Board of Directors and shareholders approved the 2019 Stock Plan, or 2019 Plan, to replace the 2009 stock Plan, or the 2009 Plan. Under the 2019 Plan, 357,143 shares of common stock are available for grants, plus any shares subject to any outstanding options or other awards granted under the Company's 2009 Plan that expire, are forfeited, cancelled, returned to the Company for failure to satisfy vesting requirements, settled for cash or otherwise terminated without payment being made thereunder. As of January 3, 2021, approximately 319,341 shares of the Company's common stock were reserved for issuance under the 2019 Plan.

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Options typically vest at a rate of 25% one year after the vesting commencement date, and one forty-eighth for each month of service thereafter. RSUs typically vest at a rate of 25% one year after the vesting commencement date, and one eighth every six months thereafter. The Company may implement different vesting schedules in the future with respect to any new equity awards.

Employee Stock Purchase Plan

The 2009 Employee Stock Purchase Plan, or 2009 ESPP, was adopted in March 2009. The 2009 ESPP was amended by the Board of Directors in January 2015 and in February 2017, and was approved by the Company's stockholders on April 23, 2015 and April 26, 2017, to reserve an additional 71,429 and 107,143 shares of common stock, respectively, for issuance under the 2009 ESPP.

On May 6, 2019, the Board of Directors approved the extension of the term of the 2009 ESPP to March 5, 2029, which also requires the stockholders' ratification within 12 months of the approval by the Board of Directors. The Company plans to submit the extension of the term of the 2009 ESPP for our stockholders to ratify in the next annual general meeting.

As of January 3, 2021, 341,948 shares were reserved for issuance under the 2009 ESPP. The 2009 ESPP provides for six month offering periods. Participants purchase shares through payroll deductions of up to 20% of an employee's total compensation (maximum of 1,429 shares per offering period). The 2009 ESPP permits the Board of Directors to determine, prior to each offering period, whether participants purchase shares at: (i) 85% of the fair market value of the common stock at the end of the offering period; or (ii) 85% of the lower of the fair market value of the common stock at the beginning or the end of an offering period. The Board of Directors has determined that, until further notice, future offering periods will be made at 85% of the lower of the fair market value of the common stock at the beginning or the end of an offering period.

NOTE 13-STOCK-BASED COMPENSATION

The Company provides stock-based incentive compensation, or awards, to eligible employees and non-employee directors. Awards that may be granted under the program include non-qualified and incentive stock options, restricted stock units, or RSUs, performance-based restricted stock units, or PRSUs, and stock bonus units. To date, awards granted under the program consist of stock options, RSUs and PRSUs. The majority of stock-based awards granted under the program vest over four years. Stock options granted under the program have a maximum contractual term of ten years.

Stock-based compensation expense is recognized in the Company's consolidated statements of operations and includes compensation expense for the stock-based compensation awards granted or modified subsequent to January 1, 2006, based on the grant date fair value estimated in accordance with the provisions of the amended authoritative guidance. The impact on the Company's results of operations of recording stock-based compensation expense for fiscal years 2020, 2019, and 2018 was as follows (in thousands):

	Fiscal Years		
	2020	2019	2018
Cost of revenue	\$ 162	\$ 78	\$ 129
Research and development	670	2,242	760
Selling, general and administrative	907	824	1,012
Total costs and expenses	<u>\$ 1,739</u>	<u>\$ 3,144</u>	<u>\$ 1,901</u>

No stock-based compensation was capitalized or included in inventories at the end of 2020, 2019 and 2018.

Stock-Based Compensation Award Activity

The following table summarizes the shares available for grant under the 2019 Plan (in thousands):

	Shares Available for Grant
Balance at December 29, 2019	272
Authorized	550
Options granted	—
Options forfeited or expired	65
RSUs granted	(816)
RSUs forfeited	249
Balance at January 3, 2021	<u>320</u>

Stock Options

The following table summarizes stock options outstanding and stock option activity under the 2019 Plan, and the related weighted average exercise price, for 2020, 2019 and 2018:

	Number of Shares (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Term (in years)	Aggregate Intrinsic Value (in thousands)
Balance outstanding at December 31, 2017	254	\$ 29.26	4.34	
Granted	—	—		
Forfeited or expired	(10)	25.20		
Exercised	(15)	12.60		
Balance outstanding at December 30, 2018	229	30.52	3.70	
Granted	—	—		
Forfeited or expired	(42)	24.14		
Exercised	(1)	10.92		
Balance outstanding at December 29, 2019	186	32.09	3.32	
Granted	—	—		
Forfeited or expired	(65)	38.83		
Exercised	—	—		
Balance outstanding at January 3, 2021	121	\$ 28.46	3.75	\$ —
Exercisable and Vested and expected to vest at January 3, 2021	121	\$ 28.46	3.75	\$ —

There was no intrinsic value for the stock options, based on the Company's closing stock price of \$3.79 per share as of the end of the Company's current reporting period, which would have been received by the option holders had all option holders exercised their options as of that date.

The total intrinsic value of options exercised during 2020, 2019 and 2018 was not significant. Total cash received from employees as a result of employee stock option exercises during 2020, 2019 and 2018 was approximately \$0, \$3,600, and \$195,000, respectively. The Company settles employee stock option exercises with newly issued common shares. In connection with these exercises, there was no tax benefit realized by the Company due to the Company's current net loss position.

Total stock-based compensation expense recognized related to stock options was \$39,000, \$117,000, and \$131,000 for 2020, 2019, and 2018, respectively. No stock options were granted during the fiscal year 2020, 2019 and 2018. As of the end of 2020, the fair value of unvested stock options, net of expected forfeitures, was approximately \$38,000. This unrecognized stock-based compensation expense is expected to be recorded over a weighted average period of 0.00 year.

Significant exercise price ranges of options outstanding, related weighted average exercise prices and contractual life information at the end of 2020 were as follows:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Options Outstanding (in thousands)	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price	Options Vested and Exercisable (in thousands)	Weighted Average Exercise Price
\$12.05	52	5.68	\$ 12.05	52	\$ 12.05
\$18.48 - \$31.50	14	2.82	26.71	14	26.71
\$32.20	3	2.34	32.2	3	32.20
\$38.92	14	0.85	38.92	14	38.92
\$39.48 - \$44.94	9	2.76	42.94	9	42.91
\$46.62	3	3.34	46.62	3	46.62
\$47.46	14	2.94	47.46	14	47.46
\$48.72	8	1.35	48.72	8	48.72
\$53.48	4	3.38	53.48	4	53.48
\$12.05- \$53.48	121	3.75	\$ 28.46	121	\$ 28.46

Valuation Assumptions

The Company uses the Black-Scholes option pricing model to estimate the fair value of employee stock options and rights to purchase shares under the Company's 2009 ESPP. Using the Black-Scholes pricing model requires the Company to develop highly subjective assumptions including the expected term of awards, expected volatility of its stock, expected risk-free interest rate and expected dividend rate over the term of the award. The Company's expected term of awards assumption is based primarily on its historical experience with similar grants. The Company's expected stock price volatility assumption for both stock options and ESPP shares is based on the historical volatility of the Company's stock, using the daily average of the opening and closing prices and measured using historical data appropriate for the expected term. The risk-free interest rate assumption approximates the risk-free interest rate of a Treasury Constant Maturity bond with a maturity approximately equal to the expected term of the stock option or ESPP shares. This fair value is expensed over the requisite service period of the award. The fair value of RSUs and PRSUs is based on the closing price of the Company's common stock on the date of grant. Equity compensation awards which vest with service are expensed using the straight-line attribution method over the requisite service period.

In addition to the assumptions used in the Black-Scholes pricing model, the amended authoritative guidance requires that the Company recognize expense for awards ultimately expected to vest; therefore, the Company is required to develop an estimate of the number of awards expected to be forfeited prior to vesting, or forfeiture rate. The forfeiture rate is estimated based on historical pre-vest cancellation experience and is applied to all share-based awards.

No stock options were granted during the years 2020, 2019 and 2018.

Restricted Stock Units

The Company grants restricted stock units, or RSUs, to employees with various vesting terms. RSUs entitle the holder to receive, at no cost, one common share for each restricted stock unit on the vesting date as it vests. The Company withholds shares in settlement of employee tax withholding obligations upon the vesting of restricted stock units. Stock-based compensation related to grants of vested RSUs and PSUs was \$1.7 million, \$3.0 million and \$1.6 million in 2020, 2019 and 2018, respectively.

The following table summarizes RSU's activity under the 2019 Plan and the related weighted average grant date fair value, for 2020, 2019 and 2018:

	RSUs & PRSUs Outstanding	
	Number of Shares (in thousands)	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2017	168	\$ 21.56
Granted	110	11.90
Vested	(77)	19.18
Forfeited	(18)	—
Nonvested at December 30, 2018	183	17.22
Granted	353	10.77
Vested	(118)	14.48
Forfeited	(41)	—
Nonvested at December 29, 2019	377	\$ 12.55
Granted	816	3.97
Vested	(144)	10.41
Forfeited	(249)	7.93
Nonvested at January 3, 2021	800	\$ 4.99

Employee Stock Purchase Plan

The weighted average estimated fair value, as defined by the amended authoritative guidance, of rights issued pursuant to the Company's ESPP during 2020, 2019 and 2018 was \$1.09, \$4.28 and \$5.18, respectively. Sales under the ESPP were 20,409 shares of common stock at an average price per share of \$2.47 for 2020, 24,131 shares of common stock at an average price per share of \$9.76 for 2019, and 31,306 shares of common stock at an average price per share of \$15.40 for 2018.

As of January 3, 2021, 341,926 shares under the 2009 ESPP remained available for issuance. The Company recorded compensation expenses related to the ESPP of \$39,000, \$60,000 and \$205,000 in 2020, 2019 and 2018, respectively.

The fair value of rights issued pursuant to the Company's ESPP was estimated on the commencement date of each offering period using the following weighted average assumptions:

	Fiscal Years		
	2020	2019	2018
Expected life (months)	6.0	6.0	6.0
Risk-free interest rate	0.12%	2.37%	2.26%
Volatility	82%	54%	50%
Dividend yield	—	—	—

The methodologies for determining the above values were as follows:

- **Expected term:** The expected term represents the length of the purchase period contained in the ESPP.
- **Risk-free interest rate:** The risk-free interest rate assumption is based upon the risk-free rate of a Treasury Constant Maturity bond with a maturity appropriate for the term of the purchase period.
- **Volatility:** The Company determines expected volatility based on historical volatility of the Company's common stock for the term of the purchase period.
- **Dividend Yield:** The expected dividend assumption is based on the Company's intent not to issue a dividend under its dividend policy.

NOTE 14-INFORMATION CONCERNING PRODUCT LINES, GEOGRAPHIC INFORMATION, ACCOUNTS RECEIVABLE AND REVENUE CONCENTRATION

The Company identifies its business segments based on business activities, management responsibility and geographic location. For all periods presented, the Company operated in a single reportable business segment.

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The following is a breakdown of revenue by product family (in thousands):

	Fiscal Years		
	2020	2019	2018
<i>Revenue by product line (1) :</i>			
New products	\$ 2,782	\$ 3,123	\$ 5,735
Mature products	5,852	7,187	6,894
Total revenue	<u>\$ 8,634</u>	<u>\$ 10,310</u>	<u>\$ 12,629</u>

- (1) New products include all products manufactured on 180 nanometer or smaller semiconductor processes, eFPGA IP license, QuickAI and SensiML AI software as a service (SaaS) revenues. Mature products include all products produced on semiconductor processes larger than 180 nanometer.

The following is a breakdown of revenue by shipment destination (in thousands):

	Fiscal Years		
	2020	2019	2018
<i>Revenue by geography:</i>			
Asia Pacific (1)	\$ 2,096	\$ 3,049	\$ 4,905
Europe	1,501	2,459	1,280
North America (2)	5,037	4,802	6,444
Total revenue	<u>\$ 8,634</u>	<u>\$ 10,310</u>	<u>\$ 12,629</u>

- (1) Asia Pacific includes revenue from Japan of \$2.0 million or 23% of total revenue in 2020. In 2019 revenue from China was \$1.1 million or 11% and Japan \$1.8 million or 17%, respectively. In 2018, revenue from China was \$1.8 million or 15% and Japan \$1.6 million or 12%, respectively.
- (2) North America includes revenue from the United States of \$5.0 million or 58% of total revenue in 2020, \$4.7 million or 46% of total revenue in 2019 and \$6.4 million or 50% of total revenue in 2018.

The following distributors and customers accounted for 10% or more of the Company's revenue for the periods presented:

	Fiscal Years		
	2020	2019	2018
Distributor "A"	24%	40%	34%
Distributor "C"	15%	13%	*
Distributor "E"	19%	*	*
Customer "B"	10%	13%	12%
Customer "E"	*	10%	*
Customer "F"	19%	*	*
Customer "G"	*	*	10%
Customer "J"	*	*	10%
Customer "M"	16%	*	*

Note: the amounts related to Distributor in the above table represent sales-in only to those distributors, and Customer information relates to sales out information. As such, sales to a Distributor, may also include information of a related Customer.

The following distributors and customers accounted for 10% or more of the Company's accounts receivable as of the dates presented:

	January 3, 2021	December 29, 2019
Distributor "A"	*	20%
Distributor "C"	*	23%
Distributor "E"	*	12%
Distributor "J"	*	31%
Customer "P"	67%	*
Customer "Q"	10%	*

As of January 3, 2021 and December 29, 2019, approximately 4% and 7%, respectively, of the Company's long-lived assets, including property and equipment and other assets were located outside the United States.

NOTE 15-COMMITMENTS AND CONTINGENCIES

Commitments

Certain wafer manufacturers require the Company to forecast wafer starts several months in advance. The Company is committed to take delivery of and pay for a portion of forecasted wafer volume. As of the end of 2020 and 2019, the Company had \$60,000 and \$57,000 respectively, of outstanding commitments for the purchase of wafer inventory.

The Company has purchase obligations with certain suppliers for the purchase of goods and services entered into in the ordinary course of business. As of January 3, 2021, total outstanding purchase obligations were \$692,000 all of which is due within next twelve months.

Litigation

From time to time, the Company may become involved in legal actions arising in the ordinary course of business including, but not limited to, intellectual property infringement and collection matters. Absolute assurance cannot be given that any such third party assertions will be resolved without costly litigation; in a manner that is not adverse to the Company's financial position, results of operations or cash flows; or without requiring royalty or other payments which may adversely impact gross profit.

NOTE 16-SUBSEQUENT EVENTS

Payroll Protection Program Loan

On May 6, 2020, the Company entered into a loan agreement with Heritage Bank ("PPP Loan", or the "Note") for a loan of \$1.2 million pursuant to the PPP under the CARES Act, as implemented by the U.S. Small Business Administration.

The Company applied for loan forgiveness in the fourth quarter of fiscal 2020, in accordance with the terms under the CARES Act. On January 26, 2021, subsequent to its fiscal year end, the Company received a notice from Heritage Bank that amounts under the Note had been forgiven. The amount forgiven of approximately \$1.2 million, will be reported within Other income on the Company's Consolidated Statement of Operations for the first fiscal quarter ended April 4, 2021.

India Transfer Pricing notice

On January 27, 2021, the Company received an order from the Income Tax Department of the Ministry of Finance in India disputing the transfer pricing rate the company used for Assessment Years 2017-18, the result of which may affect later years. It is the intention of the Company to appeal such order as the rate requested by the government of India is not representative of the results of operations of the company, as well as other factors. In addition, The Company is in the process of evaluating the effect such order may have on its foreign tax provision. Such effect if any would be to the tax provision and amounts owed under taxes to foreign jurisdictions only.

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

We maintain disclosure controls and procedures designed to ensure that information required to be disclosed in the reports we file or submit pursuant to the Securities and Exchange Act of 1934, as amended, or the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Principal, as appropriate, to allow timely decisions regarding required disclosure.

Management, with the participation of the Chief Executive Officer and Principal Financial Officer, has performed an evaluation of our disclosure controls and procedures as required by the applicable rules of the Exchange Act. Based on this evaluation, our Chief Executive Officer and Principal Financial Officer have concluded that, as of January 3, 2021 our disclosure controls and procedures were effective.

Management’s Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Internal control over financial reporting is the process designed by, or under the supervision of, our Chief Executive Officer and Principal Financial Officer, and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that: (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect our transactions and dispositions of assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, cost-effective internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with established policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Principal Financial Officer, we conducted an assessment of the effectiveness of our internal control over financial reporting as of the end of the period covered by this Annual Report on Form 10-K. In making this assessment, we used the criteria based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in “Internal Control - Integrated Framework (2013).” Based on the results of this assessment, management (including our Chief Executive Officer and Principal Financial Officer) has concluded that, as of January 3, 2021 our internal control over financial reporting was effective.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

The information required by Part III is incorporated by reference from the definitive Proxy Statement regarding our 2021 Annual Meeting of Stockholders, which Proxy Statement is anticipated to be filed with the Security and Exchange Commission within 120 days after the end of the fiscal year covered by this Report.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding the background of our officers is contained herein under Item 1, "Executive Officers and Directors."

Information regarding the background of our directors hereby incorporated by reference from our definitive Proxy Statement relating to the 2021 Annual Meeting of Stockholders, which Proxy Statement is anticipated to be filed within 120 days after the end of the fiscal year covered by this Report.

There are no family relationships between any of our directors, executive officers, or persons nominated or chosen to be a director or officer, and no such persons have been involved during the last ten years, in any legal proceedings material to their abilities or integrity.

We have adopted a Code of Conduct and Ethics, including provisions enumerated in Item 406 of Regulation S-K. A copy is posted on our website at <http://www.quicklogic/corprate/about-us/management>. Any changes to or waiver from, this Code of Conduct and Ethics will be posted on that website.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is hereby incorporated by reference from our definitive Proxy Statement relating to the 2021 Annual Meeting of Stockholders, which Proxy Statement is anticipated to be filed within 120 days after the end of the fiscal year covered by this Report.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is hereby incorporated by reference from our definitive Proxy Statement relating to the 2021 Annual Meeting of Stockholders, which Proxy Statement is anticipated to be filed within 120 days after the end of the fiscal year covered by this Report.

ITEM 13. CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this item is hereby incorporated by reference from our definitive Proxy Statement relating to the 2021 Annual Meeting of Stockholders, which Proxy Statement is anticipated to be filed within 120 days after the end of the fiscal year covered by this Report.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is hereby incorporated by reference from our definitive Proxy Statement relating to the 2021 Annual Meeting of Stockholders, which Proxy Statement is anticipated to be filed within 120 days after the end of the fiscal year covered by this Report.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. *Financial Statements*

Reference is made to Item 8 for a list of all financial statements and schedules filed as a part of this Report.

2. *Financial Statement Schedules*

QuickLogic Corporation
Valuation and Qualifying Accounts
(in thousands)

Allowance for Deferred Tax Assets:

Fiscal Year 2020	\$ 58,140	\$ 2,398	\$ —	\$ 60,538
Fiscal Year 2019	\$ 54,913	\$ 3,227	\$ —	\$ 58,140
Fiscal Year 2018	\$ 55,931	\$ —	\$ (1,018)	\$ 54,913

All other schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes hereto.

3. *Exhibits*

The exhibits listed under Item 15(b) hereof are filed as part of this Annual Report on Form 10-K.

(b) *Exhibits*

The following exhibits are filed with or incorporated by reference into this Report:

Exhibit Number	Description	Form	Exhibit	Filing Date
3.1	Fourth Amended and Restated Certificate of Incorporation of QuickLogic Corporation.	8-K	3.1	4/28/2017
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of QuickLogic Corporation.	8-K	3.2	12/24/2019
3.3	Amended and Restated Bylaws of QuickLogic Corporation.	8-K	3.2	05/02/2005
3.4	Certificate of Elimination of the Series A Junior Participating Preferred Stock.	8-K	3.1	11/26/2013
4.1	Specimen Common Stock certificate of QuickLogic Corporation.	S-1/A	4.1	10/12/1999
4.2	Form of Common Stock Warrant.	8-K	4.1	05/29/2018
4.3**	Description of Securities.			
10.1	Form of Indemnification Agreement for directors and executive officers.	10-Q	10.24	11/13/2002
10.2**	Standard Industrial Commercial Multi-Tenant Lease between Lundy Associates, LLC, as Lessor, and QuickLogic Corporation, dated February 13, 2019.			
10.3	Patent Cross License Agreement dated August 25, 1998, between QuickLogic Corporation and Actel Corporation.	S-1/A	10.18	08/10/1999

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10.4	Form of Change of Control Severance Agreement.	10-K	10.13	03/11/2008
10.5	Form of Change of Control Severance Agreement for Chief Executive Officer.	10-K	10.14	03/11/2008
10.6	2005 Executive Bonus Plan, as restated.	8-K	10.1	04/28/2008
10.7	QuickLogic Corporation 2019 Stock Plan.	10-Q	10.1	05/09/2019
10.8***	QuickLogic Corporation 2009 ESPP Plan, as amended	8-K	10.1	04/22/2020
10.9*	QuickLogic Corporation 2019 Stock Plan, as amended.	K	10.2	04/22/2020
10.10*	QuickLogic Corporation 2009 Employee Stock Purchase Plan.	10-Q	10.2	05/11/2017
10.11*	Form of Notice of Grant and Stock Option Agreement under the 2009 Stock Plan.	8-K	10-26	08/04/2009
10.12*	Form of Notice of Grant of Stock Purchase Rights and Restricted Stock Purchase Agreement under the 2009 Stock Plan.	8-K	10-27	08/04/2009
10.13*,**	Form of Notice of Grant of Restricted Stock Unit and Restricted Stock Unit Agreement under the 2009 Stock Plan.	8-K	10-28	08/04/2009
10.14*,**	Form of Notice of Grant and Stock Option Agreement under the 2019 Stock Plan.			
10.15*,**	Form of Notice of Grant of Restricted Stock Unit and Restricted Stock Unit Agreement under 2019 Stock Plan.			
10.16*,**	Form of Notice of Grant of Stock Rights and Restricted Stock Purchase Agreement Under the 2019 Stock Plan.			
10.17	Amended and Restated Loan and Security Agreement between Heritage Bank of Commerce and QuickLogic Corporation, dated as of December 21, 2018.	8-K	10.1	12/28/2018
10.18	First Amendment to Amended and Restated Loan and Security Agreement between Heritage Bank of Commerce and QuickLogic Corporation, dated as of November 6, 2019.	10-Q	10.1	11/08/2019
10.19	Second Amendment to Amended and Restated Loan and Security Agreement between Heritage Bank of Commerce and QuickLogic Corporation, dated as of December 11, 2020.	8-K	10.1	12/11/2020
10.20	Promissory Note between QuickLogic Corporation and Heritage Bank dated May 6, 2020.	8-K	10.1	05/06/2020
10.21	Underwriting Agreement, dated June 18, 2020 between QuickLogic Corporation and Oppenheimer & Co. Inc.	8-K	1.1	06/17/2020
21**	Subsidiaries of QuickLogic Corporation.			
23.1**	Consent of Moss Adams LLP, Independent Registered Public Accounting Firm.			
24.1**	Power of Attorney (included on the Signature page of this Annual Report on Form 10-K).			
31.1**	CEO Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
31.2**	CFO Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
32***	CEO and CFO Certifications pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.			
101.INS	Inline XBRL Instance Document			
101.SCH	Inline XBRL Taxonomy Extension Schema Document			
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document			
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document			
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document			
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document			
104	The cover page from the Company's quarterly report on Form 10-K for the year ended January 3, 2020 has been formatted in Inline XBRL and contained in Exhibit 101.			

* Indicates management contract or compensatory plan or arrangement.
 ** Filed herewith.
 *** Furnished herewith.

Subsidiaries of QuickLogic Corporation

Name

Jurisdiction

QuickLogic International, Inc.
QuickLogic Kabushiki Kaisha
QuickLogic (India) Private Limited
QuickLogic (Shanghai) Trading Limited
SensiML Corporation

Delaware
Japan
India
China
Delaware

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-230352) and Form S-8 (Nos. 333-34898, 333-34900, 333-34902, 333-76022, 333-123515, 333-159498, 333-208060, 333-231806, and 333-237879) of our report dated March 23, 2021, relating to the consolidated financial statements and schedule of QuickLogic Corporation, appearing in this Annual Report on Form 10-K for the year ended January 3, 2021

/s/ Moss Adams LLP

San Francisco, California

March 23, 2021

I, Brian C. Faith, certify that:

1. I have reviewed this annual report on Form 10-K of QuickLogic Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer 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 23, 2021

/s/ Brian C. Faith
Brian C. Faith
President and Chief Executive Officer

I, Anthony Contos, certify that:

1. I have reviewed this annual report on Form 10-K of QuickLogic Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer 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 23, 2021

/s/ Anthony Contos
Anthony Contos
Interim Chief Accounting Officer and Principal Financial Officer

**CERTIFICATION OF CHIEF 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**

I, Brian C. Faith, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of QuickLogic Corporation on Form 10-K for the fiscal year ended January 3, 2021 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of QuickLogic Corporation.

By: /s/ Brian C. Faith
Date: March 23, 2021
Name: Brian C. Faith
Title: *President and Chief Executive Officer*

I, Anthony Contos, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of QuickLogic Corporation on Form 10-K for the fiscal year ended January 3, 2021, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of QuickLogic Corporation.

By: /s/ Anthony Contos
Date: March 23, 2021
Name: Anthony Contos
Title: *Interim Chief Accounting Officer and Principal Financial Officer*