UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2019

OR

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

Commission File Number 001-38907

Sonim Technologies, Inc.

(Exact name of Registrant as specified in its Charter)

Delaware	**94-3336783**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

6836 Bee Cave Road Building 1, Suite 279

Austin, TX, 78746

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (650) 378-8100

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	SONM	The Nasdaq Stock Market LLC

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

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES NO ☐X

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES - NO x

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	X	Smaller reporting company	X
Emerging growth company	☒		

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on The NASDAQ Stock Market on June 28, 2019 was approximately $106,411,814.

At March 23, 2020, 20,643,151 shares of Common Stock, par value $0.001, of the registrant were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required by Part III, Items 10-14 of this Form 10-K is incorporated by reference to the Registrant's definitive Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Form 10-K, provided that if such Proxy Statement is not filed within such period, such information will be included in an amendment to this Form 10-K to be filed within such 120-day period.

Table of Contents

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K for Sonim Technologies, Inc. (the "Company," "we" or "us") contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities and Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995, including the discussion contained in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations." We have based these forward-looking statements on our current expectations and projections about future events or future financial performance, which include successfully implementing our business strategy and realizing planned cost-savings, achieving profitability and continuing as a going concern developing and introducing new technologies, obtaining, maintaining and expanding market acceptance of the technologies we offer, and competition in our markets.

In some cases, these forward-looking statements can be identified by terminology such as "may," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "future," "predict," "potential," "intend," or "continue," and similar expressions. These statements are based on the beliefs and assumptions of our management and on information currently available to our management. Our actual results, performance and achievements may differ materially from the results, performance and achievements expressed or implied in such forward-looking statements. For a discussion of some of the factors that might cause such a difference, see the "Risk Factors" contained in Part I, Item 1A. of this Annual Report on Form 10-K. Except as required by law, we specifically disclaim any obligation to update such forward-looking statements.

PART I

Item 1. Business.

Introduction

Sonim Technologies, Inc. was incorporated in the state of Delaware on August 5, 1999 and is headquartered in Austin, Texas. Unless otherwise indicated, the terms "we," "us," "our," "Company" and "Sonim" refer to Sonim Technologies, Inc. and its wholly owned and consolidated subsidiaries.

Overview

We are a leading U.S. provider of ultra-rugged mobile phones and accessories designed specifically for task workers physically engaged in their work environments, often in mission-critical roles. We currently sell our ruggedized mobile phones and accessories to three of the four largest wireless carriers in the United States— AT&T, Sprint and Verizon—as well as the three largest wireless carriers in Canada—Bell, Rogers and Telus Mobility. Our phones and accessories connect workers with voice, data and workflow applications in two end markets: industrial enterprise and public sector.

Task workers in these end markets have historically been limited to pen and paper and single-purpose electronic devices, such as barcode scanners, location-tracking devices and sensors, to accomplish specific tasks. These single-purpose devices have historically run on proprietary networks, such as Land Mobile Radio (LMR) networks that enable Push-to-Talk (PTT) services for voice communications. We provide Android-based devices that consolidate and integrate multiple functions into a single ruggedized solution running on commercial wireless networks at a total cost of ownership that we believe is significantly lower with improved productivity and safety of task workers.

Our solutions consist primarily of ultra-rugged mobile phones based on the Android platform which are capable of attaching to both public and private wireless networks, industrial-grade accessories that meet the requirements of specific applications, and software applications and cloud-based tools that provide management and deployment services to our customers. End customers of our solutions include construction, energy and utility, hospitality, logistics, manufacturing, public sector and transportation entities that primarily purchase our devices and accessories through their wireless carriers. The key attributes of our solutions are specifically tailored for the needs of our end users, including impact resistance, waterproof and dustproof construction, extended battery life and extra loud audio, supported by a three-year comprehensive warranty. All of our devices run on the Android operating system, providing a familiar and intuitive user interface, and our smartphones have access to a library of millions of applications available through the Google Play Store. We have also implemented dozens of application programming interfaces, or APIs, specific to our mobile phones and have partnered with third-party application developers to create a purpose-built experience for our end users using these applications on our mobile phones.

We currently have stocked product with three of the four largest U.S. wireless carriers: AT&T, Sprint and Verizon, meaning that these carriers test and certify our mobile phones on their networks and maintain inventory in their warehouses that they then sell through their enterprise and retail sales teams to end customers, often on a subsidized or financed basis. Our full product portfolio has been stocked with the three largest Canadian wireless carriers since 2015. In 2019, we sold approximately 39,000 mobile phones in Canada and 300,000 in the United States (which markets include rugged feature phones, smart consumer rugged phones, smart ultra-rugged phones and life-proofed smart phones).

We enter into master sales arrangements with carriers (including channel partners contributing over 90% of our total revenues for the year ended December 31, 2019) under which our partners purchase our solutions for distribution on a purchase order basis. Under these arrangements, we and the channel partners determine sales channel distribution in connection with pricing (including any discounts and price protection) and market positioning of each particular mobile phone product. We also offer our channel partners channel marketing and other promotional incentives, such as sales volume incentives, in exchange for retail price reductions. We may also offer NRE services in the form of third-party design services relating to the design of materials and software licenses used in the manufacturing of our products.

For the years ended December 31, 2019 and 2018, our revenues were $116.3 million and $135.7 million, respectively. For the years ended December 31, 2019 and 2018, our net loss was $25.8 million, and our net income was $1.3 million, respectively. For the years ended December 31, 2019 and 2018, revenues from our top three customers were $68 million and $89 million, respectively.

Our Industry

Communication, productivity and safety among task workers has always been a central requirement in business-critical and mission-critical environments. Organizations with remote and disparate workers—from police and firefighters to construction, oil rig and manufacturing workers—need an extremely durable solution that provides reliable and secure voice, data and workflow applications. Historically, task workers had limited options, and in many cases resorted to using pen and paper. In the 1930s, public safety organizations introduced LMR networks that enabled PTT services, allowing workers to instantly and reliably initiate communications. In the 1970s, proprietary bar code scanners and other proprietary single-purpose tools were introduced to assist task workers in accomplishing specific tasks. In addition, in the mid-1990s, Nextel's iDEN service provided organizations the benefits of PTT without the upfront equipment and infrastructure investments required with LMR. The advent and proliferation of LTE and advancements in smartphone technologies led to the start of the decommissioning of the Nextel iDEN network in the United States by Sprint in 2013. These developments paved the way for commercial wireless carriers to deliver mobility solutions that enhance the speed, reliability and durability of those offered by traditional LMR networks and other proprietary devices and applications.

Rugged smartphones and handheld computers comprise the largest share of the rugged display market, which is expected to reach $10.3 billion by 2023 according to MarketsandMarkets. Ruggedized mobile phones are well- suited for industrial enterprise and other critical infrastructure applications due to their durability and functionality in a range of environments. Equipping workers with smarter mobile phones also enables more efficient communication with and between field employees and enhances the information that decision-makers use to deploy resources within their organizations. The PTT over cellular network market, such as smartphones on LTE with PTT functions, has been steadily growing. According to Absolute Reports, in North America and globally, the PTT over cellular market is expected to grow at a compound annual growth rate of 16.8% and 11.5%, respectively, from 2013 to 2025 compared to 2.8% and 5.2%, respectively, for traditional LMR.

Industrial Enterprise Market Opportunity

Within the industrial enterprise market, we primarily focus on providing our solutions for business-critical tasks. We estimate that in the United States and Canada in 2018, there were 37.6 million task workers across verticals in our industrial enterprise end market, including transportation and logistics, construction, manufacturing, facilities management and energy and utility, who could benefit from our products. The extreme durability, and enhanced voice and text communication capabilities of our devices, enable these workers to be stationed in remote and hazardous environments, while remaining connected to their central command center at all times.

The functionality and durability requirements for workers in the industrial enterprise market significantly differ from that provided by a consumer-focused mobile device. Our solutions provide enterprises with the ability to centrally manage and control device functions and data stored on the phone remotely. Enterprises seeking to reduce their operating expenses by optimizing workflows can enhance their workers' productivity by leveraging specialized, purpose-built rugged platforms with functions such as PTT, location tracking, barcode scanning and extra-loud audio. These features are especially crucial for business-critical applications across the industrial enterprise.

Public Sector Market Opportunities

Public Safety and Critical Infrastructure. Historically, U.S. public safety agencies and other critical infrastructure entities like utilities and municipalities have utilized rugged two-way radios running on proprietary LMR networks to ensure reliable and immediate communication. As these closed networks were locally funded, built and controlled, they were designed not to be interoperable across cities and states and other agencies. Over time, these users have incrementally augmented their LMR radios with mobile devices running on commercial wireless networks. These mobile devices enabled public-safety officers to gather real-time information, collected across multiple systems, and to respond and react to changing circumstances.

On September 11, 2001, many firefighters perished in part due to the lack of interoperability between the LMR systems of the multiple responding agencies in New York City and surrounding areas. Additionally, commercial cellular communications were halted due to the significant increase in call volumes. Based on the 9/11 Commission Report's recommendations, Congress passed legislation in 2012 to establish the First Responder Network Authority under the Department of Commerce, which was tasked with deploying a nationwide public safety broadband network.

In March 2017, the Department of Commerce and the First Responder Network Authority awarded AT&T a contract to build, maintain and operate a nationwide high-speed broadband network for public safety, or FirstNet, for 25 years. The contract provided AT&T with 20 MHz of spectrum and $6.5 billion in funding to support this network and established subscriber targets, milestone buildouts and disincentive fees to help ensure that AT&T fulfills its commitments to public safety. The contract provides AT&T a 25-year lease of FirstNet spectrum subject to AT&T enlisting a minimum number of emergency responders across the United States. As of December 2019, AT&T had signed on over 10,000 public safety agencies, representing over one million users, to FirstNet.

Due to AT&T's focus on growing its number of public safety users, other major U.S. wireless carriers including Sprint and Verizon have been focused on defending their market positions, creating a highly competitive market for public safety users among the major U.S. wireless carriers.

We introduced our first devices that supported FirstNet in the first quarter of 2018 (XP8 and XP5s), and in the second quarter of 2019 (XP3). Through our partnerships with these wireless carriers that provide First Net and similar networks, as well as wireless carriers seeking to obtain market share through other dedicated LTE networks, we believe we are in a strong position to provide our ruggedized solutions through these channel partners to the public safety market as FirstNet and competing public safety networks mature. We intend to leverage our access to end customers and end users on FirstNet to increase brand awareness and become the favored solution for dedicated LTE public safety networks offered by other wireless carrier customers as well as end customers, which in turn may drive adoption of our ruggedized solutions across the public safety market generally. We also believe that broader adoption of our ruggedized solutions for use across these public safety networks may result in the establishment of additional dedicated LTE networks. We believe that the general momentum to convert to LTE-based systems, either dedicated or prioritized for public safety, is a global trend where Western European countries and Australia are considering similar networks.

Our Ruggedized Solution

- ***Durability and reliability.*** Our mobile phones can withstand a variety of harsh environments and are supported by our industry-leading three-year comprehensive manufacturer's warranty, which includes physical damage. Key features of our rugged phones include:
  - *Puncture, shock, pressure and drop and impact resistance.* Durable rubber and Gorilla Glass construction protects against damage from sharp objects, falls, vigorous movements and compression by heavy weights.
  - *Waterproof and dustproof construction.* Reinforced seals and waterproof mesh membranes prevent potential damage caused by moisture and debris.
  - *Multi-shift battery life.* Replaceable battery designed to provide sufficient power to last through a dual eight-hour shift in most real-world conditions.
  - *Extra-loud audio*. Produces high sound quality at high volumes and uses noise cancellation technology for loud background noise environments.
  - *Glove-friendly design.* Screens and buttons are responsive to touch through gloves and water.
  - *Operational in and resistant to extreme temperatures*. Protective exterior prevents damage to our devices' hardware from very cold and hot temperatures.
  - *Chemical resistance.* Ability to effectively sterilize and sanitize, regardless of potential contaminants.
- ***Increased communication and visibility through an enterprise.*** Our solutions are used to track locations, update and manage various tasks and enable communication with and between task workers. For example, location tracking and data analytics enable fleet optimization, help enterprises make asset allocation and deployment decisions and ensure that fleets are at the right place at the right time. In addition, our solutions are specifically designed to capture, store and analyze multiple data types for enterprise needs, enabling them to make decisions. For example, by leveraging this data, task workers such as first responders can more strategically plan their logistics resulting in decreased response times. Finally, by providing a reliable mode of communication between employees, supervisors and command centers, those not in the field have crucial insight into the status and performance of task workers in the field. This can also result in improved safety for employees that work in high-risk environments.
- ***Enhanced functionality through software and hardware configurations.*** Our solutions allow end customers and task workers to customize our mobile phones using Android-based applications and vertical- specific accessories to address their varying needs. Enterprises and agencies can leverage the millions of applications available on the Google Play Store, our dozens of device-specific APIs, and our industrial accessories to create a purpose-built solution to meet the specific use cases of their task workers. For example, school bus operators can combine our ruggedized phones, an industrial car kit, a PTT application that leverages our APIs and a location-tracking application to ensure that they have a solution that enables constant communication with dispatchers that is compliant with the U.S. Department of Transportation's hands-free driving regulations and that can also automatically alert parents of route delays. The ability for enterprises and agencies to customize their solutions allows their task workers to use a single device for tasks that would previously require multiple and often more costly devices.

- ***Ease of use.*** Our devices are designed to look and function similarly to the latest generation of consumer- focused mobile phones with additional features for various enterprise-specific purposes, and also run on the Android operating system which has a familiar and intuitive interface. They provide familiar characteristics to many single-purpose devices, such as dedicated physical buttons for PTT and barcode scanning and offer a simplified user interface which helps minimize the learning curve for task workers who are transitioning from LMR or data capture devices. Furthermore, all of our mobile phones come equipped with our SCOUT application, which helps IT administrators more quickly provision and deploy our devices to task workers, reducing the cost and effort associated with converting to our solutions.
- ***Consolidation of devices.*** A large number of devices can lead to excess bulk carried by task workers and can inhibit their mobility in the field. These specialized devices can also be expensive and typically require full replacement after end-of-life, which can be a cumbersome and costly process. By combining commonly used applications and functionality into one ruggedized device with the option for add-ons, enterprises can reduce the need for multiple, single-purpose devices. We believe that replacing outdated single-purpose devices with a Sonim device can enhance fleets' mobility and economically streamline equipment updates or replacements.

As a result of these key attributes, we believe that our ruggedized, purpose-built mobile phones can increase the productivity of task workers and significantly reduce total cost of ownership for entities deploying our solutions.

Our Strategy

- ***Reorganize Company to achieve growth and profitability.*** Since November 2019, our management team has endeavored to reorganize the company into a leaner, lower cost organization focused on a path to growth and profitability. The company has reduced its global headcount from approximately 700 employees at year-end 2018 to approximately 500 employees and contractors as of December 31, 2019. We executed an additional reduction in force of approximately 10% of our US employees in February 2020. We have also relocated our headquarters from San Mateo, California to Austin, Texas, a lower cost location. These actions are expected to result in a run-rate savings of approximately 20% (or $12 million) from the Company's 2019 operating expense run-rate, excluding one-time IPO related costs. Restructuring the company positions Sonim to stabilize its operations and invest for future growth.
- ***Invest in sales channel partnerships and brand marketing to drive sales.*** Our channel partners are leading global wireless carriers and communications system integrators. These channel partners have large sales forces who sell our solutions to end customers in our target markets. They enable us to cost-effectively scale our business without employing a large direct sales force of our own. We intend to continue to invest in expanding our distribution and channel partnerships to further penetrate the public sector and industrial enterprise markets we target. Our investment in marketing the Sonim brand and our solutions to end customers in target markets helps to raise brand awareness, deepen existing channel partnerships, and acquire and retain new channel and end customers of our solutions.
- ***Position Sonim as the leading solution for the public sector.*** We believe that we are at the forefront of a public safety market that has a current need for dedicated LTE networks, such as AT&T's FirstNet, and the devices that enable their use. We intend to leverage the large-scale deployment of our solutions over dedicated LTE networks in the public safety market to further position us as a trusted solution within the cities that we serve. As public safety agencies continue to shift to these dedicated LTE networks, we intend to deliver mobility solutions to increase security, safety and efficiency across their cities. By successfully deploying our solutions in the public safety market within cities, we believe that city managers will increasingly look to us to provide communication capabilities and enable location information and data analytics for their entire municipality to improve efficiency and safety of all their task workers, taking the first steps toward "smart cities."
- ***Expand our subscription-based products and services.*** We intend to expand our cloud-based software platform to (i) deploy value-added applications like Sonim Scan, and (ii) be the launching point for third-party application providers.
- ***Expand internationally.*** The transition from existing LMR network infrastructure to LTE-based replacements for public safety has commenced outside of the United States and Canada. We are exploring public safety infrastructure projects in Australia and Europe. In addition, there is a very large industrial market internationally that our current and future devices are well-positioned to address. We will look for ways to expand our sales reach, especially through distribution and channel partners to address these market opportunities.

Our Target Markets

We believe our solutions can improve communication reliability, operational efficiency and safety for end customers and task workers in both commercial and public sectors. Our ruggedized mobility solutions target two end markets: industrial enterprise and public sector. These markets include:

Industrial Enterprise

Transportation and Logistics. Enterprises and fleet workers across supply chain, delivery services and field management rely on mobile devices to operate safely and efficiently in environments that are often susceptible to inclement weather. For enterprises looking to improve supply chain functionality, our mobile resource management applications such as location tracking, mileage tracking and job dispatch can help businesses monitor operations more efficiently. We believe that a weather-resistant and long-battery ruggedized device, combined with productivity applications and services like Sonim Scan—which integrates a barcode scanning engine with the native camera on our XP8 device—provides a reliable communication device for transportation and logistics workers. In addition, our solutions reduce the number of devices and tools that these task workers carry in the field by consolidating the functionality of multiple single-purpose devices into one purpose-built mobile device.

Construction. We offer workers in the construction industry a crush-, puncture-, scratch- and impact-resistant device, which we believe to be crucial in environments where there is a high risk of such occurrences. Jobsites also value the push-to-talk (PTT) capabilities that are tightly integrated into Sonim devices. Additionally, we believe our phones help promote worker safety and productivity, with support for lone-worker safety applications and with features such as extended battery life and extra loud-speakers. For business decision-makers, we offer a consolidated device with a total cost of ownership that we believe is significantly lower versus comparable offerings that enables real-time reporting, which can help eliminate costly delays by capturing verbal, visual and location data from job sites.

Manufacturing. As market demand and competition in the manufacturing sector require more nimble production lines, equipment for reliable communication and safety standard compliance are necessary to improve efficiency and keep workers safe. Our devices' PTT functionality and extra-loud speakerphones are designed to keep lines of communication open and functional in fast-changing and loud environments, while our glove-friendly touch screen displays allow for workers to have access to real-time data, thus reducing production down time. Additionally, our devices are designed to survive blunt force and can be sanitized and sterilized for safe use in food or medical processing facilities. We believe that these features can enhance the productivity of workers in the manufacturing industry.

Facilities Management. Service-based operations in large indoor and outdoor facilities require management of mobile teams. Our mobile phones consolidate radio, guard tour verification, panic button systems and scanners, which otherwise would require separate and single-purpose equipment. Our devices can improve business operations through functionalities such as automated work order dispatch and job completion verification tools delivered via proprietary third-party applications integrated with our devices.

Energy and Utility. The safety standards for mobile phones used in the energy and utility industry are more stringent due to the reactive characteristics of the natural resources being procured and serviced, as well as the potentially high-voltage or explosive environments. We believe we are uniquely positioned to serve these workers because our devices are designed for use in potentially explosive or hazardous environments (rated Non-Incendive or Intrinsically Safe by either the CSA Group, ATEX or IECEx notified bodies), and their resistance to various chemicals and extreme temperatures. Reliable communication devices are often mission- critical for workers to stay safe while performing energy- and utility-related operations.

Public Sector

Public Safety. In the United States, AT&T's FirstNet network provides one of several reliable networks for this sector. Due to AT&T's focus on growing its number of public safety users, other major U.S. wireless carriers, including Sprint and Verizon, have been forced to defend their market positions, creating a highly competitive market for public safety users among the major U.S. wireless carriers. Through our partnerships with all of the major wireless carriers, we believe we are in a strong position to provide mission-critical solutions to the public safety market as FirstNet and competing public safety networks mature. Through enhanced communication capabilities, we believe our devices can decrease the response time of first responders and help public safety workers stay safe and connected in hazardous, isolated or emergency conditions. We believe that the durability of our phones combined with their purpose-built functionality, provide a lower total cost of ownership compared to similar products, which is highly attractive to city and state decision-makers.

Federal Government. Whether during natural disasters or day-to-day operations, our devices provide functionality and reliability that is crucial for federal workers to protect and serve their nation. Our mobile solutions support purpose-built voice communications and data capture applications that allow federal workers to stay connected and quickly make more informed decisions while in the field.

Products and Technology

Features of Our Ruggedized Mobile Phones

Our mobile phones can withstand a variety of harsh environments and are supported by our industry-leading three-year comprehensive manufacturer's warranty. We developed our devices to meet industry standards for protection from the ingress of water and/or micro-particles (IEC standard 60529). Our devices are rated a minimum of IP-68, allowing them to be submersed in up to six and a half feet of water for up to 30 minutes, and our XP8 smartphone has been further tested and certified to withstand sprays of high pressure streams (up to 1,450 PSI) of hot (80°C) water (IPx9K). We have additionally designed and manufactured our devices to withstand repeated drops to concrete across all angles and faces, attaining MIL-STD-810G ratings and, in 2011, earning the Sonim XP3300 the title of World's Toughest Phone by the Guinness Book of World Records after surviving a fall from 82 feet 11.7 inches to concrete. Engineered with a protective glass lens that is up to three times thicker than that of other cellular devices in the market and a unique blend of plastic and rubber used in the housings, our ultra-rugged mobile phones are designed to be resistant to punctures caused by impacts from external objects up to 2J on the display lens and 4J on the housing. Furthermore, we understand that the jobs of our end users often take them into extreme environments. As a result, we have designed our devices to operate from -4°F to +131°F, be usable while wearing work gloves (glove-friendly touch display, large physical buttons), be audible in noisy environments with loud 100+ dB loudspeakers and multiple microphone noise-cancellation technology, and, for our XP5s and XP8 phones to last throughout an average day based on ordinary use without needing to be recharged with large, extended-life batteries. We have also designed, manufactured and certified our devices to be safe for use in potentially hazardous or explosive environments.

In addition, our devices provide a wide range of connectivity options for our end customers (including LTE, 3G, GSM, WiFi, NFC, location tracking and Bluetooth for certain of our devices), and our phones support a wide range of global frequencies allowing them to be used almost anywhere in the world where there is cellular coverage. Our phones are certified to work on multiple mobile network operators and come equipped with LTE Band 14 to support FirstNet. We continue to explore how and when to best support the latest technologies, including 5G, and we plan to incorporate them into our product roadmap when our end market segments require such functionality and the technology has reached a reasonable level of maturity.

Our Devices

Sonim XP8. The Sonim XP8 is an Android-based LTE smartphone that is certified as Android Enterprise Recommended by Google. The Sonim XP8 comes equipped with a five-inch durable, glove-friendly display, an ultra-rugged exterior, physical programmable buttons (including a large PTT button), and unique accessory ports and connectors that enable modular capabilities and functionality.

Sonim XP5s. The Sonim XP5s is a purpose-built LTE feature phone designed for task workers who have a "no frills" attitude about their communications tool. It comes equipped with a 2.64-inch non-touch display, dual front-facing loudspeakers, a large PTT button, and the same XP and SecureAudio connector ports, enabling full access to our complete ecosystem of industrial accessories.

Sonim XP3. The Sonim XP3 is an LTE feature phone in a clamshell form factor that offers our customers a cost-effective voice and/or PTT solution without distracting end users from doing their jobs with things like an application store or email. Built with an over-sized PTT button, a physical numeric keypad and a loud front-facing speaker, the Sonim XP3 delivers a reliable voice-centric experience to those who operate in these industrial environments.

Rapid Deployment Kit (RDK). The RDK is an all-in-one portable communications system. Easily deployed in minutes, the RDK contains an internal 15.6 Ah battery, 4 Sonim XP8 smartphones, built-in cellular, GPS and WiFi antenna, an optional satellite backup, and an integrated LTE router/modem to ensure a team can stay connected in multiple situations in multiple locations. An optional configuration has integrated LMR interoperability ensuring communications across LTE and LMR devices

Accessories

Our portfolio of industrial-grade accessories extends beyond the traditional consumer cellular ecosystem of wall chargers and cases. We work with a number of accessory manufacturers and design partners to deliver innovative purpose-built accessories that enhance the functionality and usability of our devices. Our audio accessories take advantage of our SecureAudio Connector, which allows for accessories, like a Remote Speaker Microphone, or RSM, to be physically secured to the device via a screw mechanism that prevents accidental disconnection. Our multi-bay charging accessories allow for enterprises and agencies to charge multiple devices at once via a single unit, ensuring that at the start of a shift, the device is fully charged and ready to go. We also support a wide range of in-vehicle solutions that enable hands-free voice communications for those end users who work from the road.

Sonim SCOUT/Cloud/Scan Applications

In addition to the ecosystem of Android developers and their applications, which are supported on our devices, we provide a suite of applications and tools that help customers manage, deploy and support their Sonim devices. The capabilities of these software applications differentiate us from many rugged vendors that only focus on hardware. Current capabilities include:

- Sonim Setup Wizard allows provisioning teams to rapidly customize and deploy large number of devices with less manual work and fewer errors.
- Sonim SafeGuard lets user administrators block usage of selected apps and features, ensuring only those critical to job related functions and cost requirements are used.
- Sonim Kiosk Mode lets user administrators configure devices with the minimum required functionality, a critical customer need in hazardous environments or anywhere that user safety is paramount.
- Scout App Updater lets administrators control when and where updates are sent to users' phones.
- Sonim Scan integrates a barcode scanning engine with the native camera on the Sonim XP8, allowing end users to scan up to 45 1D or 2D barcodes per minute.

Sales and Marketing

As of December 31, 2019, our sales and marketing team consisted of 38 professionals located in the United States, Canada and Europe. We sell our products directly to wireless carriers, through distributors and resellers and also directly to end customers. Our marketing efforts consist of product marketing, channel partner/carrier marketing and corporate marketing. Product marketing focuses on ensuring that carrier requirements related to product specifications are in-line with our brand requirements. Channel partner marketing focuses on go-to-market strategy as well as developing supplemental sales tools, carrier and non-carrier marketing campaigns, industry trade show materials and brand awareness. Corporate marketing consists of public relations, social and digital marketing and lead generation operations.

Manufacturing

To help control and manage the quality, cost and reliability of our supply chain, we directly manage the procurement of all final assembly materials used in our products, which include LCDs, housings, camera modules and antennas. In addition, we complete the final assembly of our devices in our Shenzhen, China facility.

In our final assembly facility, we assemble and perform quality assurance on our devices, across three production lines. The assembly of each of our products requires over 800 components, primarily related to mounting components onto circuit boards, and requires multiple custom components for ruggedization of the device, which includes housing, display and glass lens, printed circuit board assembly, camera function, battery, speakers and unique accessory ports, among others. Some of the components used to assemble our products are custom-made and obtained through single-source suppliers.

As of March 2019, this facility has a designed capacity to produce up to 100,000 units per month. We are currently exploring options to become more efficient, cost effective and scalable in our manufacturing capacity, including by utilizing contract manufacturing.

We are closely monitoring the impact of the COVID-19 global outbreak and its resulting impact on our manufacturing operations and supply chain, with our top priority being the health and safety of our employees, customers, partners, and communities. While we believe our recent restructuring efforts will enable us to improve our supply chain and better address the global economic events related to the COVID-19 virus, there remains uncertainty related to the public health situation in China and elsewhere. We believe our sales partners have ample inventory to continue meeting customer needs in the near term but there is an increasing likelihood that our results could be negatively impacted by an interruption in the operation of our manufacturing facility in Shenzhen, China. The magnitude of any potential impact is unknown, as it is unclear how long it will take for the overall supply chain to return to normal. We are working closely with our partners and suppliers to manage this process.

Competition

We operate in a highly competitive environment serving end customers in the industrial enterprise and public sector markets. These markets are highly fragmented, evolving and increasingly competitive. Competition in our industry is intense and has been characterized by rapidly changing technologies, evolving industry standards, significant barriers to entry in the form of carrier certification requirements, frequent new product introductions, annual operating system changes and rapid changes in end user requirements.

Non-rugged mobile device manufacturers have not historically created devices specifically to compete in the industrial enterprise and public sector markets. These manufactures typically focus on a different consumer audience and the requirements to manufacture ruggedized phones differ significantly from their core products. Nevertheless, we face competition from manufacturers of non-rugged mobile phones such as Apple Inc and Samsung Electronics Co. Ltd. to the extent end users decide to purchase traditional devices and add a rugged case for use in environments that we believe are better suited for purpose built ruggedized mobile phones. In addition, Samsung Electronics Co. Ltd. has also introduced a line of "business rugged" devices targeted at public safety and industrial applications. We also face competition from manufacturers of rugged mobile phones such as Bullitt Mobile Ltd. and Kyocera Corporation as well as from large system integrators and manufacturers of private and public wireless network equipment and devices. Competitors in this space include Harris Corporation, JVC KENWOOD Corporation, Motorola Solutions, Inc. and Tait International Limited. For the Data Capture and RFID portion of our product offerings, competitors include companies that provide a broad portfolio of barcode scanning products that are suitable for the majority of global market applications, such as Datalogic USA, Inc., Honeywell International Inc., Panasonic Corporation and Zebra Technologies Corporation.

We believe the principal competitive factors affecting the market for our products are the products' performance, features (including security features), quality, design innovation, reliability, price, customer service, reputation in the industry, brand loyalty and a strong third-party software and accessories ecosystem. We believe that our strongest competitive advantages are our products' durability and reputation in the industry, as well as the push to talk capabilities not available in all competitive devices. Additionally, we believe our XP8 rugged smartphone is one of the most rugged smartphones made anywhere in the world and it is consequently able to be fully sterilized and cleaned. In order to compete, we will be required to continue to respond promptly and effectively to the challenges of technological changes and our competitors' innovations.

With regard to competition from LMR providers, traditional LMR providers have chosen to not fully enter the LTE market primarily to avoid harming their significant existing LMR business. For example, certain major LMR providers have historically achieved over $3.0 billion in annual revenues from device sales. Further, these LMR providers typically do not have stocked products with major U.S. and Canadian wireless carriers. Achieving stocked product status with the wireless carriers requires that a manufacturer incur substantial cost and maintain technical know-how regarding carrier certification requirements. Stocking products at the wireless carriers may also result in competition against existing dealers for LMR providers, with certain such providers transacting with over 700 dealers in North America.

Intellectual Property

Our competitiveness and future success are dependent on our ability to protect our own proprietary technology and to access other important intellectual property. We protect our freedom to operate in the markets and mitigate intellectual property costs by proactively securing licenses with key patent holders, filing our own patents, trademarks, and copyrights and participating in defensive patent pools. As of January 1, 2020, we held 24 utility and design patents in the United States and 11 outside the United States and have filed 5 utility and design patent applications in the United States and one outside the United States. We also have contractual rights to standard essential patents for 2G, 3G, 4G and 5G wireless technologies, some of which require significant royalty payments. In addition, as of January 1, 2020, we held 11 trademarks in the United States and 33 trademarks outside the United States and have filed 7 trademark applications in the United States and 4 outside the United States. We opportunistically negotiate licenses with other patent holders where appropriate for our technology.

Our products are built to conform to wireless standards which are covered by numerous essential patents held by third parties. Our wireless carriers require us to provide patent indemnification for the products we sell to them, and in turn we secure intellectual property indemnification from our suppliers.

We do not believe that our products infringe on the proprietary rights of any third parties. There can be no assurance, however, that third parties will not claim such infringement by us or our channel partners and end customers with respect to current or future products. In the past, we have had third parties assert exclusive patent or other intellectual property rights to technologies that are important to our business. Any such claims, with or without merit, could be time consuming, result in costly litigation, cause product shipment delays or require us to enter into a royalty or licensing agreement, any of which could delay the development and commercialization of our products.

Our devices use the Android operating system based on the Android Open Source Project. We additionally integrate third-party licensed software on commercially reasonable terms. Several Android-based apps and extension enablers of Android are developed internally by our employees.

Certain License Agreements

In September 2008, we entered into a multi-year patent license agreement, as amended in January 2019, or the Nokia Agreement, with Nokia Corporation, or Nokia, pursuant to which Nokia granted us a license to certain Nokia-owned cellular standard essential patents for our devices that include such cellular standard technology. The Nokia Agreement is currently effective and contains customary termination clauses.

In January 2017, we entered into an amended and restated global patent license agreement, as amended in December 2018, or the Ericsson Agreement, with Telefonaktiebolaget LM Ericsson (Publ), or Ericsson, pursuant to which Ericsson granted us a license under certain Ericsson patents to manufacture and sell mobile phones that comply with certain telecommunications standards. Under the agreement, we made a one-time payment to Ericsson to partially settle royalty arrears and are obligated to pay Ericsson (i) single-digit U.S. dollar amounts per unit, which amounts are based on the particular product sold and the standards with which such products are compliant, and (ii) quarterly payments to cover the remaining royalty arrears. The Ericsson Agreement continues until January 1, 2024, unless terminated earlier by the parties. Ericsson has the right to terminate in the event (i) we materially breach the agreement and do not cure such breach within 30 days, or (ii) in the event of a change of control of our company, where the successor does not agree to the terms of the agreement. Further, Ericsson may terminate certain rights under the agreement with respect to third-party manufacturers if a third-party manufacturer files an infringement suit relating to any patents owned by Ericsson.

Legislation and Regulation

Wireless communication devices use radio spectrum, which is regulated by government agencies throughout the world. In the United States, use of spectrum is regulated by the Federal Communications Commission, or FCC, and the National Telecommunications and Information Administration, or NTIA, for non-federal government entities and federal government entities, respectively. The FCC and NTIA allocate spectrum for various uses, including commercial wireless services and public safety services, and regulate the use of that spectrum and the devices, such as our products, that operate on that spectrum. The FCC and NTIA also adopt requirements that affect wireless equipment, such as limits on radio emissions and rules requiring that handsets have specified capabilities, such as providing location information to 911 operators. The FCC also regulates the testing and certification for the import and/or sale of certain wireless devices.

Other countries also have regulatory bodies that define and implement the rules for using radio spectrum, pursuant to their respective national laws and international coordination under the International Telecommunications Union. Our ability to manufacture and sell products in other countries could be affected by such rules. In addition, any significant variations between the rules in the United States and rules in other countries, including differences in available spectrum bands for wireless communication, could increase the costs of designing and manufacturing our products.

Research and Development

We allocate a significant amount of resources and funds to developing robust and innovative solutions for the end users of our products and ensuring that these solutions meet their exacting requirements for functionality and reliability. Our research and development initiatives are led by our internal teams and are supported by third-party original design manufacturers as needed. Our product management team and our sales and marketing team spend their time interacting with a combination of end users and IT administrators in our target markets, wireless carriers and application and accessory ecosystem partners to better understand the market requirements for our solution. Once defined, our engineering organization develops and tests the solution against these requirements and works to achieve technical certification and approval from the wireless carriers which allows the solutions to be sold to our end users.

Employees

Since November 2019, our management team has endeavored to reorganize the company into a leaner, lower cost organization focused on a path to growth and profitability. The company has reduced its global headcount from approximately 700 employees at year-end 2018 to approximately 500 employees and contractors as of December 31, 2019. We executed an additional reduction in force of approximately 10% of our US employees in February 2020.

As of December 31, 2019, we had 403 full-time employees, including 38 in sales and marketing and business development, 37 in general and administrative, 210 in research and development and 118 in supply chain manufacturing, and 98 full-time independent contractors, including 7 in sales and marketing and business development, 2 in general and administrative, 89 in research and development. None of our employees are represented by a labor union or covered by a collective bargaining agreement. We have not experienced any work stoppages, and we consider our relations with our employees to be good.

Item 1A. Risk Factors.

Investing in our securities involves a great deal of risk. Careful consideration should be made of the following factors as well as other information included in this Annual Report on Form 10-K before deciding to purchase our securities. There are many risks that affect our business and results of operations, some of which are beyond our control. If any of the following risks actually occur, our business, financial condition or operating results could be significantly harmed. This could cause the trading price of our common stock to decline, and you may lose all or part of your investment. Additional risks that we do not yet know of or that we currently think are immaterial may also affect our business and results of operations.

Risks Related to Our Business

We have not been profitable in recent years and may not achieve or maintain profitability in the future.

We have incurred significant net losses since 2013 and have an accumulated deficit of $166.2 million as of December 31, 2019. We are not certain whether or when we will obtain a high enough volume of sales of our products to sustain or increase our growth or achieve or maintain profitability in the future. We also expect our costs to increase in future periods, which would negatively impact our future operating results if our revenues do not increase. In particular, we expect to continue to expend substantial financial and other resources on:

- research and development related to our solutions, including investments in our engineering and technical teams;
- expansion of our sales and marketing efforts;
- general and administrative expenses, including legal and accounting expenses related to being, a public company; and
- continued expansion of our business.

These investments may not result in increased revenues or growth in our business. Additionally, we have recently and may continue to encounter unforeseen operating expenses, difficulties, complications, delays and other unknown factors that may result in losses in future periods. If we are unable to increase our revenues at a rate sufficient to offset the expected increase in our costs, our business, operating results and financial position may be harmed, and we may not be able to achieve or maintain profitability over the long term or continue as a going concern. Our consolidated financial statements account for the continuation of our business as a going concern. We are subject to the risks and uncertainties associated with the development and release of new products. Our principal sources of liquidity as of December 31, 2019 consist of existing cash and cash equivalents totaling $11.3 million, which includes the impact of approximately $36.8 million in proceeds from our initial public offering of common stock that closed in May 2019. During the twelve months of 2019, we used approximately $33.5 million of cash and investments for operating activities. Due to these conditions, along with reductions in our current revenue run-rate, substantial doubt exists as to our ability to continue as a going concern. Our audited consolidated financial statements have been prepared assuming we will continue as a going concern and do not include any adjustments that might be necessary should we be unable to continue as a going concern. If necessary, we will seek to raise additional capital from the sale of equity securities or the incurrence of indebtedness to allow us to continue operations. There can be no assurance that additional financing will be available to us on acceptable terms, or at all. Additionally, if we issue additional equity securities to raise funds, whether to existing investors or others, the ownership percentage of our existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Additionally, we may be limited as to the amount of funds we can raise pursuant to SEC rules and the continued listing requirements of Nasdaq. If we cannot grow our revenue run-rate or raise needed funds, we might be forced to make additional reductions in our operating expenses, which could adversely affect our ability to implement our business plan and ultimately our viability as a Company.

We rely on our channel partners to generate a substantial majority of our revenues. If these channel partners fail to perform or if we cannot enter into agreements with channel partners on favorable terms, our operating results could be significantly harmed.

A substantial majority of our revenues are generated through sales by our channel partners, which are primarily wireless carriers who sell our phones through their sales channels. To the extent our channel partners are unsuccessful in selling or do not promote our products, or we are unable to obtain and retain a sufficient number of high-quality channel partners, our business and operating results could be significantly harmed.

We enter into master sales arrangements with the majority of our channel partners (including channel partners contributing over 90% of our total revenues for the years ended December 31, 2019 and 2018) under which our partners purchase our products for distribution on a purchase order basis. While these arrangements are typically long term, they generally do not contain any firm purchase volume commitments. As a result, our channel partners are not contractually obligated to purchase from us any minimum quantity of products. We are generally required to satisfy any and all purchase orders delivered to us within specified delivery windows, with limited exceptions (such as orders significantly in excess of forecasts). If we are unable to efficiently manage our supply and satisfy purchase orders on a timely basis to our channel partners, we may be in breach of our sales arrangements and lose potential sales. Our sales arrangements also generally include technical performance standards for our mobile phones and accessories sold, which vary by channel partner. If a technical issue with any of our covered products exceeds certain preset failure thresholds for the relevant performance standard or standards, the channel partner typically has the right to cease selling the product, cancel open

purchase orders and levy certain monetary penalties. If our products suffer technical issues or failures following sales to our channel partners, we may be subject to significant monetary impact and our channel partners may cease making purchase orders, which would significantly harm our business and results of operations. In addition, our channel partners retain sole discretion in which of their stocked products to offer their customers. While we may offer limited customer incentives, we generally have limited to no control over which products our channel partners decide to offer or promote, which directly impacts the number of products that our partners will purchase from us.

Our channel partners may be unsuccessful in marketing, selling and supporting our solutions. They may also market, sell and support solutions that are competitive with ours, and may devote more resources to the marketing, sales and support of such products. They may have incentives to promote our competitors' products in lieu of our products, particularly for competitors who do a large volume business with the channel partner. For example, during the summer of 2019, we expected, based on input from our US wireless carrier channel partners, for such channel partners to subsidize our new products following launch, to place new releases in retail locations and to sign up push-to-talk customers to our new generation phones. In each of these cases, there were significant delays and changes in the rollout of these efforts, which negatively impacted demand for our products and thus our profitability. In the event there is not sufficient demand for our products, our channel partners may stop selling our products completely. While we employ a small direct sales force, our channel partners have significantly larger sales teams who are not contractually obligated to promote any of our devices and often have multiple competing devices in stock to offer their customers. In addition, downstream sales by our channel partners often succeed due to attractive device prices and monthly rate plans, which we do not control. In certain cases, we may promote our own devices through customer incentives, typically in exchange for retail price reductions or contributions of funds for marketing purposes; however, there can be no assurance that any such incentives would contribute to increased purchases of our products. Further, given the impact of attractive pricing on ultimate sales, we generally must offer increased promotional funding or price reductions for our more expensive products. This promotional funding or price reductions operate to reduce our margins and significantly impact our profitability.

New sales channel partners, as well as sales of new products being sold by existing channel partners, may take several months or more to achieve significant sales. Our channel partner sales structure could subject us to lawsuits, potential liability and reputational harm if, for example, any of our channel partners misrepresents the functionality of our products or services to their customers or violate laws or our corporate policies. Additionally, some of our master agreements with our wireless carrier customers contain most "favored nation" clauses. These clauses typically provide that if we enter into an agreement with another wireless carrier or customer on more favorable terms, we must offer some of those terms to our existing wireless carrier customers. These provisions may obligate us to provide different, more favorable, terms to our existing wireless carrier customers, which could, if applied, result in lower revenues or otherwise adversely impact our business, financial condition and results of operations.

If we fail to effectively manage our existing or future sales channel partners, our channel partners fail to promote our products effectively, we are unable to meet our obligations under our sales arrangements or enter into future agreements with wireless carrier customers that have terms that are more favorable to the customer, our business and results of operations would be harmed.

We are in default under our credit facilities and as a result, B. Rileymay accelerate amounts owed under such facilities and may foreclose upon the assets securing our obligations and our liquidity could be adversely impacted.

In October 2017 (the "Effective Date"), we entered into a Subordinated Term Loan and Security agreement (the "Riley Loan Agreement") with B. Riley Principal Investments, LLC ("BRPI"). To secure our performance of our obligations under the Riley Loan Agreement, we granted BRPI a subordinated security interest in all of our assets, including our intellectual property. As of December 31, 2019, we were in default under the Riley Loan Agreement for a number of reasons, including the occurrence of a material adverse change and failure to provide notice of certain events. Upon the occurrence and during the continuance of an event of default under the Riley Loan Agreement, BRPI has the option, among other things, to accelerate the debt, which was in the amount of $10.1 million as of December 31, 2019, and foreclose upon the assets pledged as collateral, any of which could severely affect our liquidity and significantly harm our business. In addition, we are unable to borrow under the EWB facility during the continuance of an event of default thereunder or under the Riley Loan Agreement, which could severely affect our liquidity and significantly harm our business.

In the years ended December 31, 2019 and 2018, approximately 66% and 66%, respectively, of our revenues, were derived from our top four customers. We expect our revenues to continue to be heavily concentrated among our top customers, and the loss of, or significant reduction in orders from, any of these customers could significantly reduce our revenues and adversely impact our operating results.

In 2018, three of the four largest U.S. wireless carriers, and the three largest Canadian wireless carriers, began stocking our entire next generation product portfolio following their certification of our products, resulting in significant revenue concentration among these carriers. In addition to the certification and stocking of our products by these wireless carriers, revenue increased among such wireless carriers as a result of increases in awareness of our brand among end users and end customers over the past several years, new product launches and an increased focus by carriers such as AT&T and Verizon on dedicated public safety networks, including FirstNet. We expect our revenues to remain heavily concentrated among these top wireless carriers, and we will be substantially dependent on these wireless carriers continuing to purchase and promote our products to their sales channels as well as customer demand for devices and services from these wireless carriers (factors over which we do not have any control). The loss of one or more of these significant customers, or reduced demand or purchases from these significant customers, would result in significant harm to our revenues and results of operations, and our growth could be limited.

Our business is difficult to evaluate because we have a limited operating history in our markets.

We have a limited operating history based on which you can evaluate our present business and future prospects. Because of this limited operating history, we face challenges in predicting our business and evaluating its prospects which creates uncertainty in our ability to implement our business plan successfully. For example, in the summer of 2019, we experienced reduced forecasts for our newly introduced products from our US wireless carrier channel partners and, post-launch, delays in the rollout of our products, which had a negative impact on our business. Our prospects must be considered in light of the risks, expenses and difficulties frequently encountered by newly public companies that have recently launched new products into a new market. If we are unsuccessful in addressing these risks and uncertainties, our business, results of operations and financial condition will be significantly harmed.

We may not fully realize the expected benefits of our cost-saving initiatives.

Maintaining a low corporate cost structure is a key element of our current business strategy. Since November 2019, our management team has endeavored to reorganize the company into a leaner, lower cost organization focused on a path to growth and profitability. For example, we have taken steps to reduce our global headcount and have relocated our headquarters from San Mateo, California to Austin, Texas, a lower cost location. Our strategic restructuring may not result in anticipated savings or other economic benefits, could result in total costs and expenses that are greater than expected, could make it more difficult to attract and retain qualified personnel and may disrupt our operations, each of which could have a material adverse effect on our business. In addition, if we experience unanticipated inefficiencies caused by our reduced headcount, we may be unable to fully execute our new strategy.

We are materially dependent on the adoption of our solutions by both the industrial enterprise and public sector markets, and if end customers in those markets do not purchase our solutions, our revenues will be adversely impacted, and we may not be able to expand into other markets.

Our revenues have historically been in the industrial enterprise market, and we are materially dependent on the adoption of our solutions by both the industrial enterprise and public sector markets. End customers in the public sector market may remain, for reasons outside our control, tied to Land Mobile Radio ("LMR') solutions or other competitive alternatives to our phones. Sales of our products to these buyers may also be delayed or limited by these competitive conditions. If our products are not widely accepted by buyers in those markets, we may not be able to expand sales of our products into new markets, and our business, results of operations and financial condition may be adversely impacted.

We participate in a competitive industry, which may become more competitive. Competitors with greater resources and significant experience in high-volume product manufacturing may be able to respond more quickly and cost-effectively than we can to new or emerging technologies and changes in customer requirements.

We face significant competition in developing and selling our solutions. Our primary competitors in the non-rugged mobile device market include Apple Inc. and Samsung Electronics Co. Ltd. Our primary competitors in the rugged mobile device market include Bullitt Mobile Ltd., and Kyocera Corporation. We also face competition from large system integrators and manufacturers of private and public wireless network equipment and devices. Competitors in this space include Harris Corporation, JVC KENWOOD Corporation, Motorola Solutions, Inc., or MSI, and Tait International Limited. For the Data Capture and RFID portion of our product offerings, competitors include companies that provide a broad portfolio of barcode scanning products that are suitable for the majority of global market applications, such as Datalogic USA, Inc., Honeywell International Inc., Panasonic Corporation and Zebra Technologies Corporation.

We cannot assure we will be able to compete successfully against current or future competitors. Increased competition in mobile computing platforms, data capture products, or related accessories and software developments may result in price reductions, lower gross profit margins, and loss of market share, and could require increased spending on research and development, sales and marketing, and customer support. Some competitors may make strategic acquisitions or establish cooperative relationships with suppliers or companies that produce complementary products, which may create additional pressures on our competitive position in the marketplace.

Most of our competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources and experience than we do. In addition, because of the higher volume of components that many of our competitors purchase from their suppliers, they are able to keep their supply costs relatively low and, as a result, may be able to recognize higher margins on their product sales than we do. Many of our competitors may also have existing relationships with the channel partners who we use to sell our products, or with our potential customers. This competition may result in reduced prices, reduced margins and longer sales cycles for our products. Our competitors may also be able to more quickly and cost-effectively respond to new or emerging technologies and changes in customer requirements. The combination of brand strength, extensive distribution channels and financial resources of the larger vendors could cause us to lose market share and could reduce our margins on our products. If any of our larger competitors were to commit greater technical, sales, marketing and other resources to our markets, our ability to compete would be adversely impacted. If we are unable to successfully compete with our competitors, our sales would suffer and as a result our financial condition will be adversely impacted.

Defects in our products could reduce demand for our products and result in a loss of sales, delay in market acceptance and injury to our reputation, which would adversely impact our business.

Complex software, components and assemblies used in our products may contain undetected defects that are subsequently discovered at any point in the life of the product. For example, in 2018, we recalled one batch of our XP8 devices from two wireless carriers due to manufacturing defects. In addition, in the summer of 2019, we experienced technical challenges related to our XP8 smartphone and other general non-systemic, accessory-related issues in our feature phones, which cumulatively resulted in lost sales momentum and diverted resources away from launching new carrier customers. Defects in our products may result in a loss of sales, delay in market acceptance and injury to our reputation and increased warranty costs.

Additionally, our software may contain undetected errors, defects or bugs. We have recently detected software bugs, which impacted overall sales, commencing in the third quarter of 2019. It is possible that additional errors, defects or bugs will be found in our existing or future software products and related services with the potential for delays in, or loss of market acceptance of, our products and services, diversion of our resources, injury to our reputation, increased service and warranty expenses, and payment of damages.

Further, errors, defects or bugs in our solutions could be exploited by hackers or could otherwise result in an actual or perceived breach of our information systems. Alleviating any of these problems could require significant expense and could cause interruptions, delays or cessation of our product licensing, which would reduce demand for our products and result in a loss of sales, delay in market acceptance and injure our reputation and could adversely impact our business, results of operations and financial condition.

If our business does not grow as we expect, or if we fail to manage our growth effectively or if our cost cutting measures are not sufficient our operating results and business would suffer.

Our ability to successfully grow our business depends on a number of factors including our ability to:

- implement cost-saving initiatives;
- operate efficiently with a reduced workforce;
- accelerate the adoption of our solutions by new end customers;
- expand into new vertical markets;
- develop and deliver new products and services;
- increase awareness of the benefits that our solutions offer;
- expand our international footprint, and
- become more cost effective and scalable utilizing contract manufacturing.

As usage of our solutions grows, we will need to continue to make investments to develop and implement new or updated solutions, technologies, security features and cloud-based infrastructure operations. In addition, we will need to appropriately scale our internal business systems and our services organization, including the suppliers of our detection equipment and customer support services, to serve our growing customer base. Any failure of, or delay in, these efforts could impair the performance of our solutions and reduce customer satisfaction.

Further, our growth could increase quickly and place a strain on our managerial, operational, financial and other resources, and our future operating results depend to a large extent on our ability to successfully manage our anticipated expansion and growth. To manage our growth successfully, we will need to continue to invest in sales and marketing, research and development, and general and administrative functions and other areas. We are likely to recognize the costs associated with these investments earlier than receiving some of the anticipated benefits, and the return on these investments may be lower, or may develop more slowly, than we expect, which could adversely impact our operating results.

If we are unable to manage our growth effectively, we may not be able to take advantage of market opportunities or develop new solutions or upgrades to our existing solutions, satisfy customer requirements, maintain the quality and security of our solutions or execute on our business plan, any of which could harm our business, operating results and financial condition.

We are required to undergo a lengthy customization and certification process for each wireless carrier customer, which increases our operating expenses, and failure to obtain such certification would adversely impact our results of operations and financial condition.

Each wireless carrier requires each of our devices to complete a thorough technical acceptance process before it can be stocked and sold. Such acceptance processes impose rigorous and complex requirements on our devices, which result in a lengthy testing and certification process, during which we incur substantial operating expenses related to the wireless carrier's technical acceptance of our devices. The acceptance processes and related costs to us vary across carrier customers depending on carrier size and level of customization required. Generally, the certification process commences within one to three months of product concept development. During this development stage, certain carriers provide a technology roadmap and target demographics, allowing us to define product specifications to meet carrier goals, while other carriers provide defined specifications and preferred price points. Once we receive approval of a product concept by the carrier, we and the carrier advance the product to the development stage. When the product is close to becoming a functioning model, we commence internal quality assurance processes and field testing, which may include third -party lab testing, in-market field testing and interoperability testing. Finally, as the last step in the testing phase, the wireless carrier typically conducts testing itself, following which the product may be certified and stocked. The entire process can last from six to 18 months depending on the particular wireless carrier and type of device. Any delay in the acceptance process or failure to satisfy the device certification requirements would affect our ability to bring products to market and adversely impacts our results of operations and financial condition.

If we fail to adequately forecast demand for our inventory and supply needs, we could incur additional costs or experience manufacturing delays, which could reduce our gross margin or cause us to delay or even lose sales.

Because our production volumes are based on a forecast of channel partner demand rather than firm purchase commitments from our major customers, our forecasts have been, and there is a risk that our forecasts could be in the future, inaccurate and there is a risk that we will be unable to sell our products at the volumes and prices we expect, which may result in excess inventory. We provide, and will continue to provide, forecasts of our demand to our third-party suppliers prior to the scheduled delivery of products to our channel partners. If we overestimate our requirements, our contract manufacturers may have excess component inventory, which could increase our costs. If we underestimate our requirements, our contract manufacturers may have inadequate component inventory, which could interrupt the manufacturing of our products and result in delays in shipments and revenues, lost sales, or we could incur unplanned overtime costs to meet our requirements, resulting in significant cost increases. For example, certain materials and components used to manufacture our products may reach end of life during any of our product's life cycles, following which suppliers no longer provide such expired materials and components. This would require us to either source and qualify an alternative component, which could require a re-certification of the device by the wireless carriers and/or regulatory agencies, or forecast product demand for a final purchase of such materials and components that may reach end of life to ensure that we have sufficient product inventory through a product's life cycle. If we overestimate forecasted demand, we will hold excess end-of-life materials and components resulting in increased costs. If we underestimate forecasted demand, we could experience delays in shipments and loss of revenues.

In addition, if we underestimate our requirements and the applicable supplier becomes insolvent or is no longer able to timely supply our needs in a cost-efficient manner or at all, we may be required to acquire components, which may need to be customized for our products, from alternative suppliers, including at significantly higher costs. For example, in 2018, one of our suppliers became insolvent and ceased all production, requiring us to seek alternative supply of complex components in a very short time frame. If we cannot source alternative suppliers and/or alternative components, we may suffer delays in shipments or lost sales. Similarly, credit constraints at our suppliers could require us to accelerate payment of our accounts payable, impacting our cash flow. Further, lead times for materials and components that we order vary significantly and depend on factors such as the specific supplier, contract terms, customization needed for any particular component and demand for each component at a given time. Any such failure to accurately forecast demand and manufacturing and supply requirements, and any need to obtain alternative supply sources, could materially harm our business, results of operations and financial condition.

We may not be able to continue to develop solutions to address user needs effectively in an industry characterized by ongoing change and rapid technological advances.

To be successful, we must adapt to rapidly changing technological and application needs by continually improving our products, as well as introducing new products and services, to address user demands.

Our industry is characterized by:

- evolving industry standards;
- frequent new product and service introductions;

- evolving distribution channels;
- increasing demand for customized product and software solutions;
- rapid competitive developments; and
- changing customer demands.

Future success will depend on our ability to effectively and economically adapt in this evolving environment. We could incur substantial costs if we must modify our business to adapt to these changes and may even be unable to adapt to these changes.

The markets for our devices and related accessories may not develop as quickly as we expect or may not develop at all.

Our future success is substantially dependent upon continued adoption of devices and related accessories in the industrial enterprise and public sector markets, including the transition from Land Mobile Radio ("LMR") and Push to Talk ("PTT"), to smartphone and Long-Term Evolution ("LTE") networks. These market developments and transitions may take longer than we expect or may not occur at all and may not be as widespread as we expect. If the market does not develop as we expect, our business, operating results and financial condition would be significantly harmed.

Our dependence on third-party suppliers for key components of our products could delay shipment of our products and reduce our sales.

We depend on certain suppliers for the delivery of components used in the assembly of our products, including machined parts, injection molded plastic parts, printed circuit boards and other miscellaneous custom parts for our products. Our reliance on third-party suppliers creates risks related to our potential inability to obtain an adequate supply of components and reduced control over pricing and timing of delivery of components. In particular, we have little to no control over the prices at which our suppliers sell materials and components to us. Certain supplies of our components are available only from a single source or limited sources and we may not be able to diversify suppliers in a timely manner. We have experienced shortages in the past that have negatively impacted our results of operations and may experience such shortages in the future. For example, in 2018, we experienced a shortage in supply of a camera part from one of our suppliers for our XP8 phone, which resulted in delays in delivery of completed XP8 phones to certain of our channel partners.

We also do not have long-term supply agreements with any of our suppliers. Our current contracts with certain suppliers may be canceled or not extended by such suppliers and, therefore, do not afford us with sufficient protection against a reduction or interruption in supplies. Moreover, in the event any of these suppliers breach their contracts with us, our legal remedies associated with such a breach may be insufficient to compensate us for any damages we may suffer.

Any interruption of supply for any material components of our products for any reason, including but not limited to a global or local health crises, or inability to obtain required components from our third-party suppliers, could significantly delay the production and shipment of our products and harm our revenues, profitability and financial condition.

Our future success is dependent on our ability to create independent brand awareness for our company and products with end customers, and our inability to achieve such brand awareness could limit our prospects.

We depend on a small number of wireless carriers to distribute our products. While we intend to accelerate direct marketing and end-customer brand awareness initiatives in the future, our sales and marketing efforts have historically been predominantly focused on channel partners. As such, our operating expenses related to end-customer marketing efforts have historically been very small, representing less than 1.0% of our total sales and marketing expenses during years ended December 31, 2019 and 2018. To increase end-customer brand awareness, we intend to develop sales tools for key verticals within are target markets, increase usage of social media and expand product training efforts, among other things. As a result, we expect our sales and marketing expenses to increase in the future, primarily from increased sales personnel expenses, which will require us to cost-efficiently ramp up our sales and marketing capabilities and effectively target end customers. However, there can be no assurance that we will successfully increase our brand awareness or do so in a cost-efficient manner while maintaining market share within our existing sales channels. Our failure to establish stand-alone brand awareness with end customers of our products would leave us vulnerable to competitors and have an adverse impact on our prospects. If we are unable to significantly increase the awareness of our brand and solutions with end customers in a cost-efficient manner, we will remain significantly dependent on our channel partners for sales of our products and would adversely impact our ability to grow our business.

We are dependent on the continued services and performance of a concentrated group of senior management and other key personnel, the loss of any of whom could adversely impact our business.

Our future success depends in large part on the continued contributions of a concentrated group of senior management and other key personnel. In particular, the leadership of key management personnel is critical to the successful management of our company, the development of our solutions and our strategic direction. We also depend on the contributions of key technical personnel.

In the second half of 2019, and the first quarter of 2020, we implemented significant senior management changes resulting in a newly appointed CEO, CFO, CMO and Executive VP of Sales. During this period of transition, there may be operational inefficiencies as the new members of the senior management team become familiar with our business and operations, and there can be no guarantee that the transition of operational responsibilities will be successful. Leadership transitions can be difficult to manage and may cause uncertainty, a disruption to our business or increase the likelihood of turnover in key officers and employees. Competition for qualified personnel remains intense. Also, the uncertainty inherent in our senior management transitions could lead to concerns from current and potential customers, suppliers and other third parties with whom the company does business, any of which could have a material adverse impact on our operations.

We compete in a rapidly evolving market, and the failure to respond quickly and effectively to changing market requirements could cause our business and operating results to decline.

The mobile device market is characterized by rapidly changing technology, changing customer needs, evolving industry standards and frequent introductions of new products and services. In order to deliver a competitive mobile device, our solutions must be capable of operating in an increasingly complex network environment. As new wireless phones are introduced and standards in the mobile device market evolve, we may be required to modify our phones and services to make them compatible with these new products and standards. Likewise, if our competitors introduce new devices and services that compete with ours, we may be required to reposition our solutions or introduce new phones and solutions in response to such competitive pressure. We may not be successful in modifying our current phones or introducing new ones in a timely or appropriately responsive manner, or at all. If we fail to address these changes successfully, our business and operating results could be significantly harmed.

If dedicated public safety LTE networks are not deployed at the rate we anticipate or at all, demand for our solutions may not grow as expected.

A key part of our strategy is to further expand the use of our solutions over dedicated LTE networks in the public safety market. If the deployment of dedicated LTE networks is delayed or such networks are not adopted at the rate we anticipate, demand for our solutions may not develop as we anticipate, which would have a negative effect on our revenues.

If we are unable to sell our solutions into new markets, our revenues may not grow.

Any new market into which we attempt to sell our solutions may not be receptive. Our ability to penetrate new markets depends on the quality of our solutions, the continued adoption of our public safety solution by first responders, the perceived value of our solutions as a risk management tool and our ability to design our solutions to meet the demands of our customers. If the markets for our solutions do not develop as we expect, our revenues may not grow.

Our ability to successfully face these challenges depends on several factors, including increasing the awareness of our solutions and their benefits, the effectiveness of our marketing programs, the costs of our solutions, our ability to attract, retain and effectively train sales and marketing personnel, and our ability to develop relationships with wireless carriers and other partners. If we are unsuccessful in developing and marketing our solutions into new markets, new markets for our solutions might not develop or might develop more slowly than we expect, either of which would harm our revenues and growth prospects.

We have recently reduced the size of our organization and we may encounter difficulties in managing our business as a result of this reduction, or the attrition that may occur following this reduction, which could disrupt our operations. In addition, we may not achieve anticipated benefits and savings from the reduction.

Since November 2019, we have reduced our global headcount from approximately 700 employees at year-end 2018 to approximately 500 employees as of December 31, 2019. In addition, we executed an additional reduction in force of approximately 10% of our US employees in February 2020. We took these actions in an effort to reorganize the company into a leaner, lower cost organization focused on a path to growth and profitability. These reductions in force, and the attrition that may occur following these reductions, will result in the loss of institutional knowledge and expertise and the reallocation and combination of certain roles and responsibilities across the organization, all of which could adversely affect our operations. These restructuring and additional measures we might take to reduce costs could divert management attention, yield attrition beyond our intended reduction in force, reduce employee morale, or cause us to delay, limit, reduce or eliminate certain product development plans, each of which could have an adverse impact on our business, operating results and financial condition

If we are unable to attract, integrate and retain additional qualified personnel, including top technical talent, our business could be adversely impacted.

Our future success depends in part on our ability to identify, attract, integrate and retain highly skilled technical, managerial, sales and other personnel. We face intense competition for qualified individuals from numerous other companies, including other software and technology companies, many of whom have greater financial and other resources than we do. Some of these companies may offer compensation and benefit packages that may be more appealing to high-quality candidates than those we have to offer. In addition, new hires often require significant training and, in many cases, take significant time before they achieve full productivity. We may incur significant costs to attract and retain qualified personnel, including significant expenditures related to salaries and benefits and compensation expenses related to equity awards, and we may lose new employees to our competitors or other companies before we realize the benefit of our investment in recruiting and training them. Moreover, new employees may not be or become as productive as we expect, as we may face challenges in adequately or appropriately integrating them into our workforce and culture. In addition, the news of our recent cost reduction action, may make it more difficult to recruit new employees or retain existing employees. If we are unable to attract, integrate and retain suitably qualified individuals who are capable of meeting our growing technical, operational and managerial requirements on a timely basis or at all, our business will be adversely impacted.

Volatility or lack of positive performance in our stock price may also affect our ability to attract and retain our key employees. Employees may be more likely to leave us if the shares they own or the shares underlying their vested options have significantly appreciated in value relative to the original purchase prices of the shares or the exercise prices of the options, or, conversely, if the exercise prices of the options that they hold are significantly above the market price of our common stock. If we are unable to appropriately incentivize and retain our employees through equity compensation, or if we need to increase our compensation expenses in order to appropriately incentivize and retain our employees, our business, operating results and financial condition would be adversely impacted.

Our existing IT systems may not be adequate to manage our growth, and our implementation of updated IT systems could result in significant disruptions to our operations.

Our existing IT systems may be inadequate to manage our growth, and we are planning to implement various upgrades to our enterprise resource planning, or ERP, systems, as well as other complementary IT systems, over the next several years. Implementation of these solutions and systems is highly dependent on coordination of numerous software and system providers and internal business teams. The interdependence of these solutions and systems is a significant risk to the successful completion of the initiatives and the failure of any one system could have a significant adverse impact on the implementation of our overall IT infrastructure. We may experience difficulties as we transition to these new or upgraded systems and processes, including loss or corruption of data, delayed shipments, decreases in productivity as our personnel and third-party providers implement and become familiar with new systems, increased costs and lost revenues.

In addition, transitioning to these new systems requires significant capital investments and personnel resources. Difficulties in implementing new or upgraded information systems or significant system failures could disrupt our operations and have a significant adverse impact on our capital resources, financial condition, results of operations or cash flows. Implementation of this new IT infrastructure could have a significant impact on our business processes and information systems across a significant portion of our operations. As a result, we will be undergoing significant changes in our operational processes and internal controls as our implementation progresses, which in turn will require significant change management, including recruiting and training of qualified personnel. If we are unable to successfully manage these changes as we implement these systems, including harmonizing our systems, data, processes and reporting analytics, our ability to conduct, manage and control routine business functions could be negatively affected and significant disruptions to our business could occur. In addition, we could incur material unanticipated expenses, including additional costs of implementation or costs of conducting business. These risks could result in significant business disruptions or divert management’s attention from key strategic initiatives and have a significant adverse impact on our capital resources, financial condition and results of operations.

The application development ecosystem supporting our devices and related accessories is new and evolving.

The application development ecosystem supporting our devices and related accessories is new and evolving. Specifically, the number of application developers in the ecosystem supporting our devices and accessories is small. If the market or the application development ecosystem does not develop, timely or at all, demand for our products may be limited, and our business and results of operations will be significantly harmed.

The impact of potential changes in customs, tariffs, and trade policies in the United States and the potential corresponding actions by other countries, including recent trade initiatives announced by the U.S. presidential administration against China, in which we do business could adversely impact our financial performance.

The U.S. government has made proposals from time to time that are intended to address trade imbalances, which include encouraging increased production in the United States. These proposals could result in increased customs duties and tariffs, and the renegotiation of some U.S. trade agreements. We import a significant percentage of our products into the United States, and an increase in customs duties and tariffs with respect to these imports could negatively impact our financial performance. The implementation of customs duties and tariffs may cause U.S. trading partners to take actions with respect to U.S. imports or U.S. investment activities in their respective countries. Any potential changes in trade policies in the United States and the potential corresponding actions by other countries in which we do business could adversely impact our financial performance. Given the level of uncertainty over which provisions will be enacted, we cannot predict with certainty the impact of the proposals.

For example, in 2018 and 2019, the U.S. presidential administration and Chinese government imposed significant tariffs on exports between the two countries. This ongoing policy dispute between China and the United States could have significant impact on the industries in which we participate, directly and indirectly, and no assurance can be given that any individual customer or significant groups of companies or a particular industry, will not be adversely impacted by any governmental actions taken by either China or the United States. In addition, we manufacture our mobile phones at our facility in Shenzhen, China, which could result in significant additional costs to us when shipping our products to various customers in the United States. It is not possible to predict with any certainty the outcome of future trade negotiations between the United States and China, and any prolonged or increased tariffs on imports from China to the United States would adversely impact our business, results of operations and financial condition.

Operating outside of the United States presents specific risks to our business, and we have substantial operations outside of the United States.

Most of our employee base and operations are located outside the United States, primarily in China and India. Most of our software development, third-party contract manufacturing, and product assembly operations are conducted outside the United States.

Risks associated with operations outside the United States include:

- effectively managing and overseeing operations that are distant and remote from corporate headquarters may be difficult and may impose increased operating costs;
- fluctuating foreign currency rates could restrict sales, increase costs of purchasing, and impact collection of receivables outside of the United States;
- volatility in foreign credit markets may affect the financial well-being of our customers and suppliers;
- violations of anti-corruption laws, including the Foreign Corrupt Practices Act and the U.K. Bribery Act could result in large fines and penalties;
- violations of privacy and data security laws could result in large fines and penalties;
- tax disputes with foreign taxing authorities, and any resultant taxation in foreign jurisdictions associated with operations in such jurisdictions, including with respect to transfer pricing practices associated with such operations;
- adverse changes in, or uncertainty of, local business laws or practices, including the following:
- foreign governments may impose burdensome tariffs, quotas, taxes, trade barriers, or capital flow restrictions;
- restrictions on the export or import of technology may reduce or eliminate the ability to sell in or purchase from certain markets;
- political and economic instability, including deterioration of political relations between the United States and other countries, may reduce demand for our solutions or put our non-U.S. assets at risk;
- potentially limited intellectual property protection in certain countries may limit recourse against infringing on our solutions or cause us to refrain from selling in certain geographic territories;
- staffing may be difficult along with higher turnover at international operations;
- a government-controlled exchange rate and limitations on the convertibility of currencies, including the Chinese yuan;
- transportation delays and customs related delays that may affect production and distribution of our products; and
- integration and enforcement of laws vary significantly among jurisdictions and may change significantly over time.

Our failure to manage any of these risks successfully could harm our international operations and adversely impact our business, operating results and financial condition.

A security breach or other significant disruption of our IT systems or those of our partners, suppliers or manufacturers, caused by cyberattacks or other means, could have a negative impact on our operations, sales, and operating results.

All IT systems are potentially vulnerable to damage, unauthorized access or interruption from a variety of sources, including but not limited to, cyberattacks, cyber intrusions, computer viruses, security breaches, energy blackouts, natural disasters, terrorism, sabotage, war, insider trading and telecommunication failures. A cyberattack or other significant disruption involving our IT systems or those of our outsource partners, suppliers or manufacturers could result in the unauthorized release of proprietary, confidential or sensitive information of ours or result in virus and malware installation on our devices. Such unauthorized access to, or release of, this information or other security breaches could: (i) allow others to unfairly compete with us, (ii) compromise safety or security, (iii) subject us to claims for breach of contract, tort, and other civil claims, and (iv) damage our reputation. Any or all of the foregoing could have a negative impact on our business, financial condition and results of operations.

We experience lengthy sales cycles for our products and the delay of an expected large order could result in a significant unexpected revenue shortfall.

The purchase of our products is often an enterprise-wide decision for prospective customers, which requires us to engage in sales efforts over an extended period of time and provide a significant level of education to prospective customers regarding the uses and benefits of such devices. Prospective customers, especially the wireless carriers that sell our products, often undertake a prolonged evaluation process that may take from several months to several years in certain cases. Consequently, if our forecasted sales from a specific customer are not realized, we may not be able to generate revenues from alternative sources in time to compensate for the shortfall. The loss or delay of an expected large order could also result in a significant unexpected revenue shortfall. Moreover, to the extent we enter into and deliver our products pursuant to significant contracts earlier than we expected, our operating results for subsequent periods may fall below expectations. We may spend substantial time, effort and money on our sales and marketing efforts without any assurance that our efforts will produce any sales. If we are unable to succeed in closing sales with new and existing customers, our business, operating results and financial condition will be harmed.

We may require additional capital to fund our business and support our growth, and our inability to generate and obtain such capital on acceptable terms, or at all, could harm our business, operating results, financial condition and prospects.

We intend to continue to make substantial investments to fund our business and support our growth. In addition, we may require additional funds to respond to business challenges, including the need to develop new features or enhance our solutions, improve our operating infrastructure or acquire or develop complementary businesses and technologies. As a result, in addition to the revenues we generate from our business, we may need to engage in additional equity or debt financings to provide the funds required for these and other business endeavors. If we raise additional funds through future issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock. Any debt financing that we may secure in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. We may not be able to obtain such additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business may be adversely impacted. In addition, our inability to generate or obtain the financial resources needed may require us to delay, scale back, or eliminate some or all of our operations, which may have a significant adverse impact on our business, operating results and financial condition.

We have a limited history of high-volume commercial production of our devices, and we may face manufacturing capacity constraints.

We have limited history and experience in high-volume commercial production of our devices. For example, we launched our first high-volume products in March 2018. Because of this limited production history, we face challenges in predicting our business and evaluating its prospects, which may result in breakdowns of our ability to timely supply our devices to our customers. Moreover, we face manufacturing capacity constraints that present further risks to our business. If overall demand of our devices increases in the future, we will need to expand our manufacturing capacity in a cost-efficient manner. Failing to meet customer demand due to our failure to successfully address these risks and challenges could adversely impact our reputation and future sales, which would significantly harm our business, results of operations and financial condition.

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

As of December 31, 2019, we had U.S. federal and state net operating loss carryforwards, or NOLs, of $42.4 million and $11.5 million, respectively, due to prior period losses, a portion of which expire in various years beginning in 2035 and 2032, respectively, if not utilized. In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its NOLs to offset future taxable income. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities. Under the Tax Cuts and Jobs Act, or the Tax Act, the amount of post 2017 NOLs that we are permitted to deduct from U.S. federal income taxes in any taxable year is limited to 80% of our taxable income in such year, where taxable income is determined without regard to the NOL deduction itself. The Tax Act generally eliminates the ability to carry back any NOL to prior taxable years, while allowing post 2017 unused NOLs to be carried forward indefinitely without expiration. Additionally, state NOLs generated in one state cannot be used to offset income generated in another state. For these reasons, we may not be able to realize a tax benefit from the use of our NOLs, whether or not we attain profitability.

We are involved in securities-related legal actions that are expensive and time consuming, and, if resolved adversely, could result in significant legal expenses and settlement or damage awards.

We and certain of our current and former officers and directors are currently and may in the future become subject to claims and litigation by our stockholders alleging violations of securities laws or other related claims which could harm our business, divert management attention, and require us to incur significant costs. For example, following our IPO in May 2019, four class action lawsuits were filed against us, as described in Item 3, Legal Proceedings. Each lawsuit is purportedly brought on behalf of a putative class of all persons who purchased shares of our common stock registered in the IPO, and seeks, among other things, compensatory damages and attorneys' fees and costs on behalf of the putative class.

We are generally required, to the extent permitted by law, to indemnify our current and former directors and officers who are named as defendants in these types of lawsuits. We also have certain contractual obligations to the underwriters regarding the pending shareholder lawsuits, and we could have such contractual indemnification obligations to underwriters in future lawsuits. While a certain amount of insurance coverage may be available for expenses or losses associated with these lawsuits, this coverage is subject to deductibles and may not otherwise prove to be sufficient. Based on information currently available, we are unable to reasonably estimate a possible loss or range of possible loss, if any, with regards to these lawsuits; therefore, no litigation reserve has been recorded in the accompanying consolidated financial statements. Although we plan to defend against these lawsuits vigorously, there can be no assurances that a favorable final outcome will be obtained. These lawsuits or future litigation may require significant attention from management and could result in significant legal expenses, settlement costs, or damage awards that could have a material impact on our financial position, results of operations, and cash flows.

The unfavorable outcome of any future litigation, arbitration or administrative action could have a significant adverse impact on our financial condition or results of operations.

From time to time we are a party to litigation, arbitration, or administrative actions. Our business may bring us into conflict with third parties with whom we have contractual or other business relationships, or with our competitors or others whose interests differ from ours. If we are unable to resolve those conflicts on terms that are satisfactory to all parties, we may become involved in litigation brought by or against us. Our financial results and reputation could be negatively impacted by unfavorable outcomes to any future litigation or administrative actions, including those related to the Foreign Corrupt Practices Act, the U.K. Bribery Act, or other anti-corruption laws. Monitoring, initiating and defending against legal actions is time-consuming for our management, likely to be expensive and may detract from our ability to fully focus our internal resources on our business activities. In addition, despite the availability of insurance, we may incur substantial legal fees and costs in connection with litigation. Lawsuits are subject to inherent uncertainties, and defense and disposition costs depend upon many unknown factors. Lawsuits could result in judgments against us that require us to pay damages, enjoin us from certain activities, or otherwise negatively affect our legal or contractual rights, which could have a significant adverse effect on our business. In addition, the inherent uncertainty of such litigation could lead to increased volatility in our stock price and a decrease in the value of our stockholders' investment in our common stock. There can be no assurances as to the favorable outcome of any litigation or administrative proceedings. In addition, it can be very costly to defend litigation or administrative proceedings and these costs could negatively impact our financial results.

The nature of our business may result in undesirable press coverage or other negative publicity, which would adversely impact our brand identity, future sales and results of operations.

Our solutions are used to assist law enforcement and other public safety personnel in situations involving public safety. The incidents in which our solutions are deployed may involve injury, loss of life and other negative outcomes, and such events are likely to receive negative publicity. Such negative publicity could have an adverse impact on new sales or renewals or expansions of coverage areas by existing customers, which would adversely impact our financial results and business.

Changes in the availability of federal funding to support local public safety or other public sector efforts could impact our opportunities with public sector end customers.

Many of our public sector end customers rely to some extent on funds from the U.S. federal government in order to purchase and pay for our solutions. Any reduction in federal funding for local public safety or other public sector efforts could result in our end customers having less access to funds required to continue, renew, expand or pay for our solutions. For example, changes in policies with respect to "sanctuary cities" may result in a reduction in federal funds available to our current or potential end customers. Additionally, the last U.S. government partial shutdown, and any future U.S. government shutdowns, could result in delayed public safety spending or re-allocation of funding into other areas of public safety. If federal funding is reduced or eliminated and our end customers cannot find alternative sources of funding to purchase our solutions, our business will be harmed.

Economic uncertainties or downturns, or political changes, could limit the availability of funds available to our customers and potential customers, which could significantly adversely impact our business.

Current or future economic uncertainties or downturns could adversely impact our business and operating results. Negative conditions in the general economy both in the United States and abroad, including conditions resulting from changes in gross domestic product growth, financial and credit market fluctuations, political deadlock, natural catastrophes, infectious disease outbreaks, and warfare and terrorist attacks in North America, Europe, the Asia Pacific region or elsewhere, could cause a decrease in funds available to our customers and potential customers and negatively affect the growth rate of our business.

These economic conditions may make it extremely difficult for our customers and us to forecast and plan future budgetary decisions or business activities accurately, and they could cause our customers to reevaluate their decisions to purchase our solutions, which could delay and lengthen our sales cycles or result in cancellations of planned purchases. Furthermore, during challenging economic times or as a result of political changes, our customers may tighten their budgets and face constraints in gaining timely access to sufficient funding or other credit, which could result in an impairment of their ability to make timely payments to us. In turn, we may be required to increase our allowance for doubtful accounts, which would adversely impact our financial results.

We cannot predict the timing, magnitude or duration of any economic slowdown, instability or recovery, generally or within any particular industry, or the impact of political changes. If the economic conditions of the general economy or industries in which we operate worsen from present levels, or if recent political changes result in less funding being available to purchase our solutions, our business, operating results and financial condition could be adversely impacted.

We face risks related to health epidemics and other outbreaks, which could significantly disrupt our operations

Our business and operating results could be adversely impacted by the effects of epidemics, including but not limited to the coronavirus that has been reported to have surfaced in Wuhan, China in December 2019 and has since spread to most other parts of the world, including the United States and Canada, our principal markets. We are closely monitoring the impact of COVID-19 global outbreak. While we believe our recent restructuring efforts will enable us to improve our supply chain and better address the global economic events related to the COVID-19 virus, there remains significant uncertainty related to the public health situation globally.

Our results of operations could be adversely affected to the extent that such coronavirus or any other epidemic generally harms the global economy. In addition, our customers and/or suppliers may be adversely impacted as a result of a health epidemic or other outbreak, which may materially and adversely affect our business, financial condition and results of operations. Further, our operation may experience disruptions, such as temporary closure of our offices and/or those of our customers or suppliers and suspension of services. which may materially and adversely affect our business, financial condition and results of operations.

We are subject to anti-corruption, anti-bribery, anti-money laundering, economic sanctions, export control, and similar laws. Non-compliance with such laws can subject us to criminal or civil liability and harm our business, revenues, financial condition and results of operations.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, and other anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly to generally prohibit companies and their employees and third-party intermediaries from authorizing, offering, or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. As we increase our international presence, we may engage with distributors and third-party intermediaries to market our solutions and to obtain necessary permits, licenses, and other regulatory approvals. In addition, we or our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. We can be held liable for the corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, partners and agents, even if we do not explicitly authorize such activities.

The United States has imposed economic sanctions that affect transactions with designated foreign countries, nationals and others. In particular, the United States prohibits U.S. persons from engaging with individuals and entities identified as "Specially Designated Nationals," such as terrorists and narcotics traffickers. These prohibitions are administered by the U.S. Department of the Treasury's Office of Foreign Assets Control, or OFAC. OFAC rules prohibit U.S. persons from engaging in, or facilitating a foreign person's engagement in, transactions with or relating to the prohibited individual, entity or country, and require the blocking of assets in which the individual, entity or country has an interest. Blocked assets (e.g., property or bank deposits) cannot be paid out, withdrawn, set off or transferred in any manner without a license from OFAC. Other countries in which we operate, including Canada and the United Kingdom, also maintain economic and financial sanctions regimes.

Some of our solutions, including software updates and third-party accessories, may be subject to U.S. export control laws, including the Export Administration Regulations; however, the vast majority of our products are non-U.S.-origin items, developed and manufactured outside of the United States, and therefore not subject to these laws. For third-party accessories, we rely on manufactures to supply the appropriate export control classification numbers that determine our obligations under these laws.

We cannot assure you that our employees and agents will not take actions in violation of our policies and applicable law, for which we may be ultimately held responsible. As we increase our international presence, our risks under these laws, rules, and regulations may increase. Further, any change in the applicability or enforcement of these laws, rules, and regulations could adversely impact our business operations and financial results.

Detecting, investigating and resolving actual or alleged violations can require a significant diversion of time, resources, and attention from senior management. In addition, noncompliance with anti-corruption, anti-bribery, anti-money laundering, or economic sanctions laws, rules, and regulations could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage, and other collateral consequences. If any subpoenas or investigations are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, revenues, financial condition, and results of operations would be significantly harmed. In addition, responding to any action will likely result in a significant diversion of management's attention and resources and significant defense costs and other professional fees. Enforcement actions and sanctions could further harm our business, financial condition and results of operations.

Foreign currency fluctuations may reduce our competitiveness and sales in foreign markets.

The relative change in currency values creates fluctuations in product pricing for international customers. These changes in foreign end-customer costs may result in lost orders and reduce the competitiveness of our products in certain foreign markets. These changes may also negatively impact the financial condition of some foreign customers and reduce or eliminate their future orders of our products. In addition, a significant portion of our research and development expenditure takes place in China and India. Fluctuations in the currency values of those countries could negatively impact our operating expenses.

We are subject to a wide range of product regulatory and safety, consumer, worker safety and environmental laws and regulations.

Our operations and the products we manufacture and/or sell are subject to a wide range of product regulatory and safety, consumer, worker safety and environmental laws and regulations. Compliance with such existing or future laws and regulations could subject us to future costs or liabilities, impact our production capabilities, constrict our ability to sell, expand or acquire facilities, restrict what solutions we can offer and generally impact our financial performance. Our products are designed for use in potentially explosive or hazardous environments. If our product design fails for any reason in such environments, we may be subject to product liabilities and future costs. In addition, some of these laws are environmental and relate to the use, disposal, remediation, emission, discharge of and exposure to hazardous substances. These laws often impose liability and can require parties to fund remedial studies or actions regardless of fault. Environmental laws have tended to become more stringent over time and any new obligations under these laws could have a negative impact on our operations or financial performance.

Laws focused on the energy efficiency of electronic products and accessories, recycling of both electronic products and packaging, reducing or eliminating certain hazardous substances in electronic products, and the transportation of batteries continue to expand significantly. Laws pertaining to accessibility features of electronic products, standardization of connectors and power supplies, the transportation of lithium-ion batteries, and other aspects are also proliferating. There are also demanding and rapidly changing laws around the globe related to issues such as product safety, radio interference, radio frequency radiation exposure, medical related functionality, and consumer and social mandates pertaining to use of wireless or electronic equipment. These laws, and changes to these laws, could have a substantial impact on whether we can offer certain products, solutions, and services, and on what capabilities and characteristics our products or services can or must include.

These laws and regulations impact our products and could negatively impact our ability to manufacture and sell products competitively. In addition, we anticipate that we will see increased demand to meet voluntary criteria related to reduction or elimination of certain constituents from products, increasing energy efficiency and providing additional accessibility.

Changes in laws and regulations concerning the use of telecommunication bandwidth could increase our costs and adversely impact our business.

Our business depends on our ability to sell devices that use telecommunication bandwidth allocated to licensed and unlicensed wireless services, and that use of that bandwidth is subject to laws and regulations that are subject to change over time. Changes in the permitted uses of telecommunication bandwidth, reallocation of such bandwidth to different uses, and new or increased regulation of the capabilities, manufacture, importation, and use of devices that depend on such bandwidth could increase our costs, require costly modifications to our products before they are sold, or limit our ability to sell those products in to our target markets. In addition, we are subject to regulatory requirements for certification and testing of our products before they can be marketed or sold. Those requirements may be onerous and expensive. Changes to those requirements could result in significant additional costs and could adversely impact our ability to bring new products to market in a timely fashion.

Failure of our suppliers, subcontractors, distributors, resellers, and representatives to use acceptable legal or ethical business practices, or to fail for any other reason, could negatively impact our business.

We do not control the labor and other business practices of our suppliers, subcontractors, distributors, resellers and third-party sales representatives, or TPSRs, and cannot provide assurance that they will operate in compliance with applicable rules, and regulations regarding working conditions, employment practices, environmental compliance, anti-corruption, and trademark a copyright and patent licensing. If one of our suppliers, subcontractors, distributors, resellers, or TPSRs violates labor or other laws or implements labor or other business practices that are regarded as unethical, the shipment of finished products to us could be interrupted, orders could be canceled, relationships could be terminated, and our reputation could be damaged. If one of our suppliers or subcontractors fails to procure the necessary license rights to trademarks, copyrights or patents, legal action could be taken against us that could impact the sale-ability of our products and expose us to financial obligations to a third party. Any of these events could have a negative impact on our sales and results of operations.

Moreover, any failure of our suppliers, subcontractors, distributors, resellers and TPSRs, for any reason, including bankruptcy or other business disruption, could disrupt our supply or distribution efforts and could have a negative impact on our sales and results of operations.

Natural or man-made disasters and other similar events may significantly disrupt our business, and negatively impact our operating results and financial condition.

Any of our facilities may be harmed or rendered inoperable by natural or man-made disasters, including earthquakes, tornadoes, hurricanes, wildfires, floods, nuclear disasters, acts of terrorism or other criminal activities, infectious disease outbreaks, and power outages, which may render it difficult or impossible for us to operate our business for some period of time. For example, our corporate headquarters is located in the San Francisco Bay Area, a region known for seismic activity. Our facilities would likely be costly to repair or replace, and any such efforts would likely require substantial time. Any disruptions in our operations could negatively impact our business and operating results and harm our reputation. In addition, we may not carry business insurance or may not carry sufficient business insurance to compensate for losses that may occur. Any such losses or damages could have a significant adverse impact on our business, operating results and financial condition. In addition, the facilities of significant vendors may be harmed or rendered inoperable by such natural or man-made disasters, which may cause disruptions, difficulties or significant adverse impact on our business.

We are subject to a wide range of privacy and data security laws, regulations and other legal obligations.

Personal privacy and information security are significant issues in the United States and the other jurisdictions in which we operate or make our products and applications available. The legislative and regulatory framework for privacy and security issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. Our handling of data is subject to a variety of laws and regulations, including regulation by various government agencies, including the U.S. Federal Trade Commission, or FTC, and various state, local and foreign agencies. We may collect personally identifiable information, or PII, and other data from our customers. We use this information to provide services to our customers and to support, expand and improve our business. We may also share customers' PII with third parties as allowed by applicable law and agreements and authorized by the customer or as described in our privacy policy.

The U.S. federal and various state and foreign governments have adopted or proposed limitations on the collection, distribution, transfer, use and storage of PII. In the United States, the FTC and many state attorneys general are applying federal and state consumer protection laws as imposing standards for the online collection, use and dissemination of data. Many foreign countries and governmental bodies, including Canada, the European Union and other relevant jurisdictions, have laws and regulations concerning the collection and use of PII obtained from their residents or by businesses operating within their jurisdiction. These laws and regulations often are more restrictive than those in the United States. Laws and regulations in these jurisdictions apply broadly to the collection, use, storage, disclosure and security of data that identifies or may be used to identify or locate an individual, such as names, email addresses and, in some jurisdictions, Internet Protocol, or IP, addresses. Within the European Union, legislators have adopted the General Data Protection Regulation, or GDPR, effective May 2018 which may impose additional obligations and risk upon our business, and which may increase substantially the penalties to which we could be subject in the event of any non-compliance. We may incur substantial expense in complying with the obligations imposed by the governments of the foreign jurisdictions in which we do business or seek to do business and we may be required to make significant changes in our business operations, all of which may adversely impact our revenues and our business overall.

Although we are working to comply with those federal, state, and foreign laws and regulations, industry standards, contractual obligations and other legal obligations that apply to us, those laws, regulations, standards and obligations are evolving and may be modified, interpreted and applied in an inconsistent manner from one jurisdiction to another, and may conflict with one another, other requirements or legal obligations, our practices or the features of our products or applications. At state level, lawmakers continue to pass new laws concerning privacy and data security. Particularly notable in this regard is the California Consumer Privacy Act, or CCPA, which became effective on January 1, 2020. The CCPA introduced significant new disclosure obligations and provides California consumers with significant new privacy rights. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulations, industry standards, contractual obligations or other legal obligations, or any actual or suspected security incident, whether or not resulting in unauthorized access to, or acquisition, release or transfer of PII or other data, may result in governmental enforcement actions and prosecutions, private litigation, fines and penalties or adverse publicity and could cause our customers to lose trust in us, which could have an adverse impact on our reputation and business. Any inability to adequately address privacy and security concerns, even if unfounded, or comply with applicable laws, regulations, policies, industry standards, contractual obligations, or other legal obligations could result in additional cost and liability to us, damage our reputation, inhibit sales and adversely impact our business.

We also expect that there will continue to be new proposed laws, regulations and industry standards concerning privacy, data protection and information security in the United States, the European Union and other jurisdictions, and we cannot yet determine the impact such future laws, regulations and standards may have on our business. New laws, amendments to or re-interpretations of existing laws and regulations, industry standards, contractual obligations and other obligations may require us to incur additional costs and restrict our business operations. Such laws and regulations may require companies to implement privacy and security policies, permit users to access, correct and delete personal information stored or maintained by such companies, inform individuals of security breaches that affect their personal information, and, in some cases, obtain individuals' consent to use PII for certain purposes. In addition, a foreign government could require that any PII collected in a country not be disseminated outside of that country, and we are not currently equipped to comply with such a requirement.

We are exposed to risks associated with strategic transactions.

We may consider strategic acquisitions of and combinations with companies with complementary technologies or intellectual property in the future. Acquisitions hold special challenges in terms of successful integration of technologies, products, services and employees. We may not realize the anticipated benefits of these transactions or the benefits of any other acquisitions we have completed or may complete in the future, and we may not be able to incorporate any acquired services, products or technologies with our existing operations, or integrate personnel from the acquired or combined businesses, in which case our business could be harmed.

Acquisitions and other strategic transactions involve numerous risks, including:

- problems integrating and divesting the operations, technologies, personnel, services or products over geographically disparate locations;
- unanticipated costs, taxes, litigation and other contingent liabilities;
- continued liability for discontinued businesses and pre-closing activities of divested businesses or certain post-closing liabilities which we may agree to assume as part of the transaction in which a particular business is divested;
- adverse impacts on existing business relationships with suppliers and customers;
- cannibalization of revenues as customers may seek multi-product discounts;
- risks associated with entering into markets in which we have no, or limited, prior experience;
- incurrence of significant restructuring charges if acquired products or technologies are unsuccessful;
- significant diversion of management's attention from our core business and diversion of key employees' time and resources;
- licensing, indemnity or other conflicts between existing businesses and acquired businesses;
- inability to retain key customers, distributors, suppliers, vendors and other business relations of the acquired business; and
- potential loss of our key employees or the key employees of an acquired organization or as a result of discontinued businesses.

Financing for future strategic transactions may not be available on favorable terms, or at all. If we identify an appropriate acquisition or combination candidate for any of our businesses, we may not be able to negotiate the terms of the transaction successfully, finance the transaction or integrate the applicable business, products, service offerings, technologies or employees. Future strategic transactions may not be well-received by the investment community, which may cause the value of our stock to fall. We cannot ensure that we will be able to identify or complete any acquisition, divestiture or discontinued business in the future. Further, the terms of our indebtedness constrain our ability to enter into and finance certain strategic transactions.

If we acquire businesses, new products, service offerings or technologies in the future, we may incur significant acquisition-related costs. In addition, we may be required to amortize significant amounts of finite-lived intangible assets and we may record significant amounts of goodwill or indefinite-lived intangible assets that would be subject to testing for impairment. We have in the past and may in the future be required to write off all or part of the intangible assets or goodwill associated with these investments that could harm our operating results. If we consummate one or more significant future acquisitions in which the consideration consists of stock or other securities, our existing stockholders' ownership could be significantly diluted. If we were to proceed with one or more significant future acquisitions in which the consideration included cash, we could be required to use a substantial portion of our cash and investments. Acquisitions could also cause operating margins to fall depending on the businesses acquired.

Our strategic investments may involve joint development, joint marketing, or entry into new business ventures, or new technology licensing. Any joint development efforts may not result in the successful introduction of any new products or services by us or a third party, and any joint marketing efforts may not result in increased demand for our products or services. Further, any current or future strategic acquisitions and investments by us may not allow us to enter and compete effectively in new markets or enhance our business in our existing markets and we may have to impair the carrying amount of our investments.

We could be adversely impacted by changes in accounting standards and subjective assumptions, estimates and judgments by management related to complex accounting matters.

Generally accepted accounting principles and related accounting pronouncements, implementation guidelines, and interpretations with regard to a wide range of matters that are relevant to our businesses, including, but not limited to, revenue recognition, asset impairment, inventories, customer rebates and other customer consideration, tax matters, and litigation and other contingent liabilities are highly complex and involve many subjective assumptions, estimates and judgments. Changes in these rules or their interpretation or changes in underlying assumptions, estimates or judgments could significantly change our reported or expected financial performance or financial condition. New accounting guidance may also require systems and other changes that could increase our operating costs and/or change our financial statements. For example, implementing future accounting guidance related to revenue, accounting for leases and other areas could require us to make significant changes to our accounting systems, impact existing debt agreements and result in adverse changes to our financial statements.

Risks Related to Our Intellectual Property

If we are unable to successfully protect our intellectual property, our competitive position may be harmed.

Our ability to compete is heavily affected by our ability to protect our intellectual property. We rely on a combination of patents, patent applications, copyright and trademark laws, trade secrets, confidentiality procedures and contractual provisions to protect our proprietary rights. We also enter, and plan to continue to enter, into confidentiality, invention assignment or license agreements with our employees, consultants and other parties with whom we contract, and control access to and distribution of our software, documentation and other proprietary information. The steps we take to protect our intellectual property may be inadequate, and it is possible that some or all of our confidentiality agreements will not be honored, and certain contractual provisions may not be enforceable. Existing trade secret, trademark and copyright laws offer only limited protection. Unauthorized parties may attempt to copy aspects of our products or obtain and use information which we regard as proprietary. Policing unauthorized use of our products is difficult, time consuming and costly, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. We cannot assure you that our means of protecting our proprietary rights will be adequate or that our competitors will not independently develop similar technology, the effect of either of which would harm our competitive position in the market. Furthermore, disputes can arise with our strategic partners, customers or others concerning the ownership of intellectual property.

Others may claim that we infringe on their intellectual property rights, which may result in costly and time-consuming litigation and could delay or otherwise impair the development and commercialization of our products.

In recent years, there has been a significant increase in litigation in the United States involving patents and other intellectual property rights, and because our products are comprised of complex technology, we are often involved in or impacted by assertions, including both requests to take licenses and litigation, regarding infringement of patent and other intellectual property rights of third parties. Third parties have asserted, and in the future may assert, intellectual property infringement claims against us and against our channel partners, end customers and suppliers. Many of these assertions are brought by non-practicing entities whose principal business model is to secure patent licensing revenues from product manufacturing companies. Claims for alleged infringement and any resulting lawsuit, if successful, could subject us to significant liability for damages and invalidation of our intellectual property rights. Defending any such claims, with or without merit, including pursuant to indemnity obligations, could be time consuming, expensive, cause product shipment delays or require us to enter into a royalty or licensing agreement, any of which could delay the development and commercialization of our products or reduce our margins. If we are unable to obtain a required license, our ability to sell or use certain products may be impaired. In addition, if we fail to obtain a license, or if the terms of the license are burdensome to us, our operations could be significantly harmed.

Our use of open source software could subject us to possible litigation or otherwise impair the development of our products.

A portion of our technologies incorporates open source software, including open source operating systems such as Android, and we expect to continue to incorporate open source software into our platform in the future. Few of the licenses applicable to open source software have been interpreted by courts, and their application to the open source software integrated into our proprietary technology platform may be uncertain. If we fail to comply with these licenses, then pursuant to the terms of these licenses, we may be subject to certain requirements, including requirements that we make available the source code for our software that incorporates the open source software. We cannot assure you that we have not incorporated open source software in our software in a manner that is inconsistent with the terms of the applicable licenses or our current policies and procedures. If an author or other third party that distributes such open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could incur significant legal expenses defending against such allegations. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition or require us to devote additional research and development resources to change our technology platform.

With respect to open source operating systems, if third parties cease continued development of such operating systems or restrict our access to such operating system, our business and financial results could be adversely impacted. We are dependent on third parties' continued development of operating systems, software application ecosystem infrastructures, and such third parties' approval of our implementations of their operating and system and associated applications. If such parties cease to continue development or support of such operating systems or restrict our access to such operating systems, we would be required to change our strategy for our devices. As a result, our financial results could be negatively impacted because a resulting shift away from the operating systems we currently use, and the associated applications ecosystem could be costly and difficult.

Our inability to obtain and maintain any third-party license required to develop new products and product enhancements could seriously harm our business, financial condition and results of operations.

From time to time, we are required to license technology from third parties to develop new products or product enhancements. For example, we have entered into worldwide intellectual property cross license agreements or other technology license agreements with a number of global technology companies in the mobile telecommunications market. Third-party licenses may not be available to us on commercially reasonable terms, or at all. If we fail to renew any intellectual property license agreements on commercially reasonable terms, or any such license agreements otherwise expire or terminate, we may not be able to use the patents and technologies of these third parties in our products, which are critical to our success. We cannot assure you that we will be able to effectively control the level of licensing and royalty fees paid to third parties, and significant increase in such fees could have a significant and adverse impact on our future profitability. Seeking alternative patents and technologies may be difficult and time-consuming, and we may not be successful in finding alternative technologies or incorporating them into our products. Our inability to obtain any third-party license necessary to develop new products or product enhancements could require us to obtain substitute technology of lower quality or performance standards, or at greater cost, which could seriously harm our business, financial condition and results of operations.

Risks Related to Ownership of Our Common Stock

The market price of our common stock is likely to be volatile and could fluctuate or decline, resulting in substantial loss of your investment.

The market price of our common stock could be subject to wide fluctuations in response to, among other things, the factors described in this "Risk factors" section or otherwise, and other factors beyond our control, such as fluctuations in the valuations of companies perceived by investors to be comparable to us.

Furthermore, the stock markets have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market fluctuations, as well as general economic, systemic, political and market conditions, such as recessions, interest rate changes or international currency fluctuations, may negatively affect the market price of our common stock.

The trading price of our common stock is likely to be volatile and subject to wide price fluctuations in response to various factors, including:

- market conditions in the broader stock market in general, or in our industry in particular;
- actual or anticipated fluctuations in our quarterly financial and operating results;
- introduction of new products and services by us or our competitors;

- sales, or anticipated sales, of large blocks of our stock;
- issuance of new or changed securities analysts' reports or recommendations;
- failure of industry or securities analysts to maintain coverage of our company, changes in financial estimates by any industry or securities analysts that follow our company, or our failure to meet such estimates;
- additions or departures of key personnel;
- regulatory or political developments;
- changes in accounting principles or methodologies;
- acquisitions by us or by our competitors;
- litigation and governmental investigations; and
- economic, political and geopolitical conditions or events.

These and other factors may cause the market price and demand for our common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have often instituted securities class action litigation against the company that issued the stock. If additional class action litigation was instituted against us, in addition to the four class action lawsuits to which we and certain of our former officers and current and former directors are currently subject, as described in Item 3. Legal Proceedings, such matters could further divert the time and attention of our management from our business and seriously harm our business, financial condition and results of operations.

We may fail to continue to meet the listing standards of Nasdaq, and as a result our common stock may be delisted, which could have a material adverse effect on the liquidity of our common stock.

The listing standards of the Nasdaq Global Market provide that a company, in order to qualify for continued listing, must maintain a minimum stock price of $1.00 and satisfy standards relative to minimum stockholders' equity, minimum market value of publicly held shares and various additional requirements. The closing bid price of our common stock has fluctuated below $1.00 per share in 2020. If the closing bid price of our common stock were to remain below $1.00 per share for 30 consecutive trading days, or we do not meet other listing requirements, we would fail to be in compliance with Nasdaq's listing standards. There can be no assurance that we will continue to meet the minimum bid price requirement, or any other requirement in the future. If we fail to meet the minimum bid price requirement, The Nasdaq Stock Market LLC may initiate the delisting process with a notification letter. If we were to receive such a notification, we would be afforded a grace period of 180 calendar days to regain compliance with the minimum bid price requirement. In order to regain compliance, shares of our common stock would need to maintain a minimum closing bid price of at least $1.00 per share for a minimum of 10 consecutive trading days. In addition, we may be unable to meet other applicable Nasdaq listing requirements, including maintaining minimum levels of stockholders' equity or market values of our common stock, in which case our common stock could be delisted. If our common stock were to be delisted, the liquidity of our common stock would be adversely affected, and the market price of our common stock could decrease. In addition, the delisting of our common stock could materially adversely affect our access to the capital markets and any limitation on liquidity or reduction in the price of our common stock could materially adversely affect our ability to raise capital.

Unless our common stock continues to be listed on a national securities exchange it will become subject to the so-called "penny stock" rules that impose restrictive sales practice requirements.

If we are unable to maintain the listing of our common stock on Nasdaq or another national securities exchange, our common stock could become subject to the so-called "penny stock" rules if the shares have a market value of less than $5.00 per share. The SEC has adopted regulations that define a penny stock to include any stock that has a market price of less than $5.00 per share, subject to certain exceptions, including an exception for stock traded on a national securities exchange. The SEC regulations impose restrictive sales practice requirements on broker-dealers who sell penny stocks to persons other than established customers and accredited investors. An accredited investor generally is a person whose individual annual income exceeded $200,000, or whose joint annual income with a spouse exceeded $300,000 during the past two years and who expects their annual income to exceed the applicable level during the current year, or a person with net worth in excess of $1.0 million, not including the value of the investor's principal residence and excluding mortgage debt secured by the investor's principal residence up to the estimated fair market value of the home, except that any mortgage debt incurred by the investor within 60 days prior to the date of the transaction shall not be excluded from the determination of the investor's net worth unless the mortgage debt was incurred to acquire the residence. For transactions covered by this rule, the broker-dealer must make a special suitability determination for the purchaser and must have received the purchaser's written consent to the transaction prior to sale. This means that if we are unable maintain the listing of our common stock on a national

securities exchange, the ability of stockholders to sell their common stock in the secondary market could be adversely affected. If a transaction involving a penny stock is not exempt from the SEC's rule, a broker-dealer must deliver a disclosure schedule relating to the penny stock market to each investor prior to a transaction. The broker-dealer also must disclose the commissions payable to both the broker-dealer and its registered representative, current quotations for the penny stock, and, if the broker-dealer is the sole market-maker, the broker-dealer must disclose this fact and the broker-dealer's presumed control over the market. Finally, monthly statements must be sent disclosing recent price information for the penny stock held in the customer's account and information on the limited market in penny stocks.

Our executive officers and directors, and their affiliated entities, along with our two other largest stockholders, own a significant percentage of our stock and are able to exert significant control over matters subject to stockholder approval.

Our executive officers and directors, together with entities affiliated with such individuals, along with our two other largest stockholders, beneficially own a majority of our common stock as of December 31, 2019. Accordingly, these stockholders may, as a practical matter, continue to be able to control the election of a majority of our directors and the determination of all corporate actions. This concentration of ownership could delay or prevent a change in control of the Company.

Sales of a substantial number of shares of our common stock in the public market, or the perception these sales might occur, could cause our stock price to decline.

The market price of our common stock could decrease significantly as a result of sales of a large number of shares of our common stock in the public market, and the perception that these sales could occur may also depress the market price of our common stock. Certain stockholders are entitled, under our investors' rights agreement, to require us to register shares owned by them for public sale in the United States. In addition, we filed a registration statement to register shares issued under our equity compensation plans. As a result, subject to the satisfaction of applicable vesting periods, the shares issued upon exercise of outstanding stock options or upon settlement of outstanding RSU awards will be available for immediate resale in the United States in the open market. A decline in the price of shares of our common stock might impede our ability to raise capital through the issuance of additional shares of our common stock or other equity securities.

Since we do not expect to pay any cash dividends for the foreseeable future, investors may be forced to sell their stock in order to obtain a return on their investment.

We do not anticipate declaring or paying in the foreseeable future any cash dividends on our capital stock. Instead, we plan to retain any earnings to finance our operations and growth plans discussed elsewhere in this report. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any return on their investment. As a result, investors seeking cash dividends should not purchase our common stock.

If securities or industry analysts do not publish research or reports about our business, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. If one or more of the analysts who cover us downgrade our stock or describe us or our business in a negative manner, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fails to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

If we fail to maintain proper and effective internal controls or are unable to remediate any deficiencies or weaknesses in our internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and the rules and regulations of Nasdaq. Section 302 of the Sarbanes-Oxley Act requires, among other things, that we report on the effectiveness of our disclosure controls and procedures in our quarterly and annual reports and, beginning with our annual report for the year ended December 31, 2020, Section 404 of the Sarbanes-Oxley Act requires that we perform system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting in our Form 10-K filing for that year. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. As a newly public company, we may experience difficulty in testing our internal controls in a timely manner. We have recently implemented reductions in force which may result in changes to our internal controls over financial reporting. A changing internal control environment increases the risk that our system of internal controls is not designed effectively or that internal control activities will not occur as designed. The occurrence of or failure to remediate a significant deficiency or material weakness may adversely affect our business and the market price of shares of our common stock.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in those internal controls. With respect to the year ended December 31, 2019, we identified two material weaknesses in our internal controls over financial reporting relatedto the design and implementation of our IT general controls including elevated (administrator) access to financial reporting systems and subsystems and accounting for fulfillment costs in connection with adoption of ASU 2014-09, Revenue from Contracts with Customers (Topic 606). Although we are making efforts to remediate these issues, these efforts may not be sufficient to avoid similar material weaknesses in the future.

If the material weaknesses in our internal controls are not fully remediated or if additional material weaknesses are identified, those material weaknesses could cause us to fail to meet our future reporting obligations, reduce the market's confidence in our financial statements, harm our stock price and subject us to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities. In addition, our common stock may not be able to remain listed on Nasdaq or any other securities exchange. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

We are an "emerging growth company" and we cannot be certain whether the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act, and we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies" including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

The requirements of being a public company may strain our resources and distract our management, which could make it difficult to manage our business, particularly after we are no longer an "emerging growth company."

We are required to comply with various regulatory and reporting requirements, including those required by the SEC. Complying with these reporting and other regulatory requirements will be time-consuming and will result in increased costs to us and could have a negative effect on our results of operations, financial condition or business.

As a public company, we are subject to the reporting requirements of the Exchange Act and requirements of the Sarbanes-Oxley Act. These requirements may place a strain on our systems and resources. The Exchange Act requires that we file annual, quarterly and current reports with respect to our business and financial condition. The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal controls over financial reporting. To maintain and improve the effectiveness of our disclosure controls and procedures, we will need to commit significant resources, hire additional staff and provide additional management oversight. We will be implementing additional procedures and processes for the purpose of addressing the standards and requirements applicable to public companies. Sustaining our growth also will require us to commit additional management, operational and financial resources to identify new professionals to join our firm and to maintain appropriate operational and financial systems to adequately support expansion. These activities may divert management's attention from other business concerns, which could have a significant adverse impact on our results of operations, financial condition or business.

As an "emerging growth company" as defined in the JOBS Act, we intend to take advantage of certain temporary exemptions from various reporting requirements including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. In addition, we have elected under the JOBS Act to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

When these exemptions cease to apply, we expect to incur additional expenses and devote increased management effort toward ensuring compliance with them. We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public company or the timing of such costs.

Some provisions of Delaware law and our certificate of incorporation and bylaws may delay or prevent a change incontrol and may discourage bids for our common stock at a premium over its market price.

Our certificate of incorporation and bylaws provide for, among other things:

- the authorization of undesignated preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval;
- advance notice requirements for stockholder proposals; and
- certain limitations on convening special stockholder meetings.

These anti-takeover defenses could discourage, delay or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing and cause us to take other corporate actions than you desire.

Additionally, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, or the DGCL. These provisions prohibit large stockholders, in particular a stockholder owning 15% or more of the outstanding voting stock, from consummating a merger or combination with a corporation unless this stockholder receives board approval for the transaction or 66 2/3% of the shares of voting stock not owned by the stockholder approve the merger or transaction. These provisions of Delaware law may have the effect of delaying, deferring or preventing a change in control, and may discourage bids for our common stock at a premium over its market price.

Our amended and restated certificate of incorporation designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, employees, agents or trustees to us or our stockholders, (iii) any action asserting a claim against us or any director or officer or other employee of ours arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our bylaws or (iv) any action asserting a claim against us or any director or officer or other employee of ours that is governed by the internal affairs doctrine, in each such case subject to such Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of, and consented to, the provisions of our amended and restated certificate of incorporation described in the preceding sentence. Under our amended and restated certificate of incorporation, this exclusive forum provision will not apply to claims which are vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery of the State of Delaware, or for which the Court of Chancery of the State of Delaware does not have subject matter jurisdiction. For instance, the provision would not apply to actions arising under federal securities laws, including suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, jurisdiction over which is exclusively vested by statute in the U.S. federal courts. This exclusive choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and such persons. If a court were to find the choice of forum provisions contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could have a significant impact on our business, financial condition and results of operations.

Our amended and restated certificate of incorporation designates the U.S. federal district courts as the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. We will seek to enforce these provisions.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall, to the fullest extent permitted by law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, there is uncertainty as to whether a court would enforce such provision. The Delaware Supreme Court recently determined that the exclusive forum provision of federal district courts of the United States of America for resolving any complaint asserting a cause of action arising under the Securities Act is permissible and enforceable under Delaware law, reversing an earlier decision from the Court of Chancery of the State of Delaware that had ruled that such provisions were not enforceable. In light of the Delaware Supreme Court determination that Delaware law permits exclusive federal forum provisions, we will seek to enforce the exclusive federal forum provision in our amended and restated certificate of incorporation including in pending litigation. Enforcement of this provision could result in additional costs. If we face relevant litigation and are unable to enforce this provision, we may incur additional costs associated with resolving such matters in other jurisdictions, which could harm our business, financial condition, or results of operations.

Our future quarterly results of operations may fluctuate significantly due to a wide range of factors, including reliance on our carrier distribution channels, significant competition and seasonality in our business, which makes our future results difficult to predict.

Our revenues and results of operations could vary significantly from quarter to quarter as a result of various factors, many of which are outside of our control, including:

- the expansion of our customer base;
- the renewal of sales arrangements with, and expansion of coverage areas by, existing channel partners;
- the size, timing and terms of our sales to both existing and new channel partners;
- the introduction of products or services that may compete with us for the limited funds available to our customers, and changes in the cost of such products or services;
- changes in our customers' and potential customers' budgets;
- our ability to control costs, including our operating expenses;
- our ability to hire, train and maintain our direct sales force;
- the timing of satisfying revenue recognition criteria in connection with initial deployment and renewals;
- fluctuations in our effective tax rate; and
- general economic and political conditions, both domestically and internationally.

Any one of these or other factors may result in fluctuations in our revenues and operating results, meaning that quarter-to-quarter comparisons of our revenues, results of operations and cash flows may not necessarily be indicative of our future performance.

In addition, we have experienced, and expect to continue to experience, first quarter seasonality due, among other things, to customer capital spending patterns and the timing of our planned expenses. Such seasonality could have a significant adverse impact on our results of operations, particularly for our quarters ending March 31.

Because of the fluctuations described above, our ability to forecast revenues is limited and we may not be able to accurately predict our future revenues or results of operations. In addition, we base our current and future expense levels on our operating plans and sales forecasts, and our operating expenses are expected to be relatively fixed in the short term. Accordingly, we may not be able to reduce our costs sufficiently to compensate for an unexpected shortfall in revenues, and even a small shortfall in revenues could disproportionately and adversely impact our financial results for that quarter. The variability and unpredictability of these and other factors could result in our failing to meet or exceed financial expectations for a given period.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We maintain our corporate headquarters in a leased facility in Austin, Texas. In addition, we lease a facility totaling 8,416 square feet in San Mateo, California. The lease expires in August 2025 and, in March 2020, we entered into a letter of intent to sublease the space beginning June 1, 2020. Subsequent to December 31, 2019, we are negotiating a sublease of a portion of the facility as part of the relocation of our corporate headquarters to Austin, Texas. Our final assembly and testing facility is located in Shenzhen, China. We also have a software development center in Bangalore, India and a research and development center in Beijing, China. We believe that our facilities are suitable to meet our current needs. We may expand our existing facilities or move them to other locations in the future, and we believe that suitable additional or alternative space will be available as needed to accommodate any such growth or moves. However, we expect to incur additional expenses in connection with any such new or expanded facilities.

Item 3. Legal Proceedings.

On September 20, 2019, a purported Sonim stockholder who allegedly purchased stock registered in Sonim's initial public offering ("IPO") filed a putative class action complaint in the Superior Court of the State of California, County of San Mateo, captioned Pearson v. Sonim Technologies, Inc., et al., Case No. 19CIV05564, on behalf of himself and others who purchased shares of Sonim registered in the IPO (the "Pearson Action"). On October 4 and 16, 2019, two additional purported class action complaints substantially similar to the Pearson Action were filed on behalf of different plaintiffs yet the same putative class of Sonim stockholders, in the same court as the Pearson Action. On October 7, 2019, a substantially similar putative class action lawsuit was filed in the United States District Court for the Northern District of California. All four complaints allege violations of the Securities Act of 1933 by Sonim and certain of its current and former officers and directors for, among other things, alleged false or misleading statements and omissions in the registration statement issued in connection with the IPO, relating primarily to an alleged failure to disclose software defects in Sonim's phones and alleged misstatements about performance characteristics of Sonim's phones. Sonim intends to defend these matters vigorously. An adverse outcome in any of these matters, however, could have a material adverse effect on our consolidated financial condition, results of operations, or cash flows for a particular period.

The Company is involved in various other legal proceedings arising in the normal course of business. The Company does not believe that the ultimate resolution of these other matters will have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

The results of any future litigation cannot be predicted with certainty and, regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management time and resources and other factors.

Item 4. Mine Safety Disclosures.

None.

PART II

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

Market Information

Our common stock is traded on the Nasdaq Stock Market under the symbol "SONM."

Holders of Record

As if March 23, 2020, there were 100 holders of record of our common stock based on information furnished by American Stock Transfer and Trust Company, LLC, the transfer agent for our securities.

Dividends

We have not declared or paid any cash dividends on our capital stock and do not intend to pay cash dividends in the foreseeable future. Any future determinations relating to our dividends and earning retention policies will be made at the discretion of our board of directors, who will review such policies from time to time in light of our earnings, cash flow generation, financial position, results of operations, the terms of our indebtedness and other contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

Recent Sales of Unregistered Securities

On October [15], 2019, we issued 666 shares of common stock to a [former] service provider in exchange for the provision of services pursuant to an agreement with such service provider. This transaction did not involve any underwriters, underwriting discounts or commissions, or any public offering. We believe that the transaction was exempt from registration under the Securities Act in reliance on in reliance on Section 4(a)(2) of the Securities Act as a transaction by an issuer not involving any public offering.

Use of Proceeds

On May 14, 2019, we closed our IPO in which we sold 3,571,429 shares of our common stock at a price of $11.00 per share. On May 22, 2019, we sold an additional 505,714 shares of common stock, and our selling stockholder sold 30,000 shares of common stock, at a price to the public of $11.00 per share pursuant to the exercise of the underwriters' option to purchase additional shares. The offer and sale of the shares in the IPO were registered under the Securities Act pursuant to a registration statement on Form S-1 (File No. 333-230887), which was declared effective by the SEC on May 9, 2019. We raised approximately $36.8 million in net proceeds after deducting underwriting discounts and commissions of $3.1 million and offering expenses paid by us of approximately $4.9 million.

We intend to use the net proceeds of our IPO for general corporate purposes, including working capital, expanded sales and marketing activities, increased research and development expenditures and funding our growth strategies. We also used a portion of the net proceeds from the offering to prepay $3.25 million of the outstanding principal amount under the subordinated secured convertible promissory note issued to B. Riley Principal Investments, LLC We used a portion of the net proceeds to satisfy tax withholding and remittance obligations related to the restricted stock award granted to our chief executive officer immediately following the closing of the IPO, or the RSA Settlement and pre-payment of B. Riley loan. The representatives of the underwriters for our IPO were Oppenheimer & Co. Inc. and Lake Street Capital Markets, LLC. With the exception of the RSA Settlement, no payments were made by us to directors, officers or persons owning ten percent or more of our common stock or to their associates, or to our affiliates, other than payments in the ordinary course of business to officers for salaries and to non-employee directors pursuant to our director compensation policy.

Item 6. Selected Financial Data.

Not Applicable.

Item 7. Management's Discussion and Analysis of Financial Condition, Results of Operations and Critical Accounting Policies.

The following commentary should be read in conjunction with the Consolidated Financial Statements and related notes thereto contained in Part IV of this Annual Report on Form 10-K. This discussion contains forward-looking statements based on current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under Item 1A.,"Risk Factors," included in Part I of this Annual Report on Form 10-K.

Company Overview

We are a leading U.S. provider of ultra-rugged mobile phones and accessories designed specifically for task workers physically engaged in their work environments, often in mission-critical roles. We currently sell our ruggedized mobile phones and accessories to three of the four largest wireless carriers in the United States—AT&T, Sprint and Verizon—as well as the three largest wireless carriers in Canada—Bell, Rogers and Telus Mobility. Our phones and accessories connect workers with voice, data, and workflow applications in two end-markets: industrial enterprise and public sector.

We generate revenues from sales of our (i) mobile phones, (ii) industrial-grade accessories and (iii) beginning in 2019, cloud-based software and application services. We sell our mobile phones and accessories primarily to wireless carriers in both the United States and Canada, who then resell our products in conjunction with network services to end customers.

Our first mobile device was introduced and began shipping in low volumes in 2006, primarily in Europe, and in increasing volumes in 2012 in Canada through Bell. In late 2012, we first shipped to U.S. wireless carriers, AT&T and Sprint, but between 2012 and 2017, we had (i) only one or two mobile phones in our product portfolio being sold at any one time, (ii) only a handful of wireless carriers selling such phones and (iii) such phones being sold generally as a non-stocked product. In 2018, three of the four largest U.S. wireless carriers and the three largest Canadian wireless carriers certified certain of our products and decided to stock our entire next generation product portfolio, for the first time in our history, resulting in our revenues increasing by more than 100% from the year ended December 31, 2017 to the year ended December 31, 2019. Revenues have decreased from $135.7 million for the year ended December 31, 2018 to $116.3 million for the year ended December 31, 2019. In 2019, we sold approximately 320,300 mobile phones to wireless carriers with approximately 29% and 28% sold to AT&T and Verizon, respectively, compared to a total of approximately 287,500 to wireless carriers in 2018. In addition to acceptance by these large wireless carriers of our product portfolio, expanded adoption of our mobile phones was driven by increases in awareness over the past several years following sales and marketing efforts directed at wireless carriers, new product launches and the increased focus by carriers, such as AT&T and Verizon on dedicated public safety networks, including FirstNet. We expect to continue unit sales volumes with these wireless carriers and anticipate launching additional products starting in 2020 following customization and certification processes. In March 2019 and April 2019, we launched commercial sales of our XP3 mobile phone on the Sprint network and AT&T network (including FirstNet), respectively, in each case following technical acceptance by the applicable wireless carrier.

Because our U.S. sales channel is primarily comprised of large wireless carriers, the number of customers that we sell to is limited. For the year ended December 31, 2019, approximately 87% of our revenues came from this channel and 66% came from our top four channel partner customers. For the year ended December 31, 2019, our smartphones accounted for approximately 50% of our revenues and our feature phones accounted for approximately 45% of our revenues. To help control and manage the quality, cost and reliability of our supply chain, we directly manage the procurement of all final assembly materials used in our products, which include LCDs, housings, camera modules and antennas. In addition, we complete the final assembly of our devices in our Shenzhen, China facility.

To continue to develop differentiated products to attract and retain customers, we have made significant investments in research and development. While the hardware design of our devices remains generally the same for all wireless carriers, each product must be configured specifically to conform to the requirements of each carrier's network, resulting in higher development expenses as the number of wireless carriers we sell through increases. In addition to the unique configurations, we must go through a technical acceptance process for each device at each wireless carrier before it can be stocked. The acceptance process for each device at each wireless carrier has historically cost up to $1.2 million. Since this task tends to be cyclical in nature, we employ third- party experts on a carrier-by-carrier and product-by-product basis to assist with this acceptance process.

Additional Sonim Subsidiary

On August 21, 2019, Sonim Technologies (Canada), Inc. was incorporated, a fully owned subsidiary of the Company, to aide with sales and post sales services. During the year ended December 31, 2019, immaterial fees were incurred in the set-up of the subsidiary.

Restructuring and Reduction in Force

In September 2019, the Board of Directors approved, and management commenced and completed, a restructuring plan to reduce operating costs and better align its workforce with the needs of its business. Under the plan, the Company reduced its workforce by 16 employees. Affected employees are eligible to receive severance and COBRA reimbursement payments. In connection with the restructuring, the Company accrued $0.7 million in aggregate restructuring charges related to one-time termination severance payments and other employee-related costs. $0.2 million of the cash payments related to the personnel-related restructuring charges were paid during the second half of 2019, with the remaining $0.5 million to be paid by the second quarter of 2020. The Company may also incur additional costs not currently contemplated due to events that may occur as a result of, or that are associated, with the workforce reductions.

Departure of Certain Officers; Appointment of Certain Officers; and Compensatory Arrangements of Certain Officers

On September 9, 2019, the Company and Mr. James Walker determined that Mr. Walker would cease serving as the Company's Chief Financial Officer. Mr. Walker was deemed eligible to receive certain severance benefits following his last day of employment pursuant to, and subject to the conditions set forth in, his existing agreements with the Company, all of which have been previously publicly disclosed, as well as extension of his post-separation option exercise period to January 17, 2020.

On September 10, 2019, the Company entered into an employment agreement with Robert Tirva, which was amended on December 18, 2019, which governs the terms of Mr. Tirva's employment as the Company's Chief Financial Officer. In this role, Mr. Tirva will serve as the Company's principal financial officer and principal accounting officer.

On October 29, 2019, the Company and Mr. Robert Plaschke agreed that Mr. Plaschke will cease serving as the Company's Chief Executive Officer. In connection with Mr. Plaschke's transition, the Company entered into a Transition and Separation Agreement with Mr. Plaschke pursuant to which he will serve as a Senior Advisor to the Board until April 30, 2020.

On October 29, 2019, the Company entered into an employment agreement with Thomas W. Wilkinson, which governs the terms of Mr. Wilkinson's employment as the Company's Chief Executive Officer and member of the board.

Initial Public Offering

On May 9, 2019, our registration statement on Form S-1 (File No. 333-230887) related to our initial public offering ("IPO") was declared effective by the SEC, and our common stock began trading on The Nasdaq Stock Market LLC ("Nasdaq") on May 10, 2019. Our IPO closed on May 14, 2019. As a result, our consolidated financial statements as of December 31, 2019 reflects the impact of our IPO.

Key Metrics

We review a variety of key financial metrics to help us evaluate growth trends, establish budgets, measure the effectiveness of our business strategies and assess operational efficiencies. In addition to our financial results determined in accordance with U.S. GAAP, we believe the following non-GAAP and operational measures are useful in evaluating our performance related metrics.

	Year Ended December 31,	
	2019	**2018**
	(in thousands)	
Smartphones	102	160
Feature Phones	257	151
Total Units Sold	359	311
Adjusted EBITDA	$ (12,355)	$ 6,931
Adjusted Covenant EBITDA	$ (11,812)	$ 7,480

Units Sold

Our smartphones include the XP6, XP7, and XP8 models. The number of smartphone units sold during the year ended December 31, 2019 compared to the year ended December 31, 2018 decreased by 36%, primarily due to a slower than expected sales of our XP8 product at several carriers.

Our feature phones include the XP3, XP5, and XP5s models. The number of feature phone units sold during the year ended December 31, 2019 compared to the year ended December 31, 2018 increased by 70%, primarily due to increased demand for the XP5s from several carriers and the introduction of our newest feature phone, the XP3.

Adjusted EBITDA and Adjusted Covenant EBITDA

We define Adjusted EBITDA as net income (loss) adjusted to exclude the impact of stock-based compensation expense, depreciation and amortization, interest expense, income taxes, change in fair value of warrant liability and one-time restructuring costs. We define Adjusted Covenant EBITDA as Adjusted EBITDA further adjusted to exclude the impact of exchange rate changes. Adjusted EBITDA and Adjusted Covenant EBITDA are useful financial metrics in assessing our operating performance from period to period by excluding certain items that we believe are not representative of our core business, such as certain material non-cash items and other adjustments such as stock-based compensation and changes in the fair value of the warrant liability. We use Adjusted Covenant EBITDA to periodically assess compliance with certain covenants and other provisions under our East West Bank Loan Agreement.

We believe that Adjusted EBITDA and Adjusted Covenant EBITDA, viewed in addition to, and not in lieu of, our reported GAAP results, provide useful information to investors regarding our performance and overall results of operations for various reasons, including:

- non-cash equity grants made to employees at a certain price do not necessarily reflect the performance of our business at such time, and as such, stock-based compensation expense is not a key measure of our operating performance; and
- costs associated with certain events, such as changes in fair value of warrant liability and restructuring costs, are not considered a key measure of our operating performance.

We use Adjusted EBITDA and Adjusted Covenant EBITDA:

- as a measure of operating performance;
- for planning purposes, including the preparation of budgets and forecasts;
- to allocate resources to enhance the financial performance of our business;
- to evaluate the effectiveness of our business strategies;
- to periodically assess compliance with certain covenants and other provisions under the EWB Loan Agreement;
- in communications with our board of directors concerning our financial performance; and
- as a consideration in determining compensation for certain key employees.

Adjusted EBITDA and Adjusted Covenant EBITDA have limitations as analytical tools, and should not be considered in isolation, or as a substitute for analysis of our results as reported under GAAP. Some of these limitations include:

- they do not reflect all cash expenditures, future requirements for capital expenditures or contractual commitments;
- they do not reflect changes in, or cash requirements for, working capital needs;
- they do not reflect interest expense on our debt or the cash requirements necessary to service interest or principal payments; and
- other companies in our industry may define and/or calculate these metrics differently than we do, limiting their usefulness as comparative measures.

Set forth below is a reconciliation from net income (loss) to Adjusted EBITDA and Adjusted Covenant EBITDA for the respective periods:

	2019	2018
	(in thousands)	
Net income (loss)	$ (25,834)	$ 1,277
Depreciation and amortization	3,525	1,850
Stock-based compensation	6,308	252
Interest expense	1,522	1,828
Change in fair value of warrant liability[1]	—	970
Income taxes	1,388	754
Restructuring costs	736	—
Adjusted EBITDA	(12,355)	6,931
Exchange rates	543	549
Adjusted Covenant EBITDA	$ (11,812)	$ 7,480

(1) Prior to the conversion of each share of our then outstanding preferred stock to one share of our common stock effected in November 2018. (including the conversion of preferred stock issuable upon exercise of warrants), the fair value of outstanding warrants to purchase preferred stock was subject to periodic remeasurement, and any change in fair value was recognized as a change in fair value of warrant liability.

Factors Affecting Our Results of Operations

We believe that the growth and future success of our business depend on many factors. While these factors present significant opportunities for our business, they also pose important challenges that we must successfully address in order to improve our results of operations.

Research and Development

We believe that our performance is significantly dependent on the investments we make in research and development and that we must continue to develop and introduce innovative new products on a two to three-year cycle. While the hardware design of our devices is generally the same for all wireless carriers, each device must be configured to conform to the requirements of each wireless carrier's network, resulting in higher development expenses as the number of wireless carriers we sell through increases. In addition to the design and configuration costs, each device must undergo a multi-month technical approval process at each carrier before it can be certified to be stocked at each carrier. The approval process for each device for each carrier has historically cost between $1-2 million. Prior to commencement of development of a product for certification, we generally do not receive any purchase orders or commitments. Following a carrier's review of product concepts, we may receive a product award letter from that carrier to move forward with the development and certification process, at which time we may begin receiving advance purchase orders or commitments. Since the timing of when we seek technical approval with our wireless carriers tends to be cyclical in nature, quarter-over-quarter expenditures may vary significantly depending on the number of approvals in process during the quarter. If we fail to innovate and enhance our product offerings, our brand, market position and revenues may be adversely affected. If our research and development efforts are not successful, we will not recover these investments that we make.

New Customer Acquisitions

We are focused on continuing to acquire new customers, both in North America and overseas, to support our long-term growth. Historically, we have been dependent on a small number of wireless carriers distributing our products. We have invested, and expect to continue to invest, in our sales and marketing efforts to drive new customer acquisition. In particular, a key part of our strategy is to further expand the use of our solutions over dedicated LTE networks in the public safety market. We will also continue to invest in and expand our international sales teams. As a result, we expect our sales and marketing costs to increase as we seek to acquire new customers. Sales and marketing investments will often occur in advance of any sales benefits from these activities, and it may be difficult for us to determine if we are efficiently allocating our sales and marketing resources.

Seasonality and New Product Introduction

We have historically experienced lower net revenue in our first quarter compared to other quarters in our fiscal year due to seasonal demand associated with the introduction of new products to our lead customers. New product introductions can significantly impact net revenue, gross profit and operating expenses. The timing of product introductions can also impact our net revenue as our wireless carrier customers prepare for a new product launch, and channel inventory of an older product often declines as the launch of a newer product approaches. Net revenue can also be affected when consumers and distributors anticipate a new product introduction. However, neither historical seasonal patterns nor historical patterns of product or service introductions should be considered reliable indicators of our future pattern of product or service introductions, future net sales or financial performance.

Components of Our Results of Operations

The following describes the line items set forth in our consolidated statements of operations.

Revenues

Revenues are recognized on the date that the customer receives the products sold. Any discounts, marketing development funds, product returns or other revenue reductions are treated as offsets to revenues, which is presented on a net basis. We have also historically entered into customer agreements with channel partners that include a combination of products and non-recurring engineering services, or NRE services. When a customer agreement includes NRE services which involve significant design modification and customization of the product software that is essential to the functionality of the hardware, revenues are also recognized according to the contractual milestones in the agreements under ASC 605 or when or as control transfers to the customer under ASC 606. If a milestone is deemed non-substantive, we defer, if applicable, and recognize such non-substantive milestones over the estimated period of performance applicable to each agreement on a straight-line basis, as appropriate. All of our revenues are derived from a single segment.

The Company recognizes revenue primarily from the sale of products, including our mobile phones and accessories, and the majority of the Company's contracts include only one performance obligation, namely the delivery of product. A performance obligation is a commitment in a contract to transfer a distinct good or service to the customer and is defined as the unit of account for revenue recognition under ASC 606. The Company also recognizes revenue from other contracts that may include a combination of products and NRE services or from the provision of solely NRE services. Where there is a combination of products and NRE services, the Company accounts for the commitments as individual performance obligations if they are both capable of being distinct and distinct within the context of the contract.

Our customer agreements with channel partners set forth the terms pursuant to which our channel partners purchase our products for distribution on a purchase order basis. While these arrangements are typically long term, they generally do not contain any firm purchase volume commitments. As a result, our channel partners are not contractually obligated to purchase from us any minimum number of products. However, while our channel partners provide us with demand forecasts under these sales arrangements, we are generally required to satisfy any and all purchase orders delivered to us within specified delivery windows, with limited exceptions (such as orders significantly in excess of forecasts). Our sales arrangements also generally include technical performance standards for our mobile phones and accessories sold, which vary by channel partner. If a technical issue with any of our covered products exceeds certain preset failure thresholds for the relevant performance standard or standards, the channel partner typically has the right to cease selling the product, cancel open purchase orders and levy certain monetary penalties. In addition, our channel partners retain sole discretion in which of their stocked products to offer their customers.

We also offer our channel partners channel marketing and other limited promotional incentives, such as sales volume incentives, in exchange for retail price reductions. Under certain of our customer agreements, we may also offer NRE services in the form of third-party design services relating to the design of materials and software licenses used in the manufacturing of our products.

Cost of Revenues and Gross Profit/Gross Margin

Cost of revenues primarily consists of the following:

- Direct costs consist of raw materials, supplies and sub-assemblies used in the production of our products. We purchase all materials and sub-assemblies from our supply chain directly and do all final assembly and testing at our facility in Shenzhen, China. Direct materials represent the majority of our direct manufacturing expenses.
- Direct labor costs expended in the final assembly and testing of our products. Labor is charged toeach product based on the actual time required to build that specific product.
- Other direct costs related to the shipment of the final product to the customer, including such items as shipping costs, royalties on third-party technology included in the product, warranty cost accruals and packaging and handling costs.

- Indirect manufacturing expense associated with producing our products, such as rent on production facilities, depreciation on production equipment and tooling, engineering and support salaries and other indirect manufacturing costs.
- Amortization of NRE expenses is now part of cost of goods as a result of the adoption of ACS 606 in 2019, using the modified retrospective method.

Gross profit is defined as revenues less cost of revenues. Gross margin is gross profit expressed as a percentage of revenues. We expect that our gross margin may fluctuate from period to period, primarily as a result of changes in average selling price, revenue mix among our devices, and manufacturing costs. In addition, we may reserve against the value at which we carry our inventory based upon the device's lifecycle and conditions in the markets in which we sell.

Operating Expenses

Our operating expenses consist of the following categories:

Research and development. Research and development expenses consist primarily of personnel-related expenses, including salaries, bonuses, stock-based compensation and employee benefits. Research and development expenses also include the costs of developing new products and supporting existing products. Research and development activities include the design of new products, refinement of existing products and design of test methodologies to ensure compliance with required specifications, as well as all costs associated with achieving technical acceptance with each product at each carrier. All research and development costs are expensed as incurred. We expect our research and development expenses to increase in absolute dollars as we continue to expand our available solutions.

Sales and marketing. Sales expenses consist primarily of personnel-related expenses, including salaries, bonuses, stock-based compensation, commissions to independent sales representatives, travel costs and employee benefits, as well as field support and customer training costs. Marketing expenses include all social media and collateral print media, and brand development expenses. We expect our sales and marketing costs to increase in absolute dollars as we seek to expand our product lines and customer base and increase brand awareness with end customers.

General and administrative. General and administrative expenses consist primarily of personnel-related expenses, including salaries, bonuses, stock-based compensation, travel costs and employee benefits, as well as professional and consulting fees, legal fees, trade shows, depreciation expense and occupancy costs. We expect our general and administrative expenses to increase in absolute dollars as we expand our organization to better support our customers and our anticipated growth. Additionally, these expenses will increase as we establish the necessary infrastructure to operate effectively as a public company.

Income taxes. As part of the process of preparing our consolidated financial statements we are required to estimate our taxes in each of the jurisdictions in which we operate. We account for income taxes in accordance with the asset and liability method. Under this method, deferred tax assets and liabilities are recognized based on temporary differences between the financial reporting and income tax bases of assets and liabilities and the tax effects of operating loss and credit carryforwards using the enacted tax rates expected to apply in the periods of expected settlement. In addition, this method requires a valuation allowance against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Provision for Income Taxes (in thousands, except percentages)	**2019**	**2018**	**$ Change**	**% Change**
Provision for Income Taxes (in thousands, except percentages)				
Provision for Income Taxes	$ 1,388	$ 754	$ 634	84.09%

We recognized an expense for income taxes of $1.4 million during 2019 as compared to an expense of $0.8 million during 2018. The increase in tax expense in 2019 was primarily due to the Company's increase in earnings in the foreign subsidiaries and uncertain tax position accrual.

Results of Operations

Years Ended December 31, 2019 and 2018:

See Note 2 – Adoption of ASC 606 was made using the modified retrospective and is not fully comparative in the table below.

The following tables present key components of our results of operations for the respective periods (In thousands):

	Year Ended December 31,		2019 vs 2018	
	2019	2018	Increase (Decrease)	%
	(in thousands)			
Net revenues	$ 116,251	$ 135,665	$ (19,414)	-14.3%
Cost of revenues	81,742	87,576	(5,834)	-6.7%
Gross profit	34,509	48,089	(13,580)	-28.2%
Operating expenses:				
Research and development	26,064	23,247	2,817	12.1%
Sales and marketing	13,908	12,228	1,680	13.7%
General and administrative	16,182	7,220	8,962	124.1%
Restructuring costs	736	—	736	100.0%
Total operating expense	56,890	42,695	14,195	33.2%
Income (loss) from operations	(22,381)	5,394	(27,775)	-514.9%
Interest expense	(1,522)	(1,828)	306	-16.7%
Change in fair value of warrant liability	—	(970)	970	-100.0%
Other expense, net	(543)	(565)	22	-3.9%
Income (loss) before income taxes	(24,446)	2,031	(26,477)	-1303.6%
Income tax expense	(1,388)	(754)	(634)	84.1%
Net income (loss)	$ (25,834)	$ 1,277	$ (27,111)	-2123.0%

Net revenues. Net revenues for the year ended December 31, 2019 decreased by $19.4 million, or 14.3%, to $116.3 million compared to $135.7 million for the year ended December 31, 2018. The decrease in net revenues was primarily attributable to a lower overall average selling price as a result of the change in product mix in 2019 compared to 2018 along with a significant decrease in professional service fees from $5.0 million in 2018 to $0.4 million in 2019.

Cost of revenues. Total cost of revenues for the year ended December 31, 2019 decreased $5.8 million, or 6.7%, to $81.7 million, or 70.3% of revenues, compared to $87.6 million, or 64.6% of revenues for the year ended December 31, 2018. This decrease was primarily attributable to related decrease in net revenues.

Gross profit and margin. Gross profit for the year ended December 31, 2019 decreased $13.6 million, or 28.2%, to $34.5 million, or 29.7% of revenues, from $48.1 million, or 35.4% of revenues for the year ended December 31, 2018. This decrease was primarily attributable to lower revenues related to a lower average sales price and a one-time reserve adjustment relating to the aging of materials and finished goods, losses resulting from minimum purchase commitment of $3.1 million and the amortization of NRE expenses of $1.5 million as a result of the adoption of ACS 606.

Research and development. Research and development expenses for the year ended December 31, 2019 increased by $2.8 million or 12.1%, to $26.1 million compared to $23.3 million for the year ended December 31, 2018. These expenses increased primarily due to the $2.9 million increase in employee headcount related expenses, prior to restructuring, a $1.2 million increase in costs associated with the XP3 product launch, a $0.8 million increase in consulting, a $0.3 million increase in travel expense and a $0.2 million increase for IDC office rent, partially offset by $2.7 million for the ACS 606 adjustment of capitalized fulfillment costs now flowing through cost of revenues.

Sales and marketing. Sales and marketing expenses for the year ended December 31, 2019 increased by $1.7 million, or 13.7% to $13.9 million compared to $12.2 million for the year ended December 31, 2018. These increases were primarily attributable to a $0.7 million increase in employee headcount, prior to restructuring, a $0.7 million increase related to the expansion of our customer support department, and $0.3 million of related stock compensation expense.

General and administrative. General and administrative expenses for the year ended December 31, 2019 increased by $9.0 million, or 124.1% to $16.2 million compared to $7.2 million for the year ended December 31, 2018. These expenses increased primarily due to a $5.1 million increase of stock compensation in connection with the IPO for the Chief Executive Officer and Chief Financial Officer, a $1.1 million increase of directors and officers insurance, a $0.9 million increase in legal fees, a $0.8 million increase of employee compensation and hiring of new consultants, $0.7 million of increased accounting fees, and a $0.5 million increase for office rent.

Restructuring costs. In September 2019, the Board of Directors approved, and management commenced and completed, a restructuring planto reduce operating costs and better align its workforce with the needs of its business. Under the plan, we reduced our workforce by 16 employees. Affected employees are eligible to receive severance and COBRA reimbursement payments. During the year ended December 31, 2019, we recorded a one-time charge related to restructuring costs totaling $0.7 million.

Interest expense/Other expense, net Interest expense/other expense decreased by $0.3 million, or 20.6%, to $2.1 million, for the year ended December 31, 2019, from $2.4 million for the year ended December 31, 2018. The decrease is a result of lower financing expenses.

Income tax expense. Income tax expense increased by $0.6 million, or 84%, to $1.4 million, for the year ended December 31, 2019, from $0.8 million, for the year ended December 31, 2018.

Adjusted EBITDA. Adjusted EBITDA was a loss of $12.4 million, for the year ended December 31, 2019 compared to net income of $6.9 million, for the year ended December 31, 2018.

Net income (loss). The net loss for December 31, 2019 was $25.8 million compared to net income of $1.3 million for December 31, 2018. The increase in net loss is a result of a decrease in revenues of $19 million and increased costs associated with the IPO of $5.2 million, restructuring costs of $0.7 million and overall increase in headcount and office administrative expenses.

Liquidity and Capital Resources

Historically, we have funded operations from a combination of private equity financings, convertible loans from existing investors and borrowings under loan agreements. As of December 31, 2019, and 2018, we had an aggregate of $10.1 million and $13.1 million, respectively, of principal and deferred accrued interest outstanding under the B. Riley Convertible Note.

Under the B. Riley Convertible Note issued by the Company pursuant to the Subordinated Term Loan and Security agreement (the "Riley Loan Agreement"), we have borrowed an aggregate principal amount of $12.0 million on a subordinated secured basis. Borrowings bear interest at 10% per year; interest amounts accrued and compounded into principal outstanding until October 2018, following which we are required to pay periodic interest in cash. The B. Riley Convertible Note matures on September 1, 2022. Borrowings under the B. Riley Convertible Note are secured by a subordinated lien on substantially all of our assets, subject to permitted liens. The principal amount of indebtedness under the B. Riley Convertible Note is convertible into shares of our common stock at $8.87 per share. Between the first and second anniversary of the original issue date of the note, between the second and the third anniversary of the original issue date of the note, following the third anniversary of the original issue date of the note and following the fourth anniversary of the original issue date of the note, B. Riley Principal Investments, LLC may elect to convert 75.0%, 50.0%, 25.0% and 12.5%,respectively, of the then-outstanding total principal amount and accrued interest outstanding under the note at the conversion price per share of $8.87. We have the right to prepay amounts under the B. Riley Convertible Note at any time with a 2.0% prepayment fee if paid off before October 2019, a 1.0% prepayment fee if paid off between October 2019 and October 2020 and no prepayment fee thereafter. The prepayment fees are waived if the outstanding principal balance does not fall below $10.0 million following prepayment. Following prepayment, the outstanding principal balance fell below the $10.0 million threshold and we paid a minimal prepayment fee. We have classified the debt as a current liability from a long-term liability based on the occurrence of a material adverse change in our business, however B. Riley Principal Investments LLC has not commenced enforcement of its rights thereunder. Upon the occurrence and during the continuance of an event of default under the Riley Loan Agreement, B. Riley Principal Investments has the option, among other things, to accelerate the debt and foreclose upon the assets pledged as collateral, any of which could severely affect our liquidity and significantly harm our business. In addition, we are unable to borrow under the EWB facility during the continuance of an event of default thereunder or under the Riley Loan Agreement, which could severely affect our liquidity and significantly harm our business.

We maintain a credit line with East West Bank ("EWB") pursuant to the EWB Loan Agreement. In the future, we may borrow up to $8.0 million under the line of credit available under the EWB Loan Agreement; provided that we are not then in default and we maintain amounts on deposit with EWB equal to any amounts borrowed under the EWB Loan Agreement. As of December 31, 2019, no amounts were outstanding under the EWB Loan Agreement. As of December 31, 2019, we were in default under the EWB Loan Agreement for a number of reasons, including the occurrence of a material adverse change and failure to provide notice of certain events. Borrowings under the EWB Loan Agreement bear interest at 1.0% plus the prime lending rate. Borrowings under the EWB Loan Agreement are secured by a senior lien on substantially all of our assets, including inventory and receivables, subject to permitted liens. In the event of a default under the EWB Loan Agreement, entities affiliated with B. Riley Financial and Investec Investments (UK) Limited, two of our stockholders, have the right to purchase the indebtedness under the EWB Loan Agreement at par and to exercise remedies for the default, in their discretion, as the holders of the indebtedness.

The EWB Loan Agreement contains certain negative and affirmative covenants as well as financial covenants, including covenants that restrict our ability to, among other things, incur or prepay indebtedness on subordinated debt, dispose of assets, engage in mergers and consolidations, make acquisitions or other investments, exceed annual capital expenditure limits, as defined, and make changes in the nature of the business. Objective events of default, therein, include, without limitation, nonpayment of principal, interest or other obligations, violation of the covenants, insolvency, and court-ordered judgments. Audited financial statements are required to be submitted to the lenders no later than 120 days after year end. In particular, we are required to maintain a minimum availability under the line of credit under the EWB Loan Agreement of $750,000 and maintain a fixed charge coverage ratio, defined as the sum of Adjusted Covenant EBITDA plus capital expenditures minus taxes and dividends over fixed charges, of at least 1.05 to 1.00 as of the

last of each month. In 2018, the financial covenants were amended to temporarily suspend the obligation to comply with the minimum fixed charge coverage ratio through September 30, 2018, to increase the minimum fixed charge coverage ratio as of December 31, 2019.

In 2018, the financial covenants were amended to permanently remove the requirement to maintain positive Adjusted Covenant EBITDA. As a result, as of the period ended March 31, 2018, we were no longer subject to this Adjusted Covenant EBITDA financial covenant. In October 2019, the financial covenants were amended to suspend the obligation to comply with the minimum fixed charge coverage ratio through the maturity date, which was amended to February 28, 2020, a cash block was placed on interest payments under our subordinated debt under the B. Riley Convertible Note and the establishment of a blocked account was mandated, following which we may request revolving advances up to the amount on deposit in such blocked account in EWB's discretion. In February 2020, the cash block on interest payments under the B. Riley Convertible Note was removed and the maturity date was amended to April 30, 2020.

As of December 31, 2019, and 2018, no amounts were outstanding under the EWB Loan Agreement. As of both December 31, 2019 and 2018, the Company had remaining borrowing capacity of up to $8.0 million against the line of credit, provided that such borrowings are conditioned upon us not being in default and are otherwise subject to the terms and conditions of the EWB Loan Agreement. As of 2019, we were not in compliance with one of the financial covenants, specifically the fixed charge coverage ratio, however, EWB waived such noncompliance in October 2019 by amending the EWB Loan Agreement through February 2020. EWB subsequently extended waiver to May 2020.

Cash and cash equivalents as of December 31, 2019 was $11.3 million, or $1.7 million lower than net cash of $13.0 million at December 31, 2018. The decrease was driven primarily by the use of cash in operating activities.

Cash Flows

The following table summarizes our sources and uses of cash for the periods presented:

	2019	2018
Net cash provided by (used in) operating activities	$ (33,523)	$ 3,861
Net cash used in investing activities	(1,356)	(2,545)
Net cash provided by financing activities	33,128	10,152

Cash flows from operating activities

For the year ended December 31, 2019, cash used in operating activities was $33.5 million, primarily attributable to a net loss of $25.8 million and a net cash outflow of $20.9 million from changes in our net operating assets and liabilities, partially offset by non-cash charges of $13.5 million, and non-cash revenue of $0.3 million under our trade-in guarantee program. Non-cash charges primarily consisted of $6.3 million in stock-based compensation, $3.1 million in inventory write-downs, and $3.5 million in depreciation and amortization. The net cash outflow in our net operating assets and liabilities was primarily due to a $20.1 million decrease in accounts payable, a $3.7 million decrease in prepaid expenses, a decrease in accounts receivable of $8.8 million, partially offset by a $3.6 million decrease in deferred revenue, an increase in other assets of $3.9 million, and an increase in income tax payable of $1.2 million.

For the year ended December 31, 2018, cash provided by operating activities was $3.9 million, primarily attributable to net income of $1.3 million and non-cash charges of $4.2 million, partially offset by a net cash outflow of $1.1 million from changes in our net operating assets and liabilities, and non-cash revenue of $0.5 million under our trade-in guarantee program. Non-cash charges primarily consisted of $1.8 million in depreciation and amortization, $1.0 million for the change in fair value of warrant liability, $1.0 million in interest expense, and $0.3 million in stock-based compensation. The net cash outflow in our net operating assets and liabilities was primarily due to an $8.1 million increase in accounts receivable, a $12.8 million increase in inventory, and a $4.1 million increase in prepaid expenses and other current assets, partially offset by a $16.0 million increase in accounts payable, a $7.4 million increase in accrued expenses, and a $0.4 million increase in income tax payable.

Cash flows from investing activities

For the year ended December 31, 2019, cash used in investing activities was $1.4 million, primarily attributable to purchases of property and equipment of $1.0 million and tooling development and purchases of software licenses of $0.4 million.

For the year ended December 31, 2018, cash used in investing activities was $2.5 million, attributable to tooling development and purchases of software licenses of $1.7 million and purchases of property and equipment of $0.8 million.

Cash flows from financing activities

For the year ended December 31, 2019, cashprovided by financing activities was $33.1 million, primarily attributable to proceeds from issuance of common stock upon IPO, net of costs, of $36.8 million, proceeds from issuance of common stock, net of costs of $1.6 million, proceeds from exercise of warrants, stock options and ESPP of $03 million, partially offset by the repayment of long-term debt of $3.7 million and taxes paid on net issuance of restricted stock award of $1.9 million

For the year ended December 31, 2018, cash provided by financing activities was $10.2 million, attributable primarily to net proceeds from additional net borrowings under the B. Riley Convertible Note of $5.0 million, and net proceeds from a private equity financing of shares of our common stock for an aggregate of $8.3 million in November and December 2018, partially offset by the net repayment on our lines of credit of $2.9 million. In addition, during 2018, the borrowing capacity under our line of credit with EWB was increased from $6.0 million to $8.0 million.

Our consolidated financial statements account for the continuation of our business as a going concern. We are subject to the risks and uncertainties associated with the development and release of new products. Our principal sources of liquidity as of December 31, 2019 consist of existing cash and cash equivalents totaling $11.3 million, which includes the impact of approximately $36.8 million in proceeds from our initial public offering of common stock that closed in May 2019. During the year ended December 31, 2019, we used approximately $33.5 million of cash for operating activities. Due to these conditions, along with reductions in our current revenue run rate, substantial doubt exists as to our ability to continue as a going concern for one year from the date our financial statements are available. Our audited consolidated financial statements have been prepared assuming we will continue as a going concern and do not include any adjustments that might be necessary should we be unable to continue as a going concern.

After evaluation of the aforementioned conditions, we believe our current resources, along with expected proceeds from forecasted billings, will provide sufficient funding for planned operations into the third quarter of 2020. Our new management team is in the process of outlining a revised strategy for the Company and its forward-looking operations to address the ongoing business in light of our liquidity concerns. If we cannot grow our revenue run-rate or enhance our operating model, we might be forced to make additional reductions in our operating expenses, which could adversely affect our ability to implement our business plan and ultimately our viability as a Company. If necessary, we will seek to raise additional capital from the sale of equity securities or the incurrence of indebtedness to allow us to continue operations. There can be no assurance that additional financing will be available to us on acceptable terms, or at all. Additionally, if we issue additional equity securities to raise funds, whether to existing investors or others, the ownership percentage of our existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Additionally, we may be limited as to the amount of funds we can raise pursuant to SEC rules and the continued listing requirements of Nasdaq.

Off-Balance Sheet Arrangements

As of December 31, 2019, and 2018, we had not entered into any off-balance sheet arrangements and did not have any holdings in variable interest entities.

Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions for the reported amounts of assets, liabilities, revenues, expenses and related disclosures. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions and any such differences may be material. The worldwide spread of the COVID-19 virus is expected to result in a global slowdown of economic activity which is likely to decrease demand for a broad variety of goods and services, including from our customers, while also disrupting sales channels and marketing activities for an unknown period of time until the disease is contained. We expect this to have a negative impact on our sales and our results of operations, the size and duration of which we are currently unable to predict. In preparing our consolidated financial statements in accordance with GAAP, we are required to make estimates, assumptions and judgments that affect the amounts reported in our financial statements and the accompanying disclosures. Estimates and assumptions about future events and their effects cannot be determined with certainty and therefore require the exercise of judgment. As of the date of issuance of these financial statements, we are not aware of any specific event or circumstance that would require us to update our estimates, judgments or revise the carrying value of our assets or liabilities. These estimates may change, as new events occur and additional information is obtained, and are recognized in the consolidated financial statements as soon as they become known. Actual results could differ from those estimates and any such differences may be material to our financial statements

While our significant accounting policies are more fully described in the Note 1 to our consolidated financial statements appearing elsewhere in this prospectus, we believe the following discussion addresses our most critical accounting policies, which are those that

are most important to our financial condition and results of operations and require our most difficult,subjective and complex judgments.

Revenue Recognition

The Company adopted the requirements of Accounting Standards Codification ("ASC") 2014-09, Revenue from Contracts with Customers (Topic 606), effective January 1, 2019, using the modified retrospective method. Under the modified retrospective method, this guidance is applied to those contracts which were not completed as of January 1, 2019 and the prior period comparable financial information continues to be presented under the guidance of ASC 605, Revenue Recognition. Refer to New Accounting Pronouncements, Pronouncements adopted in 2019, for a discussion of the effect of the adoption of Topic 606.

Under Topic 606, revenue is recognized when control of promised goods or services is transferred to a customer in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To determine revenue recognition for its arrangements, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. See Note 2, Revenue Recognition, for additional information.

Revenues from the sale of our mobile phones and accessories is recognized when all of the following conditions per Accounting Standards Codification, or ASC, Topic 605, *Revenue Recognition*, or ASC 605, are met: (i) there is persuasive evidence of an arrangement; (ii) the product has been delivered to the customer; (iii) the collection of the fees is reasonably assured; and (iv) the amount of fees to be paid by the customer is fixed or determinable. Terms of product sales are generally FOB destination. Revenue recognition also incorporates allowances for discounts, price protection, returns and customer incentives that can be reasonably estimated.

The Company recognizes revenue primarily from the sale of products, including our mobile phones and accessories. The Company also recognizes revenue from other contractual arrangements that may include a combination of products and Non-Recurring Engineering ("NRE") services or from the provision of solely NRE services.

Revenue recognition incorporates discounts, price protection and customer incentives. In addition to cooperative marketing and other incentive programs, the Company has arrangements with some distributors, which allow for price protection and limited rights of return, generally through stock rotation programs. Under the price protection programs, the Company gives distributors credits for the difference between the original price paid and the Company's then current price. Under the stock rotation programs, certain distributors are able to exchange certain products based on the number of qualified purchases made during the period.

Stock-Based Compensation

We account for stock-based payments at fair value. The fair value of stock options is measured using the Black-Scholes option-pricing model. For share-based awards that vest subject to the satisfaction of a service requirement, the fair value measurement date for stock-based compensation awards is the date of grant and the expense is recognized on a straight-line basis, over the vesting period. We account for forfeitures as they occur. The fair value of each stock option grant is determined using the methods and assumptions discussed below (see "—Fair Value of Common Stock"). Each of these inputs is subjective and generally requires significant judgment and estimation by management.

- *Expected term*. The expected term represents the period that stock-based awards are expected to be outstanding. Our historical share option exercise information is limited due to a lack of sufficient data points and does not provide a reasonable basis upon which to estimate an expected term. The expected term for option grants is therefore determined using the simplified method. The simplified method deems the expected term to be the midpoint between the vesting date and the contractual life of the stock-based awards.

- *Expected volatility*. The expected volatility is derived from the historical stock volatilities of comparable peer public companies within our industry that are considered to be comparable to our business over a period equivalent to the expected term of the stock-based awards, since there has been no trading history of our common stock. Given the absence of a public trading market for our common stock, our board of directors exercised their judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including valuations performed by an independent third party, developments in our operations, sales of preferred stock, the prices, rights, preferences and privileges of our preferred stock relative to the common stock, actual operating results and financial performance and capital resources, the conditions in the our industry and the economy and capital markets in general, the stock price performance and volatility of comparable public companies, the likelihood of achieving a liquidity event for shares of our common stock underlying these stock options, such as an initial public offering or sale of our company, and the lack of liquidity of our common stock, among other factors. After the closing of this offering, our board of directors will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of the grant. Our board of directors intended all options granted to be exercisable at a price per share not less than the per share fair value of our common stock underlying those options on the grant date.
- *Risk-free interest rate*. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the stock-based awards' expected term.
- *Expected dividend yield*. The expected dividend yield is zero as we have not paid nor do we anticipate paying any dividends on our common stock in the foreseeable future.

Fair Value of Common Stock

Historically, for all periods prior to this initial public offering, the fair values of the shares of our common stock underlying our share-based awards were estimated on each grant date by our board of directors. In order to determine the fair value of our common stock underlying option grants, our board of directors considered, among other things, valuations of our common stock prepared by an independent third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation.*

The fair value of our common stock was estimated by first estimating our aggregate implied equity value using a weighting of discounted cash flows method (income approach) and comparable public companies method (market approach). Prior to the conversion of all of our outstanding preferred stock into common stock, an option pricing model, or OPM, was used to allocate the total equity value to the different classes of equity according to their rights and privileges. To apply the OPM, we estimated the expected time to liquidity, volatility and risk-free rate.

Given the absence of a public trading market for our common stock, our board of directors exercised their judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including valuations performed by an independent third party, developments in our operations, sales of preferred stock, the prices, rights, preferences and privileges of our preferred stock relative to the common stock, actual operating results and financial performance and capital resources, the conditions in the our industry and the economy and capital markets in general, the stock price performance and volatility of comparable public companies, the likelihood of achieving a liquidity event for shares of our common stock underlying these stock options, such as an initial public offering or sale of our company, and the lack of liquidity of our common stock, among other factors. After the closing of this offering, our board of directors will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of the grant. Our board of directors intended all options granted to be exercisable at a price per share not less than the per share fair value of our common stock underlying those options on the grant date.

Provision for Income Taxes

The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using the currently enacted tax rates that apply to taxable income in effect for the years in which those tax assets are expected to be realized or settled. We record a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized.

The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax regulations in multiple tax jurisdictions. We may be periodically reviewed by domestic and foreign tax authorities regarding the amount of taxes due. These reviews may include questions regarding the timing and amount of deductions and the allocation of income among various tax jurisdictions. In evaluating the exposure associated with various filing positions, we record estimated reserves when it is more likely than not that an uncertain tax position will not be sustained upon examination by a taxing authority. Such estimates are subject to change.

Inventory Valuation

We report inventories at the lower of cost or net realizable value, in accordance with the adoption of Accounting Standards Update Codification 330, *Inventory (Topic 330): Simplifying the Measurement of Inventory*. Cost is determined using a first-in, first-out method, or FIFO, and includes materials, labor, shipping and manufacturing overhead related to the purchase and production of

inventories. Net realizable value is the estimated selling price in the ordinary course of business less reasonably predictable costs of completion, disposal and transportation.

Warranty Reserves

We provide standard warranty coverage on our accessories and devices for one and three years, respectively, providing labor and parts necessary to repair the systems during the warranty period. We account for the estimated warranty cost as a charge to cost of revenues when revenue is recognized. The estimated warranty cost is based on historical product performance and field expenses. We update this estimate periodically. The actual product performance and/or field expense profiles may differ, and in those cases we adjust warranty accruals accordingly.

Convertible Preferred Stock Warrant Liability

Prior to the November 2018 conversion of all our preferred stock into common stock, we accounted for our freestanding warrants to purchase shares of our convertible preferred stock as liabilities at fair value upon issuance primarily because the shares underlying the warrants contain contingent redemption features outside our control. The warrants were subject to re-measurement at each balance sheet date with any change in fair value being recognized as the change in fair value of warrant liability. Subsequent to this conversion, the remaining convertible preferred stock warrants became warrants to purchase common stock and the related liability was reclassified to additional paid-in capital, a component of stockholders' equity (deficit).

Recently Issued and Adopted Accounting Pronouncements and Critical Accounting Policies and Estimates

See "Note 1 – The Company and Its Significant Accounting Policies" of "Notes to the Consolidated Financial Statements" under the caption Recently Issued Accounting Pronouncements and Recently Adopted Accounting Pronouncements.

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

Interest rates risk

We had cash and cash equivalents totaling $11.3 million and $13.0 million as of December 31, 2019 and December 31, 2018, respectively. We had no short-term investments as of December 31, 2019 and December 31, 2018. Our cash and cash equivalents consist of cash in bank accounts and money market funds. The primary objectives of our investment activities are to preserve principal and provide liquidity without significantly increasing risk. We do not enter into investments for trading or speculative purposes. Due to the nature of our cash and cash equivalents, a hypothetical 100 basis point change in interest rates would not have a material effect on the fair value of our portfolio. We therefore do not expect our operating results or cash flows to be materially affected by a sudden change in market interest rates.

Item 8. Financial Statements and Supplementary Data

The following consolidated financial statements of Sonim, the supplementary data and the independent registered public accounting firm's report are incorporated by reference from Part IV, Item 15(1) and (2):

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets – At December 31, 2019 and 2018

Consolidated Statements of Operations – Years Ended December 31, 2019 and 2018

Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit) – Years Ended December 31, 2019 and 2018

Consolidated Statements of Cash Flows – Years Ended December 31, 2019 and 2018

Notes to the Consolidated Financial Statements

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

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures: Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Exchange Act Rule 13a-15I. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Annual Report on Form 10-K.

In designing and evaluating disclosure controls and procedures, our management recognizes that any system of controls, however well designed and operated, can provide only reasonable assurance, and not absolute assurance, that the desired control objectives of the system are met. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events. Because of these and other inherent limitations of control systems, there can be no assurance that any design will succeed in achieving its stated goals in all future circumstances. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the objectives of our disclosure control system are met and, as set forth above, our Chief Executive Officer and our Chief Financial Officer have concluded, based on their evaluation as of the end of the period covered by this Annual Report on Form 10-K, that our disclosure controls and procedures were effective to provide reasonable assurance that the objectives of our disclosure control system were met.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in those internal controls. With respect to the year ended December 31, 2019, we identified two material weaknesses in our internal controls over financial reporting related to the design and implementation of our IT general controls including elevated (administrator) access to financial reporting systems and subsystems and accounting for fulfillment costs in connection with adoption of ASU 2014-09, Revenue from Contracts with Customers (Topic 606). Although we are making efforts to remediate these issues, these efforts may not be sufficient to avoid similar material weaknesses in the future.

Changes in Internal Control Over Financial Reporting: During the quarter ended December 31, 2019, there were no changes to our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting: This annual report does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of the company's registered public accounting firm due to a transition period established by rules of the Securities and Exchange Commission for newly public companies

Item 9B. Other Information.

None.

PART III

Certain information required by Part III is omitted from this report. We will file our definitive proxy statement for our Annual Meeting of Stockholders (the "Proxy Statement") not later than 120 days after the end of the fiscal year covered by this report, and certain information included therein is incorporated herein by reference.

Item 10. Directors, Executive Officers and Corporate Governance.

For information regarding our Directors and compliance with Section 16(a) of the Securities Exchange Act of 1934, we direct you to the sections entitled "Proposal 1 – Election and Ratification of Directors" and "Delinquent Section 16(a)Reports," respectively, in the Proxy Statement. For information regarding our Audit/Compliance Committee and our Audit/Compliance Committee's financial expert, we direct you to the section entitled "Information about the Board of Directors and Corporate Governance – Committees of the Board – Audit/Compliance Committee" in the Proxy Statement. For information regarding our Code of Conduct, we direct you to the section entitled "Information about the Board of Directors and Corporate Governance – Code of Conduct" in the Proxy Statement. Information regarding our executive officers is contained in the section entitled "Executive Officers of the Registrant," in Part I, Item I of this report. This information is incorporated herein by reference.

Item 11. Executive Compensation.

For information regarding our Executive Compensation, we direct you to the section captioned "Executive and Director Compensation and Other Matters" in the Proxy Statement. This information is incorporated herein by reference

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

This information is located in the sections captioned "Stock Ownership of Certain Beneficial Owners Management" and "Equity Compensation Plan Information" in the Proxy Statement. This information is incorporated herein by reference.

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

You will find this information in the sections captioned "Transactions with Related Persons" and "Information about the Board of Directors and Corporate Governance – Director Independence" in the Proxy Statement. This information is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

You will find this information in the section captioned "Independent Registered Public Accountants – Principal Accountant Fees and Services" in the Proxy Statement. This information is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

The following documents are filed as part of this report:

1. **Financial Statements.** The following consolidated financial statements and related documents are filed as part of this report:

2. **Financial Statement Schedules.** Schedules are omitted because they are not required or applicable, or the required information is included in the Financial Statements or related notes.

3. **Exhibits.** The Exhibits listed in the accompanying Exhibit Index are filed or incorporated by reference as part of, or furnished with, this report.

Exhibit Index

Exhibit Number	Description	Form	File No.	Incorporated by Exhibit Reference	Filing Date
3.1	Amended and Restated Certificate of Incorporation of the Registrant.	8-K	001-38907	3.1	May 17, 2019
3.4	Amended and Restated Bylaws of the Registrant.	S-1	001-38907	3.4	April 15, 2019
4.1	Form of Common Stock Certificate of the Registrant	S-1/A	333-230887	4.1	April 29, 2019
4.2	Amended and Restated Investor Rights Agreement, by and between the Registrant and the investors listed on Exhibit A thereto, dated November 21, 2012, as amended.	S-1	333-230887	4.2	April 15, 2019
4.3	Securities Purchase Agreement, by and between the Registrant and the purchasers listed on Exhibit A thereto, dated November 2, 2018	S-1	333-230887	4.3	April 15, 2019
4.4*	Description of the Registrant's Securities				*
10.1	2012 Equity Incentive Plan and forms of agreements thereunder	S-1	333-230887	10.1	April 15, 2019
10.2	2019 Equity Incentive Plan and forms of agreements thereunder	S-1/A	333-230887	10.2	April 29, 2019
10.3	2019 Employee Stock Purchase Plan	S-1/A	333-230887	10.3	April 29, 2019
10.4	Form of Indemnification Agreement, by and between the Registrant and each of its directors and executive officers.	S-1	333-230887	10.4	April 15, 2019
10.7	Employment Agreement, by and between the Registrant and Charles Becher, dated February 7, 2019.	S-1	333-230887	10.7	April 15, 2019
10.8	Office Lease Agreement, by and between the Registrant and BCSP Crossroads Property LLC, dated May 25, 2006, as amended.	S-1	333-230887	10.8	April 15, 2019
10.9	English language summary of Shenzhen Warehouse Lease Agreement, by and between Sonim Technologies (Shenzhen) Ltd. and Shenzhen Gaoxinqi Industrial Park Management Co., Ltd., dated February 14, 2016, as amended	S-1/A	333-230887	10.9	April 29, 2019
10.10	English language summary of Shenzhen Plant Lease Agreement, by and between Sonim Technologies (Shenzhen) Ltd. and Shenzhen Gaoxinqi Industrial Park Management Co., Ltd., dated April 10, 2016, as amended.	S-1/A	333-230887	10.10	April 29, 2019
10.11+	Amended and Restated Global Patent License Agreement, by and between Telefonaktiebolaget LM Ericsson (Publ) and the Registrant, effective as of January 1, 2017.	S-1	333-230887	10.11	April 15, 2019
10.12	Patent License Agreement, by and between Nokia Corporation and the Registrant, effective as of September 23, 2008, as amended.	S-1/A	333-230887	10.12	April 29, 2019
10.13	English language summary of Shenzhen Lease Agreement, by and between Sonim Technologies (Shenzhen) Ltd. and Shenzhen Gaoxinqi Industrial Park Management Co., Ltd., dated August 28, 2018.	S-1/A	333-230887	10.13	April 29, 2019

10.14	English language summary of Shenzhen Lease Agreement, by and between Sonim Technologies (Shenzhen) Ltd. and Shenzhen Gaoxinqi Industrial Park Management Co., Ltd., dated January 15, 2019.	S-1/A	333-230887	10.14	April 29, 2019
10.15	Separation Agreement by and between the Registrant and James Walker dated September 9, 2019.	10-Q	001-38907	10.1	November 12, 2019
10.16	Employment Agreement by and between the Registrant and Robert Tirva, dated September 9, 2019.	10-Q	001-38907	10.2	November 12, 2019
10.17*	Transition and Separation Agreement by and between the Registrant and Robert Plaschke, dated October 29, 2019.				*
10.18*	Employment Agreement by and between the Registrant and Thomas Wilkinson, dated October 29, 2019.				*
10.19*	Transaction Bonus Plan.				*
10.20*	Subordinated Term Loan and Security Agreement between B. Riley Principal Investments, LLC and the Registrant dated October 23, 2017.				*
10.21*	First Amendment to the Subordinated Term Loan and Security Agreement between B. Riley Principal Investments, LLC and the Registrant dated March 30, 2018.				*
10.22*	Amended and Restated Subordinated Secured Convertible Promissory Note dated April 9, 2018				*
21.1*	Subsidiaries of the Registrant.				*
23.1 *	Consent of Independent Registered Public Accounting Firm.				*
24.1*	Power of Attorney (included on signature page to this Annual Report on Form 10-K).				*
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				*
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				*
32.1*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				*
32.2*	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				*
101.INS	XBRL Instance Document				
101.SCH	XBRL Taxonomy Extension Schema Document				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				

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

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* Filed herewith.

** Compensatory plan or management contract

\+ Portion of this exhibit (indicated by asterisks) have been omitted as the Registrant has determined that (i) the omitted information is not material and (ii) the omitted information would likely cause competitive harm to the Registrant if publicly disclosed.

++ Furnished herewith

Item 16. Form 10-K Summary

None.

SIGNATURES

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

Sonim Technologies, Inc.

Date March 27, 2020

By: /s/ Robert Tirva
Robert Tirva
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints **THOMAS W. WILKINSON** and **ROBERT TIRVA** and each or any one of them, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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

Name	Title	Date
/s/ Thomas W. Wilkinson **Thomas W. Wilkinson, Chief Executive Officer**	*Principal Executive Officer*	March 27, 2020
/s/ Robert Tirva **Robert Tirva, Chief Financial Officer**	*Principal Financial and Accounting Officer*	March 27, 2020
/s/ John Kneuer **John Kneuer**	*Director and Chairman of the Board of Directors*	March 27, 2020
/s/ Alan Howe **Alan Howe**	*Director*	March 27, 2020
/s/ Kenny Young **Kenny Young**	*Director*	March 27, 2020
/s/ Susan G. Swenson **Susan G. Swenson**	*Director*	March 27, 2020
/s/ Maurice Hochschild **Maurice Hochschild**	*Director*	March 27, 2020
/s/ Jeffrey D. Johnson **Jeffrey D. Johnson**	*Director*	March 27, 2020

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of directors of Sonim Technologies, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sonim Technologies, Inc. (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, convertible preferred stock and stockholders' equity (deficit), and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2019 and 2018, and the consolidated results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company's recurring losses from operations and its need for additional capital raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for revenue recognition in the year ended December 31, 2019 due to the adoption of Accounting Standards Codification Topic No. 606, *Revenue Recognition*.

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.

/s/Moss Adams LLP
Campbell, CA
March 27, 2020

We have served as the Company's auditor since 2013.

SONIM TECHNOLOGIES, INC.
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2019 and DECEMBER 31, 2018
(IN THOUSANDS EXCEPT SHARE AND PER SHARE AMOUNTS)

	2019	2018
Assets		
Cash and cash equivalents	$ 11,298	$ 13,049
Accounts receivable, net	10,082	18,877
Inventory	19,531	21,831
Prepaid expenses and other current assets	6,430	10,111
Total current assets	47,341	63,868
Property and equipment, net	1,442	1,071
Other assets	6,676	2,406
Total assets	$ 55,459	$ 67,345
Liabilities and stockholders' equity		
Current portion of long-term debt	$ 9,821	$ 301
Accounts payable	7,234	27,295
Accrued expenses	10,265	16,381
Deferred revenue	291	4,223
Total current liabilities	27,611	48,200
Income tax payable	1,961	807
Long-term debt, less current portion	362	13,209
Total liabilities	29,934	62,216
Commitments and contingencies (Note 10)		
Common stock, $0.001 par value per share; 100,000,000 shares authorized: 20,437,235 shares issued and outstanding at December 31, 2019; 100,000,000 shares authorized; 15,591,357 shares issued and outstanding at December 31, 2018	20	15
Preferred Stock, $0.001 par value per share; 5,000,000 shares authorized	—	—
Additional paid-in capital	191,751	148,641
Accumulated deficit	(166,246)	(143,527)
Total stockholders' equity	25,525	5,129
Total liabilities and stockholders' equity	$ 55,459	$ 67,345

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

SONIM TECHNOLOGIES, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
YEARS ENDED DECEMBER 31, 2019 and 2018
(IN THOUSANDS EXCEPT SHARE AND PER SHARE AMOUNTS)

.	2019	2018
Net revenues	$ 116,251	$ 135,665
Cost of revenues	81,742	87,576
Gross profit	34,509	48,089
Operating expenses:		
Research and development	26,064	23,247
Sales and marketing	13,908	12,228
General and administrative	16,182	7,220
Restructuring costs	736	—
Total operating expenses	56,890	42,695
Income (loss) from operations	(22,381)	5,394
Interest expense	(1,522)	(1,828)
Change in fair value of warrant liability	—	(970)
Other expense, net	(543)	(565)
Income (loss) before income taxes	(24,446)	2,031
Income tax expense	(1,388)	(754)
Net income (loss)	(25,834)	1,277
Dividends on Series A, Series A-1 and Series A-2 preferred stock	—	(10,152)
Net loss attributable to common stockholders	$ (25,834)	$ (8,875)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.39)	$ (2.57)
Weighted–average shares used in computing net loss per share attributable to common stockholders, basic and diluted	18,603,582	3,447,283

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

SONIM TECHNOLOGIES, INC.
CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)
YEARS ENDED DECEMBER 31, 2019 and 2018
(IN THOUSANDS EXCEPT SHARE AMOUNTS)

	Series A convertible preferred stock		Series A-1 convertible preferred stock		Series A-2 convertible preferred stock		Series B convertible preferred stock		Common stock		Additional paid-in	Accumulated	Total stockholders'
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	capital	deficit	equity (deficit)
Balance at January 1, 2018	7,471,765	$ 44,564	1,586,024	$ 4,487	1,183,703	$ 9,733	1,665,291	$ 21,613	1,027,113	$ 1	$ 54,892	$ (144,804)	$ (89,911)
Exercise of warrants	310,676	47	—	—	—	—	—	—	—	—	—	—	—
2018 dividends declared and paid on Series A, Series A-1, and Series A-2 convertible preferred Stock	944,694	9,380	66,255	622	49,456	150	—	—	—	—	(10,152)	—	(10,152)
Issuance of common stock upon exercise of stock options	—	—	—	—	—	—	—	—	15,475	—	17	—	17
Reclassification of warrants from liability to preferred stock upon exercise	—	2,951	—	—	—	—	—	—	—	—	—	—	—
Recapitalization of Series A, Series A-1, Series A-2, and Series B convertible preferred stock into common stock	(8,727,135)	(56,942)	(1,652,279)	(5,109)	(1,233,159)	(9,883)	(1,665,291)	(21,613)	13,277,864	13	93,534	—	93,547
Reclassification of warrant from liability to equity upon conversion and elimination of preferred stock	—	—	—	—	—	—	—	—	—	—	1,804	—	1,804
Issuance of common stock, net of issuance costs of $831	—	—	—	—	—	—	—	—	1,270,905	1	8,294	—	8,295
Employee and nonemployee stock-based compensation	—	—	—	—	—	—	—		—	—	252		252
Net income	—	—	—	—	—	—	—		—	—	—	1,277	1,277
Balance at December 31, 2018	—	—	—	—	—	—	—	—	15,591,357	15	148,641	(143,527)	5,129
Beginning balance adjustment – Impact of ASC 606	—	—	—	—	—	—	—	—	—	—	—	3,115	3,115
Issuance of common stock, net of issuance costs of $30	—	—	—	—	—	—	—	—	228,294	1	1,603	—	1,604
Issuance of common stock, with IPO net of issuance costs of $8,000	—	—	—	—	—	—	—	—	4,297,901	4	36,846	—	36,850
Issuance of common stock upon ESPP purchase	—	—	—	—	—	—	—	—	68,606	—	146	—	146
Exercise of stock options	—	—	—	—	—	—	—	—	95,739	—	81	—	81
Exercise of warrants	—	—	—	—	—	—	—	—	155,338	—	23	—	23
Taxes paid on net issuance of restricted stock award	—	—	—	—	—	—	—	—	—	—	(1,897)	—	(1,897)
Employee and nonemployee stock-based compensation	—	—	—	—	—	—	—	—	—	—	6,308	—	6,308
Net loss	—	—	—	—	—	—	—	—	—	—	—	(25,834)	(25,834)
Balance at December 31, 2019	—	$ -	—	$ -	—	$ -	—	$ -	20,437,235	$ 20	$ 191,751	$ (166,246)	$ 25,525

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

SONIM TECHNOLOGIES, INC.
CONSOLIDATED STATEMENT OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2019 and 2018
(IN THOUSANDS)

	2019	2018
Cash flows from operating activities:		
Net income (loss)	$ (25,834)	$ 1,277
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	3,525	1,850
Stock-based compensation	6,308	252
Trade-in guarantee	(268)	(537)
Inventory write-downs	3,109	—
Warrant revaluation	—	970
Noncash interest expense	367	1,031
Deferred income taxes	109	140
Provision for doubtful accounts	45	5
Changes in operating assets and liabilities:		
Accounts receivable	8,749	(8,065)
Inventory	(809)	(12,847)
Prepaid expenses and other current assets	3,681	(4,127)
Other assets	(3,803)	(42)
Accounts payable	(20,075)	16,049
Accrued expenses	(6,117)	7,408
Deferred revenue	(3,664)	82
Income tax payable	1,154	415
Net cash provided by (used in) operating activities	(33,523)	3,861
Cash flows from investing activities:		
Purchase of property and equipment	(992)	(787)
Development of tooling and purchased software licenses	(364)	(1,758)
Net cash used in investing activities	(1,356)	(2,545)
Cash flows from financing activities:		
Proceeds on line of credit	5,614	72,135
Repayment on line of credit	(5,614)	(75,050)
Proceeds from issuance of common stock, net of costs	1,604	8,295
Cost associated with amendments to credit agreements	—	(69)
Proceeds from issuance of common stock upon IPO, net of costs	36,864	—
Taxes paid on net issuance of restricted stock award	(1,897)	—
Proceeds from exercise of warrants	23	47
Proceeds from exercise of stock options	81	17
Proceeds from ESPP	146	—
Proceeds from borrowings on long-term debt	—	4,992
Repayment of long-term debt	(3,693)	(215)
Net cash provided by financing activities	33,128	10,152
Net increase (decrease) in cash and cash equivalents	(1,751)	11,468
Cash and cash equivalents at beginning of the year	13,049	1,581
Cash and cash equivalents at end of the year	$ 11,298	$ 13,049
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 1,043	$ 546
Cash paid for income taxes	273	259
Non-cash investing and financing activities:		
Other assets included in accounts payable	—	40
IPO issuance costs included in accounts payable	14	—
Payment of dividends in shares of convertible preferred stock	—	10,152
Conversion of preferred stock to common stock	—	93,547
Reclassification of warrant (liability to preferred stock) upon exercise of preferred stock	—	2,951
Reclassification of warrant (liability to additional paid-in capital) upon conversion and elimination of preferred stock	—	1,804

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

NOTE 1 —The Company and its significant accounting policies

Description of Business —Sonim Technologies, Inc. was incorporated in the state of Delaware on August 5, 1999 and is headquartered in Austin, Texas. The Company is a leading U.S. provider of ultra-rugged mobile phones and accessories designed specifically for task workers physically engaged in their work environments, often in mission-critical roles.

Liquidity and Ability to Continue as a Going Concern – Our consolidated financial statements account for the continuation of our business as a going concern. We are subject to the risks and uncertainties associated with the development and release of new products. Our principal sources of liquidity as of December 31, 2019 consist of existing cash and cash equivalents totaling approximately $11,298, which includes the impact of approximately $36,850 in proceeds from our initial public offering of common stock that closed in May 2019. During 2019, we used approximately $33,523 of cash and investments for operating activities. After evaluation of the aforementioned conditions, we believe our current resources, along with expected proceeds from forecasted billings, will provide sufficient funding for planned operations into the third quarter of 2020 and potentially through the end of the year. Due to these conditions, along with reductions in our current revenue run-rate, substantial doubt exists as to our ability to continue as a going concern for one year from the date the consolidated financial statements are available. Our consolidated financial statements have been prepared assuming we will continue as a going concern and do not include any adjustments that might be necessary should we be unable to continue as a going concern.

If necessary, we will seek to raise additional capital from the sale of equity securities or the incurrence of indebtedness to allow us to continue operations. There can be no assurance that additional financing will be available to us on acceptable terms, or at all. Additionally, if we issue additional equity securities to raise funds, whether to existing investors or others, the ownership percentage of our existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Additionally, we may be limited as to the amount of funds we can raise pursuant to SEC rules and the continued listing requirements of Nasdaq. If we cannot grow our revenue run-rate or raise needed funds, we might be forced to make substantial reductions in our operating expenses, which could adversely affect our ability to implement our business plan and ultimately our viability as a Company.

Financial Statement Presentation—The accompanying audited consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the U.S. ("U.S. GAAP") and pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC") for annual financial information.

Principles of Consolidation — The accompanying consolidated financial statements include the accounts of Sonim Technologies. Inc. and its wholly owned foreign subsidiaries, Sonim Technologies Spain SL, Sonim Technologies India Private Limited, Sonim Technologies (Shenzhen) Limited, Sonim Technologies (Hong Kong) Limited, Sonim Technologies (Canada), Inc and Sonim Communications India Private Limited (collectively, the "Company"). All significant intercompany transactions and balances have been eliminated in consolidation.

Additional Sonim Subsidiary – On August 21, 2019, Sonim Technologies (Canada), Inc. was incorporated, a fully owned subsidiary of the Company, to aide with sales and post sales services. During the year ended December 31, 2019, immaterial fees were incurred in the set-up of the subsidiary and the Company did not record any intercompany transactions.

Estimates —The preparation of consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. These estimates include, but are not limited to, estimates related to revenue recognition; valuation assumptions regarding the determination of the fair value of common stock, as well as stock options and warrants; the useful lives of our long-lived assets; product warranties; loss contingencies; and the recognition and measurement of income tax assets and liabilities, including uncertain tax positions; The Company bases its estimates on historical experience and on various other assumptions that the Company believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Reverse Stock Split – In November 2018, the Company's stockholders approved a one-for-fifteen reverse stock split of its common and convertible preferred stock, which was effective on November 2, 2018. The par value of the common stock and convertible preferred stock were not adjusted as a result of the reverse stock split. Accordingly, all share and per share amounts for the period presented in the consolidated financial statements and notes thereto have been adjusted retrospectively to reflect this reverse stock split.

Concentrations of Credit Risk—The Company's product revenues are concentrated in the technology industry, which is highly competitive and rapidly changing. Significant technological changes in the industry or customer requirements, or the emergence of competitive products with new capabilities or technologies, could adversely affect the Company's consolidated operating results. Financial instruments that potentially subject the Company to credit risk consist primarily of cash and cash equivalents and accounts receivable. Cash and cash equivalents are deposited with high-quality, federally insured commercial banks in the United States and cash balances are in excess of federal insurance limits at December 31, 2019 and 2018. The Company generally does not require collateral or other security in support of accounts receivable. To reduce credit risk, management performs ongoing credit evaluations of its customers' financial condition. The Company analyzes the need for reserves for potential credit losses and records allowances for doubtful accounts when necessary. The Company had allowances for such losses totaling approximately $52 and $11 at December 31, 2019 and 2018, respectively, and recognized $45 and $5 in bad debt expense during the years ended December 31, 2019 and 2018, respectively.

Segment Information—The Company operates in one reporting segment. Operating segments are defined as components of an enterprise about which separate financial information is evaluated regularly by the chief operating decision maker, who is the chief executive officer, in deciding how to allocate resources and assessing performance. The Company's chief operating decision maker allocates resources and assesses performance based upon discrete financial information at the consolidated level.

Cash and Cash Equivalents—The company considers all highly liquid investments with an original maturity from the date of purchase of 90 days or less to be cash equivalents. As of December 31, 2019, and 2018, cash and cash equivalents consist of cash deposited with banks and money market funds. Included in the Company's cash and cash equivalents are amounts held by foreign subsidiaries. The Company had $733 and $884 of foreign cash and cash equivalents included in the Company's cash positions at December 31, 2019 and 2018, respectively.

Accounts Receivable and Allowance for Doubtful Accounts—Accounts receivable consist primarily of amounts due from customers in the course of normal business activities. Collateral on trade accounts receivable is generally not required. The Company maintains an allowance for doubtful accounts for estimated uncollectible accounts receivable. The allowance is based on our assessment of known delinquent accounts. Accounts are written off against the allowance account when they are determined to be no longer collectible.

Inventory—The Company reports inventories at the lower of cost or net realizable value. Cost is determined using a first-in, first-out method ("FIFO") and includes materials, labor, and manufacturing overhead related to the purchase and production of inventories. Net realizable value is the estimated selling price in the ordinary course of business less reasonably predictable costs of completion, disposal, and transportation.

The Company periodically reviews its inventory for potential slow-moving or obsolete items and writes down specific items to net realizable value, as appropriate. The Company writes down inventory based on forecasted demand and technological obsolescence. These factors are impacted by market and economic conditions, technology changes, new product introductions, and changes in strategic direction, and require estimates that may include uncertain elements. Actual demand may differ from forecasted demand and such differences may have a material effect on recorded inventory values. Any write-down of inventory to the lower of cost or net realizable value creates a new cost basis that subsequently would not be marked up based on changes in underlying facts and circumstances.

Property and Equipment—Property and equipment are stated at cost less accumulated depreciation and amortization. The cost for molds and tooling used in the Company's manufacturing processes are capitalized and included in equipment. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective assets, generally 24 to 36 months. Leasehold improvements are amortized over the shorter of estimated useful lives of the assets or the lease term. Expenditures for repairs and maintenance are charged to expense as incurred. Upon disposition, the cost and related accumulated depreciation and amortization are removed from the accounts and the resulting gain or loss is reflected in the consolidated statements of operations.

Non-recurring Engineering ("NRE") Tooling and Purchased Software Licenses—Third-party design services relating to the design of tooling materials and purchased software licenses used in the manufacturing process are capitalized and included in other assets within the consolidated balance sheets. During the years ended December 31, 2019 and 2018, amortization of NRE tooling and NRE software costs approximating $2,904 and $1,410 were charged to cost of revenues. The related net book value is $630 and $1,686, respectively, as of December 31, 2019 and 2018. In addition, as of December 31, 2019 Other Assets includes $4,524 of deferred NRE costs representing costs to fulfill contracts pursuant to Accounting Standards Update ("ASU") 2014-09 in conjunction with 606, Revenue from Contracts with Customers (Topic 606) as discussed below.

Long-lived Assets—The Company reviews long-lived assets for impairment whenever events or changes incircumstances indicate that the carrying amount of an asset may not be recoverable. No such impairments have been identified to date.

Revenue Recognition — The Company adopted the requirements of Accounting Standards Codification ("ASC") 2014-09, *Revenue from Contracts with Customers* (Topic 606), effective January 1, 2019, using the modified retrospective method. Under the modified retrospective method, this guidance is applied to those contracts which were not completed as of January 1, 2019 and the prior period comparable financial information continues to be presented under the guidance of ASC 605, *Revenue Recognition*. Refer to New Accounting Pronouncements, Pronouncements adopted in 2019, for a discussion of the effect of the adoption of Topic 606.

The Company recognizes revenue primarily from the sale of products, including our mobile phones and accessories. The Company also recognizes revenue from other contractual arrangements that may include a combination of products and Non-Recurring Engineering ("NRE") services or from the provision of solely NRE services.

Revenue recognition incorporates discounts, price protection and customer incentives. In addition to cooperative marketing and other incentive programs, the Company has arrangements with some distributors, which allow for price protection and limited rights of return, generally through stock rotation programs. Under the price protection programs, the Company gives distributors credits for the difference between the original price paid and the Company's then current price. Under the stock rotation programs, certain distributors are able to exchange certain products based on the number of qualified purchases made during the period.

The Company's handsets typically require a technical approval process. This process entails design and configuration activities required to conform the Company's devices to a wireless carrier customer's specific network requirements. Each wireless carrier defines its own specific functional requirements and certification process in order for the product to be ready for manufacture. While the technical approval process does involve some level of customization, in addition to design and configuration, the Company does not charge separately and is not reimbursed for these activities to the extent that they do not involve significant customization and does not incur these costs in advance of entering into binding agreements with its wireless carrier customers. Such technical approval is obtained prior to shipment.

Revenue Recognition under ASC 606, *Revenue from Contracts with Customers*—Under Topic 606, revenue is recognized when control of promised goods or services is transferred to a customer in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To determine revenue recognition for its arrangements, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. See Note 2, Revenue Recognition, for additional information.

Revenue Recognition under ASC 605, *Revenue Recognition*— During 2018, revenues from the sale of our mobile phones and accessories was recognized when all of the following conditions were met per ASC Topic 605, *Revenue Recognition* ("ASC 605"): (i) there was persuasive evidence of an arrangement; (ii) the product had been delivered to the customer; (iii) the collection of the fees was reasonably assured; and (iv) the amount of fees to be paid by the customer was fixed or determinable. Costs associated with the design and development activities for technical approval were expensed as incurred. The Company monitored its cooperative marketing and other incentive programs and recorded a provision, at the time of sale, for future payments or credits granted as a reduction of revenue based on historical experience and revenue was reduced by the allowances offered to customers.

In addition, when revenue arrangements involved multiple elements, each element, referred to as a deliverable, was evaluated to determine whether it represented a separate unit of accounting in accordance with ASC 605-25, Revenue Recognition – Multiple-Element Arrangements. Generally, we accounted for a deliverable separately if the delivered item had stand-alone value to the customer and delivery or performance of the undelivered item or service is probable and substantially in our control. When separate units of accounting were determined, arrangement consideration was allocated at the inception of the arrangement, based on each unit's relative selling price, and recognized based on the method most appropriate for that unit. When an arrangement included NRE services which involved significant production, modification or customization of the product software that was essential to the functionality of the hardware, revenues were recognized according to the milestone method in accordance with the provisions of ASC Topic 605-35, Construction-Type and Production- Type Contract. Under this method, we recognize revenues from milestone payments when: (i) the milestone event was substantive and its achievability was not reasonably assured at the inception of the agreement, and (i) we did not have ongoing performance requirements related to the achievement of the milestone earned. Milestone payments were considered substantive if all of the following conditions were met: the milestone payment (i) was commensurate with either our performance to achieve the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from our performance to achieve the milestone, (ii) related solely to past performance, and (iii) was reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement. If a milestone is deemed non-substantive, we deferred, if applicable, and recognized such non-substantive milestones over the estimated period of performance applicable to each agreement on a straight-line basis, as appropriate.

Revenue recognized during the year ended December 31, 2018, included revenue recognized from two customers that were related to milestones achieved, and which totaled $4,168. The summary of revenue from these two customers was as follows:

	December 31 2018
Customer A	$ 1,067
Customer B	3,101
Total revenues	$ 4,168

The Company's agreement with these customers entitled it to additional payments upon the achievement of certain milestones, however there were no payments as of December 31, 2018, related to product design and development, and achievement of regulatory and industry specific certifications. If a milestone is deemed to be substantive, the Company is permitted to recognize revenue related to the milestone payment in its entirety. In the event, milestones are deemed non-substantive, the Company recognizes, and defers if applicable, payments for the achievement of such non-substantive milestones over the estimated period of performance applicable to each agreement on a straight-line basis, as appropriate.

Cost of Revenues—Cost of revenues includes direct and indirect costs associated with the manufacture of the Company's products as well as with the performance of NRE services in connection with significant design modification and customization. Direct costs include material and labor, royalty, depreciation and amortization while indirect costs include other labor and overhead costs incurred in manufacturing the product.

Advertising—The Company expenses the costs of advertising, including promotional expenses, as incurred. Advertising expenses for the years ended December 31, 2019 and 2018 were approximately $35 and $27, respectively.

Shipping and Handling Costs—When the Company bills customers for shipping and handling it includes such amounts as part of revenue. Costs incurred for shipping and handling are recorded in cost of revenues.

Deferred Revenues—Deferred revenues represents the amount that is allocated to undelivered elements in multiple element arrangements. We limit the revenue recognized to the amount that is not contingent on the future delivery of products or services or meeting other specified performance conditions.

Research and Development—Research and development expenses consist of compensation costs, employee benefits, subcontractors, research supplies, allocated facility related expenses and allocated depreciation and amortization. Research and development expenses include costs incurred for the design and configuration activities of new products to conform to the specific functional requirements of the Company's wireless carrier customers necessary to prepare the product for manufacture. The company determines the NRE technical approval costs and NRE field test costs are contract fulfillment costs and recognizes the associated NRE asset as these costs are incurred. The Company tracked the NRE asset by product and customer then amortized the NRE assets over a period of 4 years, which is management's estimated average product life for each model phone, starting the date of the first significant sales. This is a change in accounting under ASC 340-40.

Stock Warrants—Freestanding warrants related to shares that could be subject to a deemed liquidation event under the circumstances described in Note 6 are accounted for in accordance with ASC 480, *Distinguishing Liabilities from Equity Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity* ("ASC 480"). Freestanding warrants that are related to the Company's convertible preferred stock are classified as liabilities on the consolidated balance sheets and are subject to remeasurement at each balance sheet date, with the change in fair value being recognized as a component of other income (expense) until the earlier of: (i) the exercise or expiration of the warrants, (ii) an equity recapitalization event that would result in the warrant agreement being classified as part of stockholders' equity or (iii) the completion of a liquidation event, including the completion of an initial public offering ("IPO"). On August 30, 2018, a portion of the convertible preferred stock warrants were exercised (See Note 7). Further, on November 1, 2018, the Company converted all outstanding shares of convertible preferred stock into shares of common stock, at which time the remaining convertible preferred stock warrants were converted into warrants to purchase common stock and the related liability was reclassified to permanent equity, specifically to additional paid-in capital.

Stock-Based Compensation—The Company measures equity classified stock-based awards granted to employees and directors based on the estimated fair value on the date of grant and recognizes compensation expense of those awards, net of estimated forfeitures, on a straight-line basis over the requisite service period, which is generally the vesting period of the respective award. For awards subject to performance conditions, the Company evaluates the probability of achieving each performance condition at each reporting date and begins to recognize expense over the requisite service period when it is deemed probable that a performance condition will be met using the accelerated attribution method. The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option pricing model, which is described more fully in Note 8. The fair value of each restricted stock award is measured as the fair value per share of the Company's common stock on the date of grant.

Compensation expense related to share-based awards issued to nonemployees is recognized as the awards vest. At each reporting date, the Company revalues the fair value of the award, also using the Black-Scholes option pricing model, and expense related to the unvested portion of such nonemployee awards. As a result, compensation expense related to the unvested share-based awards issued to nonemployees fluctuates as the fair value of the Company's common stock fluctuates.

Warranty—The Company provides standard warranty coverage on its accessories and handsets for one and three years, respectively, providing labor and parts necessary to repair the systems during the warranty period. The Company accounts for the estimated warranty cost as a charge to cost of revenues when revenue is recognized. The estimated warranty cost is based on historical product performance and field expenses.

Utilizing actual service records, the Company calculates the average service hours and parts expense per system to determine the estimated warranty charge. The Company updates these estimated charges periodically. The actual product performance and/or field expense profiles may differ, and in those cases the Company adjusts warranty accruals accordingly.

From time to time, the Company ships mobile devices to its customers as seed stock. The seed stock represents extra units of mobile devices beyond the original mobile devices ordered by the customer and are primarily used to facilitate warranty coverage of mobile devices received by our customers from their direct customers, which is described in Note 4.

Trade-in Guarantee—The Company has provided certain end customers, who purchase a particular device during a defined promotional period, the right to trade-in their original device for a newer model at no additional cost, however, only for a subsequent and defined period of time. The Company accounts for this trade-in right as a guarantee liability and recognizes product revenue net of the fair value of such right, with subsequent changes to the guarantee liability recognized within revenue on a straight-line basis as the trade-in right expires. The guarantee liability is initially measured at fair value and is determined based on assumptions including the probability and timing of a customer upgrading to a new device and the value of the upgraded device. As of December 31, 2019, and 2018, the guarantee liability related to this trade-in was zero and $268, respectively, and is reflected in deferred revenue on the consolidated balance sheets. The trade-in period began July 1, 2018 and ended April 1, 2019. Revenue recognized in 2019 and 2018 approximated $268 and $537, respectively.

Comprehensive Income or Loss—The Company had no items of comprehensive income or loss other than net income (loss) for the years ended December 31, 2019 and 2018. Therefore, a separate statement of comprehensive income (loss) has not been included in the accompanying consolidated financial statements.

Foreign currency translation—The Company uses the U.S. dollar as its functional currency for its significant subsidiaries. Foreign currency assets and liabilities are translated into U.S. dollars at the end-of-period exchange rates except for property, plant and equipment, and related depreciation and amortization, which are translated at the historical exchange rates. Expenses are translated at average exchange rates in effect during each period. Foreign assets held directly by the Company include certain accounts receivable balances and bank accounts which are translated in the U.S. dollar at the end-of-period exchange rates. During the years ended December 31, 2019 and 2018, the Company had approximately $543 and $549, respectively, in net foreign currency transactions losses, which are included in other expense, net on the consolidated statement of operations.

Sales taxes—Sales and value added taxes are accounted for on a net basis and collected from customersand remitted to governmental authorities are not included inrevenue.

Income taxes—The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using the currently enacted tax rates that apply to taxable income in effect for the years in which those tax assets are expected to be realized or settled. The Company records a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized.

Compliance with income tax regulations requires the Company to make decisions relating to the transfer pricing of revenue and expenses between each of its legal entities that are located in several countries. The Company's determinations include many decisions based on management's knowledge of the underlying assets of the business, the legal ownership of these assets, and the ultimate transactions conducted with customers and other third parties. The calculation of the Company's tax liabilities involves dealing with uncertainties in the application of complex tax regulations in multiple tax jurisdictions. The Company may be periodically reviewed by domestic and foreign tax authorities regarding the amount of taxes due. These reviews may include questions regarding the timing and amount of deductions and the allocation of income among various tax jurisdictions. In evaluating the exposure associated with various filing positions, the Company records estimated reserves when it is more likely than not that an uncertain tax position will not be sustained upon examination by a taxing authority. Such estimates are subject to change. See Note 9, "Income Taxes".

Net Loss per Share Attributable to Common Shareholders—The Company follows the two-class method when computing net income per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net income per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income available to common shareholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Net loss per share is calculated by dividing the net loss attributable to common shareholders by the weighted- average number of shares of common stock outstanding during the period. For the years ended December 31, 2019 and 2018, for purposes of the calculation of diluted net loss per share, convertible preferred stock, warrants to purchase stock, unvested restricted stock units and stock options to purchase common stock are considered potentially dilutive securities but have been excluded from the calculation of diluted net loss per share as their effect is antidilutive. As a result, diluted net loss per common share is the same as the basic net loss per share for the periods presented.

The computation of net income (loss) available to common stockholders is computed by deducting the dividends declared and cumulative dividends, whether or, not declared, in the period on preferred stock (whether or not paid) from the reported net income (loss). For the year ended December 31, 2019, there were no cumulative dividends and no impact, whereas for the year ended December 31, 2018, the deduction of dividends resulted in the 2018 net income being reduced to a net loss available to common stockholders for purposes of the computations of earnings per share.

The Company's convertible preferred stock outstanding as of December 31, 2017 and through November 1, 2018, the date prior to the conversion of all preferred stock, contractually entitle the holders of such stock to participate in dividends but do not contractually require the holders of such stock to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss attributable to common stockholders, such losses are not allocated to such participating securities. In periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common shareholders is the same as basic net loss per share attributable to common stockholders, since dilutive common stock are not assumed to have been issued if their effect is antidilutive.

Restructuring and Reduction in Force – In September 2019, the Board of Directors (the "Board") approved, and management commenced and completed, a restructuring plan to reduce operating costs and better align its workforce with the needs of its business. Under the plan, the Company reduced its workforce by 16 employees. Affected employees are eligible to receive severance and COBRA reimbursement payments. In connection with the restructuring, the Company incurred $747 in aggregate restructuring charges related to one-time termination severance payments and other employee-related costs. During the second half of 2019, $209 of related restructuring charges were paid, with the remaining $527 to be paid by the second quarter of 2020. The Company may also incur additional costs not currently contemplated due to events that may occur as a result of, or that are associated with, the workforce reduction.

Departure of Certain Officers and Appointment of Certain Officers — On October 29, 2019, the Company and Mr. Robert Plaschke agreed that Mr. Plaschke will cease serving as the Company's Chief Executive Officer. In connection with Mr. Plaschke's transition, the Company entered into a Transition and Separation Agreement with Mr. Plaschke pursuant to which he will serve as a Senior Advisor to the Board until April 30, 2020**,** at which time he is eligible for a bonus of three-to-six months of his annual salary to be determined by the Company's Board.

On October 29, 2019, the Company entered into an employment agreement with Thomas W. Wilkinson, which governs the terms of Mr. Wilkinson's employment as the Company's Chief Executive Officer and member of the board.

On September 9, 2019, the Company and Mr. James Walker determined that Mr. Walker would cease serving as the Company's Chief Financial Officer. Mr. Walker was deemed eligible to receive certain severance benefits following his last day of employment pursuant to, and subject to the conditions set forth in his existing agreements with the Company, all of which have been previously publicly disclosed, as well as extension of his post-separation option exercise period to January 17, 2020.

On September 10, 2019, the Company entered into an employment agreement with Robert Tirva,which was amended on December 18, 2019,which governs the terms of Mr. Tirva's employment as the Company's Chief Financial Officer. In this role, Mr. Tirva will serve as the Company's principal financial officer and principal accounting officer.

Initial Public Offering ("IPO") —On May 14, 2019, the Company closed an initial public offering ("IPO') in which the Company sold 3,571,429 shares of its common stock, at a price to the public of $11.00 per share. On May 22, 2019, the Company sold an additional 505,714 shares of common stock, and our former Chief Executive Officer sold 30,000 shares of common stock, at a price to the public of $11.00 per share pursuant to the exercise of the underwriters' option to purchase additional shares. The offer and sale of the shares in the IPO were registered under the Securities Act pursuant to a registration statement on Form S-1 (File No. 333-230887), which was declared effective by the SEC on May 9, 2019. The Company raised approximately $36,850 in net proceeds, after deducting underwriting discounts and commissions of $3,139 and offering expenses paid by us of approximately $4,861. Offering costs, which consist of direct incremental legal, consulting, banking and accounting fees relating to the Company's IPO, are offset against proceeds from the IPO within stockholders' equity. As of December 31, 2018, there was $63 of deferred offering costs within other non-current assets on the consolidated balance sheets. During the year ended December 31, 2019, $4,861 in deferred offering costs were incurred and charged to additional paid in capital. Issuance costs totaling $14 were unpaid and charged to accounts payable/accrued expenses as of December 31, 2019.

New accounting pronouncements:

Pronouncements adopted in 2019:

The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and it may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that an emerging growth company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's consolidated financial statements with another public company, which is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period, difficult or impossible because of the potential differences in accounting standards used.

As discussed above, the Company adopted Topic 606 under the modified retrospective method effective January 1, 2019. The adoption of Topic 606 did not materially impact the Company's timing and measurement of revenue recognition as compared to the prior Topic 605 guidance, however, resulted in a cumulative effect adjustment of $3,115, net of the associated income tax effect of $215, to reduce the opening accumulated deficit as of January 1, 2019 relating to the capitalization of certain non-recurring engineering costs that were incurred to fulfill contracts pursuant to Subtopic 340-40, Other Assets and Deferred Costs, which were previously expensed. In addition, the Company identified approximately $770 of deferred revenue as contract liabilities.

The guidance permitted two methods of adoption, the full retrospective method applying the standard to each prior reporting period presented, or the modified retrospective method with a cumulative effect of initially applying the guidance recognized at the date of initial application. The standard also allows entities to apply certain practical expedients at their discretion. We adopted the standard using the modified retrospective method with a cumulative adjustment and provided additional disclosures comparing results to previous U.S. GAAP in Note 2. We applied the new revenue standards only to contracts not completed as of the date of initial application, referred to as open contracts.

In June 2018, the FASB issued ASU 2018-07,*Compensation—Stock Compensation (Topic 718)*. This ASU simplifies the accounting for share-based payments granted to nonemployees for goods and services. Under the ASU, most of the guidance on such payments to nonemployees would be aligned with the requirements for share-based payments granted to employees. This ASU is effective for nonpublic business entities for annual reporting periods beginning after December 15, 2019, with early adoption permitted. The Company elected to early adopt this standard, resulting in no material impact to the consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02,*Income Statement – Reporting Comprehensive Income (Topic 220).* This ASU provides entities with the option to elect to reclassify the income tax effect of the Tax Cuts and Jobs Act on items within AOCI to retained earnings. This ASU is effective for all business entities for annual reporting periods beginning after December 15, 2018. The adoption of ASU 2018-02 did not have an impact on the Company's consolidated financial statements.

In October 2016, the FASB issued ASU 2016-16 *Income Taxes—Intra-Entity Transfers of Assets Other Than Inventory*. ASU 2016-16 requires entities to recognize income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amendments in ASU 2016-16 are effective for annual reporting periods beginning after December 15, 2018 and requires a modified retrospective method of adoption. The adoption of ASU 2016-16 did not have an impact on the Company's consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01,*Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*, as amended, which affect various aspects of recognition, measurement, presentation and disclosure of financial instruments. The amendment is effective for nonpublic business entities for annual periods beginning after December 15, 2018. The adoption of ASU 2016-01 did not have an impact on the Company's consolidated financial statements.

Pronouncements not yet adopted:

In December 2019, the FASB issued ASU

No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes (ASU 2019-12),* which simplifies the accounting for income taxes. This guidance is effective for fiscal years beginning after December 31, 2021 with early adoption permitted. The Company has not yet started evaluating the potential impact of the new standard on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13,*Fair Value Measurement (Topic 820)—Changes to the Disclosure Requirements for Fair Value Measurement* The ASU eliminates certain disclosure requirements for fair value measurements for all entities and modifies some disclosure requirements. This ASU is effective for nonpublic entities beginning after December 15, 2020, with early adoption permitted. The Company is currently evaluating this new standard and the impact it will have on its presentation of the consolidated financial statements.

In July 2018, the FASB issued ASU No. 2018-09,*Codification Improvements*. The ASU amendments represent changes to clarify, correct errors, or make minor improvements to the Accounting Standards Codification. Some amendments do not require transition guidance and are effective immediately. Amendments that require transition guidance have various effective dates. The amendments applicable to and effective for the Company's 2018 fiscal year did not have a significant impact on the Company's consolidated financial statements. The Company has not yet determined the full effects of the remaining amendments within this ASU on its consolidated financial statements, however, many of the remaining amendments are not expected to be applicable to the Company.

In August 2016, the FASB issued ASU 2016-15,*Statement of Cash Flows (Topic 230) – Classification of Certain Cash Receipts and Cash Payments*, which clarifies eight specific cash flow issues in an effort to reduce diversity in practice in how certain transactions are classified within the statement of cash flows. This ASU is effective for nonpublic business entities beginning after December 15, 2019 with early adoption permitted. The Company is currently evaluating this new standard and the impact it will have on its existing accounting policies or presentation of the consolidated statement of cash flows.

In February 2016, the FASB issued ASU 2016-02,*Leases (Topic 842),* as amended, which requires lessees to recognize a liability associated with obligations to make payments under the terms of the arrangement in addition to a right-of-use asset representing the lessee's right to use, or control the use of the given asset assumed under the lease. The standard will be effective for nonpublic business entities for annual reporting periods beginning after December 15, 2021. The Company is currently evaluating this new standard and the impact it will have on its consolidated financial statements, information technology systems, process, and internal controls.

NOTE 2 —Revenue recognition

The following reflect the changes in account balances as a result of the adoptions of ACS 606:

December 31, 2019

	As Reported	Balances Without Adoption of Topic 606	Effect of Change Higher/(Lower)
Assets			
Cash and cash equivalents	$ 11,298	$ 11,298	$ —
Accounts receivable, net	10,082	10,082	—
Inventory	19,531	19,531	—
Prepaid expenses and other current assets	6,430	6,430	—
Total current assets	47,341	47,341	—
Property and equipment, net	1,442	1,442	—
Other assets	6,676	2,337	4,339
Total assets	$ 55,459	$ 51,120	$ 4,339
Liabilities and stockholders' equity			
Current portion of long-term debt	$ 9,821	$ 9,821	$ —
Accounts payable	7,234	7,234	—
Accrued expenses	10,265	10,265	—
Deferred revenue	291	291	—
Total current liabilities	27,611	27,611	—
Income tax payable	1,961	1,931	30
Long-term debt, less current portion	362	362	—
Total liabilities	29,934	29,904	30
Commitments and contingencies			
Common stock	20	20	—
Preferred Stock	—	—	—
Additional paid-in capital	191,751	191,751	—
Accumulated deficit	(166,246)	(170,555)	4,309
Total stockholders' equity	25,525	21,216	4,309
Total liabilities and stockholders' equity	$ 55,459	$ 51,120	$ 4,339

December 31, 2019

	As Reported	Balances Without Adoption of Topic 606	Effect of Change Higher/(Lower)
Net revenues	$ 116,251	$ 116,251	$ -
Cost of revenues	81,742	80,258	1,484
Gross profit	34,509	35,993	(1,484)
Operating expenses:			
Research and development	26,064	28,742	(2,678)
Sales and marketing	13,908	13,908	—
General and administrative	16,182	16,182	—
Restructuring costs	736	736	—
Total operating expenses	56,890	59,568	(2,678)
Income (loss) from operations	(22,381)	(23,575)	1,194
Interest expense	(1,522)	(1,522)	-
Other expense, net	(543)	(543)	-
Income (loss) before income taxes	(24,446)	(25,640)	1,194
Income tax expense	(1,388)	(1,388)	-
Net income (loss)	(25,834)	(27,028)	1,194
Net loss attributable to common stockholders	$ (25,834)	$ (27,028)	$ 1,194
Net loss per share, basic and diluted	$ (1.39)	$ (1.45)	$ 0.06
Weighted–average shares used in computing net loss per share, basic and diluted	18,603,582	18,603,582	

The Company recognizes revenue primarily from the sale of products, including our mobile phones and accessories, and the majority of the Company's contracts include only one performance obligation, namely the delivery of product. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is defined as the unit of account for revenue recognition under ASC 606. The Company also recognizes revenue from other contracts that may include a combination of products and NRE services or from the provision of solely NRE services. Where there is a combination of products and NRE services, the Company accounts for the promises as individual performance obligations if they are concluded as distinct. Performance obligations are considered distinct if they are both capable of being distinct and distinct within the context of the contract. In determining whether performance obligations meet the criteria for being distinct, the Company considers a number of factors, such as the degree of interrelation and interdependence between obligations, and whether or not the good or service significantly modifies or transforms another good or service in the contract. During the year ended December 31, 2019, the Company did not have any contracts in which the products and NRE services were concluded to be a single performance obligation. In certain cases, the Company may offer tiered pricing based on volumes purchased for specific model phones. To date, all tiered pricing provisions have fallen into observable ranges of pricing to existing customers, thus, not resulting in any material right which could be concluded as its own performance obligation. In addition, the Company does not offer material post-contract support services to its customers.

Net revenue for an individual contract is recognized at the related transaction price, which is the amount the Company expects to be entitled to in exchange for transferring the goods and/or services. The transaction price for product sales is calculated as the product selling price net of variable consideration which may include estimates for marketing development funds, sales incentives, and price protection and stock rotation rights. The Company generally does not offer a right of return to its customers. Typically, variable consideration does not need to be constrained as estimates are based on specific contract terms. However, the Company continues to assess variable consideration estimates such that it is probable that a significant reversal of revenue will not occur. The transaction price for a contract with multiple performance obligations is allocated to the separate performance obligations on a relative standalone selling price basis. Standalone selling prices for products are determined based on the prices charged to customers, which are directly observable. Standalone selling price of the professional services are mostly based on time and materials. We determine our estimates of variable consideration based on historical collection experience with similar payor classes, aged accounts receivable by payor class, terms of payment agreements, correspondence from payors related to revenue audits or reviews, our historical settlement activity of audited and reviewed claims and current economic conditions using the portfolio approach. Revenue is recognized only to the extent that it is probable that a significant reversal of the cumulative amount recognized will not occur in future periods.

Revenue is then recognized for each distinct performance obligation as control is transferred to the customer. Revenue attributable to hardware is recognized at the time control of the product transfers to the customer. Revenue attributable to professional services is recognized at the time the Company has performed the professional services to the customer.

Disaggregation of revenue

The following table presents our Net revenue disaggregate by product category for the years ended:

	Year Ended December 31,	
	2019	**2018**
	(in thousands)	
Smartphones	$ 57,981	$ 89,379
Feature Phones	52,714	35,510
Accessories/Other	5,556	10,776
Total Revenue	$ 116,251	$ 135,665

Shipping and handling costs

The Company has elected to account for shipping and handling activities related to contracts with customers as costs to fulfill the promise to transfer the associated products.

Contract costs

Applying the practical expedient, the Company recognizes the incremental costs of obtaining contracts as an expense when incurred when the amortization period of the assets that otherwise would have been recognized is one year or less. These costs are included in sales and marketing and general and administrative expenses.

The costs associated with design and development non-recurring engineering activities for technical approval represent costs to fulfill a contract pursuant to ASC 340-40. Accordingly, the Company capitalizes these non-recurring engineering costs and amortizes such costs over the estimated period of time over which they are expected to be recovered, which is typically, the estimated life of a particular model phone.

As of January 1, 2019, the total costs to fulfill a contract which were deferred and capitalized upon adoption of ASC 606 totaled $3,330 and were recorded in Other Assets. As of December 31, 2019, the total costs to fulfill a contract were $4,524. The increase in the total capitalized costs to fulfill a contract is primarily associated with the Company's introduction of its new XP8 model phone

Contract balances

The Company records accounts receivable when it has an unconditional right to consideration. As of December 31, 2019, the Company does not have a contract receivable balance. Contract liabilities are recorded when cash payments are received or due in advance of performance. Contract liabilities consist of advance payments and deferred revenue, where the Company has unsatisfied performance obligations. Contract liabilities are presented as a component of deferred revenue on the consolidated balance sheets. As of January1, 2019 and December 31, 2019, the contract liabilities were $770 and $291, respectively, with the contract liabilities as of December 31, 2019 expected to be recognized into revenue in FY 2020.

The following table is a rollforward of contract balances as of December 31, 2019:

	Contractual Liability
Balance at January 1, 2019	$ 770
Recognition of revenue	(481)
Addition of revenue	2
Balance at December 31, 2019	$ 291

NOTE 3 —Fair value measurement

The fair value measurements standard establishes a framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements). The three levels of the fair value hierarchy under the standard are described below:

Level 1—Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Company has the ability to access.

Level 2—Inputs to the valuation methodology include:

- Quoted market prices for similar assets or liabilities in activemarkets;
- Quoted prices for identical or similar assets or liabilities in inactivemarkets;
- Inputs other than quoted prices that are observable for the asset orliability;
- Inputs that are derived principally from or corroborated by observable market databy correlation or other means.

If the asset or liability has a specified (contractual) term, the level 2 input must be observable for substantially the full term of the asset or liability.

Level 3—Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used for assets and liabilities measured at fair value. There have been no changes in the methodologies used for the years ended December 31, 2019 and 2018.

Money market funds are classified within level 1 of the fair value hierarchy because they are valued using quoted market prices.

The warrant liability was classified within level 3 of the fair value hierarchy because there was no active market for the warrant or for similar warrants. The fair value of the Series A and Series B warrants at September 30, 2018, and November 2, 2018, was estimated by first applying a weighting of the income approach and the market approach to determine the equity value of the Company. An Option-Pricing Method ("OPM") was then used to allocate the total equity value of the Company to the different classes of equity according to their rights and preferences. As the Company was a private company at September 30, 2018 and November 2, 2018, the fair value measurement was based on significant inputs that are not observable in the market and thus represent Level 3 inputs. As of December 31, 2019, and December 31, 2018, as a result of the Company's November 2018 stock conversion of preferred shares into common shares, all Series A and Series B warrants outstanding are now exercisable into common stock and are no longer required to be remeasured at fair value on a recurring basis.

Trade-in guarantee liability is classified within level 3 of the fair value hierarchy because the fair value measurement is based on inputs that are not observable in the market, including the probability and timing of a customer upgrading to a new device and the value of the upgraded device.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables sets forth by level, within the fair value hierarchy, the Company'sassets and liabilities at fair value:

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds *	$ 9,250	$ —	$ —	$ 9,250
Liabilities:				
Trade-in Guarantee**	$ —	$ —	$ —	$ —

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds *	$ 11,006	$ —	$ —	$ 11,006
Liabilities:				
Trade-in Guarantee**	$ —	$ —	$ 268	$ 268

* Included in cash and cash equivalents on the consolidated balance sheets.

** Included in deferred revenue on the consolidated balance sheets.

The table below sets forth a summary of changes in the fair value of the Company's level 3 liabilities for the years ended December 31, 2019 and 2018:

	Warrant Liability	Trade-In Guarantee
Balance at January 1, 2019	$ —	$ 268
Recognition of revenue	—	(268)
Balance at December 31, 2019	$ —	$ —
Balance at January 1, 2018	$ 3,785	$ 805
Recognition of revenue	—	(537)
Change in fair value	970	—
Exercised and reclassified to equity	(1,804)	—
Conversion of preferred stock to common stock and reclassified to equity	(2,951)	
Balance at December 31, 2018	$ —	$ 268

NOTE 4 —Significant Balance Sheet Components

Inventory consisted of the following:

	December 31	
	2019	2018
Devices – for resale	$ 13,559	$ 11,319
Raw materials	4,522	8,826
Accessories	1,450	1,686
	$ 19,531	$ 21,831

During the year ended December 31, 2019, the Company recorded a one-time inventory reserve adjustment of $3.1 million as a result of aging materials and finished goods and accrued a loss of $0.7 million of purchase commitments in connection with end of life products.

Prepaids and other current assets consisted of the following:

	December 31	
	2019	2018
Deposits for manufacturing inventory	$ 897	$ 4,294
Prepaid taxes	1,031	606
Refundable value added taxes	1,376	2,561
Prepaid licenses and royalties	761	1,128
Director & officer insurance	604	—
Prepaid parts (direct buy)	536	458
Other	1,225	1,064
	$ 6,430	$ 10,111

Property and equipment consisted of the following:

	December 31	
	2019	2018
Computer equipment	$ 5,087	$ 4,182
Software	981	981
Furniture, fixtures, and office equipment	175	173
Leasehold Improvements	179	152
	6,422	5,488
Less: accumulated depreciation and amortization	(4,980)	(4,417)
	$ 1,442	$ 1,071

Depreciation and amortization expense of property and equipment for the years ended December 31, 2019 and 2018, was $3,525 and $1,850, respectively.

Accrued Expenses consisted of the following:

	December 31	
	2019	2018
Customer allowances	$ 2,647	$ 5,732
Employee-related liabilities	1,873	3,077
Warranties	1,154	1,103
Accrual for goods received not invoiced	1,047	2,700
Contractual obligations	1,230	—
Royalties	657	1,212
Contractors	285	36
Research and development	271	462
Shipping	120	480
Interest	33	275
Commissions	—	290
Other	948	1,014
	$ 10,265	$ 16,381

Warranty Liability consisted of the following:

The table below sets forth the activity in the warranty liability account, which is included in accrued expenses on the consolidated balance sheets for the periods ended December 31, 2019 and 2018:

Balance, January 1, 2019	$	1,103
Additions		1,157
Cost of warranty claims		(1,106)
Balance, December 31, 2019	$	1,154
Balance, January 1, 2018	$	1,742
Additions		355
Cost of warranty claims		(994)
Balance, December 31, 2018	$	1,103

NOTE 5 —Borrowings

Senior Credit Agreement

The Company has a loan and security agreement ("LSA") with East West Bank (the "Senior Lender" or "EWB"), as amended. Under the terms of the LSA, as amended, the Senior Lender has provided for a $6,000 line of credit; provided that we maintain amounts on deposit with equal to any amounts borrowed under the LSA.

We maintain a credit line with EWB pursuant to the EWB Loan Agreement. In the future, we may borrow up to $8,000 under the line of credit available under the EWB Loan Agreement; provided that we maintain amounts on deposit with EW equal to any amounts borrowed un the EWB Loan Agreement. As of December 31, 2019, no amounts were outstanding under the EWB Loan Agreement. Borrowings under the EWB Loan Agreement bear interest at 1.0% plus the prime lending rate. Borrowings under the EWB Loan Agreement are secured by a senior lien on substantially all of our assets, including inventory and receivables, subject to permitted liens. In the event of a default under the EWB Loan Agreement, entities affiliated with B. Riley Financial and Investec Investments (UK) Limited, two of our stockholders, have the right to purchase the indebtedness under the EWB Loan Agreement at par and to exercise remedies for the default, in their discretion, as the holders of the indebtedness.

The EWB Loan Agreement contains certain negative and affirmative covenants as well as financial covenants, including covenants that restrict our ability to, among other things, incur or prepay indebtedness on subordinated debt, dispose of assets, engage in mergers and consolidations, make acquisitions or other investments, exceed annual capital expenditure limits, as defined, and make changes in the nature of the business. Objective events of default, therein, include, without limitation, nonpayment of principal, interest or other obligations, violation of the covenants, insolvency, and court-ordered judgments. Audited financial statements are required to be submitted to the lenders no later than 120 days after year end. In particular, we are required to maintain a minimum availability under the line of credit under the EWB Loan Agreement of $750 and maintain a fixed charge coverage ratio, defined as the sum of Adjusted Covenant EBITDA plus capital expenditures minus taxes and dividends over fixed charges, of at least 1.05 to 1.00 as of the last of each month.

In 2018, the financial covenants were amended to temporarily suspend the obligation to comply with the minimum fixed charge coverage ratio through September 30, 2018, to increase the minimum fixed charge coverage ratio as of December 31, 2018, and for the last day of each month thereafter, from 1.05 to 1.10, and to increase the minimum excess availability to $1,200. In 2018, the financial covenants were amended to permanently remove the requirement to maintain positive Adjusted Covenant EBITDA. As a result, as of the period ended March 31, 2018, we were no longer subject to this Adjusted Covenant EBITDA financial covenant. In October 2019, the financial covenants were amended to suspend the obligation to comply with the minimum fixed charge coverage ratio through the maturity date, which was amended to February 28, 2020, a cash block was placed on interest payments under the Company's subordinated debt under the Riley Loan Agreement (as defined below) and the establishment of a blocked account was mandated, following which we may request revolving advances up to the amount on deposit in such blocked account in EWB's discretion.

As of December 31, 2019, and 2018, no amounts were outstanding under the EWB Loan Agreement. As of both December 31, 2019 and 2018, the Company had remaining borrowing capacity of up to $8,000 against the line of credit. As of September 30, 2019, the Company was not in compliance with one of the financial covenants, specifically the fixed charge coverage ratio, however, the Senior Lender waived such noncompliance in October 2019 by amending the EWB Loan Agreement through February 2020. The Senior Lender subsequently extended the wavier to May 2020. The Company has established a blocked account as required by the Senior Lender to resume future borrowings if needed.

Long-Term Debt

Riley Loan— On October 26, 2017 (the "Effective Date"), the Company entered into a Subordinated Term Loan and Security agreement (the "Riley Loan Agreement") with B. Riley Principal Investments, LLC ("BRPI"), an affiliate of B. Riley Financial, Inc., a shareholder of the Company. Under the original Riley Loan Agreement, the Company could borrow principal up to $10,000 via a subordinated secured convertible promissory note (the "Convertible Note"), with an optional conversion feature as described below.

During the year ended December 31, 2018, the Company amended the Riley Loan Agreement to increase the available aggregate principal borrowings to $12,000. The 2018 amendments did not change the terms of the original Riley Loan Agreement other than to provide a waiver of the defined prepayment penalties if any repayment does not reduce the principal amount outstanding below $10,000. The Riley Loan Agreement, as amended, matures on September 1, 2022 (the "Maturity Date") and carries a stated interest rate of 10% and provided that the first year of interest commencing on October 26, 2018 be compounded into the principal, with interest-only payments beginning thereafter. In October 2019, a cash block was placed on interest payments under the Riley Loan Agreement, which was accepted by B. Riley.

As of December 31, 2019, and 2018, the total outstanding principal and interest under the Riley Loan Agreement, as amended, was $10,003 and $13,001, respectively. During the three months ended September 30, 2019, the Company repaid $3,250, or 25% of the principal amount under the Riley Loan Agreement and incurred a 2% fee on the amount below the $10,000 threshold as a result of the prepayment. During the fourth quarter of 2019, the compounded interest, which was added to the outstanding principal totaled $251.

The Company has classified the debt as current as the business has materially adversely changed. as defined in the Riley Loan Agreement and is callable by BRPI. The Company has not been notified by BRPI of any intent to call the debt.

Optional Conversion— On November 2, 2018, in conjunction with the Company's conversion of all of its outstanding shares of preferred stock into shares of common stock (See Note 6) and the 15-to-1 reverse stock split, the Company amended the optional conversion terms of its existing Convertible Note. As amended, the Convertible Note provides that at any time, on or prior to the Maturity Date, BRPI may elect to convert principal amounts outstanding, including accrued interest, as limited below, into shares of common stock at $8.87 per share. The number of shares of common stock to be issued upon conversion is limited to the sum of (A) the lesser of (i) the principal outstanding and (ii) the aggregate principal amount borrowed under the Riley Loan Agreement to date multiplied by the Designated Percentage as described below, and (B) accrued interest. The "Designated Percentage" is one hundred percent (100%) if the conversion date is prior to the first anniversary of the Effective Date, seventy-five percent (75%) in Year 2 of the Riley Loan Agreement, fifty percent (50%) in Year 3, twenty-five percent (25%) in Year 4, and twelve and a half of percent (12.5%) in the final year of the Riley Loan Agreement on or prior to the Maturity Date.

Promissory Notes Payable—In 2014 and 2017, the Company entered into agreements with one of its suppliers, whereby certain of its trade payables for royalties and royalty up-front payments were converted to payment plans. In December 2018, the Company amended its accounts payable financing agreements, effective January 1, 2019, which provides for the $736 outstanding balance to be paid in twenty equal quarterly installments. The amounts due under these agreements would be paid in quarterly installments over periods from two to four years, with interest ranging up to 8%. Remaining balances are $508 and $718 at December 31, 2019 and 2018, respectively.

Other Financing Arrangements—In 2017, the Company entered into three financing arrangements totaling approximately $472 with remaining maturity dates of June 2020 and August 2020. During 2019, the Company repaid the remaining outstanding balance. As of December 31, 2019, and 2018, the remaining balances were zero and $238, respectively.

The components of the long-term debt balance as of December 31 are as follows:

	2019	2018
Convertible note	$ 10,003	$ 13,001
Less unamortized discount and debt issuance costs	(328)	(447)
Subtotal Convertible note	9,675	12,554
Promissory note payable	508	718
Other	—	238
Subtotal long-term debt	10,183	13,510
Less current portion	(9,821)	(301)
Total long-term debt	$ 362	$ 13,209

Future aggregate annual principal payment on all long-term debt, excluding the discount of $328, are as of December 31, 2019:

Year Ending, December 31st,	
2020	$ 144
2021	144
2022	10,146
2023	77
	$ 10,511

NOTE 6 —Convertible Preferred Stock and Stockholders' Equity

Under the Company's Amended and Restated Certificate of Incorporation dated October 23, 2017, the authorized capital stock of the Company consisted of 33,853,333 shares of capital stock (par value of $0.001 per share), comprising 18,666,666 shares of common stock and 15,186,664 shares of convertible preferred stock, of which 1,266,666 shares were designated as Series A-3, 1,186,666 shares were designated as Series A-2 convertible preferred stock ("Series A-2"), 1,733,333 shares were designated as Series A-1 convertible preferred stock ("Series A-1"), 9,333,333 shares were designated as Series A convertible preferred stock ("Series A"), and 1,666,666 shares were designated as Series B convertible preferred stock ("Series B").

On November 1, 2018, the Company converted all outstanding shares of Series A, Series A-1, Series A-2 and Series B into shares of common stock. Prior to this conversion, the Company also approved the payment of dividends to all holders of Series A, Series A-1 and Series A-2 of record on this date. The value of the dividends of $6,539 were determined in accordance with the terms of the Amended and Restated Certificate of Incorporation dated October 23, 2017, based on the stated dividend rate per respective Series. The total Series A, Series A-1 and Series A-2 shares issued as dividends was 944,694, 66,255 and 49,456, respectively. The dividends of $10,152 were recorded at fair value as of the date of Board approval. The total outstanding preferred shares of 13,277,864, inclusive of historical shares issued as dividends, were converted into common stock.

On November 2, 2018, the Company amended and restated its previous certificate of incorporation and adjusted its authorized capital stock (par value of $0.001) to consist of 100,000,000 shares of common stock and 5,000,000 shares of preferred stock. Each outstanding share of common stock entitles the holder to one vote of each matter properly submitted to the stockholders of the Company for vote. During the year ended December 31, 2019, no shares of preferred stock have been issued.

On November 2, 2018, the Company entered into a Securities Purchase Agreement for the sale of 2,089,136 shares of common stock, under which 1,270,905 shares of common stock were sold as of December 31, 2018, at $7.18 per share for net proceeds of approximately $8,295. Issuance costs approximating $831 were incurred and netted against the proceeds within the consolidated statements of stockholder's equity (deficit). The Company sold an additional 227,628 shares of common stock for net proceeds of $1,604, incurring issuance costs of $30 and were netted against the proceeds within the consolidated statements of stockholder's equity (deficit) in January 2019.

On April 24, 2019, the Company issued 10,000 shares of common stock to a former employee in exchange for a release of claims and other agreements.

On October 15, 2019, the Company issued 666 shares of common stock to a vendor as compensation in exchange for timely completion of services.

The following table shows shares of common stock reserved as of:

	December 31	
	2019	2018
Shares subject to options to purchase common stock	2,645,714	1,320,197
Unvested restricted stock units	249,500	—
Shares subject to warrants to purchase common stock	956	156,294
Shares subject to term debt optional conversion into common stock	761,186	1,099,278
Total	3,657,356	2,575,769

The following summarizes the terms of the convertible preferred stock outstanding under the Amended and Restated Certificate of Incorporation dated October 23, 2017 prior to the November 2018 conversion into common stock.

Convertible preferred stock—Preferred stock was not redeemable.

Dividend provisions—The holders of Series A-3, Series A-2, Series A-1 and Series A in preference to the holders of Series B and common stock, were entitled to receive cumulative dividends at a rate of 5%, 5%, 5% and 15%, respectively, of the Series A-3, Series A-2, Series A-1, and Series A original issue prices per annum, respectively, on each outstanding share of Series A-3, Series A-2, Series A-1, and Series A, respectively, (as adjusted for any stock dividends, combinations, splits, and the like with respect to such shares). The Series A-3, Series A-2, Series A-1 and Series A dividends accrued on each outstanding share of Series A-3, Series A-2, Series A-1 and Series A, respectively, from day to day commencing on the date of original issuance whether or not earned or declared by the Board of Directors, whether or not there are profits, surplus, or other funds legally available for the payment thereof and was cumulative to the extent not actually paid. The Series A-3, Series A-2, Series A-1, and Series A dividends were payable in cash or in Series A-3, Series A-2, Series A-1 and Series A shares, respectively, at the original Series A-3, Series A-2, Series A-1, and Series A issue price, respectively. The original issue prices for Series A-1 and Series A was approximately $6.03. The original issue prices for Series A-3, and Series A-2 was approximately $8.87.

Dividends on the Series B were only payable in the event the Company paid dividends to common stockholders. Through November 2, 2018, no dividends were declared or paid to common stockholders.

Through November 2018, cumulative dividends of approximately $32,499 have been paid through the issuance of 4,467,139 shares of Series A, 164,604 shares of Series A-1, and 105,822 shares of Series A-2.

Liquidation preference—In the event of any liquidation, dissolution, or winding up of the Company, or in the event that the Company was party to an acquisition or asset transfer, the holders of Series A-1 shares outstanding were entitled to be paid, out of the available funds and assets, and prior and in preference to any payment or distribution of any such funds on any shares of Series A-3, Series A-2, Series A, Series B, or common stock, an amount per share equal to the original issue price of Series A-1, plus all cumulative unpaid dividends. If assets were not sufficient to permit payment in full to all holders of Series A-1, such assets would be distributed among the holders of Series A-1 ratably in proportion to the full amounts to which they would be entitled.

After payment in full to the holders of Series A-1, as mentioned above, the holders of Series A shares outstanding were entitled to be paid, out of the available funds and assets, and prior and in preference to any payment, or distribution of any such funds on any shares of Series A-3, Series A-2, Series B or common stock, an amount per share equal to one times the original issue price of Series A, respectively, plus cumulative dividends at the rate of 15% of the original issue price. If assets were not sufficient to permit payment in full to all holders of Series A, such assets would be distributed among the holders of Series A ratably in proportion to the full amounts to which they would be entitled.

In addition to the foregoing and in connection with the August 2016 preferred stock agreement with an investor (the "August 2016 Investor") to purchase 466,014 shares of Series A, the Company was obligated to pay to the August 2016 Investor (concurrently with the payment of the Series A Liquidation Preference and Series A-1 Liquidation Preference, as applicable, and prior to the payment of any Series B Liquidation Preference or Participation Payments, if any) an amount that is equal to $5.22 multiplied by the amount the August 2016 Investor actually receives in such liquidation pursuant to payment of the Series A-1 Liquidation Preference and Series A Liquidation Preference, if any (and, for purposes of clarity, not in payment of any Participation Payment, if any), with respect to the shares then held by and warrant shares totaling 466,014 then held by, or issuable to, the August 2016 Investor.

After payment in full to the holders of Series A-1 and Series A, as mentioned above, the holders of Series B shares outstanding were entitled to be paid, out of the available funds and assets, and prior and in preference to any payment, or distribution of any such funds on any shares of Series A-2, Series A-3, or common stock, an amount per share equal to one times the original issue price of Series B, plus all declared but unpaid non-cumulative dividends. If assets were not sufficient to permit payment in full to all holders of Series B, such assets would be distributed among the holders of Series B ratably in proportion to the full amounts to which they would be entitled.

After payment in full to the holders of Series A-1 and Series A and Series B, as mentioned above, the holders of Series A-3 and Series A-2 shares outstanding were entitled to be paid, out of the available funds and assets, and prior and in preference to any payment, or distribution of any such funds on any shares of common stock, an amount per share equal to all accrued and unpaid dividends on the Series A-3 and Series A-2 shares, respectively. If assets were not sufficient to permit payment in full to all holders of Series A-3 and Series A-2, such assets would be distributed among the holders of Series A-3 and Series A-2 ratably in proportion to the full amounts to which they would be entitled.

After payment in full to the holders of Series A-3, Series A-2, Series A-1, Series A and Series B, as mentioned above, any remaining assets available for distribution would be distributed ratably among the holders of common stock, Series A-3, Series A-2, Series A-1, Series A, and Series B, on an as-if converted to common stock basis for the convertible preferred stockholders, and common stock.

Conversion rights—Each outstanding share of convertible preferred stock was convertible, at the option of the holder, at any time after the date of issuance of such shares, into shares of common stock according to a Conversion Formula as defined in the Certificate of Incorporation dated October 23, 2017. The conversion rate was one share of common stock for each share of convertible preferred stock and was subject to adjustment for such events such as stock splits and combinations.

Anti-dilution rights—The holders of each share of convertible preferred stock were entitled to conversion price adjustments if the Company sold additional shares of its common stock for a price less than any then effective preferred stock conversion price.

Voting rights—Excluding Series A-3 which were non-voting shares, the holders of each share of convertible preferred stock were entitled to the number of votes equal to the number of shares of common stock into which such share was convertible.

NOTE 7 —Warrants

In connection with an August 2016 preferred stock agreement ("PSA"), the Company issued the August 2016 PSA Warrant. The warrant becomes exercisable into Series A preferred shares as follows: 1) 155,338 shares vested in each of August 2017, 2018 and 2019. If, subsequent to the issuance of the August 2016 PSA warrant, the Company declares or pays dividends on Series A in the form of common shares, cash or a security other than Series A, then upon exercise of this warrant, the holder is entitled to receive dividends as if the holder had owned the Series A preferred shares as of the date the dividend is declared.

The Company's October 2017 Amended and Restated Certificate of Incorporation included a provision that a change of control, as defined, results in a cash redemption of Series A and Series B. The ability to effect a change in control was within the control of the preferred stockholders. As a result of effecting a change in control being outside the control of the Company, the warrants to purchase Series A and Series B were classified as liabilities, with subsequent changes in fair value recorded in the Company's consolidated statements of operations. During the years ended December 31, 2019 and 2018, the Company recognized other expense of zero and $970, respectively, from the remeasurement of the fair value of this warrant.

On August 30, 2018, warrants to purchase 310,676 shares of Series A were exercised in exchange for consideration of $47. Upon exercise, the fair value of the warrants at the time of exercise of $2,951 was reclassified from liability to equity. Additionally, in connection with this exercise, the Company amended the original PSA ("Amended PSA") to revise the terms for the then outstanding unvested warrants. In accordance with the terms of the Amended PSA, upon any reclassification, exchange, conversion, substitution, or other event that occurs on or after the original issuance date and prior to the termination which results in a change of the number and/or class of securities issuable upon exercise of conversion of the warrant, the holder of the warrant shall be entitled to receive, upon exercise, the number and kind of securities and property that such holder would have received as if the warrant had been exercised immediately before such reclassification, exchange conversion substitution or other event. As a result of the Company's conversion of all outstanding preferred shares into common stock, the remaining outstanding warrants are now exercisable into common shares. On November 2, 2018, in connection with the Company's conversion of outstanding preferred stock to common stock, the Company reclassified the remaining warrants outstanding from liability to equity based on the terms of the August 30, 2018 amended warrant agreement, as defined above. As a result, the outstanding liability at the time of the conversion of $1,804 was reclassified into stockholder's equity (deficit).

There were 155,338 warrants exercised on May 10, 2019 for total cash proceeds of $23. During the year ended December 31, 2018, warrants to purchase 5,977 shares of preferred stock expired.

The following table discloses warrants issued and outstanding as of December 31, 2019 and 2018:

	December 31, 2019			December 31, 2018		
Issuance date	Exercise price	Number of warrant shares	Year of expiration	Exercise price	Number of warrant shares	Year of expiration
Common						
November 2012	$ 6.00	7	2028	$ 6.00	7	2028
November 2012	$ 6.00	927	2020	$ 6.00	927	2020
November 2012	$ 14.50	22	2028	$ 14.50	22	2028
August 2016	—	—		$ 0.15	155,338	2023
Total warrants		956			156,294	

NOTE 8—Stock-based Compensation

As of December 31, 2019, the Company had the 2012 Equity Incentive Plan (the "2012 Option Plan") and 2019 Equity Incentive Plan (the "2019 Option Plan") in place.

As of December 31, 2019, the number of shares available to be issued under the 2012 Option Plan and 2019 Option Plan were zero and 944,828 respectively.

As of December 31, 2018, the Company had the 2012 Option Plan in place and the number of shares remaining to be issued under the plan was 455,557.

The Option Plans provides for the grant of incentive and non-statutory stock options ("Options"), stock appreciation rights ("SAR"), restricted stock awards ("RSA"), and restricted stock unit awards ("RSU") to employees, nonemployee directors, and consultants of the Company. Option awards granted under the Option Plan generally become exercisable ratably over a two-year or four-year period following the date of grant and expire ten years from the date of grant. At the discretion of the Company's Board of Directors, certain awards may be exercisable immediately at the date of grant but are subject to a repurchase right, under which the Company may buy back any unvested shares at their original exercise price in the event of an employee's termination prior to full vesting. All other awards are exercisable only to the extent vested. At December 31, 2019 and 2018, there were no shares that had been early exercised that were subject to the Company's repurchase right at that date. The exercise price or strike price for Options and SARs granted under the Option Plan must generally be at least equal to 100% of the fair value of the Company's common stock at the date of grant, as determined by the Board of Directors. The exercise price of incentive stock options granted under the Option Plan to ten percent or greater stockholders must be at least equal to 110% of the fair value of the Company's common stock at the date of grant, as determined by the Board of Directors, and are not exercisable after five years from the date of grant.

The Company's board of directors adopted, and its stockholders approved, the 2019 Employee Stock Purchase Plan and the 2019 Equity Incentive Plan in March 2019 and April 2019, respectively, each of which became effective in connection with the IPO. There are 541,379 shares of common stock reserved for issuance under the 2019 Employee Stock Purchase Plan. Additionally, the number of shares of common stock reserved for issuance under the 2019 Employee Stock Purchase Plan will automatically increase on January 1 of each calendar year for 10 years, starting January 1, 2020, and ending on, and including, January 1, 2029, in an amount equal to the lesser of 1% of the total number of shares of capital stock outstanding on December 31st of the prior calendar year, and (ii) 500,000 shares, unless the board of directors or compensation committee determines prior to such date that there will be a lesser increase, or no increase. 2,906,900 shares of common stock are reserved for future issuance under the 2019 Equity Incentive Plan, plus the number of shares subject to outstanding stock options or other stock awards that were granted under the 2012 Option Plan that are forfeited, terminated, expire or are otherwise not issued. Additionally, the number of shares of common stock reserved for issuance under the 2019 Equity Incentive Plan will automatically increase on January 1 of each calendar year for 10 years, starting January 1, 2020 and ending on and including January 1, 2029, in an amount equal to 5% of the total number of shares of capital stock outstanding on December 31 of the prior calendar year, unless the board of directors or compensation committee determines prior to the date of increase that there will be a lesser increase, or no increase. The purchase price of the shares will not be less than the lesser of an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the Offering Date or an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the applicable Purchase Date.

As of December 31, 2019, 68,606 shares have been issued under the 2019 Employee Stock Purchase Plan.

On April 10, 2019, the Company granted an aggregate of 128,000 restricted stock units to the Company's executives, of which 38,000 were forfeited and 90,000 are outstanding at December 31, 2019.

On May 13, 2019, the Company granted a fully vested restricted stock award of 383,197 shares, and issued 210,758 net shares of common stock after withholding 172,439 shares of common stock totaling $1,897, recorded as a reduction to additional paid-in capital, to satisfy tax obligations associated with the grant, to the Company's Chief Executive Officer as a bonus pursuant to his employment agreement. As a result, the Company recorded $4,215 as compensation expense to operating expenses under the Statement of Operations during the year ended December 31, 2019.

In connection with the IPO, the Company accelerated vesting of 201,666 options dated September 10, 2018, pursuant to the employment agreement of the Company's Chief Financial Officer. As a result, the Company recorded $287 as compensation expense to operating expenses under the Statement of Operations during year ended December 31, 2019.

Stock-based compensation expense is as follows:

	For the Year Ended December 31	
	2019	2018
Research and development	$ 394	$ 41
Sales and marketing	664	66
General and administrative	5,208	111
Cost of revenues	42	34
	$ 6,308	$ 252

Stock Options:

Stock option activity for the years ended December 31, 2019 and 2018 is as follows:

	Options	Weighted average exercise price per share	Weighted average remaining contractual life (in years)	Aggregate Intrinsic Value
Outstanding at January 1, 2018	**1,126,722**	**$ 0.68**	**8.14**	**$ 470**
Options granted	458,156	$ 0.90		
Options exercised	(15,475)	$ 1.12		
Options forfeited	(249,206)	$ 0.61		
Options cancelled	—	—		
Outstanding at December 31, 2018	**1,320,197**	**$ 0.77**	**7.99**	**$ 8,465**
Options granted	1,635,853	$ 5.94		
Options exercised	(95,739)	$ 0.85		
Options forfeited	(186,266)	$ 7.02		
Options cancelled	(28,331)	$ 2.72		
Outstanding at December 31, 2019	**2,645,714**	**$ 3.50**	**8.51**	**$ 4,184**
Vested and expected to vest at December 31, 2019	2,645,714	$ 3.50	8.51	$ 4,184
Vested at December 31, 2019	1,058,169	$ 2.80	7.05	$ 2,431

As of December 31, 2019, there was approximately $4,019 of unamortized stock-based compensation cost related to unvested stock options, which is expected to be recognized over a weighted average period of three years.

The total pre-tax intrinsic value of options exercised during the years ended December 31, 2019 and 2018 was $266 and $94 respectively. The intrinsic value is the difference between the estimated fair value of the Company's common stock at the date of exercise and the exercise price for in-the-money options.

The weighted average grant date calculated value of options granted during the years ended December 31, 2019 and 2018 was $2.84 and $1.85, respectively.

The fair value of employee stock options is determined using the Black-Scholes option-pricing model using various inputs, including the Company's estimates of the fair value of common stock on the date of grant, expected term, expected volatility, risk-free interest rate, and expectations regarding future dividends. Share-based compensation also reflects the Company's estimate regarding the portion of awards that may be forfeited.

The following describes the key inputs used by the Company:

Fair Value of Common Stock—The fair value of the stock was determined by a 409A Valuation with a third-party pre-IPO and is now determined by the price of the stock on the open market.

Expected Term—The expected term represents the period that the Company's stock options are expected to be outstanding. The majority of stock option grants are considered to be "plain vanilla" and thus the Company determines the expected term using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the options.

Expected Volatility—The expected volatility was derived from the historical stock volatilities of several unrelated public companies within the Company's industry that the Company considers to be comparable to the business over a period equivalent to the expected term of the stock option grants. The Company completed its IPO in May 2019, and therefore does not have sufficient history.

Risk-Free Interest Rate—The risk-free interest rate is based on the interest yield in effect at the date of grant for zero coupon U.S. Treasury notes with maturities approximately equal to the option's expected term.

Dividend Rate—The expected dividend rate was assumed to be zero, as the Company has not previously paid dividends on common stock and has no current plans to do so.

Forfeiture Rate—Effective January 1, 2018, forfeitures are recognized when they occur. Historically, the Company estimated the forfeiture rate based on an analysis of actual forfeiture experience, analysis of employee turnover behavior, and other factors.

The calculated fair value of option grants made during the years ended December 31, 2019 and 2018, were estimated using the following Black-Scholes option pricing model assumptions:

	2019	2018
Expected dividend yield	0 %	0 %
Risk-free interest rate*	1.59%-2.33%	2.86 %
Expected volatility	50 %	50 %
Expected life (in years)	6.25	5.75-6.25

*All 2018 options granted on same date.

The following table summarizes information about stock options outstanding as of December 31, 2019 and 2018:

	2019				
	Options outstanding			Options exercisable	
Exercise price	Total Outstanding	Weighted average remaining contractual life	Total exercisable	Weighted average exercise price	
$ 0.45	356,906	4.70	286,322	$	0.45
$ 0.75	325,747	7.09	255,364	$	0.75
$ 0.90	369,056	8.69	219,743	$	0.90
$ 1.35	41,815	4.58	45,148	$	1.35
$ 1.50	35,232	5.52	38,565	$	1.50
$ 2.26	169,000	9.84	-	$	2.26
$ 2.48	610,000	9.92	-	$	2.48
$ 3.87	219,640	10.00	-	$	3.87
$ 10.94	518,318	9.27	213,027	$	10.94
	2,645,714	7.05	1,058,169	$	2.80

	2018			
	Options outstanding		Options exercisable	
Exercise price	Total Outstanding	Weighted average remaining contractual life	Total exercisable	Weighted average exercise price
$ 0.45	399,567	6.51	288,402	$ 0.45
$ 0.75	352,261	8.10	192,290	$ 0.75
$ 0.90	455,041	9.69	82,924	$ 0.90
$ 1.35	64,376	5.67	63,962	$ 1.35
$ 1.50	48,952	6.52	37,677	$ 1.50
	1,320,197	7.98	665,255	$ 0.74

Restricted Stock Awards:

As of December 31, 2019, unvested restricted stock units totaled 249,500 shares. There were no RSAs issued for the year ended December 31, 2018.

The following table summarized the outstanding RSU's as of December 31, 2019:

	RSU's
Outstanding at January 1, 2018	—
Granted	287,500
Forfeited	(38,000)
Outstanding at December 31, 2018	**249,500**
Vested at December 31, 2019	—

NOTE 9 —Income Taxes

The following table presents the income (loss) before income taxes for domestic and foreign operations for the years ended December 31:

	2019	2018
Domestic loss	$ (26,964)	$ (1,680)
Foreign subsidiaries income	2,518	3,711
Income (loss) before income taxes	$ (24,446)	$ 2,031

	2019	2018
Current income tax expense:		
Federal	$ -	$ (145)
State	(3)	140
Foreign	1,282	619
Total Current	1,279	614
Deferred income tax expense:		
Federal	-	144
State	-	-
Foreign	109	(4)
Total Deferred	109	140
Total provision for income taxes	$ 1,388	$ 754

The Company's effective tax rate differs from the federal statutory rate due to the following for the years ended December 31:

	2019	2018
Statutory federal income tax rate	21%	21%
State income taxes, net of federal tax benefits	0.61%	11.43%
Stock compensation	-1.27%	2.47%
Foreign rate differential	-3.53%	-8.15%
Tax credits	0.68%	-4.79%
Warrants revaluation	0.00%	10.03%
GILTI Inclusion	-0.76%	38.10%
Section 382 limits	0.00%	-67.57%
Non-deductible expenses	-4.58%	11.45%
Valuation allowance	-14.58%	23.30%
Other, net	-3.25%	-0.13%
Effective tax rate	-5.68%	37.14%

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The following table presents the significant components of the Company's deferred tax assets and liabilities at December 31:

	2019	2018
Gross deferred tax assets:		
Net operating loss carryforward	$ 9,587	$ 5,717
Tax credits	725	538
Accruals and reserves	2,461	2,054
Alternative minimum tax credits	89	157
Total gross deferred tax assets	12,862	8,466
Less: valuation allowance	(11,814)	(8,088)
Total deferred tax assets net of valuation allowance	1,048	378
Deferred tax liabilities:		
Property and equipment	(37)	(284)
Accrual and reserves	(1,025)	-
Net deferred tax assets (liabilities)	$ (14)	$ 94

A valuation allowance is provided for deferred tax assets where the recoverability of the assets is uncertain. The determination to provide a valuation allowance is dependent upon the assessment of whether it is more likely than not that sufficient future taxable income will be generated to utilize the deferred tax assets. Based on the weight of the available evidence, which includes the Company's historical operating losses, lack of taxable income, and the accumulated deficit, the Company provided a full valuation allowance against the U.S. deferred tax assets resulting from the accruals and reserves along with the net operating loss and credits carried forward. The valuation allowance was $11,814 as of December 31, 2019 compared to $8,088 as of December 31, 2018, a change in valuation of $3,726. The valuation allowance was $8,088 as of December 31, 2018, compared to $7,753 as of December 31, 2017, a change in valuation of $335.

At December 31, 2019 and 2018, the Company had net deferred income tax assets related primarily to net operating loss carry forwards, accruals and reserves and tax credit carryforward that are not currently being recognized of approximately $12,862 and $8,466, respectively, which have been offset by a valuation allowance.

We have not provided U.S. Federal and State income taxes, nor foreign withholding. taxes of undistributed earnings for certain non-US subsidiaries, because such earnings are intended to be indefinitely reinvested. If these earnings were distributed to the U.S. in the form of dividends or otherwise, or if the shares of the relevant foreign subsidiaries were sold or otherwise transferred, we would not be subject to U.S. income tax due to the transition tax of IRC Section 965 or via the newly enacted Global Intangible Low-Taxed Income ("GILTI") provision, enacted as part of the 2017 U.S. Tax Act. The Company would be subject to U.S. state tax and potential foreign withholding taxes on a repatriation of the foreign earnings. The amount of unrecognized deferred income tax liability related to these earnings is not material.

Estimate of cumulative foreign earnings is as follows as of December 31:

	2019	2018
China	$ 5,818	$ 4,020
India	4,580	4,039
Total	$ 10,398	$ 8,059

The Company had net operating loss carryovers (NOL) for federal and state income tax purposes of approximately $42,415 and $11,492, respectively, as of December 31, 2019. Approximately $24,367 of federal NOLs will expire beginning in 2020, while approximately $18,048 generated beginning in 2018 have an indefinite life. The state NOLs will expire if unused in years 2031 through 2039:

	2019	2018
Federal NOL	$ 42,415	$ 24,411
State NOL	$ 11,492	$ 9,580

The Company had research and development ("R&D") credit carryforwards as follows as of December 31:

	2019	2018
Federal R&D credits	$ 632	$ 467
California R&D credits	$ 117	$ 91

At December 31, 2019, the Company had approximately $632 of federal and $117 of California research and development tax credit and other tax credit carryforwards available to offset future taxable income. The federal credits begin to expire in 2020 and the California research credits have no expiration dates.

Federal and state laws impose restrictions on the utilization of net operating loss carryforwards and R&D credit carryforwards in the event of a change in ownership of the Company, which constitutes an 'ownership change' as defined by Internal Revenue Code Section 382 and 383. The Company experienced an ownership change in the past that materially impacts the availability of its net operating losses and tax credits. The amounts indicated in the above tables reflect the reduction of net operating losses and credit carryforwards as a result of previous ownership changes that the Company experienced. Should there be additional ownership changes in the future, the Company's ability to utilize existing carryforwards could be substantially restricted.

Uncertain Tax Positions

The Company accounts for uncertainty in income taxes in accordance with the Financial Accounting Standards Board guidance for Income Taxes, as provided in ASC 740, Accounting for Income Taxes. Tax positions are evaluated in a two-step process. The Company first determines whether it is more likely than not that a tax position will be sustained upon examination by the tax authority, including resolutions of any related appeals or litigation processes, based on technical merit. If a tax position meets the more-likely-than-not recognition threshold it is then measured to determine the amount of benefit to recognized, in the financial statements. The tax position is measured as the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement.

The following table summarizes the activity related to unrecognized tax benefits as follows as of December 31:

In thousands	2019	2018
Unrecognized benefit-beginning of period	$ 5,957	$ 1,347
Gross increases-prior period tax positions	400	5,162
Gross (decreases)-prior period tax positions	-	(589)
Gross increases -current period tax positions	543	37
Unrecognized benefit-end of period	$ 6,900	$ 5,957

The unrecognized tax benefits of approximately $5,284 as of December 31, 2019 are accounted for as a reduction in the Company's deferred tax assets. Due to the Company's valuation allowance, only $1,615 of the $6,900 of unrecognized tax benefits would affect the Company's effective tax rate, if recognized. The Company does not believe it is reasonably possible that its unrecognized tax benefits will significantly change in the next twelve months.

The Company recognizes interest and penalties related to unrecognized tax benefits as incometax expense. The Company accrued $229 and $58 of interest and penalties in December 31, 2019 and 2018, respectively, and the Company has accrued a $356 and $126 liability for accrued interest and penalties related to unrecognized tax benefit as of December 31, 2019 and 2018, respectively

The Company's material income tax jurisdictions are the United States (federal and California), China and India. As a result of net operating loss and credit carryforwards, the Company is subject to audit for tax years 2013 and forward for federal and California purposes. The China and India tax years are open under the statute of limitations from 2014 and forward.

NOTE 10 —Commitments and Contingencies

Operating leases—The Company leases several facilities under noncancelable operating leases that begin expiring in 2020. The Company recognizes rent expense on a straight-line basis over the lease period.

Future minimum lease payments under noncancelable operating lease commitments are approximately as follows:

Year Ending, December 31st,	
2020	$ 1,168
2021	655
2022	483
2023	454
2024	467
2025	318
	$ 3,545

Rent expense was approximately $1,243 and $946 for the years ended December 31, 2019 and 2018.

Purchase Commitments—The aggregate amount of noncancelable purchase orders as of December 31, 2019 and 2018, was approximately $1,022 and $4,650, respectively, and were related to the purchase of components of our devices.

Royalty payments—The Company is required to pay per unit royalties to wireless essential patent holders and other providers of integrated technologies on mobile devices delivered, which, in aggregate, amount to less than 5% of net revenues associated with each unit, and expire in 2021 and 2023. Royalty expense for the years ended December 31, 2019 and 2018, was $2,886 and $2,529, respectively, which are included in cost of revenues on the consolidated statements of operations.

Securities litigation—On September 20, 2019, a purported Sonim stockholder who allegedly purchased stock registered in Sonim's initial public offering ("IPO") filed a putative class action complaint in the Superior Court of the State of California, County of San Mateo, captioned Pearson v. Sonim Technologies, Inc., et al., Case No. 19CIV05564, on behalf of himself and others who purchased shares of Sonim registered in the IPO (the "Pearson Action"). On October 4 and 16, 2019, two additional purported class action complaints substantially similar to the Pearson Action were filed on behalf of different plaintiffs yet the same putative class of Sonim stockholders, in the same court as the Pearson Action. On October 7, 2019, a substantially similar putative class action lawsuit was filed in the United States District Court for the Northern District of California. All four complaints allege violations of the Securities Act of 1933 by Sonim and certain of its current and former officers and directors for, among other things, alleged false or misleading statements and omissions in the registration statement issued in connection with the IPO, relating primarily to an alleged failure to disclose software defects in Sonim's phones and alleged misstatements about performance characteristics of Sonim's phones. Sonim intends to defend these matters vigorously. An adverse outcome in any of these matters, however, could have a material adverse effect on our consolidated financial condition, results of operations, or cash flows for a particular period. Due to the uncertainly of the outcome of this matter, the Company has not recorded any accruals as of December 31, 2019.

General litigation—The Company is involved in various other legal proceedings arising in the normal course of business. The Company does not believe that the ultimate resolution of these other matters will have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

The results of any future litigation cannot be predicted with certainty and, regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management time and resources and other factors.

Indemnification—Under the terms of its agreements with wireless carriers and other partners, the Company has agreed to provide indemnification for intellectual property infringement claims related to the Company's product sold by them to their end customers. From time to time, the Company receives notices from these wireless carriers and other partners of a claim for infringement of intellectual property rights potentially related to their products. These infringement claims have been settled, dismissed, have not been further pursued by the customers, or are pending further action by the Company.

Contingent severance obligations—The Company has agreements in place with certain key employees (Executive Severance Arrangement) guaranteeing severance payments under certain circumstances. Generally, in the event of termination by the Company without cause, termination due to death or disability, or resignation for good reason, the Company is obligated to the pay the employees: (i) any time before a Change in Control, amounts up to $1,754 or (ii) if at any time within 12 months of a Change in Control, amounts up to $2,345. As of December 31, 2019, and 2018, no accrual has been recorded.

On December 11, 2019, the Board of Directors of Sonim Technologies, Inc. (the "Company") approved the Sonim Technologies Inc. Transaction Bonus Plan (the "Plan") that is intended to incentivize Company employees who are in a position to significantly impact the value received by the Company's stockholders in a change of control transaction. Pursuant to the Plan, upon consummation of a change of control transaction, 10% of the consideration payable to Company stockholders, after deducting transaction expenses, will be distributed to Plan participants, including the Company's named executive officers. The Plan has a three year term and may be extended by the administrator of the Plan. Subject to the terms of the Plan, participants must be continuously providing services to the Company through the date of the closing of a change in control transaction to be eligible to receive a bonus thereunder, and payment is contingent upon delivery and non-revocation of a general release of claims. In connection with the adoption of the Plan, the Company's Board of Directors allocated a 50% interest in the Plan to Thomas Wiley Wilkinson, the Company's Chief Executive Officer, and a 10% interest in the Plan to Robert Tirva, the Company's Chief Financial Officer, 5% to Randy Denny, Chief Sales Officer, John Graff, Chief Marketing Officer, Peter Liu, EVP of Global Operations, and Bengt Jonassen, SVP of Engineering and 2.5% to Stephanie Sogawa, Legal Counsel and Katie Smith, Chief of Staff.

NOTE 11 —Related Party Transactions

Revenue transactions with a certain investor—During the year ended December 31, 2019 and 2018, the Company recognized revenue of zero and $797, respectively, with an investor and holder of the August 2016 Series A warrants which were amended to common stock warrants in conjunction with the November 2018 preferred stock conversion event.

Management Services Agreement—In October 2017, the Company entered into a management services agreement with BRI, an investor, pursuant to which BRPI agreed to provide advisory and consulting services to the Company. The Company incurred approximately zero and $200, in related consulting fees during the years ended December 31, 2019 and 2018, respectively. At the closing of the Company's IPO, the management services agreement was terminated in accordance with its terms.

NOTE 12 —Net Loss Per Share Attributable to Common Stockholders

Net loss per share attributable to common stockholders for the years ended December 31, 2019 and 2018, was determined by decreasing Net income or increasing Net loss for the years then ended by the number of cumulative dividends, not yet declared, on the Company's previously outstanding convertible preferred stock. The following table sets forth the computation of the Company's basic and diluted net loss per share attributable to common stockholders for the periods ended:

	For the Years Ended December 31	
	2019	**2018**
Numerator:		
Net loss allocable to common stockholders	$ (25,834)	$ (8,875)
Denominator:		
Weighted-average shares used in computing net loss per share, basic and diluted	18,603,582	3,447,283
Net loss per share, basic and diluted	$ (1.39)	$ (2.57)

The potentially dilutive common shares thatwere excluded from the calculation of diluted net loss per share because their effect would have been antidilutive for theperiods ended:

	For the Years Ended December 31	
	2019	2018
Shares subject to options to purchase common stock	2,645,714	1,320,197
Unvested restricted stock units	249,500	—
Shares subject to warrants to purchase common stock	956	156,294
Shares subject to term debt optional conversion into common stock	761,186	1,099,278
Total	3,657,356	2,575,769

NOTE 13 —Entity Level Information

Segment Information—The Company operates in one reporting segment. Operating segments are defined as components of an enterprise about which separate financial information is evaluated regularly by the chief operating decision maker, who is the chief executive officer, in deciding how to allocate resources and assessing performance. The Company's chief operating decision maker allocates resources and assesses performance based upon discrete financial information at the consolidated level.

The following table summarizes the revenue by region based on ship-to destinations for the periods ended:

	For the Years Ended December 31	
	2019	2018
U.S.	$ 90,597	$ 105,881
Canada and Latin America	17,400	14,405
Europe and Middle East	5,308	10,158
Asia Pacific	2,946	5,221
	$ 116,251	$ 135,665

Long-lived assets located in the United States and Asia Pacific region were $889 and $642,and $2,013 and $393 as of December 31, 2019 and 2018, respectively.

The composition of revenues is as follows:

	For the Years Ended December 31	
	2019	2018
Product Sales	$ 115,807	$ 130,665
Services	444	5,000
Total revenues	$ 116,251	$ 135,665

Concentrations of Credit Risk—The Company's product revenues are concentrated in the technology industry, which is highly competitive and rapidly changing. Significant technological changes in the industry or customer requirements, or the emergence of competitive products with new capabilities or technologies, could adversely affect the Company's consolidated operating results. Financial instruments that potentially subject the Company to credit risk consist primarily of cash and cash equivalents and accounts receivable. Cash and cash equivalents are deposited with high-quality, federally insured commercial banks in the United States and cash balances are in excess of federal insurance limits at December 31, 2019 and 2018. The Company generally does not require collateral or other security in support of accounts receivable. To reduce credit risk, management performs ongoing credit evaluations of its customers' financial condition. The Company analyzes the need for reserves for potential credit losses and records allowances for doubtful accounts when necessary. The Company had allowances for such losses totaling approximately $52 and $11 at December 31, 2019 and 2018, respectively.

Receivables from two customers approximated 40% and 28% of total accounts receivable at December 31, 2019 and 44% and 43% of total accounts receivable at December 31, 2018.

Revenue from three customers in 2019 and 2018 accounted for approximately the following percentage of total revenues:

	For the Years Ended December 31,	
	2019	**2018**
Customer A	*	20%
Customer B	18%	*
Customer C	15%	*
Customer D	*	25%
Customer E	27%	20%
Total	60%	65%

* Customer revenue did not exceed 10% in the respective periods.

NOTE 14 —Subsequent Events

Subsequent to December 31, 2019, the World Health Organization declared the novel coronavirus outbreak a public health emergency. The outbreak caused the Chinese government to place restrictions on travel and other activities throughout the country. The Company operates facilities in China. In cooperation with the government authorities, the Company's operations in China extended their Chinese New Year holiday shut down for several weeks. While operations have resumed, the Company's operating subsidiaries in Shenzhen and Hong Kong may continue to operate at below normal levels due to the continued restrictions on travel in China and labor shortages. The related financial impact cannot be reasonably estimated at this time but is expected to materially affect the Company's consolidated results for the first and second quarter and full year of fiscal 2020.

On January 17, 2020, Sonim Technologies, Inc. (the "Company") and Mr. Charles Becher agreed that Mr. Becher would no longer serve as the Company's Chief Sales and Marketing Officer, effective immediately. Mr. Becher will be paid the separation benefits he is entitled to in accordance with, and subject to the conditions set forth in, his existing agreement with the Company, of approximately $189.

On February 27, 2020, and March 31, 2020 there was a workforce reduction of 119 employees and contractors as part of the ongoing cost reduction in the United States, China and India.

DESCRIPTION OF REGISTRANT'S SECURITIES

The following is a description of the common stock, $0.001 par value per share ("Common Stock") of Sonim Technologies, Inc. (the "Company," "we," "our," or "us"), which is the only security of the Company registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended. The following summary description is based on the provisions of our Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation"), our Amended and Restated Bylaws, (the "Bylaws"), and the applicable provisions of the Delaware General Corporation Law (the "DGCL"). This information may not be complete in all respects and is qualified entirely by reference to the provisions of our Certificate of Incorporation, our Bylaws and the DGCL. Our Certificate of Incorporation and our Bylaws are filed as exhibits to this Annual Report on Form 10-K.

General

Our authorized capital stock consists of 100,000,000 shares of Common Stock, and 5,000,000 shares of undesignated preferred stock, $0.001 par value per share ("Preferred Stock").

Common Stock

Dividend Rights

Subject to preferences that may apply to shares of Preferred Stock outstanding at the time, the holders of outstanding shares of our Common Stock are entitled to receive dividends out of funds legally available at the times and in the amounts that our board of directors may determine.

Voting Rights

Each holder of our Common Stock is entitled to one vote for each share of Common Stock held on all matters submitted to a vote of stockholders. Cumulative voting for the election of directors is not provided for in our certificate of incorporation, which means that the holders of a majority of our shares of Common Stock voted can elect all of the directors then standing for election.

Preemptive or Similar Rights

Our Common Stock is not entitled to preemptive rights and is not subject to conversion or redemption. The rights of the holders of our Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our Preferred Stock that our board of directors may designate and issue in the future.

Liquidation Rights

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

Preferred Stock

Our board of directors is authorized, subject to limitations prescribed by Delaware law, to issue up to 5,000,000 shares of our Preferred Stock in one or more series, to establish from time to time the number of shares to be included in each series, to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further action by our stockholders. Our board of directors can also increase or decrease the number of shares of any series of Preferred Stock, but not below the number of shares of that series then outstanding, unless approved by the affirmative vote of the holders of a majority of our capital stock entitled to vote, or such other vote as may be required by the certificate of designation establishing the series. Our board of directors may authorize the issuance of Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the Common Stock.

The issuance of Preferred Stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in our control and might adversely affect the market price of our Common Stock and the voting and other rights of the holders of our Common Stock.

Anti-Takeover Effects of the Certificate of Incorporation and Bylaws and Delaware Law

Our Certificate of Incorporation and Bylaws contain certain provisions that could have the effect of delaying, deterring, or preventing another party from acquiring control of our company. These provisions and certain provisions of the DGCL, which are summarized below, may discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of our company to negotiate first with our board of directors.

Undesignated Preferred Stock

As discussed above, our board of directors have the ability to issue Preferred Stock with voting or other rights or preferences that could impede the success of any attempt to acquire control of our company. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Limits on Ability of Stockholders to Act by Written Consent or Call a Special Meeting

Our Certificate of Incorporation provides that our stockholders may not act by written consent, which may lengthen the amount of time required to take stockholder actions. As a result, a holder controlling a majority of our capital stock would not be able to amend our Bylaws or remove directors without holding a meeting of our stockholders called in accordance with our Bylaws.

In addition, our Bylaws provide that special meetings of the stockholders may be called only by the chairperson of our board, our Chief Executive Officer, or our board of directors. Stockholders may not call a special meeting, which may delay the ability of our stockholders to force consideration of a proposal or for holders controlling a majority of our capital stock to take any action, including the removal of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our Bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of our board of directors. These provisions may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

No Cumulative Voting

Our Certificate of Incorporation and Bylaws do not permit cumulative voting in the election of directors. Cumulative voting allows a stockholder to vote a portion or all of the stockholder's shares for one or more candidates for seats on the board of directors. Without cumulative voting, a minority stockholder may not be able to gain as many seats on our board of directors as the stockholder would be able to gain if cumulative voting were permitted. The absence of cumulative voting makes it more difficult for a minority stockholder to gain a seat on our board of directors to influence our board's decision regarding a takeover or otherwise.

Amendment of Certificate of Incorporation and Bylaws Provisions

The amendment of the above provisions of our Certificate of Incorporation and Bylaws requires approval by holders of at least two-thirds of our outstanding capital stock entitled to vote generally in the election of directors.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the DGCL ("Section 203") regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, calculated as provided under Section 203; or
- at or subsequent to the date of the transaction, the business combination is approved by our board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person that, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. The existence of this provision may have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of Common Stock held by stockholders.

The provisions of the DGCL and the provisions of our Certificate of Incorporation and Bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, might also inhibit temporary fluctuations in the market price of our Common Stock that often result from actual or rumored hostile takeover attempts. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests.

Choice of Forum

Our Certificate of Incorporation provides that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a breach of fiduciary duty owed by any director, officer or other employee to us or our stockholders; (iii) any action asserting a claim against us or any director or officer or other employee arising pursuant to the DGCL, our Certificate of Incorporation or Bylaws; (iv) any action or proceeding to interpret, apply, enforce or determine the validity of the Certificate of Incorporation or the Bylaws; (v) any action or proceeding as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; or (vi) any action asserting a claim against us or any director or officer or other employee that is governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants This provision would not apply to claims brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Our Certificate of Incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act of 1933, as amended ("Securities Act").

Registration Rights

Certain holders of our Common Stock are entitled to rights with respect to the registration of their shares under the Securities Act. These registration rights are contained in our Amended and Restated Investors' Rights Agreement ("IRA"), dated as of November 12, 2012, which is filed as an exhibit to this Annual Report on Form 10-

K. The IRA provides that certain holders of our Common Stock have rightswhich require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. The registration of shares of our Common Stock by the exercise of registration rights described would enable the holders to sell these shares without restriction under the Securities Act, when the applicable registration statement is declared effective. The registration rights under the IRA will expire five years following the completion ofour initial public offering (May 14, 2024)or, with respect to any particular stockholder, when such stockholder holds 1% or less of our Common Stock and is able to sell all of its shares pursuant to Rule 144 of the Securities Act during any threemonth period.

October 29, 2019

Robert Plaschke

Re: Transition and Separation Agreement

Dear Bob:

This letter (the "**Agreement**") sets forth the terms and conditions that Sonim Technologies, Inc. (the "**Company**" or "**Sonim**") is offering to aid in your employment transition.

1. EMPLOYMENT AND TRANSITION PERIOD. As discussed, your service as Chief Executive Officer ("**CEO**") of Sonim ended effective October 29, 2019 (the "**Transition Date"**), as of which date the Company's Board of Directors (the "**Board**") elected a new CEO. Subject to the terms of this Agreement, you will remain employed by the Company as a Senior Advisor to the Board as described below from the Transition Date through April 30, 2020 (or such earlier date as your employment may be terminated by you or the Company pursuant to Section 1(i) (Early Termination) below) (the "**Separation Date**"). Additionally, you hereby resign from the Board effective as of the Transition Date. The period from the Transition Date through the Separation Date shall be deemed the "**Transition Period**" and your continued employment shall be subject to the following terms:

(a) Title/Position. As of the Transition Date, your title shall change to "Senior Advisor," and you agree that you will be deemed to have resigned from any other office or position you may hold within the Company, except that you will remain employed through the Separation Date as contemplated in this Agreement. You agree to provide any documentation requested by the Company to confirm any such resignation. You further agree that after the Transition Date, you will not have authority to bind the Company and shall not purport to bind the Company to any representation, promise, or agreement, except with the prior written consent of the Company's CEO.

(b) Duties. During the Transition Period, you shall be responsible for providing transition information to the CEO and other Sonim personnel, including electronic files, a written briefing, face to face meetings, and personal assistance in transitioning key customer relationships, as requested, with respect to any matters about which you are knowledgeable; and you shall remain available, as requested, to assist with management, oversight, or execution with respect to projects and matters in which you have been involved and to work to finalize deals with customers in which you have been involved (collectively, the "**Transition Duties**"). You agree to make yourself available to perform Transition Duties for up to 40 hours per week for the duration of Transition Period.

(c) Compensation. During the Transition Period, you will continue to be paid the same base salary now in effect, on the Company's normal employee payroll schedule, subject to standard deductions and withholdings.

(d) Benefits. During the Transition Period, you will be eligible to receive the same employment benefits made available to the Company's employees generally, in accordance with the terms and conditions of the Company's benefit plans and policies which may be in effect from time to time and may utilize any and all vacation or paid time off benefits available to you under the Company's policies.

(e) Equity. Any outstanding unvested equity awards shall continue to vest during the Transition Period and, if the Company terminates the Transition Period without Cause pursuant to Section 1(i) below, then a portion of your outstanding unvested equity awards shall accelerate and vest, at the date of such termination, to the same extent as they would have vested had you remained in service until April 30, 2020, subject to your satisfaction of the conditions for receipt of the Severance Benefits (as set forth below). If you resign your employment during the Transition Period, no amount of unvested equity awards shall be accelerated.

(f) Facilities. During the Transition Period, you shall have continued use of a workspace at the Company's offices, but will not be required to work from the Company's offices except as requested by the CEO. During the Transition Period, you shall have continued use of your Sonim email and voicemail accounts, and you will be expected to perform Transition Duties using such accounts. After the Separation Date, you shall no longer have access to your Sonim email and voicemail accounts, and you shall provide the Company access and passwords to facilitate monitoring of such accounts by the Company thereafter to ensure Sonim business matters are timely handled. Upon the Separation Date, an automatic reply message shall be set on your Sonim email account, and an out of office greeting shall be recorded on your Sonim voicemail account, both of which shall be mutually-agreed between you and the Company.

(g) Outside Activities. During the Transition Period, you may enter into other employment or consulting relationships or otherwise provide services to or engage in business activities for other persons and entities (collectively, "**Outside Activities**"), provided that such Outside Activities do not: (i) interfere with your availability to perform the Transition Duties; (ii) involve competition with the Company or preparation for such competition; (iii) create an actual, apparent, or potential conflict of interest with the Company, or (iv) harm or threaten to harm the Company's business or reputation, all as determined in good-faith by the Company in its sole discretion. To ensure compliance with the foregoing provision, you agree not to engage in any Outside Activities without providing specific information to the Board about any such proposed Outside Activities and obtaining the Board's advance written approval which approval shall not be unreasonably delayed or withheld.

(h) Compliance with Company Policies and Insider Trading Laws. During the Transition Period, you will continue to be required to abide by all Company employment policies and procedures, as adopted or modified from time to time. If requested, you will acknowledge in writing your receipt and understanding of existing, modified, or new Company policies. The Company may modify, suspend, or revoke any such policies in whole or in part, at any time, without advance notice. You further agree to comply with all laws applicable to the Company and your continued service to the Company.

(i) Early Termination. Nothing in this Agreement alters your employment at-will status. Accordingly, during the Transition Period you are entitled to resign your

employment with or without Cause (as defined below) or advance notice, and the Company may terminate your employment with or without Cause or advance notice.

(i) If prior to April 30, 2020, you resign your employment for any reason, then you will be eligible for the Severance Benefits in Section 2 (and not Section 3) as set forth below, *provided that* you have satisfied the conditions for receipt of the Severance Benefits (as set forth below, including without limitation satisfactory transition of duties during the Transition Period, as determined in good faith by the Board).

(ii) If prior to April 30, 2020, the Company terminates your employment with Cause, then you will no longer be eligible for participation in any Company benefit plans, and you will not be entitled to any Severance Benefits.

(iii) If you remain employed through April 30, 2020 or if the Company terminates your employment without Cause prior to April 30, 2020, you will be eligible for the Severance Benefits in Section 3 (and not Section 2), *provided that* you have satisfied the conditions for receipt of the Severance Benefits (as set forth below, including without limitation satisfactory transition of duties during the Transition Period, as determined in good faith by the Board).

(j) Definition of Cause. For purposes of this Agreement, "Cause" is defined as any of the following: (i) theft, dishonesty, or falsification of any employment or Company record; (ii) conviction (including any plea of guilty or nolo contendere) of a felony or any criminal act that impairs your ability to perform your duties with the Company; (iii) failure or inability to perform any reasonable assigned duties after written notice from the Board of Directors of the Company of, and a reasonable opportunity to cure (of no fewer than 10 business days), such failure or inability, if capable of cure; (iv) improper disclosure of the Company's confidential or proprietary information; (v) commission of an intentional or grossly negligent act that has a material detrimental effect on the Company's reputation or business; or (vi) any material breach of any written agreement with the Company, which breach is not cured pursuant to the terms of such agreement (or, if no cure provision is specified therein, after written notice from the Board of Directors of the Company of such breach providing no fewer than 10 business days to cure), if capable of cure, or a material breach of a confidentiality or proprietary information and inventions agreement, which breach shall be deemed non-curable.

(k) Final Pay and Benefits. On the Separation Date, you will cease to be employed by or hold any office or position with the Company and the Company will pay you all accrued wages, including all accrued and unused paid time off earned through the Separation Date, subject to standard payroll deductions and withholdings. You are entitled to these payments by law.

2. SEVERANCE BENEFITS IF RESIGNATION FOR ANY REASON BEFORE APRIL 30, 2020. If prior to April 30, 2020, you resign your employment for any reason, and: you (i) timely sign and return this Agreement to the Company, (ii) comply fully with your obligations hereunder (including without limitation satisfactorily transitioning your duties during the Transition Period); and (iii) within twenty-one (21) days after the Separation Date, execute and return to the Company the a release of claims in the form attached hereto as **Exhibit A** (the

"**Separation Date Release**") and allow the Separation Date Release to become effective, then, you and the Company agree that, in full satisfaction of any obligations for the Company to provide you with severance benefits as stated in the Employment Agreement between you and the Company dated August 18, 2018 (the "**Offer Letter**"), the Company will provide you with the following severance benefits:

(a) Cash Severance. The Company will pay you salary continuation as if you remained employed through April 30, 2020, at your base salary in effect as of the Separation Date, subject to standard payroll deductions and withholdings ("**Early Termination Severance Pay**"). Your Early Termination Severance Pay will be paid in the form of salary continuation payments. The salary continuation payments will be paid in equal installments on the Company's regular payroll schedule and will be subject to applicable tax withholdings over the period beginning on the Separation Date and ending on April 30, 2020; provided, however, that no payments will be paid prior to the 30th day following the Separation Date. On the 30th day following your Separation Date, the Company will pay you in a lump sum the salary continuation payments that you would have received on or prior to such date under the original schedule but for the delay while waiting for the 30th day in compliance with Section 409A of the Code and the effectiveness of the release, with the balance of the salary continuation payments being paid as originally scheduled.

(b) Health Care Continuation Coverage.

(i) COBRA. To the extent provided by the federal COBRA law or, if applicable, state insurance laws, and by the Company's current group health insurance policies, you will be eligible to continue your group health insurance benefits at your own expense. Later, you may be able to convert to an individual policy through the provider of the Company's health insurance, if you wish.

(ii) COBRA Premiums. If you timely elect continued coverage under COBRA, the Company will pay your COBRA premiums to continue your coverage (including coverage for eligible dependents, if applicable) ("**COBRA Premiums**") through the period (the "**COBRA Premium Period**") starting on the Separation Date and ending on the earliest to occur of: (i) April 30, 2020; (ii) the date you become eligible for group health insurance coverage through a new employer; or (iii) the date you cease to be eligible for COBRA continuation coverage for any reason, including plan termination. In the event you become covered under another employer's group health plan or otherwise cease to be eligible for COBRA during the COBRA Premium Period, you must immediately notify the Company in writing of such event.

(iii) Special Cash Payments in Lieu of COBRA Premiums. Notwithstanding the foregoing, if the Company determines, in its sole discretion, that it cannot pay the COBRA Premiums without a substantial risk of violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company instead shall pay to you, on the first day of each calendar month, a fully taxable cash payment equal to the applicable COBRA premiums for that month (including premiums for you and your eligible dependents who have elected and remain enrolled in such COBRA coverage), subject to applicable tax withholdings (such amount, the "**Special Cash Payment**"), for the remainder of the COBRA Premium Period. You may, but are not obligated to, use such Special Cash

Payments toward the cost of COBRA premiums. On the thirtieth (30th) day following your Separation from Service, the Company will make the first payment to you under this paragraph, in a lump sum, equal to the aggregate Special Cash Payments that the Company would have paid to you through such date had the Special Cash Payments commenced on the first day of the first month following the Separation from Service through such thirtieth (30th) day, with the balance of the Special Cash Payments paid thereafter on the schedule described above.

3. SEVERANCE BENEFITS IF THE TRANSITION PERIOD ENDS ON APRIL 30, 2020 OR TERMINATION WITHOUT CAUSE PRIOR THERETO. If, prior to April 30, 2020, the Company terminates your employment without Cause, or, if you remain employed through April 30, 2020, and: you (i) timely sign and return this Agreement to the Company, (ii) comply fully with your obligations hereunder (including without limitation satisfactorily transitioning your duties during the Transition Period through April 30, 2020); and (iii) within twenty-one (21) days after the Separation Date, execute and return to the Company the Separation Date Release and allow the Separation Date Release to become effective, then, you and the Company agree that, in full satisfaction of any obligations for the Company to provide you with severance benefits as stated in the Offer Letter, the Company will provide you with the following severance benefits:

(a) Severance.

(i) If, prior to April 30, 2020, the Company terminates your employment without Cause, the Company will pay you salary continuation as if you remained employed through April 30, 2020, at your base salary in effect as of the Separation Date, subject to standard payroll deductions and withholdings; and

(ii) Regardless of payments under Section 3(a)(i) above, if any, the Company will pay you a lump sum amount equal to not less than three (3), but no more than six (6), months of your base salary, subject to standard payroll deductions and withholdings (excluding payments under Section 3(a)(i), if any, "**Full Period Severance Pay**"). Your Full Period Severance Pay will be determined by the Board, in its sole discretion, based on your performance as a Senior Advisor during the Transition Period. On the 30th day following the Separation Date, the Company will pay you the Full Period Severance Pay amount that the Board determined to pay to you, in its sole discretion, based on your performance.

(b) Health Care Continuation Coverage.

(i) COBRA. To the extent provided by the federal COBRA law or, if applicable, state insurance laws, and by the Company's current group health insurance policies, you will be eligible to continue your group health insurance benefits at your own expense. Later, you may be able to convert to an individual policy through the provider of the Company's health insurance, if you wish.

(ii) COBRA Premiums. If you timely elect continued coverage under COBRA, the Company will pay your COBRA premiums to continue your coverage (including coverage for eligible dependents, if applicable) ("**COBRA Premiums**") through the period (the "**COBRA Premium Period**") starting on the Separation Date and ending on the earliest to occur of: (i) July 30, 2020; (ii) the date you become eligible for group health insurance coverage

through a new employer; or (iii) the date you cease to be eligible for COBRA continuation coverage for any reason, including plan termination. In the event you become covered under another employer's group health plan or otherwise cease to be eligible for COBRA during the COBRA Premium Period, you must immediately notify the Company in writing of such event.

(iii) Special Cash Payments in Lieu of COBRA Premiums. Notwithstanding the foregoing, if the Company determines, in its sole discretion, that it cannot pay the COBRA Premiums without a substantial risk of violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company instead shall pay to you, on the first day of each calendar month, a fully taxable cash payment equal to the applicable COBRA premiums for that month (including premiums for you and your eligible dependents who have elected and remain enrolled in such COBRA coverage), subject to applicable tax withholdings (such amount, the "**Special Cash Payment**"), for the remainder of the COBRA Premium Period. You may, but are not obligated to, use such Special Cash Payments toward the cost of COBRA premiums. On the thirtieth (30th) day following your Separation from Service, the Company will make the first payment to you under this paragraph, in a lump sum, equal to the aggregate Special Cash Payments that the Company would have paid to you through such date had the Special Cash Payments commenced on the first day of the first month following the Separation from Service through such thirtieth (30th) day, with the balance of the Special Cash Payments paid thereafter on the schedule described above.

(c) Extended Exercise Period. The Company will agree to extend the exercise period applicable to your stock options until October 30, 2020. To the extent the stock options were granted as "incentive stock options" under the Internal Revenue Code, an extension of the exercise period of the stock options may cause them to lose such status and the stock options instead may be treated as non-qualified stock options for federal tax purposes. This change may be less advantageous to you from a personal tax perspective in certain respects, including an obligation on your part to satisfy any income and employment tax withholding obligations that arise when you exercise the stock options. The Company makes no representation or guarantees regarding the status of your stock options as incentive stock options or otherwise. You acknowledge that the Company is not providing tax advice to you and that you have been advised by the Company to seek independent tax advice with respect to the exercise and modification of the stock options and any other compensation and benefits that you are receiving under this Agreement. You acknowledge and agree that, as a condition to any exercise of your stock options, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company (except for the employer's share of any FICA), arising by reason of the exercise of your stock options with respect to the vested shares. Except as expressly modified herein, your rights, duties, and obligations with respect to your equity awards (including your right to exercise any vested shares) shall continue to be governed by the terms set forth in the applicable equity plans and agreements.

4. EQUITY. You were granted options to purchase shares of the Company's common stock, pursuant to the Company's 2012 Equity Incentive Plan (the "**Plan**"). Except as specifically provided with respect to accelerated vesting under certain conditions set forth in Section 1(e) above and with respect to an extended exercise period under certain conditions set forth in Section 3(c) above, vesting will cease as of the Separation Date and, your rights to

exercise any vested options shall be as set forth in the applicable stock option grant notice, stock option agreement, and/or the Plan and your options shall continue to be governed by the terms of the applicable grant notices, stock option agreements and the Plan.

5. OTHER COMPENSATION OR BENEFITS. You acknowledge that, except as expressly provided in this Agreement, you have not earned and will not receive from the Company any additional compensation (including base salary, bonus, incentive compensation, or equity), severance, or benefits after the Separation Date, with the exception of any vested right you may have under the express terms of a written ERISA-qualified benefit plan (e.g., 401(k) account) or any vested equity interests.

6. EXPENSE REIMBURSEMENTS. You agree that, within ten (10) days after the Separation Date, you will submit your final documented expense reimbursement statement reflecting all business expenses you incurred through the Separation Date, if any, for which you seek reimbursement. The Company will reimburse you for these expenses pursuant to its regular business practice.

7. RETURN OF PROPERTY. By the Separation Date, you agree to return to the Company all Company documents (and all copies thereof) and other Company property which you have in your possession or control, including, but not limited to, Company files, notes, drawings, records, plans, forecasts, reports, studies, analyses, proposals, agreements, financial information, research and development information, sales and marketing information, customer lists, prospect information, pipeline reports, sales reports, operational and personnel information, specifications, code, software, databases, computer-recorded information, tangible property and equipment (including, but not limited to, computers, printers, mobile telephones, servers), credit cards, entry cards, identification badges and keys; and any materials of any kind which contain or embody any proprietary or confidential information of the Company (and all reproductions thereof in whole or in part). You agree that you will make a diligent search to locate any such documents, property and information by the Separation Date. If you have used any personally owned computer, server, or e-mail system to receive, store, review, prepare or transmit any Company confidential or proprietary data, materials or information, within five (5) business days after the Separation Date, you shall provide the Company with a computer-useable copy of such information and then permanently delete and expunge such Company confidential or proprietary information from those systems; and you agree to provide the Company access to your system as requested to verify that the necessary copying and/or deletion is done. **Your timely compliance with this paragraph is a condition precedent to your receipt of the Severance Benefits.**

8. PROPRIETARY INFORMATION OBLIGATIONS. Both during and after your employment you acknowledge your continuing obligations under your Employee Confidential Information and Invention Assignment Agreement, including your obligations not to use or disclose any confidential or proprietary information of the Company. A copy of your Employee Confidential Information and Invention Assignment Agreement is attached hereto as **Exhibit B**.

9. NONDISPARAGEMENT. You agree not to disparage the Company and its officers, directors and employees in any manner likely to be harmful to them or their business, business reputations or personal reputations; provided that you may respond accurately and fully to any question, inquiry or request for information when required by legal process (e.g., a valid

subpoena or other similar compulsion of law) or as part of a government investigation. In addition, nothing in this provision or this Agreement is intended to prohibit or restrain you in any manner from making disclosures that are protected under the whistleblower provisions of federal or state law or regulation.

10. NO VOLUNTARY ADVERSE ACTION; COOPERATION. Other than with respect to claims brought on your own behalf with respect to unreleased claims you may have against the Company and with respect to claims of breach of this Agreement ("**Claims by You**"), you agree that you will not voluntarily provide assistance, information or advice, directly or indirectly (including through agents or attorneys), to any person or entity in connection with any proposed or pending litigation, arbitration, administrative claim, cause of action, or other formal proceeding of any kind brought against the Company, its parent or subsidiary entities, affiliates, officers, directors, employees or agents, nor shall you induce or encourage any person or entity to bring any such claims; provided that you may respond accurately and fully to any question, inquiry or request for information when required by legal process (e.g., a valid subpoena or other similar compulsion of law) or as part of a government investigation. In addition, other than with respect to Claims by You, you agree to voluntarily cooperate with the Company if you have knowledge of facts relevant to any existing or future litigation or arbitration initiated by or filed against the Company by making yourself reasonably available without further compensation for interviews with the Company or its legal counsel, for preparing for and providing deposition testimony, and for preparing for and providing trial testimony.

11. NO ADMISSIONS. You understand and agree that the promises and payments in consideration of this Agreement shall not be construed to be an admission of any liability or obligation by the Company to you or to any other person, and that the Company makes no such admission.

12. RELEASE OF CLAIMS.

(a) General Release. In exchange for the consideration provided to you under this Agreement to which you would not otherwise be entitled, you hereby generally and completely release the Company, and its affiliated, related, parent and subsidiary entities, and its and their current and former directors, officers, employees, shareholders, partners, agents, attorneys, predecessors, successors, insurers, affiliates, and assigns (collectively, the "**Released Parties**") from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring prior to or on the date you sign this Agreement (collectively, the "**Released Claims**").

(b) Scope of Release. The Released Claims include, but are not limited to: (i) all claims arising out of or in any way related to your employment with the Company, or the termination of that employment; (ii) all claims related to your compensation or benefits from the Company, including salary, bonuses, commissions, vacation, paid time off, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership, equity, or profits interests in the Company; (iii) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (iv) all tort claims, including claims for fraud, defamation, emotional distress, and discharge in violation of

public policy; and (v) all federal, state, and local statutory claims, including claims for discrimination, harassment, retaliation, attorneys' fees, or other claims arising under the federal Civil Rights Act of 1964 (as amended), the federal Americans with Disabilities Act of 1990, the federal Age Discrimination in Employment Act ("**ADEA**"), and the California Labor Code (as amended).

(c) ADEA Waiver. You acknowledge that you are knowingly and voluntarily waiving and releasing any rights you may have under the ADEA ("**ADEA Waiver**"), and that the consideration given for the waiver and release in this Section is in addition to anything of value to which you are already entitled. You further acknowledge that you have been advised, as required by the ADEA, that: (i) your waiver and release do not apply to any rights or claims that may arise after the date that you sign this Agreement; (ii) you should consult with an attorney prior to signing this Agreement (although you may choose voluntarily not to do so); (iii) you have twenty-one (21) days to consider this Agreement (although you may choose voluntarily to sign it earlier); (iv) you have seven (7) days following the date you sign this Agreement to revoke the ADEA Waiver (by providing written notice of your revocation to me); and (v) the ADEA Waiver will not be effective until the date upon which the revocation period has expired unexercised, which will be the eighth day after you sign this Agreement ("**Effective Date**"). Nevertheless, your general release of claims, except for the ADEA Waiver, is effective immediately, and not revocable.

(d) SECTION 1542 WAIVER. In giving the release herein, which include claims which may be unknown to you at present, you acknowledge having read and understood Section 1542 of the California Civil Code, which reads as follows: **"A general release does not extend to claims which the creditor or releasing party does not know or suspect to exist in his or her favor at the time of executing the release and that, if known by him or her, would have materially affected his or her settlement with the debtor or released party."** You hereby expressly waive and relinquish all rights and benefits under that section and any law of any other jurisdiction of similar effect with respect to the releases of claims herein, including but not limited to your release of unknown claims.

(e) Excluded Claims. Notwithstanding the foregoing, the following are not included in the Released Claims (the "***Excluded Claims***"): (i) any rights or claims for indemnification you may have pursuant to (A) the charter, bylaws or operating agreements of the Company, (B) any written indemnification agreement with the Company to which you are a party or (C) under applicable law; (ii) any rights which cannot be waived as a matter of law, including without limitation claims under the California Fair Employment and Housing Act, to the extent such claims are not waivable as a matter of law with this release; (iii) any rights you have to file or pursue a claim for workers' compensation or unemployment insurance; and (iv) any claims for breach of this Agreement. You hereby represent and warrant that, other than the Excluded Claims, you are not aware of any claims you have or might have against any of the Released Parties that are not included in the Released Claims.

13. PROTECTED RIGHTS. You understand that nothing in this Agreement limits your ability to file a charge or complaint with the Equal Employment Opportunity Commission, the Department of Labor, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission, the California Department of Fair

Employment and Housing, or any other federal, state, or local governmental agency or commission ("**Government Agencies**"). You further understand this Agreement does not limit your ability to communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. While this Agreement does not limit your right to receive an award for information provided to the Securities and Exchange Commission, you understand and agree that, to the maximum extent permitted by law, you are otherwise waiving any and all rights you may have to a monetary award or other individual relief based on any claims that you have released and any rights you have waived by signing this Agreement.

14. REPRESENTATIONS. You hereby represent that you have been paid all compensation owed and for all hours worked, you have received all the leave and leave benefits and protections for which you are eligible pursuant to the federal Family and Medical Leave Act, the California Family Rights Act, or otherwise, and you have not suffered any on-the-job injury for which you have not already filed a workers' compensation claim.

15. DISPUTE RESOLUTION. To ensure the timely and economical resolution of disputes that may arise in connection with your employment with the Company, you and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance, negotiation, execution, or interpretation of this Agreement, your employment, or the termination of your employment, including but not limited to statutory claims, shall be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. §1-16, and to the fullest extent permitted by law by final, binding and confidential arbitration, by a single arbitrator, in San Francisco, California, conducted by JAMS, Inc. ("**JAMS**") under the then applicable JAMS rules (which can be found at the following web address: https://www.jamsadr.com/rules-employment-arbitration/). **By agreeing to this arbitration procedure, both you and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding.** The Company acknowledges that you will have the right to be represented by legal counsel at any arbitration proceeding. In addition, all claims, disputes, or causes of action under this paragraph, whether by you or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. This paragraph shall not apply to an action or claim brought in court pursuant to the California Private Attorneys General Act of 2004, as amended. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award. The arbitrator shall be authorized to award any or all remedies that you or the Company would be entitled to seek in a court of law. The Company shall pay all JAMS' arbitration fees in excess of the amount of court fees that would be required of you if the dispute were decided in a court of law. Nothing in this Agreement is intended to prevent either you or the Company from obtaining injunctive relief

in court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction.

16. IRS CODE SECTION 409A COMPLIANCE. Notwithstanding anything set forth in this Agreement to the contrary, any payments and benefits provided pursuant to this Agreement which constitute "deferred compensation" within the meaning of the Treasury Regulations issued pursuant to Section 409A shall not commence until you have incurred a separation from service as provided under Treasury Regulation Section 1.409A-1(h) ("**Separation From Service**"), unless the Company reasonably determines that such amounts may be provided to you without causing you to incur the additional 20% tax under Section 409A. For the avoidance of doubt, it is intended that the payments and benefits set forth in this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9) and this Agreement will be construed to the greatest extent possible as consistent with those provisions. For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive any installment payments under this Agreement (whether severance payments, reimbursements, or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment. To the extent not so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Section 409A and incorporates by reference all required definitions and payment terms. Notwithstanding any provision to the contrary in this Agreement, if the Company (or, if applicable, the successor entity thereto) determines that any payments upon your Separation From Service set forth herein and/or under any other agreement with the Company constitute "deferred compensation" under Section 409A and you are, on your Separation From Service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely, to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments upon your Separation From Service shall be delayed until the earlier to occur of: (a) the date that is six months and one day after your Separation From Service, or (b) the date of your death (such applicable date, the "**Specified Employee Initial Payment Date**"). On the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (A) pay you a lump sum amount equal to the sum of the payments upon your Separation From Service that you would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of the severance benefits had not been so delayed pursuant to this section, and (B) commence paying the balance of the severance benefits in accordance with the applicable payment schedules set forth in this Agreement. Except to the minimum extent that payments must be delayed because you are a "specified employee" (as described above) or until the effectiveness of the Release, all amounts will be paid as soon as practicable in accordance with the Company's normal payroll practices and no interest will be due on any amounts so deferred.

17. Better After Tax Provision. If any payment or benefit that you will or may receive from the Company or otherwise (a "**280G Payment**") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "**Excise Tax**"), then any such

280G Payment will be equal to the Reduced Amount. The "**Reduced Amount**" will be either

(x) the largest portion of the 280G Payment that would result in no portion of the 280G Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the 280G Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in your receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the 280G Payment may be subject to the Excise Tax. If a reduction in a 280G Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction will occur in the manner (the "**Reduction Method**") that results in the greatest economic benefit for you. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "**Pro Rata Reduction Method**"). Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the 280G Payment being subject to taxes pursuant to Section 409A of the Code that would not otherwise be subject to taxes pursuant to Section 409A of the Code, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, will be modified so as to avoid the imposition of taxes pursuant to Section 409A of the Code as follows: (A) as a first priority, the modification will preserve to the greatest extent possible, the greatest economic benefit for you as determined on an after-tax basis; (B) as a second priority, 280G Payments that are contingent on future events (e.g., being terminated without Cause), will be reduced (or eliminated) before 280G Payments that are not contingent on future events; and (C) as a third priority, 280G Payments that are "deferred compensation" within the meaning of Section 409A of the Code will be reduced (or eliminated) before 280G Payments that are not "deferred compensation" within the meaning of Section 409A of the Code. If Section 280G of the Code is not applicable by law to you, the Company will determine whether any similar law in your jurisdiction applies and should be taken into account. The independent professional firm engaged by the Company for general tax audit purposes as of the day prior to the effective date of the Separation Date will make all determinations required to be made under this section. If the firm so engaged by the Company is serving as accountant or auditor for you, the Company will appoint a nationally recognized independent professional firm to make the determinations required hereunder. The Company will bear all expenses with respect to the determinations by such firm required to be made hereunder. The Company will use commercially reasonable efforts to cause the firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to the Company and you within thirty (30) calendar days after the date on which your right to a 280G Payment becomes reasonably likely to occur (if requested at that time by the Company or you) or such other time as requested by the Company or you. If you receive a
280G Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this section and the Internal Revenue Service determines thereafter that some portion of the 280G Payment is subject to the Excise Tax, you will promptly return to the Company a sufficient amount of the 280G Payment (after reduction pursuant to clause (x) of the first paragraph of this section) so that no portion of the remaining 280G Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) of the first paragraph of this section, you will have no obligation to return any portion of the 280G Payment pursuant to the preceding sentence.

18.
MISCELLANEOUS.
This Agreement, including its exhibits, constitutes the

complete, final and exclusive embodiment of the entire agreement between you and the Company with regard to the subject matter hereof, including without limitation your employment agreement with the Company dated August 18, 2018. It is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other agreements, promises, warranties or representations concerning its subject matter. This Agreement may not be modified or amended except in a writing signed by both you and a duly authorized officer of the Company. This Agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and inure to the benefit of both you and the Company, their heirs, successors and assigns. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination shall not affect any other provision of this Agreement and the provision in question shall be modified so as to be rendered enforceable in a manner consistent with the intent of the parties insofar as possible under applicable law. This Agreement shall be construed and enforced in accordance with the laws of the State of California without regard to conflicts of law principles. Any ambiguity in this Agreement shall not be construed against either party as the drafter. Any waiver of a breach of this Agreement, or rights hereunder, shall be in writing and shall not be deemed to be a waiver of any successive breach or rights hereunder. This Agreement may be executed in counterparts which shall be deemed to be part of one original, and facsimile and signatures transmitted by PDF shall be equivalent to original signatures.

If this Agreement is acceptable to you, please sign below and return the original to me within twenty-one (21) days after the date you receive it. The Company's offer contained herein will automatically expire if you do not sign and return it by that date.

We wish you the best in your future endeavors.

Sincerely,

Sonim Technologies, Inc.

By: _____

Maurice Hochschild
Chairman of the Board

I HAVE READ, UNDERSTAND, AND AGREE FULLY TO THE FOREGOING AGREEMENT:

Bob Plaschke

Robert Plaschke

October 29, 2019

Date

Exhibit A – Separation Date Release
Exhibit B – Employee Confidential Information and Invention Assignment Agreement

EXHIBIT A

SEPARATION DATE RELEASE

(To be signed on Separation Date or within twenty-one (21) Days thereafter)

In exchange for the consideration to be provided to me pursuant to that certain letter transition and separation agreement between me and Sonim Technologies, Inc. (the "**Company**") dated [date] (the "**Agreement**"), I hereby provide the following Separation Date Release. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Agreement.

I hereby represent that: (i) I have been paid all compensation owed and have been paid for all hours worked for the Company through the Separation Date; (ii) I have received all the leave and leave benefits and protections for which I am eligible pursuant to the federal Family and Medical Leave Act or otherwise; and (iii) I have not suffered any on-the-job injury for which I have not already filed a claim.

I hereby generally and completely release the Company, and its affiliated, related, parent and subsidiary entities, and its and their current and former directors, officers, employees, shareholders, partners, agents, attorneys, predecessors, successors, insurers, affiliates, and assigns from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring prior to or on the date I sign this Separation Date Release (the "**Released Claims**"). The Released Claims include, but are not limited to: (i) all claims arising out of or in any way related to my employment with the Company, or the termination of that employment; (ii) all claims related to my compensation or benefits from the Company, including salary, bonuses, commissions, vacation, paid time off, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership, equity, or profits interests in the Company; (iii) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (iv) all tort claims, including claims for fraud, defamation, emotional distress, and discharge in violation of public policy; and (v) all federal, state, and local statutory claims, including claims for discrimination, harassment, retaliation, attorneys' fees, or other claims arising under the federal Civil Rights Act of 1964 (as amended), the federal Americans with Disabilities Act of 1990, the federal Age Discrimination in Employment Act ("**ADEA**"), the California Fair Employment and Housing Act (as amended), and the California Labor Code (as amended).

Notwithstanding the foregoing, I am not hereby releasing any of the following claims (the "**Excluded Claims**"): (i) any rights or claims for indemnification I may have pursuant to (A) the charter, bylaws or operating agreements of the Company, (B) any written indemnification agreement with the Company to which I am a party or (C) or under applicable law; (ii) any rights that are not waivable as a matter of law; (iii) any rights I have to file or pursue a claim for workers' compensation or unemployment insurance; and (iv) any claims arising under the Agreement after the Separation Date. I understand that nothing in this Release limits my ability to file a charge or complaint with any Government Agency. I further understand that this Release does not limit my ability to communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government

Agency, including providing documents or other information, without notice to the Company. I understand that while this Release does not limit my right to receive an award for information provided to the Securities and Exchange Commission, I understand and agree that, to the maximum extent permitted by law, I am otherwise waiving any and all rights I may have to individual relief based on any claims that I have released and any rights I have waived by signing this Release. I hereby represent and warrant that, other than the Excluded Claims, I am not aware of any claims that I have or might have against any of the parties released above that are not included in the Released Claims.

I acknowledge that I am knowingly and voluntarily waiving and releasing any rights I may have under the ADEA ("**Release ADEA Waiver**"). I also acknowledge that the consideration given for the Release ADEA Waiver is in addition to anything of value to which I am already entitled. I further acknowledge that I have been advised by this writing, as required by the ADEA, that: (a) my waiver and release does not apply to any rights or claims that arise after the date I sign this Separation Date Release; (b) I should consult with an attorney prior to signing this Separation Date Release; (c) I have twenty-one (21) days to consider this Separation Date Release (although I may choose to voluntarily sign it sooner); (d) I have seven (7) days following the date I sign this Separation Date Release to revoke it, with such revocation to be effective only if I deliver written notice of revocation to the Company within the seven (7)-day period; and (e) the Separation Date Release will not be effective until the date upon which the revocation period has expired unexercised, which will be the eighth day after I sign it (the "**Release Effective Date**").

In giving the general release of claims herein, which includes claims that may be unknown to me at present, I acknowledge that I have read and understand Section 1542 of the California Civil Code, which reads as follows: **"A general release does not extend to claims that the creditor or releasing party does not know or suspect to exist in his or her favor at the time of executing the release and that, if known by him or her, would have materially affected his or her settlement with the debtor or released party."** I hereby expressly waive and relinquish all rights and benefits under that section and any law of any other jurisdiction of similar effect with respect to the releases granted herein, including, without limitation, the release of unknown and unsuspected claims granted in this Separation Date Release.

This Separation Date Release, together with the Agreement (and its Exhibits), constitutes the entire agreement between me, and the Company with respect to the subject matter hereof. I am not relying on any representation not contained herein or in the Agreement.

UNDERSTOOD AND AGREED:

By: Robert Plaschke

Date:

EXHIBIT B

EMPLOYMENT CONFIDENTIAL INFORMATION AND INVENTION ASSIGNMENT AGREEMENT

Exhibit 10.18

October 28, 2019

Mr. Tom Wilkinson
Via E-mail Delivery

Re: Employment Agreement

Dear Tom:

This letter agreement (the "***Agreement***") confirms the terms of your employment with Sonim Technologies, Inc. (the "***Company***" or "***Sonim***").

1. Position and Duties. Beginning on October 29, 2019 (your "***Start Date***"), you will serve as the Company's Chief Executive Officer (the "***CEO***"), reporting to the Company's Board of Directors (the "***Board***"). You will also serve as a member of the Company's Board. You will work primarily at your office in Austin, TX but may be required to work out of the Company's office in San Mateo, CA from time to time when required by the Company. Of course, Sonim may change your position, duties, and work location from time to time, as it deems necessary. You will devote your full business time and attention to the business affairs of the Company, except for reasonable vacations and periods of illness or incapacity. Notwithstanding the foregoing, you will be permitted to continue as Interim CEO for Cipherloc Corporation through November 30, 2019, and to serve on the Board of Directors of the following three entities: (1) Astrotech; (2) Cipherloc; and (3) FourBurner Services. You must obtain approval from the Company's Board prior to your membership as a member of the Board of Directors of any other entity. As a Sonim employee, you will be expected to abide by Company rules and policies and to acknowledge in writing that you have read the Company's Employee handbook.

2. Compensation and Benefits.

(a) Base Salary. You will receive a base salary of $400,000 per year, less required and designated payroll deductions and withholdings, and payable according to the Company's regular payroll schedule. Your annual base salary will be reviewed from time to time and is subject to change at the discretion of the Board. Salary will begin on November 1, 2019.

(b) Benefits. You will be eligible to participate in the Company's standard employee benefits pursuant to the terms, conditions and limitations of the applicable benefit plans. The Company will fund up to $15,000 per year for your participation in World Presidents Organization activities, following submission of invoices or receipts for any such expenses. In addition, the Company will provide you with a monthly $2,000 stipend through July 2020 to assist you in maintaining an office space in Austin, TX. In the event of the consummation of a Change in Control, the Company will use its reasonable best efforts to ensure that the benefits provided to you following the Change in Control (assuming your employment continues) will be equal to or greater than the benefits provided to you as of the date of this Agreement.

(c) Cash Bonus Plan. Beginning with the Company's 2020 fiscal year, as a member of senior management of the Company, you will be eligible to participate under the Company's Cash Bonus Plan, the current terms of which are set forth on Exhibit A attached hereto.

(d) Discretionary Bonus. You will be eligible to receive a bonus based on the achievement of specific initiatives that create incremental value the Company, when such specific initiatives are set forth by the Board. There is no guarantee that any specific initiatives for which you may receive a bonus will be developed at any time. Any specific initiatives for which you may be eligible to receive a bonus will be developed by the Board and communicated to you in writing. Any determination as to whether the specific initiatives are achieved and the amount of any bonus earned as a result of the

achievement of specific initiatives is determined by the Board in its sole discretion. Any bonus shall be paid within thirty (30) days after the Board's determination that a bonus shall be awarded. You must be employed on the day that your bonus (if any) is paid in order to earn the bonus. Therefore, if your employment is terminated either by you or the Company for any reason prior to the bonus being paid, you will not have earned the bonus and no partial or prorated bonus will be paid.

(e) Equity Incentive Compensation. Subject to approval by the Board, at the first Board meeting following the Start Date, the Company will grant you an option to purchase 200,000 shares of the Company's common stock (the "Option"). The Option shall vest over a four-year period, with one quarter (1/4) of the shares subject to the Option vesting on the one year anniversary of the date of grant, and 1/48th of the shares vesting in equal monthly installments thereafter, subject to your continued service to the Company. The Option shall be issued pursuant to the terms and conditions of the Company's 2012 Equity Incentive Plan (the "Plan"), at an exercise price equal to 100% of the fair market value of the Company's common stock on the date of grant, as provided in the Plan and consistent with the requirements for an exemption from the application of Section 409A of the Internal Revenue Code (the "Code"), and shall be governed in all respects by the terms of the Plan, the grant notices and the option agreements. In addition, you may be eligible for additional annual equity grants as determined annually by the Board in its sole discretion. The terms of any such additional grants will be governed by the Plan and the applicable grant notices and options agreements.

(f) Transaction Bonus. The Company will develop a bonus program in which you will be eligible to participate, to incentivize and reward senior managers of the Company in the event of a Change in Control (as defined below) of the Company during a timeframe (the "Term") to be established by the Company (a "Transaction"), subject to your continued employment at the completion of the Transaction (and with protection for terminations without Cause (as defined below) or resignations for Good Reason (as defined below) after the signing and before completion of a Transaction). Upon the completion of a Transaction during the Term, a bonus pool (the "Transaction Bonus Pool") shall be established in an amount that is equal to ten percent (10%) of the consideration payable to Company stockholders in such Transaction after deducting the transaction expenses. You will have a 50% interest in such Transaction Bonus Pool, and the Board, in consultation with you, shall determine which other members of the Company's senior management team shall be eligible to participate in the Transaction Bonus Pool and the percentage of the Transaction Bonus Pool that shall be awarded to each.

3. Proprietary Information Agreement and Company Policies. As a condition of your employment, you must sign and abide by the Company's standard for of Employment, Confidential Information and Invention Assignment Agreement (the "***Proprietary Information Agreement***"), a copy of which is attached hereto as Exhibit B. In your work for the Company, you will be expected not to use or disclose any confidential information, including trade secrets, of any former employer or other person to whom you have an obligation of confidentiality. Rather, you will be expected to use only that information which is generally known and used by persons with training and experience comparable to your own, which is common knowledge in the industry or otherwise legally in the public domain, or which is otherwise provided or developed by the Company. You agree that you will not bring onto Company premises any unpublished documents or property belonging to any former employer or other person to whom you have an obligation of confidentiality. You hereby represent that your employment does not create a conflict with any agreement between you and a third-party.

4. No Conflicts. During the term of your employment with the Company, except on behalf of the Company, you agree not to directly or indirectly, whether as an officer, director, employee, stockholder, partner, proprietor, associate, representative, consultant, agent, or in any capacity whatsoever, engage in, become financially interested in, be employed by or have any business

connection with any other person, corporation, firm, partnership or other entity whatsoever which is known by you to compete directly with the Company, throughout the world, in any line of business engaged in (or planned to be engaged in) by the Company; provided, however, that you may own, as a passive investor, securities of any publicly-held competitor corporation, so long as your direct holdings in any one such corporation shall not in the aggregate constitute more than 1% of the voting stock of such corporation.

5. At-Will Employment Relationship; Board Resignation. Your employment relationship is at will, meaning either you or the Company may terminate your employment relationship at any time, with or without Cause, and with or without advance notice. In addition, the Company may modify the other terms and conditions of your employment, including, but not limited to, compensation, benefits, position, title, reporting relationship and office location, from time to time in its sole discretion. Your at-will employment relationship can only be changed in a written agreement signed by you and a duly authorized member of the Board. If you cease serving as the Company's CEO for any reason, you agree that this Agreement constitutes your resignation from the Board as of the date of such cessation of service.

6. Severance Benefits.

(a) Termination by the Company without Cause; Termination Due to Death or Disability; Resignation for Good Reason, Prior to a Change in Control. If at any time prior to a Change in Control, or more than thirteen (13) months after a Change in Control, the Company terminates your employment without Cause, or your employment terminates due to your death or permanent disability, or you resign for Good Reason, and provided such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and if such termination occurs more than 90 days after your Start Date, then subject to your obligations below, the Company will provide you the following severance benefits:

(i) the Company will make severance payments to you in the form of salary continuation payments for a period of twelve (12) months at the rate of your base salary in effect as of your termination date, less required and designated payroll deductions and withholdings; and

(ii) if you timely elect continued health insurance coverage under COBRA, the Company will reimburse you the cost of your COBRA premiums to continue your coverage (including coverage for eligible dependents, if applicable) ("***COBRA Premiums***") through the period (the "***COBRA Premium Period***") starting on the Separation Date and ending on the earliest to occur of: (x) twelve (12) months after your termination (y) the date you become eligible for group health insurance coverage through a new employer; or (z) the date you cease to be eligible for COBRA continuation coverage for any reason, including plan termination. In the event you become covered under another employer's group health plan or otherwise cease to be eligible for COBRA during the COBRA Premium Period, you must immediately notify the Company in writing of such event.

(b) Termination by the Company without Cause; Resignation for Good Reason, Following a Change in Control. If at any time within thirteen (13) months after a Change in Control, the Company terminates your employment without Cause, or you resign for Good Reason, and provided such termination constitutes a Separation from Service, then subject to your obligations below, the Company will provide you with the following severance benefits:

(i) continuation payments for a period of eighteen (18) months at the rate of your base salary in effect as of your termination date, less required and designated payroll deductions and withholdings;

(ii) if you timely elect continued health insurance coverage under COBRA, the Company will reimburse you for your COBRA Premiums through the period (the "***CIC COBRA Premium Period***") starting on the Separation Date and ending on the earliest to occur of: (x) eighteen (18) months after your termination (y) the date you become eligible for group health insurance coverage through a new employer; or (z) the date you cease to be eligible for COBRA continuation coverage for any reason, including plan termination. In the event you become covered under another employer's group health plan or otherwise cease to be eligible for COBRA during the CIC COBRA Premium Period, you must immediately notify the Company in writing of such event; and

(iii) Notwithstanding the terms of the Company's Cash Bonus Plan that require your continued employment through the determination date of payment of an earned cash bonus, you will be entitled to receive 150% of your Target Bonus for the year of your termination based on full achievement (but no over-achievement) of the Company's performance targets then in effect under the Cash Bonus Plan.

(iv) the vesting of any then-outstanding stock options/awards as of your termination date shall be accelerated in full as of your termination date.

(v) For purposes of clarity, if you receive severance benefits under this section 6(b), you shall not be eligible for severance benefits under section 6(a).

(c) The severance benefits described above are conditional upon (a) your continuing to comply with your obligations under your Proprietary Information Agreement, including the non- competition and non-solicitation provisions thereof; (b) your delivering to the Company an effective, general release of claims in favor of the Company in a form acceptable to the Company within 30 days following your Separation from Service; and (d) if requested by the Company to confirm your Board resignation pursuant to Section 5 of this Agreement, if you are a member of the Board, your resignation from the Board, to be effective no later than the date of your termination date (or such other date as requested by the Board). The salary continuation payments will be paid in equal installments on the Company's regular payroll schedule and will be subject to applicable tax withholdings over the period outlined above following the date of your Separation from Service; provided, however, that no payments will be made prior to the 30th day following your Separation from Service. On the 30th day following your Separation from Service, the Company will pay you in a lump sum the salary continuation payments that you would have received on or prior to such date under the original schedule but for the delay while waiting for the 30th day in compliance with Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***") and the effectiveness of the release, with the balance of the salary continuation payments being paid as originally scheduled.

7. Definitions.

(a) Cause. For purposes of this Agreement, "***Cause***" is defined as any of the following: (i) your commission of any felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States, any state thereof, or any applicable foreign jurisdiction; (ii) your attempted commission of, or participation in, a fraud or act of dishonesty against the Company or any affiliate of the Company; (iii) your intentional, material violation of any contract or agreement between you and the Company or any affiliate of the Company or of any statutory duty owed to the Company or any

affiliate of the Company; (iv) your unauthorized use or disclosure of the Company's or any affiliate of the Company's confidential information or trade secrets; or (v) your gross misconduct. The determination that a termination of your employment is either for Cause or without Cause shall be made by the Company in its sole discretion.

(b) Change in Control. For purposes of this Agreement, the definition of a "***Change in Control***" is as defined in section 13(i) of the Company's 2019 Equity Incentive Plan (as in effect on the date hereof).

(c) Good Reason. For purposes of this Agreement, you will have "***Good Reason***" for your resignation from your employment with the Company if any of the following actions are taken by the Company without your express written consent:

(i) any failure by the Company to pay, or any material reduction by the Company of (a) your base salary in effect immediately prior to such failure to pay or reduction (unless reductions comparable in amount and duration are concurrently made generally for employees of the Company with responsibilities, organizational level and title comparable to your own), or (b) your bonus compensation amount eligibility, if any, in effect immediately prior to the date of such failure to pay or such reduction (subject to applicable performance requirements with respect to the actual amount of bonus compensation you earn);

(ii) the assignment of any duties, or the reduction of your responsibilities or duties, that are materially inconsistent with your position, duties, responsibilities and status with the Company immediately prior to such assignment or reduction; provided, however, that your assignment to an operating division of an acquiring company that includes the business of the Company following an acquisition, pursuant to which your duties are commensurate with the duties you had before the acquisition, except that the business of the Company is no longer independent but contained in a division, shall not be deemed a material reduction of your responsibilities, duties, or status hereunder and your resignation in connection therewith shall not be deemed for "***Good Reason***;" or

(iii) the relocation of your principal place of employment to a location that is more than fifty (50) miles from your then-current Board-approved place of work;

provided, however, that to resign for Good Reason, you must (1) provide written notice to the Company's CFO within 30 days after the first occurrence of the event giving rise to Good Reason setting forth the basis for your resignation, (2) allow the Company at least 30 days from receipt of such written notice to cure such event, and (3) if such event is not reasonably cured within such period, your resignation from all positions you then hold with the Company and its subsidiaries (including Board memberships) is effective not later than 90 days after the expiration of the cure period.

8. Code Section 409A. It is intended that all of the benefits and payments under this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Code Section 409A provided under Treasury Regulations 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9), and this Agreement will be construed to the greatest extent possible as consistent with those provisions. If not so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Code Section 409A and incorporates by reference all required definitions and payment terms. For purposes of Code Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive any installment payments under this Agreement (whether severance payments, reimbursements or otherwise) will be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder will at all times be considered

a separate and distinct payment. Notwithstanding any provision to the contrary in this Agreement, if you are deemed by the Company at the time of your Separation from Service to be a "specified employee" for purposes of Code Section 409A(a)(2)(B)(i), and if any of the payments upon Separation from Service set forth herein and/or under any other agreement with the Company are deemed to be "deferred compensation", then if delayed commencement of any portion of such payments is required to avoid a prohibited distribution under Code Section 409A(a)(2)(B)(i) and the related adverse taxation under Section 409A, the timing of the payments upon a Separation from Service will be delayed as follows: on the earlier to occur of (i) the date that is six months and one day after the effective date of your Separation from Service, and (ii) the date of the your death (such earlier date, the "***Delayed Initial Payment Date***"), the Company will (A) pay to you a lump sum amount equal to the sum of the payments upon Separation from Service that you would otherwise have received through the Delayed Initial Payment Date if the commencement of the payments had not been delayed pursuant to this paragraph, and (B) commence paying the balance of the payments in accordance with the applicable payment schedules set forth above. No interest will be due on any amounts so deferred.

9. Entire Agreement. This Agreement, including Exhibit A and Exhibit B, constitutes the complete, final and exclusive embodiment of the entire agreement between you and the Company with respect to the terms and conditions of your employment. If you enter into this Agreement, you are doing so voluntarily, and without reliance on any promise, warranty, representation or agreement, written or oral, other than those expressly contained herein. This Agreement supersedes any and all promises, warranties, representations or agreements, whether oral or written, including the Offer Letter. This Agreement may not be amended or modified except by a written instrument signed by you and a duly authorized member of the Board.

10. Enforceability. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this Agreement, and the Agreement, including the invalid or unenforceable provisions, shall be enforced insofar as possible to achieve the intent of the parties.

11. Binding Nature. This Agreement will be binding upon and inure to the benefit of the personal representatives and successors of the respective parties hereto.

12. Governing Law. This Agreement will be governed by and construed in accordance with the laws of the State of California without regard to conflicts of law principles.

13. Miscellaneous. With respect to the enforcement of this Agreement, no waiver of any right hereunder shall be effective unless it is in writing. For purposes of construction of this Agreement, any ambiguity shall not be construed against either party as the drafter. This Agreement may be executed in more than one counterpart, and signatures transmitted via facsimile shall be deemed equivalent to originals.

If these revised terms of your employment with Sonim are acceptable to you, please sign this Agreement and return it to me.

Sincerely,
Sonim Technologies, Inc.

Maurice Hochschild
Chairman of the Board

Understood and agreed to:

Tom Wilkinson

October 28, 2019
Date

EXHIBIT A: CASH BONUS PLAN

A. Subject to the discretion of the Board of Directors of the Company (the "***Board***"), you will be eligible for an annual Bonus that will be based upon performance targets set by the Board:

2020 and beyond	**100% of Annual Salary**

B. The Board will determine the actual bonus to which you are entitled each year using a formula mutually agreed upon at the beginning of each year.

C. The Company's performance against targets for each year shall be approved by the Board as soon as practicable following completion of the respective year-end audit (the date of such determination, the "***Determination Date***"). The Company's performance against targets for a year in which a Change in Control occurs shall be determined without taking into consideration any costs associated with the Change in Control that affect the Company's financial results for that year.

D. If approved, bonus payments will be made annually and in accordance with Company's standard policies and procedures. Payment shall be conditioned on (1) you being in the Company's continuous service through the relevant year's Determination Date and (2) Sonim maintaining an agreed upon minimum cash balance at the end of the fiscal quarter immediately preceding the respective Determination Date. In the event any approved bonus amounts are not paid pursuant to the foregoing subsection (2), such amounts shall be paid to you when and if Sonim achieves the cash balance, at which time you must be in the Company's continuous service to earn and receive such bonus payment.

Exhibit 10.19

SONIM TECHNOLOGIES, INC.
TRANSACTION BONUS PLAN

1. Plan Overview. Sonim Technologies, Inc. is adopting this Transaction Bonus Plan (the "Plan") to establish a bonus program for employees of the Company who are in a position to significantly impact the value received by the Company's stockholders from a Transaction (as defined below) during the term of the Plan. The Plan is based upon the theory that employees of the Company should be incentivized and rewarded in the event the Company consummates a Transaction.

2. Definitions. Unless the context otherwise requires, the following words as used herein shall have the following meanings:

(a) "Administrator" means the Board, unless the Board determines to appoint a committee of the Board to administer the Plan.

(b) "Affiliate" means any person or entity that directly or indirectly controls, is controlled by, or is under common control with the Company.

(c) "Board" means the entire Board of Directors of the Company.

(d) "Bonus" means an amount paid to a Participant under the Plan.

(e) "Cause" has the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States, any state thereof, or any applicable foreign jurisdiction; (ii) such Participant's attempted commission of, or participation in, a fraud or act of dishonesty against the Company or any Affiliate; (iii) such Participant's intentional, material violation of any contract or agreement between the Participant and the Company or any Affiliate or of any statutory duty owed to the Company or any Affiliate; (iv) such Participant's unauthorized use or disclosure of the Company's or any Affiliate's confidential information or trade secrets; or (v) such Participant's gross misconduct. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause shall be made by the Company in its sole discretion.

(f) "Company" means Sonim Technologies, Inc., a Delaware corporation.

(g) "Disability" means a condition rendering a Participant disabled, within the meaning of Section 22(e)(3) of the Internal Revenue Code of 1986, as amended.

(h) "Effective Date" means December 11, 2019.

(i) A Participant will have "Good Reason" to resign from the Participant's employment with the Company if any of the following actions are taken by the Company without the Participant's express written consent: (i) any failure by the Company to pay, or any material reduction by the Company of (A) the Participant's base salary in effect immediately prior to such failure to pay or reduction (unless reductions comparable in amount and duration are concurrently made generally for employees of the Company with responsibilities, organizational level and title comparable to the Participant's), or (B) the Participant's bonus compensation amount eligibility, if any, in effect immediately prior to the date of such failure to pay or such reduction (subject to applicable performance requirements with respect to the actual

amount of bonus compensation the Participant earns); (ii) the assignment of any duties, or the reduction of the Participant's responsibilities or duties, that are materially inconsistent with the Participant's position, duties, responsibilities and status with the Company immediately prior to such assignment or reduction; provided, however, that the Participant's assignment to an operating division of an acquiring company that includes the business of the Company following an acquisition, pursuant to which the Participant's duties are commensurate with the duties the Participant had before the acquisition, except that the business of the Company is no longer independent but contained in a division, shall not be deemed a material reduction of the Participant's responsibilities, duties, or status hereunder and Participant's resignation in connection therewith shall not be deemed for "Good Reason;" or (iii) the relocation of the Participant's principal place of employment to a location that is more than fifty (50) miles from the Participant's then-current Board-approved place of work; provided, however, that to resign for Good Reason, a Participant must (x) provide written notice to the Company's CFO within 30 days after the first occurrence of the event giving rise to Good Reason setting forth the basis for the Participant's resignation, (2) allow the Company at least 30 days from receipt of such written notice to cure such event, and (3) if such event is not reasonably cured within such period, the Participant's resignation from all positions the Participant held with the Company and its subsidiaries (including Board memberships) is effective not later than 90 days after the expiration of the cure period.

(j) reserved

(k) "Net Proceeds" means, with respect to a Transaction, the aggregate dollar value of the consideration actually received by the Company's stockholders pursuant to the terms of such Transaction in respect to their equity interests (excluding any assumption of liabilities or other indebtedness by any counterparty and any Transaction Expenses incurred by the Company in connection with the Transaction). Any consideration received by the Company's stockholders in the form of property or securities will be deemed to have the value of such consideration, as determined in good faith by the Administrator.

(l) "Participant" means any employee eligible to receive a Bonus, as determined by the Administrator, provided that any individual (a) whose employment or service is terminated by the Company for Cause at any time or who voluntarily resigns from the Company prior to the closing of a Transaction shall cease to be a Participant as of the date of termination, (b) who violates Section 5(f) or breaches any confidentiality, , non-disparagement or similar agreement with the Company or any of its Affiliates shall cease to be a Participant as of the date of such violation or breach, or (c) who ceases to be eligible for a payment under the Plan following the six month anniversary of their termination of employment or service pursuant to Section 5(c) or 5(d) shall cease to be a Participant as of such six month anniversary; and, in each case of clause (a), (b) or (c) of this Section 2(l), such individual shall not be eligible for any payment hereunder.

(m) "Plan" means this Sonim Technologies, Inc. Transaction Bonus Plan, as may be amended by the Company from time to time.

(n) "Term" means the period of time commencing on the Effective Date and terminating on the three year anniversary thereof unless previously extended by the Administrator.

(o) "Transaction" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events: (i) a sale or other disposition of all or substantially all, as determined by the Board, in its sole discretion, of the consolidated assets of the Company and its subsidiaries; (ii) a sale or other disposition of more than 50% of the outstanding securities of the Company; (iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or (iv) a merger, consolidation or similar transaction following

which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise. If required for compliance with Section 409A of the Code, in no event will a Transaction be deemed to have occurred if such transaction is not also a "change in the ownership or effective control of" the Company or "a change in the ownership of a substantial portion of the assets of" the Company as determined under Treasury Regulation Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder).

(o) "Transaction Expenses" means, for any Transaction, the amounts, if any, paid or payable by the Company (or deducted from the consideration paid or payable under the terms of the Transaction) for broker fees and expenses, investment banking fees, legal and accounting fees and expenses, and any other out-of-pocket costs or expenses incurred by the Company that are related to such Transaction.

3. Eligibility to Participate. The Participants are eligible to participate in the Plan; provided that each Participant executes an Acknowledgment and Agreement of Participation. No Participant will be eligible to receive a Bonus hereunder unless he or she (or his or her representative in the event of the Participant's death or Disability) timely executes, delivers and does not revoke a general release of claims against the Company and its Affiliates in a form, substantially the same as set forth in Exhibit A, to be furnished by the Company on or prior to the closing of a Transaction (the "Release Condition").

4. Bonus Formula.

Upon the consummation of a Transaction during the Term, a total of ten percent (10%) of the Net Proceeds shall be distributed to the Participants, subject to Section 5, in such portion as established for Participant by the Administrator in accordance with Section 6. To the extent that any portion of the Bonus be unallocated by the Administrator, such amount will not be paid out, but will be reserved for the stockholders.

5. Time of Payment; Termination of Employment or Service; Forfeiture; Non-Competition .

(a) In General. Subject to the provisions of Section 3, payments will be made to the eligible Participants in cash on the same schedule and under the same terms and conditions as apply to the payment of Transaction consideration to the stockholders of the Company in respect of their equity interests in accordance with the requirements of Treasury Regulation section 1.409A-3(i)(5)(iv).

(b) Continued Employment or Service. Except as provided below, a Participant must be continuously employed by, or providing services to, the Company or its Affiliate through the date of the closing of a Transaction to be eligible to receive a Bonus.

(c) Death or Disability. If a Participant's employment or service with the Company terminates due to the Participant's death or Disability within six (6) months prior to the closing of a Transaction, the Participant (or his or her representative, estate or designated beneficiary) will be eligible to receive the Bonus in accordance with Section 4, subject to the conditions provided herein (including the Release Condition in Section 3), with any such payment to be paid to the Participant, his or her personal representative, estate or designated beneficiary, as applicable, at the time and in the form set forth in Section 5(a).

(d) Involuntary Termination without Cause. If a Participant's employment or service with the Company is involuntarily terminated by the Company other than for Cause, or if the Participant

resigns for Good Reason, in either case within six (6) months prior to the closing of the Transaction, the Participant will be eligible to receive a Bonus in accordance with Section 4, subject to the provisions of the Plan (including compliance with any confidentiality, non-competition, non-solicitation, non-disparagement or similar agreement with the Company or any of its Affiliates as provided under Section 2(i) and the Release Condition in Section 3), with any such payment to be paid at the time and in the form set forth in Section 5(a).

(e) Voluntary Resignation or Termination with Cause. If a Participant's employment or service with the Company is terminated by the Company for Cause or is terminated voluntarily by the Participant (i.e., not for Good Reason) prior to the closing of a Transaction, then no Bonus will be paid to such individual for the Transaction, in accordance with clause (a) of Section 2(l).

(f) Non-Competition; Non-Solicitation. Subject to compliance with applicable law, Participant agrees that for the entire period of his or her employment or service with the Company and for the two (2) year period after the termination of his or her employment or service with the Company (the "Applicable Period"), Participant will not, directly or indirectly, as an officer, director, employee, consultant, owner, partner, or in any other capacity (i) solicit, perform, or provide, or attempt to solicit, perform or provide services of any kind to a Competitive Business (as defined below) anywhere in the Restricted Territory (as defined below), (ii) assist another person to solicit, perform or provide or attempt to engage in a Competitive Business anywhere in the Restricted Territory, or (iii) solicit to hire or hire any employee or consultant of the Company, or otherwise encourage any such individual to cease providing services to the Company. The parties agree that for purposes of this Agreement, "Competitive Business" is any business, operation, corporation, partnership, association, agency, or other person or entity that is in the business of developing, producing, marketing, or selling ruggedized handheld devices. For purposes of this Agreement, " Restricted Territory" means all counties in the state in which Participant primarily performs services for the Company, and all other states of the United States of America or jurisdictions outside of the United States of America in which the Company provided goods or services, had customers, or otherwise conducted business at any time during the two-year period prior to the date of the termination of Participant's relationship with the Company. Notwithstanding the foregoing, (i) this Section 5(f) shall not be applicable to Participants that work and reside primarily in California as of the date they execute the Acknowledgment and Agreement of Participation ("California-Based Participants") and (ii) for Participants that work and reside outside of the United States as of the date they execute the Acknowledgment and Agreement of Participation, subject to compliance with applicable law, the Applicable Period shall refer to the entire period of his or her employment or service with the Company and for the six (6) month period after the termination of his or her employment or service with the Company. Notwithstanding anything to the contrary set forth herein, a Participant and shall not be eligible for any payment under the Plan if the Board determines in its sole discretion that a Participant violated this Section 5(f).

6. Administration. The Administrator shall have the sole authority to interpret the provisions of the Plan and to make any and all determinations as to the eligibility for and amount of any Bonuses paid under the Plan and any other decisions to be made in the administration and operation of the Plan. To the extent a member of the Board is also a member of the Administrator, such director shall be recused from all determinations of the Administrator relating to his or her participation in the Plan. All such determinations and decisions shall be final, conclusive and binding on all interested parties and shall be afforded the maximum permissible deference upon judicial review. The Administrator (including any member of a body acting as the Administrator, if applicable, such as a member of the Board) shall not be personally liable by reason of carrying out his or her duties under the Plan.

7. Miscellaneous.

(a) No Funding. The Company will not be required to segregate or physically set aside any funds or assets to satisfy any amount due under the Plan. Neither a Participant, nor any beneficiary nor any other person will be deemed to have any property interest, legal or equitable, in any specific asset of the Company with respect to any right to payment of any amount under the Plan. To the extent that any person becomes a Participant, his or her right to payment under the Plan will be no greater than, nor will it have any preference or priority over, the rights of any unsecured general creditor of the Company.

(b) Amendment and Termination. The Plan will remain in effect until terminated by the Board. The Board has the power to amend or terminate the Plan at any time for any reason; provided that no amendment or action to terminate the Plan that would materially adversely affect the rights of any Participant shall be adopted without the written consent of such Participant.

(c) Withholding of Taxes. The Company shall have the right to withhold an amount for taxes that in the determination of the Company is required to be withheld under law with respect to any amount due or paid under the Plan.

(d) Expenses. All expenses and costs in connection with the adoption and administration of the Plan shall be borne by the Company; provided that the Company shall not be responsible for any costs or expenses incurred by any Participant in respect of his or her participation in the Plan.

(e) No Prior Right or Offer. Except as expressly provided pursuant to the Plan, nothing in the Plan shall be deemed to give any employee or director any contractual or other right to participate in the benefits of the Plan or any other plan or program of the Company.

(f) No Continued Employment or Service. Neither the establishment of the Plan or the grant of an award thereunder will be deemed to constitute an express or implied contract of employment or service of any Participant for any period of time or in any way abridge the rights of the Company to determine the terms and conditions of employment or service or to terminate the employment of any employee or service of any director with or without cause at any time.

(g) Binding upon Successors. The obligations of the Company under the Plan are and will be binding upon any successor corporation or organization that succeeds to substantially all of the assets and business of the Company, and the term "Company," whenever used in the Plan, shall mean and include any such corporation or organization after such succession.

(h) Other Plans. Nothing contained herein shall limit the Company's power to grant bonuses to employees of the Company, whether or not they are Participants in the Plan.

(i) Section 409A. Payments under the Plan are intended to comply with the applicable requirements of Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder ("Section 409A ") and the Plan shall be interpreted in accordance with such intention. For the avoidance of doubt, in no event shall the Company be liable for any tax, interest or penalty imposed under Section 409A or any damages for failing to comply with Section 409A.

(j) Governing Law. This Plan will be interpreted and enforced under the laws of the State of Delaware (without regard to their choice-of-law provisions), provided that the Plan will be interpreted and enforced under the laws of the State of California for California-Based Participants.

(k) Exclusive Jurisdiction. All disputes or claims arising out of or relating to the Plan, participation therein or any obligations thereunder shall be brought in: (i) for all Participants other than California-Based Participants, the United States District Court for the State of Delaware ; provided that if such dispute or claim shall not satisfy applicable federal jurisdiction requirements, such dispute shall be brought in the state courts of the State of Delaware , located in the County of Kent; or (ii) for all California-Based Participants, the United States District Court for the Northern District of California, provided that if such dispute or claim shall not satisfy applicable federal jurisdiction requirements, such dispute shall be brought in the state courts of the State of California, located in the County of San Mateo. By executing and delivering to the Company the Acknowledgment and Agreement of Participation, each Participant irrevocably: (a) accepts generally and unconditionally the exclusive jurisdiction and venue of such courts; (b) waives, to the fullest extent permitted by applicable law, any objection which he or she may now or hereafter have to the laying of venue of any such dispute brought in such court or any defense of inconvenient forum for the maintenance of such dispute; and (c) agrees that these provisions relating to jurisdiction and venue shall be binding and enforceable to the fullest extent permissible under applicable law.

(l) Waiver of Jury Trial. By executing and delivering to the Company the Acknowledgment and Agreement of Participation, each Participant irrevocably waives all right to trial by jury in any action, proceeding or counterclaim arising out of or relating to the Plan.

EXHIBIT A: FORM OF RELEASE

AGREEMENT AND GENERAL RELEASE

THIS AGREEMENT AND GENERAL RELEASE (the "Agreement") is made and entered into on _____, 20__ by and between _____ ("Participant") and Sonim Technologies, Inc. ("Company").

WHEREAS, Participant participated in the Sonim Transaction Bonus Plan (the "Plan") as an employee or director of the Company or its affiliate, and the parties wish to resolve all outstanding and/or possible claims and disputes between them;

NOW, THEREFORE, in consideration of the mutual promises, covenants and agreements set forth in this Agreement and General Release, the sufficiency of which the parties acknowledge, it is agreed as follows:

1. In consideration for Participant's promises, covenants and agreements in this Agreement and Agreement, Company agrees to make a payment to Participant in the amount of [-], pursuant to the terms and subject to the conditions of the Plan. Participant would not otherwise be entitled to such payments but for his promises, covenants and agreements in this Agreement and General Release.

2. The parties agree that the payments and benefits in Section 1 are in full, final and complete settlement of all claims set forth in Section 5 that Participant has or may have as of the date hereof against Company, all of Company's related holding, parent or subsidiary entities, each of their past and present affiliates, and the respective officers, directors, stockholders, employees, agents, advisors, consultants, insurers, attorneys, successors and/or assigns of each of the foregoing (collectively, the "Releasees"). Nothing in this Agreement shall be construed as an admission of liability by Company or any other Releasee, and Company specifically disclaims liability to or wrongful treatment of Participant on the part of itself and all other Releasees.

3. Participant agrees that he will not encourage or assist any of Company's or Company's affiliate's employees to litigate claims or file administrative charges against Company or any other Releasee with respect to any claim based on events, facts or circumstances as of the date hereof; provided, however that Participant may provide testimony or documents pursuant to a lawful subpoena or other compulsory legal process, in which case he agrees to notify Company immediately of his receipt of such subpoena so that Company has the opportunity to contest the same, and pursuant to a government investigation. If any court has or assumes jurisdiction of any action against Company or any of its affiliates on behalf of Participant, Participant will promptly request that court to withdraw from or dismiss the matter with prejudice. Participant further represents that he has reported to Company in writing any and all work-related injuries that he has suffered or sustained during his employment with, or provision of services to, Company.

4. Participant represents that he has not filed any complaints or charges against Company or any of its affiliates with the Equal Employment Opportunity Commission, or with any other federal, state or local agency or court, and covenants that he will not seek to recover on any claim released in this Agreement.

5. Participant covenants not to sue, and fully and forever releases and discharges Company and all other Releasees from any and all legally waivable claims, liabilities, damages, demands, and causes of action or liabilities of any nature or kind, whether now known or unknown, arising out of or in any way connected with Participant's employment or service with Company or any of its affiliates; provided, however, that nothing in this Agreement shall either waive any rights or claims of Participant: (i) that arise after Participant signs this Agreement; (ii) to enforce the terms of this Agreement; (iii) if an employee, for

the provision of accrued benefits conferred to Participant or his beneficiaries under the terms of the Company's medical, dental, life insurance, expense reimbursement or "employee pension benefit plans" (within the meaning of section 3(2) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA")) and, if applicable, the ongoing obligations of the Company with respect to the Participant's continuing employment by, or provision of services to, Company or its affiliates; (iv) relating to the Participant's outstanding equity securities in the Company; (iv) any rights or claims for indemnification Participant may have pursuant to any written indemnification agreement with the Company to which Participant is a party or under applicable law; (v) any rights which are not waivable as a matter of law. This release includes but is not limited to claims arising under federal, state or local laws concerning employment discrimination, termination, retaliation and equal opportunity, including but not limited to Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, the Equal Pay Act of 1963, the Americans with Disabilities Act of 1990, as amended, the Worker Adjustment and Retraining Notification Act of 1988, as amended, ERISA (including but not limited to fiduciary claims), the Family and Medical Leave Act, any and all statutory or common law provisions relating to or affecting Participant's employment or service by Company, claims for attorneys' fees or costs, and any and all claims in contract, tort, or premised on any other legal theory. Participant acknowledges that he is releasing claims based on age, race, color, sex, sexual orientation or preference, marital status, religion, national origin, citizenship, veteran status, disability and other legally protected categories. This provision is intended to constitute a general release of Participant's claims and potential claims against the Releasees to the maximum extent permitted by law. Notwithstanding any provision of this Agreement to the contrary, to the extent Participant is an employee, this general release does not include any claim for worker's compensation or unemployment benefits, and does not release or affect any claim that cannot be released by an agreement voluntarily entered into between private parties.

6. Participant acknowledges that (i) he has been given at least twenty-one (21) calendar days after actual receipt of the Agreement to consider and execute the Agreement and that mutually agreed-upon changes, whether material or immaterial, do not restart the 21-day period; (ii) he has seven (7) calendar days from the date he executes this Agreement in which to revoke it; and (iii) this Agreement will not be effective or enforceable nor the amounts set forth in Section 1 paid until after the seven-day revocation period ends without revocation by Participant. Revocation can be made by delivery and receipt of a written notice of revocation to Sonim Technologies, Inc.,1875 S Grant St #750, San Mateo, CA 94402, Attention: Chief Executive Officer, by midnight on or before the seventh calendar day after Participant signs the Agreement. Participant agrees and acknowledges that if he chooses to sign this Agreement before 21 days after receiving it, he has done so voluntarily.

7. Participant acknowledges that he has been advised to consult with an attorney of his choice with regard to this Agreement. Participant hereby acknowledges that he understands the significance of this Agreement and represents that the terms of this Agreement are fully understood and voluntarily accepted by him.

8. Participant agrees that he will treat the existence and terms of this Agreement as confidential and will not discuss the Agreement or its terms with anyone other than: (i) his counsel or tax advisor as necessary to secure their professional advice, (ii) his spouse, or (iii) as may be required by law.

9. Participant agrees to refrain from making any unfavorable or disparaging comments, in writing or orally, about Company, any of Company's operations, policies, or procedures, or about the Releasees. Notwithstanding the foregoing, it shall not be a violation of this Section for Participant to make truthful statements when required by order of a court or other body having jurisdiction, any governmental investigation or inquiry by a governmental entity, subpoena, court order, compulsory legal process or as otherwise may be required or allowed by law.

10. This Agreement shall be binding on Company and Participant and upon their respective heirs, representatives, successors and assigns, and shall run to the benefit of the Releasees and each of them and to their respective heirs, representatives, successors and assigns.

11. This Agreement sets forth the entire agreement between Participant and Company, and fully supersedes any and all prior agreements or understandings between them regarding its subject matter.

12. Company and Participant agree that in the event any provision of this Agreement is deemed to be invalid or unenforceable by any court or administrative agency of competent jurisdiction, or in the event that any provision cannot be modified so as to be valid and enforceable, then that provision shall be deemed severed from the Agreement and the remainder of the Agreement shall remain in full force and effect.

13. This Agreement may only be modified by written agreement signed by both parties.

14. The parties agree that the possibility that such unknown claims exist was taken into account in determining the amount of consideration to be paid for the giving of this Agreement.

PLEASE READ CAREFULLY. THIS AGREEMENT AND GENERAL RELEASE INCLUDES A RELEASE OF ALL KNOWN AND UNKNOWN CLAIMS.

Dated: _____ _____

[PARTICIPANT]

Sonim Technologies, Inc.

Dated: _____ By:_____

Exhibit 10.20

SUBORDINATED TERM LOAN AND SECURITY AGREEMENT

B. RILEY PRINCIPAL INVESTMENTS, LLC

and

SONIM TECHNOLOGIES, INC.

Dated as of October 23, 2017

TABLE OF CONTENTS

EXHIBITS

DISCLOSURE SCHEDULES

This SUBORDINATED TERM LOAN AND SECURITY AGREEMENT (this "Agreement"), dated as of October 23, 2017, is entered into by and between B. RILEY PRINCIPAL INVESTMENTS, LLC, a Delaware limited liability company ("Lender"), and SONIM TECHNOLOGIES, INC., a Delaware corporation ("Borrower"), with reference to the following facts:

RECITALS

Borrower has requested that Lender make available to Borrower one or more loans or other extensions of credit from time to time, and Lender is willing to make such loans or other extensions of credit, on and subject to the terms and conditions set forth herein. This Agreement sets forth the terms on which Lender will advance credit to Borrower, and Borrower will repay the amounts owing to Lender.

NOW, THEREFORE the parties hereby agree as follows:

1. DEFINITIONS AND CONSTRUCTION.

1.1 Definitions. As used in this Agreement (including, without limitation, in the recitals hereto), capitalized terms shall have the respective meanings set forth on Exhibit A. Any term that is used in this Agreement without definition and is defined in the UCC shall have the meaning given to such term in the UCC.

1.2 Accounting Terms. Any accounting term not specifically defined on Exhibit A shall be construed in accordance with GAAP or IFRS, consistently applied. The term "financial statements" shall include the accompanying notes and schedules.

1.3 Other Definitional Terms; Rules of Interpretation. The words "hereof," "herein" and "hereunder" and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. References to Sections, subsections, Exhibits, Schedules and the like, are to Sections and subsections of, or Exhibits or Schedules attached to, this Agreement unless otherwise expressly provided. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation." Unless the context in which used herein otherwise clearly requires, "or" has the inclusive meaning represented by the phrase "and/or." Defined terms include in the singular number the plural and in the plural number the singular. Reference to any agreement (including the Loan Documents), document or instrument means such agreement, document or instrument as amended or modified and in effect from time to time in accordance with the terms thereof (and, if applicable, in accordance with the terms hereof and the other Loan Documents), except where otherwise explicitly provided, and reference to any promissory note includes any promissory note which is an extension or renewal thereof or a substitute or replacement therefor. Reference to any law, rule, regulation, order, decree, requirement, policy, guideline, directive or interpretation means as amended, modified, codified, replaced or reenacted, in whole or in part, and in effect on the determination date, including rules and regulations promulgated thereunder.

2. LOAN AND TERMS OF PAYMENT.

2.1 Credit Extensions.

(a) Promise to Pay. Borrower hereby unconditionally promises to pay to Lender, in lawful money of the United States of America, the aggregate unpaid principal amount of all Credit Extensions made by Lender to Borrower, together with accrued and unpaid interest on the unpaid principal amount of such Credit Extensions at the rates set forth herein, and all other Obligations owing by Borrower to Lender, in each case as and when due in accordance with the terms hereof.

(b) Term Loan. Subject to the terms and conditions of this Agreement, Lender agrees to lend to Borrower from time to time during the Term Loan Availability Period, advances under the Term Loan (each a "Term Loan Advance" and collectively the "Term Loan Advances") in an aggregate original principal amount not to

exceed the Term Loan Commitment. The first Term Loan Advance, in the original principal amount of up to Five Million Dollars ($5,000,000), shall be made on the date during the Term Loan Availability Period that Borrower specifies in the initial Advance Request. Borrower may request additional Term Loan Advances after the initial Term Loan Advance, provided that at no time shall the aggregate principal amount of all Term Loan Advances hereunder exceed the Term Loan Commitment. The proposed uses of the proceeds of each Term Loan Advance shall be specified in the Advance Request for such Credit Extension; Term Loan Advance proceeds may be used for (x) working capital purposes as specified by Borrower in its Advance Request, (y) for other purposes in the ordinary course of business specified by Borrower in its Advance Request and approved by Lender (such approval not to be unreasonably withheld) and (z) for other purposes not in the ordinary course of business specified by Borrower in its Advance Request and approved by Lender in its sole discretion. Without Lender's prior written consent, Term Loan Advance proceeds may not be used (i) to repay any indebtedness for borrowed money other than (A) the Senior Debt and (B) up to One Million Dollars ($1,000,000) of the Indebtedness disclosed in Schedule 5.4 of the Disclosure Schedules, (ii) for repurchases or redemptions of equity securities, (iii) for bonuses or similar non-regular-salary payments to Borrower's officers, unless such payments have been approved by the Board, or (iv) for any use contrary to the use stated in the related Advance Request. Term Loan Advances shall be requested and funded in a minimum principal amount of not less than One Million Dollars ($1,000,000) each; provided, however, that a Term Loan Advance may be for less than this minimum principal amount with the consent of Lender or if the proceeds thereof are to be used to pay Lender Expenses. Borrower authorizes Lender to make Term Loan Advances for Lender Expenses upon notice to Borrower but without the requirement of an Advance Request or any other action or approval by Borrower. When repaid, the Term Loan Advances may not be re-borrowed. The Term Loan Advances shall be evidenced by the Term Loan Note. Lender may, from time to time, make Term Loan Advances, without Borrower's consent, to cure Events of Default under the Senior Loan Agreement, to the extent provided for in the Subordination Agreement.

2.2 Interest Rates, Payments, and Calculations.

(a) Interest Rates. Except as set forth in Section 2.2(b), the outstanding principal amount of the Term Loan shall accrue interest at a fixed annual rate of ten percent (10.0%) per annum.

(b) Default Rate. If any payment is not made within 10 days after the date such payment is due, Borrower shall pay Lender a late fee equal to the lesser of (i) five percent (5%) of the amount of such unpaid amount or (ii) the maximum amount permitted to be charged under applicable law. All Obligations shall bear interest during a Default Period at a rate equal to 5 percentage points above the interest rate applicable to such Obligations immediately prior to such Default Period.

(c) Interest and Principal Payments. For the period commencing on the Effective Date and ending on the first anniversary thereof, interest shall accrue and on and as of such anniversary date, such interest shall be compounded and be added to the Term Loan principal outstanding and shall thereafter accrue interest at the rate applicable hereunder. Interest shall be due and payable on the first calendar day of each month during the period commencing on the first anniversary of the Effective Date. Any interest not paid when due shall be compounded by being becoming part of the Obligations and such interest shall thereafter accrue interest at the rate applicable hereunder. All unpaid principal and accrued and unpaid interest and the Term Loan principal outstanding are due and payable in full on the Maturity Date.

(d) Voluntary Prepayment. Borrower may prepay all or any portion of the Term Loan at any time and from time to time, in whole or in part, provided that Borrower (i) provides written notice to Lender of its election to prepay the Term Loan Advances at least ten (10) days prior to such prepayment (the "Notice Period"), and (ii) pays, on the date of such prepayment (A) the principal amount to be prepaid, plus (B) all accrued and unpaid interest on the Term Loan Advances to the date of prepayment, plus (C) the Prepayment Charge, plus (F) all other Obligations, if any, that shall have become due and payable. During the Notice Period, Lender may elect to exercise its right, as provided in the Note, to convert the Convertible Amount, as defined in the Note, into Series A-2 Preferred, and if Lender exercises such right, Borrower's prepayment election shall not apply to the Convertible Amount.

(e) Computation of Interest. All interest chargeable under the Loan Documents shall be computed on the basis of a 360-day year for the actual number of days elapsed.

2.3 Crediting Payments.

(a) Lender will apply any wire transfer of funds, check, or other item of payment Lender may receive to conditionally reduce Obligations, but such applications of funds shall not be considered a payment on account unless such payment is of immediately available federal funds or unless and until such check or other item of payment is honored when presented for payment. Notwithstanding anything to the contrary contained herein, any wire transfer or payment received by Lender after 12:00 noon Pacific time shall be deemed to have been received by Lender as of the opening of business on the immediately following Business Day. Whenever any payment to Lender under the Loan Documents would otherwise be due (except by reason of acceleration) on a date that is not a Business Day, such payment shall instead be due on the next Business Day, and additional fees or interest, as the case may be, shall accrue and be payable for the period of such extension.

(b) Lender may initiate debit entries to any of Borrower's deposit accounts as authorized on an automatic payment authorization for principal and interest payments or any other amounts Borrower owes Lender when due (each a 'Designated Deposit Account"). These debits shall not constitute a set-off. If the ACH payment arrangement is terminated for any reason, Borrower shall make all payments due to Lender at Lender's address specified in Section 10.

2.4 Lender Expenses. Borrower shall reimburse Lender for all Lender Expenses (including reasonable attorneys' fees and expenses for documentation and negotiation of this Agreement and the other Loan Documents) incurred through and after the Effective Date, when due (or, if no stated due date, within two (2) Business Days after demand by Lender).

2.5 Additional Costs. If Lender shall determine that the adoption or implementation of any applicable law, rule, regulation, or treaty regarding capital adequacy, or any change therein, or any change in the interpretation or administration thereof by any governmental authority, central bank, or comparable agency charged with the interpretation or administration thereof, or compliance by Lender (or its applicable lending office) with any request or directive regarding capital adequacy (whether or not having the force of law) of any such authority, central bank, or comparable agency, has or would have the effect of reducing the rate of return on capital of Lender or any person or entity controlling Lender (a "Lender Parent") as a consequence of its obligations hereunder to a level below that which Lender (or its Parent) could have achieved but for such adoption, change, or compliance (taking into consideration policies with respect to capital adequacy) by an amount deemed by Lender to be material, then from time to time, within 5 days after demand by Lender, Borrower shall pay to Lender such additional amount or amounts as will compensate Lender for such reduction. A statement of Lender claiming compensation under this Section 2.5 and setting forth the additional amount or amounts to be paid to it hereunder shall be conclusive absent manifest error. Notwithstanding anything to the contrary in this Section 2.5, Borrower shall not be required to compensate Lender pursuant to this Section 2.5 for any amounts incurred more than 6 months prior to the date that Lender notifies Borrower of Lender's intention to claim compensation therefor; provided that if the circumstances giving rise to such claim have a retroactive effect, then such 6-month period shall be extended to include the period of such retroactive effect. The obligations of Borrower arising pursuant to this Section 2.5 shall survive the Maturity Date, the termination of this Agreement and the repayment of all Obligations.

2.6 Taxes.

(a) All payments by Borrower to or on account of any obligation of Borrower hereunder or under any other Loan Document shall be made free and clear of and without reduction or withholding for any Indemnified Taxes or Other Taxes, provided that, if Borrower shall be required by any applicable law to deduct any Indemnified Taxes (including any Other Taxes) from such payments, then: (i) the sum payable shall be increased as necessary so that after making all required deductions (including deductions applicable to additional sums payable

under this Section 2.6(a)), Lender receives an amount equal to the sum it would have received had no such deductions been made; (ii) Borrower shall make such deductions; and (iii) Borrower shall timely pay the full amount deducted to the relevant Governmental Authority in accordance with applicable law.

(b) Without limiting the provisions of Section 2.6(a), Borrower shall timely pay any Other Taxes to the relevant Governmental Authority in accordance with applicable law.

(c) Borrower shall indemnify Lender, within 10 days after written demand therefor, for the full amount of any Indemnified Taxes or Other Taxes (including Taxes imposed or asserted on or attributable to amounts payable under Section 2.6(a)) paid by Lender and any penalties, interest and reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes or Other Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to Borrower by Lender shall be conclusive absent manifest error.

(d) If requested in writing by Lender, Borrower shall deliver to Lender, as soon as practicable after any payment of Indemnified Taxes or Other Taxes by Borrower to a Governmental Authority, the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to Lender.

(e) If Lender receives a refund of any Taxes or Other Taxes as to which it has been indemnified by Borrower or with respect to which Borrower has paid additional amounts pursuant to Section 2.6(a) Lender shall pay to Borrower an amount equal to such refund (but only to the extent of indemnity payments made, or additional amounts paid, by Borrower under Section 2.6(a) with respect to the Taxes or Other Taxes giving rise to such refund), net of all out of pocket expenses of Lender and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund); provided that Borrower, upon the request of Lender, agrees to repay the amount paid over to Borrower (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) to Lender in the event Lender is required to repay such refund to such Governmental Authority. This Section 2.6(e) shall not be construed to require Lender to make available its tax returns (or any other information relating to its taxes that it deems confidential) to Borrower or any other Person

2.7 Term. This Agreement shall become effective on the Effective Date and shall continue in full force and effect for so long as any Obligations remain outstanding or Lender has any obligation to make Credit Extensions under this Agreement. Notwithstanding the foregoing, Lender shall have the right to terminate its obligation to make Credit Extensions under this Agreement immediately and without notice during a Default Period.

3. CONDITIONS OF EFFECTIVENESS OF THIS AGREEMENT AND OF EXTENSION OF TERM LOAN ADVANCES.

3.1 Conditions Precedent to Effectiveness of this Agreement. This Agreement shall become a binding agreement between Lender and Borrower upon the satisfaction on the following conditions precedent (the date such condition precedents are satisfied the "Effective Date"):

(a) Lender shall have received duly executed original signatures to this Agreement and other Loan Documents;

(b) Lender shall have received payment of the Lender Expenses then due specified in Section 2.4;

(c) Senior Lender shall have consented to the extension of the Term Loan on the terms and conditions set forth herein by the entering into the Subordination Agreement;

(d) An individual designated by Lender shall have been appointed to the Board; and

(e) Lender shall have received such other documents or certificates, and completion of such other matters, as Lender may reasonably deem necessary or appropriate.

3.2 Conditions Precedent to Credit Extensions. The obligation of Lender to make each Credit Extension hereunder, including the initial Credit Extension, on or after the Effective Date is subject to the satisfaction or waiver by Lender on (or in the case of the conditions set forth in clauses (a) – (c), which are applicable to the initial Credit Extension, on or prior to) the date that Borrower requests that such Credit Extension be made, of each of the following conditions:

(a) consummation of the Initial Closing, as defined in the Series A Preferred Stock Secondary Purchase Agreement to be entered into by Borrower and the Sellers and the Purchasers named therein;

(b) Borrower shall have entered into a binding commitment, on terms and conditions reasonably satisfactory to Lender, to appoint to the Board one (1) individual designated by Lender;

(c) a legal opinion of Borrower's counsel, dated as of the Effective Date, covering such matters and in a form as may be reasonably satisfactory to Lender;

(d) timely receipt by Lender of an executed Advance Request;

(e) the representations and warranties contained in Section 5 shall be true and correct in all material respects on and as of the date of such Advance Request and on the effective date of each Credit Extension as though made at and as of each such date (provided, however, that those representations and warranties expressly referring to another date shall be true, correct and complete in all material respects as of such other date); and

(f) no Potential Default or Event of Default shall have occurred and be continuing, or would exist after giving effect to such Credit Extension.

The making of each Credit Extension shall be deemed to be a representation and warranty by Borrower on the date of such Credit Extension as to the accuracy of the facts referred to in this Section 3.2.

4. CREATION OF SECURITY INTEREST.

4.1 Grant of Security Interest. Borrower grants and pledges to Lender a continuing security interest in and Lien on the Collateral, whether now or hereafter owned, existing, acquired or arising and wherever now or hereafter located, to secure the prompt repayment of any and all Obligations and to secure the prompt performance by Borrower of each of its covenants and duties under the Loan Documents. Except as set forth in the Disclosure Schedules, and subject only to the Senior Lien and Permitted Liens that may have priority by operation of law, such security interest constitutes a valid, first priority security interest in all presently existing Collateral, and will constitute a valid, first priority security interest in later-acquired Collateral, subject only to the Senior Lien and such Permitted Liens. Notwithstanding any termination of this Agreement, Lender's Lien on the Collateral shall remain in effect for so long as any Obligations are outstanding.

4.2 Perfection of Security Interest. Borrower authorizes Lender to file at any time financing statements, continuation statements, and amendments thereto that (i) either specifically describe the Collateral or describe the Collateral as all assets of Borrower of the kind pledged hereunder, and (ii) contain any other information required by the Code for the sufficiency of filing office acceptance of any financing statement, continuation statement, or amendment, including whether Borrower is an organization, the type

of organization and any organizational identification number issued to Borrower, if applicable. Borrower shall from time to time endorse and deliver to Lender, at the request of Lender, all Negotiable Collateral and other documents that Lender may reasonably request, in form satisfactory to Lender, to perfect and continue perfected Lender's security interests in the Collateral and in order to fully consummate all of the transactions contemplated under the Loan Documents. Borrower shall have possession of the Collateral, except where expressly otherwise provided in this Agreement or where Lender chooses to perfect its security interest by possession in addition to the filing of a financing statement. Where Material Collateral is in possession of a third party bailee, Borrower shall take such steps as Lender reasonably requests for Lender to (i) obtain an acknowledgment, in form and substance satisfactory to Lender, of the bailee that the bailee holds such Collateral for the benefit of Lender, (ii) obtain "control" of any Collateral consisting of investment property, deposit accounts, letter-of-credit rights or electronic chattel paper (as such items and the term "control" are defined in Division 9 of the Code) by causing the securities intermediary or depositary institution or issuing bank to execute a control agreement in form and substance satisfactory to Lender. Borrower will not create any chattel paper without placing a legend on the chattel paper acceptable to Lender indicating that Lender has a security interest in the chattel paper. Borrower from time to time may deposit with Lender specific cash collateral to secure specific Obligations; Borrower authorizes Lender to hold such specific balances in pledge and to decline to honor any drafts thereon or any request by Borrower or any other Person to pay or otherwise transfer any part of such balances for so long as the specific Obligations are outstanding.

4.3 Pledge of Shares. Borrower hereby pledges, assigns and grants to Lender a security interest in all of Borrower's right, title and interest in the Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing (collectively, the "Shares Collateral"; provided, however, that notwithstanding the foregoing, the term "Shares Collateral" shall not include securities representing at any time more than 65% of the aggregate voting power of the capital stock of a "controlled foreign corporation," as defined in Section 957 of the IRC), as security for the performance of the Obligations. The certificate or certificates for the Shares, if any, will be delivered to Lender, accompanied by an instrument of assignment undated and duly executed in blank by Borrower, and Borrower shall cause the books of each entity whose shares are part of the Shares and any transfer agent to reflect the pledge of the Shares. Upon the occurrence and during the continuance of an Event of Default, Lender may effect the transfer of the Shares into the name of Lender and cause new certificates representing such securities to be issued in the name of Lender or its transferee. Borrower will execute and deliver such documents, and take or cause to be taken such actions, as Lender may reasonably request to perfect or continue the perfection of Lender's security interest in the Shares. Unless an Event of Default shall have occurred and be continuing, Borrower shall be entitled to exercise any voting rights with respect to the Shares and to give consents, waivers and ratifications in respect thereof, provided that no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon the occurrence and continuance of an Event of Default.

4.4 Assignment of Insurance. As additional security for the payment and performance of the Obligations and subject to the security interest of Senior Lender, Borrower hereby assigns to Lender any and all monies (including proceeds of insurance and refunds of unearned premiums) due or to become due under, and all other rights of Borrower with respect to, any and all policies of insurance now or at any time hereafter covering the Collateral or any evidence thereof or any business records or valuable papers pertaining thereto, and Borrower hereby directs the issuer of any such policy to pay all such monies directly to Lender. At any time, whether or not a Default Period is then in effect, Lender may (but need not), in Lender's name or in Borrower's name, execute and deliver proof of claim, receive all such monies, endorse checks and other instruments representing payment of such monies, and adjust, litigate, compromise or release any claim against the issuer of any such policy. Any monies received as payment for any loss under any insurance policy mentioned above (other than liability insurance policies) or as payment of any award or compensation for condemnation or taking by eminent domain, shall be paid over to Lender to be applied, at the option of Lender, either to the prepayment of the Obligations or shall be disbursed to Borrower under staged payment terms reasonably satisfactory to Lender for application to the cost of repairs, replacements, or restorations.

Any such repairs, replacements, or restorations shall be effected with reasonable promptness and shall be of a value at least equal to the value of the items or property destroyed prior to such damage or destruction.

5. REPRESENTATIONS AND WARRANTIES.

Borrower represents and warrants as follows:

5.1 Valid Existence and Qualification. Borrower and each Subsidiary is a corporation duly existing under the laws of the state or other jurisdiction in which it is incorporated and qualified and licensed to do business in any state in which the conduct of its business or its ownership of property requires that it be so qualified, except where the failure to do so would not reasonably be expected to cause a Material Adverse Change.

5.2 Due Authorization; No Conflict. The execution, delivery, and performance of the Loan Documents are within Borrower's powers, have been duly authorized, and are not in conflict with nor constitute a breach of any provision contained in Borrower's organizational documents, nor will they constitute an event of default under any material agreement by which Borrower is bound. Borrower is not in default under any agreement by which it is bound, except to the extent such default would not reasonably be expected to cause a Material Adverse Change.

5.3 Enforceability. The Loan Documents to which Borrower is a party are the legal, valid and binding obligations of Borrower and are enforceable against Borrower in accordance with their respective terms.

5.4 Indebtedness. Except for Permitted Indebtedness, Borrower is not obligated (directly or indirectly), for any loans or other Indebtedness other than the Advances.

5.5 Parent, Subsidiaries and Affiliates. Except as set forth in the Disclosure Schedules, Borrower has no Parents, Subsidiaries or other Affiliates or divisions, nor is Borrower engaged in any joint venture or partnership with any other Person.

5.6 No Defaults. Except as set forth in the Disclosure Schedules, Borrower is not in default under any material contract, lease or commitment to which it is a party or by which it is bound. Borrower does not know of any dispute regarding any contract, lease or commitment which would have a Material Adverse Change.

5.7 Employee Matters. There are no controversies pending or threatened in writing between Borrower and any of its employees, agents or independent contractors other than employee grievances arising in the ordinary course of business which would not, in the aggregate, have a Material Adverse Change, and Borrower is in compliance with all federal and state laws respecting employment and employment terms, conditions and practices except for such non-compliance which would not have a Material Adverse Change.

5.8 Intellectual Property.

(a) Intellectual Property Rights. The Disclosure Schedules contain a complete list of all registered patents, applications for patents, registered trademarks, applications to register trademarks, service marks, applications to register service marks, registered mask works, trade dress and registered copyrights for which Borrower is the owner of record (the "Intellectual Property"). Except as disclosed in the Disclosure Schedules and except for Permitted Liens, (i) Borrower owns the Intellectual Property free and clear of all restrictions (including covenants not to sue a third party), court orders, injunctions, decrees, writs or Liens, whether by written agreement or otherwise, (ii) no Person other than Borrower owns or has been granted any right in the Intellectual Property, (iii) all Intellectual Property (other than applications that have yet to be granted) is valid, subsisting and enforceable and (iv) Borrower has taken all commercially reasonable action necessary to maintain and protect the Intellectual Property that is material to its business. The use of such Intellectual Property by Borrower and the operation of its businesses do not infringe any valid and enforceable intellectual property rights of any other Person, except to the extent any such infringement could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Change. No slogan or other advertising device, product, process, method, substance, part or other material now employed, or now

contemplated to be employed, by Borrower infringes upon any rights held by any other Person, except to the extent any such infringement could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Change. Except as specifically disclosed in the Disclosure Schedules, no claim or litigation regarding any of the foregoing is pending or, to Borrower's knowledge, threatened in writing, and no patent, invention, device, application, principle or any statute, law, rule, regulation, standard or code is pending or, to Borrower's knowledge, proposed, which could, individually or in the aggregate, reasonably be expected to have a Material Adverse Change.

(b) Licensed Intellectual Property. Borrower does not possess any licenses other than (i) as set forth in the Disclosure Schedules or as disclosed to Lender pursuant to the terms hereof, (ii) readily available, non-negotiated licenses of computer software and other intellectual property used solely for performing accounting, word processing and similar administrative tasks, (iii) open source licenses, and (iv) other licenses, the termination or absence of which would not reasonably be expected to cause a Material Adverse Change.

5.9 Environmental Matters. Borrower has not generated, used, stored, treated, transported, manufactured, handled, produced or disposed of any Hazardous Materials, on or off its premises (whether or not owned by it) in any manner which at any time violates in any material respect any Environmental Law or any license, permit, certificate, approval or similar authorization thereunder and the operations of Borrower comply in all material respects with all Environmental Laws and all licenses, permits, certificates, approvals and similar authorizations thereunder. There has been no investigation, proceeding, complaint, order, directive, claim, citation or notice by any governmental authority or any other Person, nor is any pending or to the best of Borrower's knowledge threatened with respect to any non-compliance with or violation of the requirements of any Environmental Law by Borrower or the release, spill or discharge, threatened or actual of any Hazardous Materials or the generation, use, storage, treatment, transportation, manufacture, handling, production or disposal of any Hazardous Materials or any other environmental, health or safety matter, which affects Borrower or its business, operations or assets or any properties at which Borrower has transported, stored or disposed of any Hazardous Materials. Borrower has no material liability (contingent or otherwise) in connection with a release, spill or discharge, threatened or actual, of any Hazardous Materials or the generation, use, storage, treatment, transportation, manufacture, handling, production or disposal of any Hazardous Materials.

5.10 ERISA Matters. Except as set forth in the Disclosure Schedules, neither Borrower nor any ERISA Affiliate (a) maintains or has maintained any Pension Plan, (b) contributes or has contributed to any Multiemployer Plan or (c) provides or has provided post-retirement medical or insurance benefits with respect to employees or former employees (other than benefits required under Section 601 of ERISA, Section 4980B of the IRC or applicable state law). Neither Borrower nor any ERISA Affiliate has received any notice or has any knowledge to the effect that it is not in full compliance with any of the requirements of ERISA, the IRC or applicable state law with respect to any Plan. No Reportable Event exists in connection with any Pension Plan. Each Plan which is intended to qualify under the IRC is so qualified, and no fact or circumstance exists which may have an adverse effect on the Plan's tax qualified status. Neither Borrower nor any ERISA Affiliate has (1) any accumulated funding deficiency (as defined in Section 302 of ERISA and Section 412 of the IRC) under any Plan, whether or not waived, (ii) any liability under Section 4201 or 4243 of ERISA for any withdrawal, partial withdrawal, reorganization or other event under any Multiemployer Plan or (iii) any liability or knowledge of any facts or circumstances which could result in any liability to the PBGC, the Internal Revenue Service, the Department of Labor or any participant in connection with any Plan (other than routine claims for benefits under the Plan).

5.11 Anti Money Laundering and Economic Sanctions Laws.

(a) To the extent applicable, each Loan Party and each of its Subsidiaries is in compliance with (i) the Patriot Act in all material respects and (ii) any applicable Anti Money Laundering Laws or any applicable Sanctions requirements of law that in each case are binding on them, except in the case of this clause (ii) where the failure to be in compliance would not reasonably be expected to have a Material Adverse Change. To the knowledge of management of the Borrower, none of the Loan Parties, their respective Subsidiaries, their respective officers or directors is an Embargoed Person.

(b) No part of the proceeds of the Loans will be used, directly or, to the knowledge of management of Borrower, indirectly, for any payments to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended.

(c) None of the Loan Parties or their respective Subsidiaries or, to the knowledge of management of Borrower, any of their respective officers and directors, will directly or indirectly use any proceeds of the Loans or lend, contribute or otherwise make available such proceeds to any Person for the purpose of financing the activities of or with any Person or in any country or territory that, at the time of funding, is an Embargoed Person.

5.12 Collateral.

(a) Borrower has rights in or the power to transfer the Collateral, and its title to the Collateral is free and clear of Liens, adverse claims, and restrictions on transfer or pledge except for Permitted Liens.

(b) All Inventory is in all material respects of good and merchantable quality, free from all material defects, except for Inventory for which adequate reserves have been made.

(c) No Equipment is a fixture to real estate unless such real estate is owned by Borrower and is subject to a mortgage in favor of Lender, or if such real estate is leased, is subject to a landlord's agreement in favor of Lender on terms acceptable to Lender, or an accession to other personal property unless such personal property is subject to a first priority lien in favor of Lender.

(d) Except as set forth in the Disclosure Schedules, none of the Collateral is maintained or invested with a Person other than Lender or Lender's Affiliates.

5.13 Name; Location of Chief Executive Office; Locations of Collateral. Except as disclosed in the Disclosure Schedules, Borrower has not, in the past 5 years, done business under any name other than that specified on the signature page hereof, and its exact legal name is as set forth in the first paragraph of this Agreement. The chief executive office of Borrower, at which Borrower keeps its books, records and accounts (or copies thereof) concerning the Collateral, is located in the Chief Executive Office State at the address indicated in Section 10 hereof. The Collateral, including the Equipment (except any part thereof which Borrower shall have advised Lender in writing consists of Collateral normally used in more than one state) is kept, or, in the case of vehicles, based, only at the address set forth on Section 10 hereof, and at other locations within the continental United States of which Lender has been advised by Borrower in writing.

5.14 Litigation. Except as set forth in the Disclosure Schedules, there are no actions or proceedings pending by or against Borrower or any Subsidiary before any court or administrative agency in which a likely adverse decision would reasonably be expected to have a Material Adverse Change. Borrower has no Commercial Tort Claims pending other than those set forth in the Disclosure Schedules and those of which Lender has been advised by Borrower in writing.

5.15 Accuracy of Financial Statements. All consolidated and consolidating financial statements related to Borrower and any Subsidiary that are delivered by Borrower to Lender fairly present in all material respects the financial condition of Borrower as of the date thereof and the results of operations of Borrower for the period then ended. There has not been a material adverse change in the consolidated or in the consolidating financial condition of Borrower since December 31, 2016, or since June 30, 2017.

5.16 Compliance with Laws and Regulations. Borrower and each Subsidiary have met the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. No

event has occurred resulting from Borrower's failure to comply with ERISA that is reasonably likely to result in Borrower's incurring any liability that could have a Material Adverse Change. Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940. Borrower is not engaged principally, or as one of its important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulations T and U of the Board of Governors of the Federal Reserve System). Borrower has complied in all material respects with all the provisions of the Federal Fair Labor Standards Act. Borrower is in compliance with all environmental laws, regulations and ordinances except where the failure to comply is not reasonably likely to have a Material Adverse Change. Borrower has not violated any statutes, laws, ordinances or rules applicable to it, the violation of which could reasonably be expected to have a Material Adverse Change. Borrower and each Subsidiary have filed or caused to be filed all tax returns required to be filed, and have paid, or have made adequate provision for the payment of, all taxes reflected therein except those being contested in good faith with adequate reserves under GAAP or IFRS or where the failure to file such returns or pay such taxes would not reasonably be expected to have a Material Adverse Change.

5.17 Government Consents. Borrower and each Subsidiary have obtained all consents, approvals, franchises, certificates, licenses, permits and authorizations of, made all declarations or filings with, and given all notices to, all governmental authorities that are necessary for the continued operation of Borrower's business as currently conducted, except where the failure to do so would not reasonably be expected to cause a Material Adverse Change.

5.18 Affiliate Transactions. Except as set forth in the Disclosure Schedules, Borrower is not conducting, permitting or suffering to be conducted, transactions with any Affiliate other than transactions with Affiliates for the purchase or sale of Inventory or services in the ordinary course of business pursuant to terms that are no less favorable to Borrower than the terms upon which such transactions would have been made had they been made to or with a Person that is not an Affiliate, as reasonably determined or approved by Lender; provided that Lender consent shall not be required for (i) Borrower's intercompany transactions with its Subsidiaries conducted in the ordinary course of its business and substantially in accordance with past practices, (ii) any transaction that does not provide for Borrower making payments, incurring liabilities or transferring property with a value of less than Two Hundred Fifty Thousand Dollars ($250,000), or (iii) any transaction approved by the Board, by the vote of its disinterested directors.

5.19 Names and Trade Names. During the past 5 years, Borrower's name has always been as set forth on the first page of this Agreement and Borrower uses no trade names, assumed names, fictitious names or division names in the operation of its business, except as set forth in the Disclosure Schedules.

5.20 Solvency. The fair salable value of the Borrower's assets on a going concern basis exceeds the fair value of its liabilities; Borrower is not left with unreasonably small capital after the consummation of transactions under this Agreement.

5.21 Full Disclosure. No representation, warranty or other statement made by Borrower in any certificate or written statement furnished to Lender taken together with all such certificates and written statements furnished to Lender contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading, it being recognized by Lender that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not to be viewed as facts and that actual results during the period or periods covered by any such projections and forecasts may differ from the projected or forecasted results.

6. AFFIRMATIVE COVENANTS.

Borrower covenants that, until payment in full of all outstanding Obligations (other than contingent indemnification obligations), and for so long as Lender may have any commitment to make a Credit Extension hereunder, Borrower shall do all of the following:

6.1 Good Standing and Government Compliance. Borrower shall maintain its organizational existence and good standing in the Borrower State, Borrower's Subsidiaries shall maintain their organizational existence and good standing in their respective jurisdictions or countries of organization or

formation, Borrower shall maintain qualification and good standing in each other jurisdiction in which the failure to so qualify could have a Material Adverse Change, and Borrower shall furnish to Lender the organizational identification number issued to Borrower by the authorities of the state in which Borrower is organized, if applicable. Borrower shall meet, and shall cause each Subsidiary to meet, the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. Borrower shall comply in all material respects with all applicable Environmental Laws, and maintain all material permits, licenses and approvals required thereunder where the failure to do so could have a Material Adverse Change. Borrower shall comply, and shall cause each Subsidiary to comply, with all statutes, laws, ordinances and government rules and regulations to which it is subject, and shall maintain, and shall cause each of its Subsidiaries to maintain, in force all licenses, approvals and agreements, the loss of which or failure to comply with which would reasonably be expected to have a Material Adverse Change.

6.2 Financial Statements, Collateral Reports, Certificates and Notices. Borrower shall deliver the following to Lender, in each case in form and substance reasonably satisfactory to Lender:

(a) as soon as available, but in any event within 20 days after the end of each calendar month, company-prepared consolidated and consolidating financial statements, including a balance sheet, income statement and cash flow statement, in a form reasonably acceptable to Lender and certified by a Responsible Officer;

(b) as soon as available, but no later than 120 days after the last day of each Fiscal Year, audited consolidated and consolidating financial statements of Borrower prepared in accordance with GAAP or IFRS, consistently applied, together with an opinion which is unqualified on such financial statements (provided that Borrower's financial statements may contain a going concern qualification based on liquidity) of an independent certified public accounting firm selected by Borrower and reasonably acceptable to Lender (provided that if a firm is acceptable to Senior Lender, it shall be acceptable to Lender) and a copy of any management letter sent to Borrower by such accountants. If the audited financial statements contain a going concern qualification based on liquidity, Borrower shall deliver, concurrent with the delivery of such statements, a statement whether, in Borrower's good faith judgment, such going concern qualification indicates that a Material Adverse Change has occurred;

(c) no earlier than ninety 90 days prior to and no later than 30 days after the beginning of each Fiscal Year, financial and business projections and a budget for Borrower and its Subsidiaries (including a balance sheet, an income statement, and a statement of cash flows), presented in a month-by-month format, for such Fiscal Year, with written certification signed by a Responsible Officer of approval thereof by the Board, which shall include the assumptions used therein, together with appropriate supporting details as reasonably requested by Lender;

(d) such sales projections, budgets, operating plans or other financial information generally prepared by Borrower in the ordinary course of business as Lender may reasonably request from time to time;

(e) upon Lender's request, within 30 days after the last day of each fiscal quarter, a report signed by Borrower, in form reasonably acceptable to Lender, listing any applications or registrations that Borrower has made or filed in respect of any Patents, Copyrights or Trademarks and the status of any outstanding applications or registrations, as well as any material change in Borrower's Patents, Copyrights or Trademarks, including but not limited to any subsequent ownership right of Borrower in or to any Trademark, Patent or Copyright not previously identified to Lender;

(f) concurrently with delivery to Senior Lender, each report delivered to Senior Lender in accordance with the Senior Loan Agreement and each notice to Senior Lender of a Senior Default and promptly upon receipt, a copy of any notice of Senior Default, acceleration of the Senior Debt or election to exercise any rights and remedies that Borrower receives from Senior Lender;

(g) promptly upon the filing thereof, copies of all registration statements and annual, quarterly, monthly or other regular reports which Borrower or any of its Subsidiaries files with the SEC, as well as promptly providing to Lender copies of any reports and proxy statements delivered to its shareholders;

(h) as soon as available, but no later than 20 days after the last day of each calendar month, aged listings of accounts receivable and accounts payable, inventory report, customer orders report, units shipped and unit sales report (including report by major customers), and management financial reports;

(i) as soon as available, but no later than 30 days after the end of each fiscal quarter, a customer warranties claim report for such fiscal quarter;

(j) promptly upon the occurrence thereof, but no later than 5 days thereafter, notice of any termination of any agreement for stocked products with AT&T or Verizon. Such notice shall include Borrower's statement whether, in its good faith judgment, such termination causes a Material Adverse Change; and

(k) promptly following request therefor by Lender, such other business or financial data, reports, appraisals and projections as Lender may reasonably request.

Borrower may deliver to Lender on an electronic basis any certificates, reports or information required pursuant to this Section 6.2, and Lender shall be entitled to rely on the information contained in the electronic files, provided that Lender in good faith believes that the files were delivered by a Responsible Officer. If Borrower delivers any such information electronically, then, if requested by Lender, Borrower shall also deliver such information to lender by U.S. Mail, reputable overnight courier service, hand delivery, facsimile or .pdf file within 5 Business Days after Borrower's electronic submission of such information.

6.3 Inventory; Returns. Borrower shall keep all Inventory in good and merchantable condition, free from all material defects except for Inventory for which adequate reserves have been made. Returns and allowances, if any, as between Borrower and its account debtors shall be on the same basis and in accordance with the usual customary practices of Borrower, as they exist on the Effective Date. Borrower shall promptly notify Lender of all returns and recoveries and of all disputes and claims involving more than $250,000.

6.4 Taxes. Borrower shall make, and cause each Subsidiary to make, due and timely payment or deposit of all material federal, state, and local taxes, assessments, or contributions required of it by law, including, but not limited to, those laws concerning income taxes, F.I.C.A., F.U.T.A. and state disability, and will execute and deliver to Lender, on demand, proof satisfactory to Lender indicating that Borrower or a Subsidiary has made such payments or deposits and any appropriate certificates attesting to the payment or deposit thereof; provided that Borrower or a Subsidiary need not make any payment if the amount or validity of such payment is contested in good faith by appropriate proceedings and is reserved against (to the extent required by GAAP or IFRS, as applicable), by Borrower.

6.5 Insurance.

(a) Borrower, at its expense, shall keep the Collateral insured against loss or damage by fire, theft, explosion, sprinklers, and all other hazards and risks, and in such amounts, as ordinarily insured against by other owners in similar businesses conducted in the locations where Borrower's business is conducted on the date hereof. Borrower shall also maintain liability and other insurance in amounts and of a type that are customary to businesses similar in size and scope to Borrower's.

(b) All such policies of insurance shall be in such form, with such companies, and in such

amounts as reasonably satisfactory to Lender. Subject to the rights of Senior Lender, all policies of property insurance shall contain a lender's loss payable endorsement, in a form satisfactory to Lender, showing Lender as the lender loss payee, and all liability insurance policies shall show Lender as an additional insured and specify that the insurer must give at least twenty (20) days' notice to Lender before canceling its policy for any reason. Upon Lender's request, Borrower shall deliver to Lender certified copies of the policies of insurance and evidence of all premium payments. If no Event of Default has occurred and is continuing, proceeds payable under any casualty policy will, at Borrower's option, be payable to Borrower to replace the property subject to the claim, provided that any such replacement property shall be deemed Collateral in which Lender has been granted a security interest. If an Event of Default has occurred and is continuing, subject to the rights of Senior Lender, all proceeds payable under any such policy shall, at Lender's option, be payable to Lender to be applied on account of the Obligations.

6.6 Notices. Borrower shall provide written notice to Lender of the following:

(a) Locations. Promptly upon becoming aware of (but in no event less than ten (10) days after the occurrence thereof) the proposed opening of any new place of business or new location of Collateral (other than an Excluded Location), the closing of any existing place of business or location of Collateral (other than an Excluded Location), any change of in the location of Borrower's books, records and accounts (or copies thereof), the opening or closing of any post office box, the opening or closing of any bank account or, if any of the Collateral consists of Goods of a type normally used in more than one state, the use of any such Goods in any state other than a state in which Borrower has previously advised Lender that such Goods will be used.

(b) Litigation and Proceedings. Promptly upon becoming aware thereof, (i) of any litigation, arbitration, governmental investigation or other actions or proceedings which are pending or threatened in writing against Borrower or any Subsidiary or to which any of the properties of any thereof is subject which could reasonably be expected to have a Material Adverse Change, and (ii) of any Commercial Tort Claims of Borrower that may arise.

(c) Names and Trade Names. Within ten (10) days after the change of Borrower's name or the use of any trade name, assumed name, fictitious name or division name not previously disclosed to Lender in writing.

(d) ERISA Matters. Promptly upon (i) the occurrence of any Reportable Event which might result in the termination by the PBGC of any Plan covering any officers or employees of Borrower, any benefits of which are, or are required to be, guaranteed by the PBGC, (ii) receipt of any notice from the PBGC of its intention to seek termination of any Plan or appointment of a trustee therefore, (iii) its intention to terminate or withdraw from any Plan, (iv) the institution of any steps by any member of the Controlled Group or any other Person to terminate any Pension Plan, (v) the failure of Borrower or any ERISA Affiliate of any member of the Controlled Group or any other Person to make a required contribution to any Pension Plan (if such failure is sufficient to give rise to a Lien under Section 302(f) of ERISA) or to any Multiemployer Plan, (vi) the taking of any action with respect to a Pension Plan which could result in the requirements that Borrower furnish a bond or other security to the PBGC or such Pension Plan, (vii) the occurrence of any event with respect to any Pension Plan or Multiemployer Plan which could result in the incurrence by any ERISA Affiliate or any member of the Controlled Group of any material liability, fine or penalty (including any claim or demand for withdrawal liability or partial withdrawal from any Multiemployer Plan), (viii) any material increase in the contingent liability of Borrower with respect to any postretirement welfare plan benefit, or (ix) any notice that any Multiemployer Plan is in reorganization, that increased contributions may be required to avoid a reduction in plan benefits or the imposition of an excise tax, that any such plan is or has been funded at a rate less than that required under Section 412 of the Code, that any such plan is or may be terminated, or that any such plan is or may become insolvent.

(e) Environmental Matters. Immediately upon becoming aware of any investigation, proceeding, complaint, order, directive, claim, citation or notice with respect to any non-compliance with or violation of the requirements of any Environmental Law by Borrower or the generation, use, storage, treatment, transportation,

manufacture handling, production or disposal of any Hazardous Materials or any other environmental, health or safety matter which affects Borrower or its business operations or assets or any properties at which Borrower has transported, stored or disposed of any Hazardous Materials unless the foregoing could not reasonably be expected to have a Material Adverse Change.

(f) Default; Material Adverse Change. Promptly of (i) any Material Adverse Change or any event or circumstance that would reasonably be expected to result in a Material Adverse Change, (ii) the occurrence of any Event of Default hereunder, or (iii) the occurrence of any Potential Default.

All of the foregoing notices shall be provided by Borrower to Lender in writing and shall describe the steps being taken by Borrower or any Subsidiary affected thereby with respect thereto.

6.7 Compliance with Laws and Maintenance of Permits. Borrower shall maintain all governmental consents, franchises, certificates, licenses, authorizations, approvals and permits, the lack of which would have a Material Adverse Change and Borrower shall remain in compliance with all applicable federal, state, local and foreign statutes, orders, regulations, rules and ordinances (including Environmental Laws and statutes, orders, regulations, rules and ordinances relating to taxes, employer and employee contributions and similar items, securities, ERISA or employee health and safety) the failure with which to comply would have a Material Adverse Change. Following any determination by Lender that there is non-compliance, or any condition which requires any action by or on behalf of Borrower in order to avoid non-compliance, with any Environmental Law, at Borrower's expense cause an independent environmental engineer acceptable to Lender to conduct such tests of the relevant site(s) as are appropriate and prepare and deliver a report setting forth the results of such tests, a proposed plan for remediation and an estimate of the costs thereof.

6.8 Inspection and Audits. Borrower shall permit Lender, or any Persons designated by Lender, to call at Borrower's places of business at any reasonable times and upon reasonable prior written notice, and, without hindrance or delay, to inspect the Collateral and to inspect, audit, check and make extracts from Borrower's books, records, journals, orders, receipts and any correspondence and other data relating to Borrower's business, the Collateral or any transactions between the parties hereto, and shall have the right to make such verification concerning Borrower's business as Lender may consider reasonable under the circumstances. Borrower shall furnish to Lender such information relevant to Lender's rights under the Loan Documents as Lender shall at any time and from time to time request. Borrower authorizes Lender to discuss the affairs, finances and business of Borrower with any officers, employees or directors of Borrower or with any Affiliate or the officers, employees or directors of any Affiliate, and to discuss the financial condition of Borrower with Borrower's independent public accountants. Any such discussions shall be without liability to Lender or to Borrower's independent public accountants. Inspections or audits shall be conducted no more often than once every twelve (12) months unless an Event of Default has occurred and is continuing in which case such inspections and audits shall occur as often as Lender shall determine is necessary. The foregoing inspections and audits shall be at Borrower's expense.

6.9 Appraisals. Borrower shall permit Lender to retain an inventory appraiser satisfactory to Lender to conduct appraisals of Borrower's Inventory from time to time at Borrower's expense; provided, however, that, (i) notwithstanding the foregoing or anything else contained herein, Borrower shall have no obligation to pay for more than one appraisal per calendar year while no Default Period exists, and (ii) if Senior Lender has conducted an appraisal within six (6) months prior to Lender's election to require an appraisal, Borrower may deliver a copy of such Senior Lender appraisal in satisfaction of Lender's election to require an appraisal.

6.10 Collateral. Borrower shall keep the Collateral in good condition, repair and order, ordinary wear and tear excepted, and shall make all necessary repairs to the Equipment and replacements thereof so that the operating efficiency and the value thereof shall at all times be preserved and maintained in all material respects. Subject to the limitations on inspection rights set forth in Section 6.8, Borrower shall permit Lender to examine any of the Collateral at any time and wherever the Collateral may be located and, Borrower shall, immediately upon request therefor by Lender, deliver to Lender any and all evidence of ownership of any of the Equipment including certificates of title and applications of title. Borrower shall, at the request of Lender,

indicate on its records concerning the Collateral a notation, in form satisfactory to Lender, of the security interest of Lender hereunder.

6.11 Use of Proceeds. Except as otherwise approved by Lender, Borrower shall use the proceeds of each Term Loan Advance solely in accordance with the proposed use of such Term Loan Advance specified in the Advance Request for such Credit Extension.

6.12 Intellectual Property. Borrower shall maintain adequate licenses, Patents, Copyrights, Trademarks and other Intellectual Property to continue its business as heretofore conducted by it or as hereafter conducted by it unless the failure to maintain any of the foregoing could not reasonably be expected to have a Material Adverse Change.

6.13 Creation/Acquisition of Subsidiaries. If Borrower or any Subsidiary creates or acquires any new Subsidiary, Borrower or such Subsidiary shall promptly notify Lender of the creation or acquisition of such new Subsidiary and take all such action as may be reasonably required by Lender to cause such new Subsidiary, if a domestic Subsidiary, to guarantee the Obligations of Borrower under the Loan Documents and to grant a continuing pledge and security interest in and to the collateral of such new domestic Subsidiary (substantially as described on Exhibit B hereto), and Borrower shall grant and pledge to Lender a perfected security interest in 100% of the Shares of such new Subsidiary, if a domestic Subsidiary, or in 65% of the Shares of such new Subsidiary, if such new Subsidiary is a foreign Subsidiary.

6.14 Patriot Act. and Office of Foreign Assets Control. Borrower shall (a) ensure, and cause each Subsidiary to ensure, that no Person who owns a controlling interest in or otherwise controls Borrower or any Subsidiary is or shall be listed on the Specially Designated Nationals and Blocked Person List or other similar lists maintained by OFAC, the Department of the Treasury or included in any Executive Orders, (b) not use or permit the use of the proceeds of the Loans to violate any of the foreign asset control regulations of OFAC or any enabling statute or Executive Order relating thereto, and (c) comply, and cause each Subsidiary to comply, with all applicable Bank Secrecy Act laws and regulations, as amended.

6.15 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Lender to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS.

Borrower covenants and agrees that, so long as any credit hereunder shall be available and until the outstanding Obligations (other than contingent indemnification obligations) are paid in full or for so long as Lender may have any commitment to make any Credit Extensions, Borrower will not do any of the following:

7.1 Dispositions. Convey, sell, lease, license, transfer or otherwise dispose of (collectively, to "Transfer"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, or, subject to Section 6.6, move cash balances on deposit with Lender to accounts opened at another financial institution, other than Permitted Transfers.

7.2 Change in Name, Location, Executive Office, or Executive Management; Change in Business; Change in Fiscal Year; Change in Control. Change its name or the Borrower State without 30 days' prior written notification to Lender; relocate its chief executive office without 10 days' prior written notification to Lender; replace its chief executive officer or chief financial officer (i) without prompt notice to Lender and (ii) unless a replacement for such officer is approved by the Board and engaged by Borrower within 90 days after such change; engage in any business, or permit any of its Subsidiaries to engage in any business, other than or reasonably related or incidental to the businesses currently engaged in by Borrower; change its Fiscal Year end; have a Change in Control; provided that the foregoing clause shall not apply to any Change of Control pursuant to which the Obligations (other than contingent indemnification obligations) are paid in full in cash contemporaneously with the close or consummation of such transaction and the Lender's obligations to make any Credit Extensions are terminated as of the close or consummation of such transaction.

7.3 Mergers or Acquisitions. Merge or consolidate or sell, lease or otherwise dispose of any of its assets other than in the ordinary course of business and other than Permitted Transfers; purchase all or substantially all of the stock or other equity interests or all or a material portion of the assets of any Person or division of such Person; or except as permitted under Section 7.6, enter into any purchase, redemption or retirement of any shares of any class of its stock or any other of its equity interests. A Subsidiary may merge or consolidate into another Subsidiary, with the prior written consent of Lender, not to be unreasonably withheld.

7.4 Indebtedness. Create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except Indebtedness to Lender.

7.5 Encumbrances. Create, incur, assume or allow any Lien with respect to any of its property, or assign or otherwise convey any right to receive income, or permit any of its Subsidiaries so to do, except for Permitted Liens and for sales of Accounts pursuant to Permitted Programs, or covenant to any other Person that Borrower in the future will refrain from creating, incurring, assuming or allowing any Lien with respect to any of Borrower's property except for customary restrictions on assignment in in-bound licenses of Intellectual Property where Borrower is the licensee and restrictions on encumbrance of equipment subject to Permitted Liens described in clause (d) of the definition of Permitted Liens.

7.6 Distributions. Pay any dividends or make any other distribution or payment on account of or in redemption, retirement or purchase of any of Borrower's capital stock, except that Borrower may (i) repurchase the stock of former or existing employees, directors and consultants pursuant to stock repurchase agreements as long as an Event of Default does not exist prior to such repurchase or would not exist after giving effect to such repurchase, (ii) with the prior written consent of Lender, repurchase the stock of former or existing employees, directors and consultants pursuant to stock repurchase agreements by the cancellation of indebtedness owed by such former employees to Borrower, (iii) convert of any of its convertible securities (including warrants) into other securities pursuant to the terms of such convertible securities or otherwise in exchange thereof, (iv) make dividends and distributions solely in common stock or any other equity security, (v) distribute equity securities to current or former employees or directors upon the exercise of their options, and (vi) make cash payments in an aggregate amount not to exceed $100,000 in lieu of fractional shares in connection with conversions permitted by clause (iii) above.

7.7 Investments. Directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments, or maintain or invest any of its property with a Person other than Lender or Lender's Affiliates or permit any Subsidiary to do so unless such Person has entered into a control agreement with Lender, in form and substance satisfactory to Lender, or suffer or permit any Subsidiary to be a party to, or be bound by, an agreement that restricts such Subsidiary from paying dividends or otherwise distributing property to Borrower.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower except for: (a) transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person; (b) transactions permitted by Section 7.6; (c) transactions constituting bona fide rounds of Borrower's common or preferred stock financing (or Subordinated Debt financing) for capital raising purposes, but only if approved by the Board, (d) reasonable and customary fees paid to independent members of the Board not to exceed $75,000 in cash for each such director in any Fiscal Year, and (e) Permitted Transfers to and Permitted Investments in Subsidiaries.

7.9 Subordinated Debt; Senior Debt. Make any payment in respect of any Subordinated Debt, or permit any of its Subsidiaries to make any such payment, except in compliance with the terms of such Subordinated Debt and the terms of the subordination agreement relating to such Subordinated Debt, or amend any provision of any document evidencing such Subordinated Debt, except in compliance with the terms of the subordination agreement relating to such Subordinated Debt, or amend any provision affecting Lender's rights contained in any documentation relating to the Subordinated Debt without Lender's prior

written consent, or amend any provision of any document evidencing the Senior Debt in violation of the terms of the Subordination Agreement.

7.10 Inventory and Equipment. Store any Material Collateral with a bailee, warehouseman, or similar third party unless the third party has been notified of Lender's security interest and Lender (a) has received an acknowledgment from the third party that it is holding or will hold such Material Collateral for Lender's benefit or (b) is in possession of the warehouse receipt, where negotiable, covering such Material Collateral. Except for Inventory sold in the ordinary course of business and except for Excluded Locations and such other locations as Lender may approve in writing, Borrower shall keep the Inventory and Equipment only at the location set forth in Section 10 and such other locations of which Borrower gives Lender prior written notice. Borrower shall not (a) permit any Equipment to become a Fixture to real property unless such real property is owned by Borrower and is subject to a mortgage in favor of Lender, or if such real estate is leased, is subject to a landlord's agreement in favor of Lender on terms acceptable to Lender, or (b) permit any Equipment to become an accession to any other personal property unless such personal property is subject to a first priority lien in favor of Lender.

7.11 No Investment Company; Margin Regulation. Become or be controlled by an "investment company," within the meaning of the Investment Company Act of 1940, or become principally engaged in, or undertake as one of its important activities, the business of extending credit for the purpose of purchasing or carrying margin stock, or use the proceeds of any Credit Extension for such purpose.

7.12 ERISA. Except as set forth in the Disclosure Schedules, directly or through any ERISA Affiliate, (a) adopt, create, assume or become a party to any Pension Plan, (b) incur any obligation to contribute to any Multiemployer Plan, (c) incur any obligation to provide post-retirement medical or insurance benefits with respect to employees or former employees (other than benefits required by law) or (d) amend any Plan in a manner that would materially increase its funding obligations.

7.13 Capital Expenditures. Unless Lender otherwise approves, make, or permit any of its Subsidiaries to make, any Capital Expenditure if, after giving effect to such Capital Expenditure, the aggregate cost of all Capital Expenditures would exceed $1,000,000 during any Fiscal Year.

7.14 Account Adjustments. During any Default Period, Borrower shall not settle or adjust Accounts in a manner which would result in reduction of amounts payable under such Accounts in excess of $100,000 in the aggregate.

8. EVENTS OF DEFAULT.

Any one or more of the following events shall constitute an Event of Default by Borrower under this Agreement:

8.1 Payment Default. If Borrower fails to pay when due any payment of principal or interest due on the Credit Extensions, or Borrower fails to pay any fee within 3 Business Days of the due date thereof, or Borrower fails to pay any Lender Expenses or any other amount payable hereunder or under any Loan Document within 10 Business Days after the due date thereof;

8.2 Covenant Default.

(a) If Borrower fails to perform any obligation under Section 6 or violates any of the covenants contained in Section 7;

(b) If Borrower fails or neglects to perform or observe any other material term, provision, condition or covenant contained in this Agreement, in any of the Loan Documents, or in any other present or future agreement between Borrower and Lender and as to any default under such other term, provision, condition or covenant that can be cured, has failed to cure such default within 15 days after Borrower receives notice thereof or any executive officer of Borrower becomes aware thereof; or

(c) If at any time, Lender's security interest in the Collateral is not prior to all other security interests or Liens of record except for Permitted Liens;

8.3 Material Adverse Change. If there occurs a Material Adverse Change;

8.4 Attachment. If any material portion of Borrower's assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession of any trustee, receiver or person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within 10 days, or if Borrower is enjoined, restrained, or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, or if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's assets, or if a notice of lien, levy, or assessment is filed of record with respect to any of Borrower's assets by the United States Government, or any department, agency, or instrumentality thereof, or by any state, county, municipal, or governmental agency, and the same is not paid within 10 days after Borrower receives notice thereof, provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower (provided that no Credit Extensions will be made during such cure period);

8.5 Insolvency. If an Insolvency Proceeding is commenced by Borrower, or if an Insolvency Proceeding is commenced against Borrower and is not dismissed or stayed within 45 days (provided that no Credit Extensions will be made prior to the dismissal of such Insolvency Proceeding);

8.6 Other Agreements. If there is, under any agreement to which Borrower is a party with a third party or parties, (i) a default resulting in (A) a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount individually or in the aggregate in excess of $250,000, including the Senior Debt, or (B) in the case of Senior Lender, the exercise of exclusive control with respect to Borrower's operating accounts; or (ii) a default that causes a Material Adverse Change; provided, however, that upon the cure or waiver of any default described in clause (i) or clause (ii) with respect to the Senior Debt, the Event of Default under this Section 8.6 shall be automatically cured;

8.7 Subordinated Debt. If Borrower makes any payment on account of Subordinated Debt, except to the extent the payment is allowed under any subordination agreement entered into with Lender relating to such Subordinated Debt;

8.8 Judgments. If one or more final judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least $250,000 (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower or the Subsidiary and the same are not within 10 days after the entry thereof, discharged or execution thereof stayed or bonded pending appeal, or such judgments are not discharged prior to the expiration of any such stay (provided that no Credit Extensions will be made prior to the discharge, stay, or bonding of such judgment, order or decree).

8.9 Misrepresentations. If any material misrepresentation or material misstatement exists now or hereafter in any warranty or representation set forth herein or in any certificate delivered to Lender by any Responsible Officer pursuant to this Agreement or to induce Lender to enter into this Agreement or any other Loan Document.

8.10 Guaranty. If any guaranty of all or a portion of the Obligations (a "Guaranty") ceases for any reason to be in full force and effect, or any Guarantor fails to perform any obligation under any Guaranty or any security agreement securing any Guaranty (collectively, the "Guaranty Documents"), or any event of default occurs under any Guaranty Document or any Guarantor revokes or purports to revoke a Guaranty, or any material misrepresentation or material misstatement exists now or hereafter in any warranty or representation set forth in any Guaranty Document or in any certificate delivered to Lender in connection with any Guaranty Document, or if any of the circumstances described in Sections 8.3 through 8.8 occur with respect to any Guarantor.

9. LENDER'S RIGHTS AND REMEDIES.

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Lender may, at its election, without notice of its election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Declare all Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, immediately due and payable (provided that upon the occurrence of an Event of Default described in Section 8.5, all Obligations shall become immediately due and payable without any action by Lender);

(b) Cease advancing money or extending credit to or for the benefit of Borrower under this Agreement or under any other agreement between Borrower and Lender;

(c) Settle or adjust disputes and claims directly with account debtors for amounts, upon terms and in whatever order Lender reasonably considers advisable;

(d) Make such payments and do such acts as Lender considers necessary or reasonable to protect its security interest in the Collateral. Borrower agrees to assemble the Collateral if Lender so requires, and to make the Collateral available to Lender as Lender may designate. Borrower authorizes Lender to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest, or compromise any encumbrance, charge, or lien which in Lender's determination appears to be prior or superior to its security interest and to pay all expenses incurred in connection therewith. With respect to any of Borrower's owned premises, Borrower hereby grants Lender a license to enter into possession of such premises and to occupy the same, without charge, in order to exercise any of Lender's rights or remedies provided herein, at law, in equity, or otherwise;

(e) Set off and apply to the Obligations any and all indebtedness at any time owing to or for the credit or the account of Borrower held by Lender;

(f) Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Lender is hereby granted a license or other right, solely pursuant to the provisions of this Section 9.1, to use, without charge, Borrower's labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any property of a similar nature, as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Lender's exercise of its rights under this Section 9.1, Borrower's rights under all licenses and all franchise agreements shall inure to Lender's benefit;

(g) Sell the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Lender determines is commercially reasonable, and apply any proceeds to the Obligations in whatever manner or order Lender deems appropriate. Lender may sell the Collateral without giving any warranties as to the Collateral. Lender may specifically disclaim any warranties of title or the like. This procedure will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral. If Lender sells any of the Collateral upon credit, Borrower will be credited only with payments actually made by the purchaser, received by Lender, and applied to the indebtedness of the purchaser. If the purchaser fails to pay for the Collateral, Lender may resell the Collateral and Borrower shall be credited with the proceeds of the sale;

(h) Lender may credit bid and purchase at any public sale; and

(i) Apply for the appointment of a receiver, trustee, liquidator or conservator of the Collateral, without notice and without regard to the adequacy of the security for the

Obligations and without regard to the solvency of Borrower, any guarantor or any other Person liable for any of the Obligations.

Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower. Lender may comply with any applicable state or federal law requirements in connection with a disposition of the Collateral and compliance will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral.

9.2 Power of Attorney. Effective only upon the occurrence and during the continuance of an Event of Default, Borrower hereby irrevocably appoints Lender (and any of Lender's designated officers, or employees) as Borrower's true and lawful attorney to: (a) send requests for verification of Accounts or notify account debtors of Lender's security interest in the Accounts; (b) endorse Borrower's name on any checks or other forms of payment or security that may come into Lender's possession, cash or deposit such checks or other items of payment or security, and apply to the Obligations all proceeds of such checks or other items; (c) sign Borrower's name on any invoice or bill of lading relating to any Account, drafts against account debtors, schedules and assignments of Accounts, verifications of Accounts, and notices to account debtors; (d) dispose of any Collateral and apply all cash sale proceeds to the Obligations; (e) make, settle, and adjust all claims under and decisions with respect to Borrower's policies of insurance and apply to the Obligations all amounts received by Lender pursuant to such policies; (f) settle and adjust disputes and claims respecting the accounts directly with account debtors, for amounts and upon terms which Lender determines to be reasonable, and apply to the Obligations all amounts received by Lender in connection with any such settlement and adjustment; (g) enter into a short-form intellectual property security agreement consistent with the terms of this Agreement for recording purposes only or modify, in its sole discretion, any intellectual property security agreement entered into between Borrower and Lender without first obtaining Borrower's approval of or signature to such modification by amending the schedules thereto, as appropriate, to include reference to any right, title or interest in any Copyrights, Patents or Trademarks acquired by Borrower after the execution hereof or to delete any reference to any right, title or interest in any Copyrights, Patents or Trademarks in which Borrower no longer has or claims to have any right, title or interest; and (h) file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral; provided Lender may exercise such power of attorney to sign the name of Borrower on any of the documents described in clause (g) above, regardless of whether a Default Period is in effect. The appointment of Lender as Borrower's attorney in fact, and each and every one of Lender's rights and powers, being coupled with an interest, is irrevocable until all of the Obligations (other than contingent indemnification obligations) have been fully repaid and performed and Lender's obligation to provide advances hereunder is terminated.

9.3 Accounts Collection. At any time after the occurrence and during the continuation of an Event of Default, (a) Lender may notify any Person owing funds to Borrower of Lender's security interest in such funds and verify the amount of such Account; and (b) Borrower shall collect all amounts owing to Borrower for Lender, receive in trust all payments as Lender's trustee, and immediately deliver such payments to Lender in their original form as received from the account debtor, with proper endorsements for deposit.

9.4 Lender Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Lender may do any or all of the following after reasonable notice to Borrower: (a) make payment of the same or any part thereof; or (b) obtain and maintain insurance policies of the type discussed in Section 6.5, and take any action with respect to such policies as Lender deems prudent. Any amounts so paid or deposited by Lender shall constitute Lender Expenses, shall be immediately due and payable, and shall bear interest at the then applicable rate hereinabove provided, and shall be secured by the Collateral. Any payments made by Lender shall not constitute an agreement by Lender to make similar payments in the future or a waiver by Lender of any Event of Default under this Agreement.

9.5 Lender's Liability for Collateral. Lender has no obligation to clean up or otherwise prepare the Collateral for sale. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

9.6 No Obligation to Pursue Others. Lender has no obligation to attempt to satisfy the Obligations by collecting them from any other person liable for them and Lender may release, modify or waive any collateral provided by any other Person to secure any of the Obligations, all without affecting Lender's rights against Borrower. Borrower waives any right it may have to require Lender to pursue any other Person for any of the Obligations.

9.7 Remedies Cumulative. Lender's rights and remedies under this Agreement, the Loan Documents, and all other agreements shall be cumulative. Lender shall have all other rights and remedies not inconsistent herewith as provided under the Code, by law, or in equity. No exercise by Lender of one right or remedy shall be deemed an election, and no waiver by Lender of any Event of Default on Borrower's part shall be deemed a continuing waiver. No delay by Lender shall constitute a waiver, election, or acquiescence by it. No waiver by Lender shall be effective unless made in a written document signed on behalf of Lender and then shall be effective only in the specific instance and for the specific purpose for which it was given. Borrower expressly agrees that this Section 9.6 may not be waived or modified by Lender by course of performance, conduct, estoppel or otherwise.

9.8 Demand; Protest. Except as otherwise provided in this Agreement, Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment and any other notices relating to the Obligations.

10. NOTICES.

All notices or demands by any party relating to this Agreement or any other agreement entered into in connection herewith shall be in writing and (except for financial statements and other informational documents which may be sent by first-class mail, postage prepaid or e-mail) shall be personally delivered or sent by a recognized overnight delivery service, certified mail, postage prepaid, return receipt requested, or by telefacsimile to Borrower or to Lender, as the case may be, at its addresses set forth below:

If to Borrower:

Sonim Technologies, Inc.
1825 S. Grant Street, Suite 200
San Mateo, CA 94402
Attn: Richard Long
Fax: (650) 378-8109
E-mail: r.long@sonimtech.com

If to Lender:

B. Riley Principal Investments, LLC
21255 Burbank Boulevard, Suite 400
Woodland Hills, CA 91367
Attention: Mr Kenny Young, Chief Executive Officer Tel: 703-469-1900
E-mail: kyoung@brileyfin.com

With a copy to:

Alan N. Forman
Executive Vice President & General Counsel B.
Riley Financial, Inc.
299 Park Ave., 7th Floor
New York, NY 10171
Tel: (212) 409-2420
E-mail: aforman@brileyfin.com

Notice shall be effective upon receipt by the addressee thereof;provided, however, that if any notice is tendered to an addressee and delivery thereof is refused by such addressee, such notice shall be effective upon such tender unless expressly set forth in such notice. The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.

11. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER; JUDICIAL PREFERENCE.

11.1 Governing Law and Venue. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of California, without regard to principles of conflicts of law. Each of Borrower and Lender hereby submits to the exclusive jurisdiction of the state and Federal courts located in the County of Los Angeles, State of California; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Lender from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Lender. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or *forum non conveniens* and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in, or subsequently provided by Borrower in accordance with, Section 10 and that service so made shall be deemed completed upon the earlier to occur of Borrower's actual receipt thereof or 3 days after deposit in the U.S. mails, proper postage prepaid.

11.2 JURY TRIAL WAIVER. BORROWER AND LENDER EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE OTHER LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR BOTH PARTIES TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

11.3 JUDICIAL REFERENCE PROVISION. WITHOUT INTENDING IN ANY WAY TO LIMIT THE PARTIES' AGREEMENT TO WAIVE THEIR RESPECTIVE RIGHTS TO A TRIAL BY JURY, if the above waiver of the right to a trial by jury is not enforceable, the parties hereto agree that any and all disputes or controversies of any nature between them arising at any time shall be decided by a reference to a private judge, mutually selected by the parties (or, if they cannot agree, by the Presiding Judge of the Los Angeles County, California Superior Court) appointed in accordance with California Code of Civil Procedure Section 638 (or pursuant to comparable provisions of federal law if the dispute falls within the exclusive jurisdiction of the federal courts), sitting without a jury, in Santa Clara County, California; and the parties hereby submit to the jurisdiction of such court. The reference proceedings shall be conducted pursuant to and in accordance with the provisions of California Code of Civil Procedure §§ 638 through 645.1, inclusive. The private judge shall have the power, among others, to grant provisional relief, including without limitation, entering temporary restraining orders, issuing preliminary and permanent injunctions and appointing receivers. All such proceedings shall be closed to the public and confidential, and all records relating thereto shall be permanently sealed. If during the course of any dispute, a party desires to seek provisional relief, but a judge has not been appointed at that point pursuant to the judicial reference procedures, then such party may apply to the Santa Clara County, California Superior Court for such relief. The proceeding before the private judge shall be conducted in the same manner as it would be before a court under the rules of evidence applicable to judicial proceedings. The parties shall be entitled to discovery which shall be conducted in the same manner as it would be before a court under the rules of discovery applicable to judicial proceedings. The private judge shall oversee discovery and may enforce all discovery rules and orders applicable to judicial proceedings in the same manner as a trial court judge. The parties agree that the selected or appointed private judge shall have the power to decide all issues in the action or proceeding, whether of fact or of law, and shall report a statement of decision thereon pursuant to California Code of Civil Procedure§ 644(a). Nothing in this paragraph shall limit the right of any party at any time to exercise self-help remedies, foreclose against collateral, or obtain provisional remedies. The private judge shall also determine all issues relating to the applicability, interpretation, and enforceability of this paragraph.

12. GENERAL PROVISIONS.

12.1 Successors and Assigns. This Agreement shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties and shall bind all persons who become bound as a debtor to this Agreement; provided, however, that neither this Agreement nor any rights hereunder may be assigned by Borrower without Lender's prior written consent, which consent may be granted or

withheld in Lender's sole discretion. Lender shall have the right without the consent of or notice to Borrower to sell, transfer, negotiate, or grant participation in all or any part of, or any interest in, Lender's obligations, rights and benefits hereunder.

12.2 Indemnification. Borrower shall defend, indemnify and hold harmless Lender and its officers, employees, and agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with the transactions contemplated by this Agreement or any other Loan Document; and (b) all losses or Lender Expenses in any way suffered, incurred, or paid by Lender, its officers, employees and agents as a result of or in any way arising out of, following, or consequential to transactions between Lender and Borrower whether under this Agreement, or otherwise (including without limitation reasonable attorneys' fees and expenses), except for losses caused by Lender's gross negligence or willful misconduct,

12.3 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

12.5 Amendments in Writing Integration. All amendments to or termination of this Agreement or the other Loan Documents must be in writing and signed by the parties to this Agreement or to such other Loan Document, as applicable. All prior agreements, understandings, representations, warranties, and negotiations between the parties hereto with respect to the subject matter of this Agreement and the other Loan Documents, if any, are merged into this Agreement and the other Loan Documents.

12.6 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement.

12.7 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations (other than contingent indemnification obligations) remain outstanding or Lender has any obligation to make any Credit Extension to Borrower. The obligations of Borrower to indemnify Lender with respect to the expenses, damages, losses, costs and liabilities described in Section 12.2 shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Lender have run.

12.8 Confidentiality. In handling any confidential information, Lender and all employees and agents of Lender shall exercise the same degree of care that Lender exercises with respect to its own proprietary information of the same types to maintain the confidentiality of any non-public information thereby received or received pursuant to this Agreement except that disclosure of such information may be made (i) to the subsidiaries or Affiliates of Lender in connection with their present or prospective business relations with Borrower, (ii) to prospective transferees or purchasers of any interest in the Loans, provided that they have entered into a comparable confidentiality agreement in favor of Borrower and have delivered a copy to Borrower, (iii) as required by law, regulations, rule or order, subpoena, judicial order or similar order, (iv) as may be required in connection with the examination, audit or similar investigation of Lender, (v) to Lender's accountants, auditors and regulations, and (vi) as Lender may determine in connection with the enforcement of any remedies hereunder. Confidential information hereunder shall not include information that either: (a) is in the public domain or in the knowledge or possession of Lender when disclosed to Lender, or becomes part of the public domain after disclosure to Lender through no fault of Lender; or (b) is disclosed to Lender by a third party, provided Lender does not have actual knowledge that such third party is prohibited from disclosing such information.

12.9 No Consequential Damages. No party to this Agreement or any other Loan Document, nor any agent or attorney of such party or Lender, shall be liable to any other party to this Agreement or any other Person on any other theory of liability of any special, indirect, consequential or punitive damages.

12.10 Lender Approvals and Consents. Unless otherwise specifically stated in the Loan Documents, all approvals and consents of Lender under the Loan Documents may be given or withheld by Lender in its sole discretion.

12.11 Conflict Waiver. Borrower acknowledges that it has engaged FBR Capital Markets & Co. ("FBR"), a subsidiary of Lender, to serve as Borrower's financial advisor with respect to the credit facility that Lender is extending hereunder and other financing transactions that Borrower and its current stockholders are undertaking. Borrower further acknowledges that FBR, under the terms of its engagement with Borrower, will receive compensation in connection with the closing of the credit facility hereunder, as well as in connection with the other financing transactions when they are consummated. Borrower waives any conflict that might exist as a result of FBR's role as financial advisor with respect to the credit facility that Lender is extending hereunder, and with respect to the financing transactions for which FBR is advising Borrower. Borrower further waives any defense to payment of any portion of the compensation due to FBR in connection with the closing of the credit facility hereunder based on the relationship between FBR and Lender, as well as any defense to payment of any portion of the compensation due to FBR with respect to other financing transactions covered by Borrower's engagement of FBR based on such relationship.

12.12 Senior Debt Purchase Right. Lender agrees with Borrower that Lender will not agree to amend the terms and conditions of Lender's Senior Debt purchase right under Section 16(a) of the Subordination Agreement without the prior written consent of Borrower, which consent shall not be unreasonably withheld.

[Rest of page intentionally left blank; signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective duly authorized officers as of the date first above written.

SONIM TECHNOLOGIES, INC.,
a Delaware corporation

By:_____
Name: Bob Plaschke
Title: President and Chief Executive Officer

B. RILEY PRINCIPAL INVESTMENTS, LLC,
a Delaware limited liability company

By:_____
Name:_____
Title:_____

(Signature Page to Loan and Security Agreement)

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective duly authorized officers as of the date first above written.

SONIM TECHNOLOGIES, INC.,
a Delaware corporation

By: _____
Name: _____
Title: _____

B. RILEY PRINCIPAL INVESTMENTS, LLC,
a Delaware limited liability company

By: Kenneth M. Young
Name: Kenneth Young
Title: CEO

EXHIBIT A

DEFINITIONS

"Advance Request" shall be a form substantially similar to Exhibit C attached hereto, with appropriate insertions.

"Affiliate" means, with respect to any Person, any Person that owns or controls directly or indirectly such Person, any Person that controls or is controlled by or is under common control with such Person, and each of such Person's senior executive officers, directors, and partners.

"Effective Date" means the date of this Agreement.

"Board" means the Borrower's Board of Directors.

"Borrower State" means Delaware, the state under whose laws Borrower is organized.

"Borrower's Books" means all of Borrower's books and records including: ledgers; records concerning Borrower's assets or liabilities, the Collateral, business operations or financial condition; and all computer programs, or tape files, and the equipment, containing such information.

"Business Day" means any day that is not a Saturday, Sunday, or other day on which banks in the State of California are authorized or required to close.

"Capital Expenditures" means with respect to any period, the aggregate of all expenditures (whether paid in cash or accrued as liabilities and including expenditures for capitalized lease obligations) by Borrower and its Subsidiaries during such period that are required by GAAP or IFRS, to be included in or reflected by the property, plant and equipment or similar fixed asset accounts (or intangible accounts subject to amortization) on the balance sheet of Borrower and its Subsidiaries (but excluding the capitalization of software).

"Change in Control" shall mean the occurrence of any event (whether in one or more transactions) which results in a transfer of control of or the power to vote more than 25% of the Equity Interests (on a fully diluted basis) of Borrower (other than by (i) the sale of Borrower's Equity Interests in a public offering or to venture capital or private equity investors so long as Borrower identifies to Lender the venture capital investors or private equity investors at least seven (7) Business Days prior to the closing of the transaction and provides to Lender a description of the material terms of the transaction, (ii) the sale of Borrower's Equity Interests pursuant to the Series A Preferred Stock Secondary Purchase Agreement referred to in Section 3.2(a) or (iii) the purchase of Equity Interests by Lender or its Affiliates).

"Chief Executive Office State" means California, the state in which Borrower's chief executive office is located.

"Code" means the Internal Revenue Code of 1986, as amended, and the rules and regulations thereunder, all as in effect from time to time.

"Collateral" means the property described on Exhibit B attached hereto.

"Control Agreement" means an agreement entered into among Borrower, Lender and, as applicable, a depository institution at which Borrower maintains a deposit account or a securities intermediary or commodity intermediary at which Borrower maintains a securities account or a commodity account, pursuant to which Lender obtains control (within the meaning of the Code) over such deposit account, securities account, or commodity account.

"Controlled Group" means a controlled group of corporations as defined in 26 U.S.C. § 1563.

"Contingent Obligation" means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another, including, without limitation, any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement,

interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices (a "Swap Agreement"); provided, however, that the term "Contingent Obligation" shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

"Copyrights" means, collectively:

(a) All present and future United States registered copyrights and copyright registrations (including all of the exclusive rights afforded a copyright registrant in the United States under 17 U.S.C. Section 106 and any exclusive rights which may in the future arise by act of Congress or otherwise), and all present and future applications for copyright registrations (including applications for copyright registrations of derivative works and compilations) (collectively, "Registered Copyrights"), and any and all royalties, payments and other amounts payable to Borrower in connection with Registered Copyrights, together with all renewals and extensions of Registered Copyrights, the right to recover for all past, present and future infringements of Registered Copyrights, and all computer programs and tangible property embodying or incorporating Registered Copyrights, and all other rights of every kind whatsoever accruing thereunder or pertaining thereto; and

(b) All present and future copyrights, Mask Works, computer programs and other rights subject to (or capable of becoming subject to) United States copyright protection which are not registered in the United States Copyright Office (collectively, "Unregistered Copyrights"), whether now owned or hereafter acquired, and any and all royalties, payments, and other amounts payable to Borrower in connection with Unregistered Copyrights, together with all renewals and extensions of Unregistered Copyrights, the right to recover for all past, present and future infringements of Unregistered Copyrights, and all computer programs and all tangible property embodying or incorporating Unregistered Copyrights, and all other rights of every kind whatsoever accruing thereunder or pertaining thereto.

"Credit Extension" means a Term Loan Advance or any other extension of credit by Lender to or for the benefit of Borrower hereunder.

"Default Period" means the period of time commencing on the day an Event of Default occurs and continuing through the date the Event of Default has been cured or waived.

"Disclosure Schedules" means the schedule of exceptions attached hereto and approved by Lender, if any.

"Dollars," "dollars" or use of the sign "$" means only lawful money of the United States and not any other currency, regardless of whether that currency uses the "$" sign to denote its currency or may be readily converted into lawful money of the United States.

"Embargoed Person" means (a) any country or territory that is the target of a sanctions program administered by OFAC or (b) any Person that (i) is or is owned or controlled by a Person publicly identified on the most current list of "Specially Designated Nationals and Blocked Persons" published by OFAC, (ii) is the target of a sanctions program or sanctions list (A) administered by OFAC, or (B) under the Iran Sanctions Act, as amended, section 1245 of the National Defense Authorization Act for Fiscal Year 2012 or Executive Order 13590 "Authorizing the Imposition of Certain Sanctions with respect to the Provision of Services, Technology or Support for Iran's Energy and Petro-chemical Sectors," effective November 21, 2011 (collectively, "Sanctions") or (iii) resides, is organized or chartered, or has a place of business in a country or territory that is the subject of a sanctions program administered by OFAC.

"Environmental Laws" means all federal, state, district, local and foreign laws, rules, regulations, ordinances, and consent decrees relating to health, safety, hazardous substances, pollution and environmental matters, as now or at any time hereafter in effect, applicable to Borrower's business or facilities owned or operated by Borrower, including laws relating to emissions, discharges, releases or threatened releases of pollutants, contamination, chemicals, or hazardous,

toxic or dangerous substances, materials or wastes into the environment (including ambient air, surface water, ground water, land surface or subsurface strata) or otherwise relating to the generation, manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials.

"Equity Interests" means, with respect to any Person, all of the shares of capital stock of (or other ownership or profit interests in) such Person, all of the warrants, options or other rights for the purchase or acquisition from such Person of shares of capital stock of (or other ownership or profit interests in) such Person, all of the securities convertible into or exchangeable for shares of capital stock of (or other ownership or profit interests in) such Person or warrants, rights or options for the purchase or acquisition from such Person of such shares (or such other interests), and all of the other ownership or profit interests in such Person (including partnership, member or trust interests therein), whether voting or nonvoting, and whether or not such shares, warrants, options, rights or other interests are outstanding on any date of determination.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, modified or restated from time to time.

"ERISA Affiliate" means any Person who for purposes of Title IV of ERISA is a member of Borrower's Controlled Group, or under common control with Borrower, within the meaning of Section 414 of the Code.

"Event of Default" has the meaning assigned in Section 8.

"Excluded Locations" means the following locations where Collateral may be located from time to time: (a) locations identified in the Disclosure Schedules, (b) locations where mobile office equipment (e.g. laptops, mobile phones and the like) may be located with employees and consultants in the ordinary course of business, (c) locations previously disclosed in a written notice to Lender pursuant hereto, and (d) other locations where, in the aggregate for all such locations, less than Two Hundred and Fifty Thousand Dollars ($250,000) of assets and property of Borrower and its Subsidiaries is located.

"Excluded Taxes" means, with respect to Lender or any other recipient of any payment to be made by or on account of any obligation of Borrower or any Guarantor hereunder or under any other Loan Document, any taxes on or measured by overall net income (however denominated), franchise taxes (in lieu of net income taxes) and branch profits taxes, in each case imposed on it by the jurisdiction (or any political subdivision thereof) under the laws of which such recipient is organized or in which its principal office is located or, in the case of Lender, in which its applicable Lending Office is located.

"Fiscal Year" means each 12 month accounting period of Borrower, which ends on December 31 of each year.

"Funding Date" means any date on which a Credit Extension is made to or for the account of Borrower which shall be a Business Day.

"GAAP" means United States generally accepted accounting principles, consistently applied, as in effect from time to time.

"Governmental Authority" means the government of the United States or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra national bodies such as the European Union or the European Central Bank).

"Guarantor" means any future domestic Subsidiary of Borrower and any other Person who hereafter executes a continuing guaranty in favor of Lender with respect to the Obligations.

"Hazardous Materials" means any hazardous, toxic or dangerous substance, materials and wastes, including hydrocarbons (including naturally occurring or man-made petroleum and hydrocarbons), flammable explosives, asbestos, urea formaldehyde insulation, radioactive materials, biological substances, polychlorinated biphenyls, pesticides, herbicides and any other kind and/or type of pollutants or contaminants (including materials which include

hazardous constituents), sewage, sludge, industrial slag, solvents and/or any other similar substances, materials, or wastes and including any other substances, materials or wastes that are or become regulated under any Environmental Law (including any that are or become classified as hazardous or toxic under any Environmental Law).

"IFRS" means the International Financial Reporting Standards adopted by the International Accounting Standards Board, consistently applied, as in effect from time to time.

"Indebtedness" of a Person means at any time the sum at such time of: (a) indebtedness of such Person for borrowed money or for the deferred purchase price of property or services (other than trade debt incurred in the ordinary course of business); (b) any obligations of such Person in respect of letters of credit, banker's or other acceptances or similar obligations issued or created for the account of such Person; (c) lease indebtedness, liabilities and other obligations of such Person with respect to capital leases; (d) obligations of third parties which are being guarantied or indemnified against by such Person or which are secured by the property of such Person; (e) any obligation of such Person under an employee stock ownership plan or other similar employee benefit plan; (f) any obligation of such Person or a commonly controlled entity to a multi-employer plan; and (g) any obligations, liabilities or indebtedness, contingent or otherwise, under or in connection with, transactions, agreements or documents now existing or hereafter entered into, which provides for an interest rate, credit, commodity or equity swap, cap, floor, collar, forward foreign exchange transaction, currency swap, cross currency rate swap, currency option, or any combination of, or option with respect to, these or similar transactions, for the purpose of hedging fluctuations in interest or exchange rates, loan, credit exchange, security or currency valuations or commodity prices; but excluding trade and other accounts payable in the ordinary course of business in accordance with customary trade terms and which are not overdue (as determined in accordance with customary trade practices) or which are being disputed in good faith by such Person and for which adequate reserves are being provided on the books of such Person in accordance with GAAP or IFRS, consistently applied.

"Indemnified Taxes" means Taxes other than Excluded Taxes.

"Insolvency Proceeding" means any proceeding commenced by or against any Person or entity under any provision of the United States Bankruptcy Code, as amended, or under any other bankruptcy or insolvency law, including assignments for the benefit of creditors, formal or informal moratoria, compositions, extension generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"Intellectual Property" has the meaning assigned in Section 5.7.

"Inventory" means all present and future inventory in which Borrower has any interest.

"Investment" means any beneficial ownership of (including stock, partnership or limited liability company interest or other securities) any Person, or any loan, advance or capital contribution to any Person.

"IP Security Agreement" means the Intellectual Property Security Agreement, dated as of the Effective Date, by and between Borrower and Lender.

"Laws" means all ordinances, statutes, rules, regulations, orders, injunctions, writs, or decrees of any Governmental Authority.

"Lender Expenses" means all reasonable costs or expenses (including reasonable attorneys' fees and expenses, whether generated in-house or by outside counsel) incurred in connection with the preparation, negotiation, administration, and enforcement of the Loan Documents; reasonable Collateral audit fees; protective advances, (including cure payments for the Senior Loan), and Lender's reasonable attorneys' fees and expenses (whether generated in-house or by outside counsel) incurred in amending, enforcing or defending the Loan Documents (including fees and expenses of appeal), incurred before, during and after an Insolvency Proceeding, whether or not suit is brought.

"Lien" means any security interest, mortgage, deed of trust, pledge, lien, charge, judgment lien, assignment, financing statement, encumbrance, title retention agreement or analogous instrument or device, including the interest of each lessor under any capitalized lease and the interest of any bondsman under any payment or performance bond, in, of or

on any assets or properties of a Person, whether now owned or subsequently acquired and whether arising by agreement or operation of law, all whether perfected or unperfected.

"Loan Documents" means, collectively, this Agreement and all other agreements, instruments and documents including promissory notes, guaranties, deeds of trust, mortgages, pledges, powers of attorney, consents, assignments, contracts, notices, security agreements, leases, financing statements, and all other writings heretofore, now or from time to time hereafter executed by or on behalf of Borrower or any other Person and delivered to Lender or to any parent, affiliate or subsidiary of Lender in connection with the Obligations or the transactions contemplated hereby, as each of the same may be amended, modified or supplemented from time to time.

"Loan Party" means Borrower or any Guarantor individually, and "Loan Parties" means Borrower and all Guarantors collectively.

"Mask Works" means mask works or similar rights available for the protection of semiconductor chips, whether now owned or hereafter acquired by Borrower.

"Material Adverse Change" means any of the following: (a) a material adverse change in, or material adverse effect upon, the business, condition (financial or otherwise), operations, performance, or prospects of either: (1) Borrower; or (ii) the Loan Parties taken as a whole; (b) a material impairment of the ability of either Borrower or the Loan Parties taken as a whole, to perform their respective obligations under the Loan Documents; or (c) a material adverse effect upon: (i) the legality, validity, binding effect or enforceability of any Loan Document to which any Loan Party is a party against either: (A) Borrower; or (B) the Loan Parties taken as a whole; or (ii) the rights and remedies of Lender under or in respect of any Loan Document.

"Material Collateral" means Collateral with a fair market value of more than $250,000.

"Maturity Date" means September 1, 2022.

"Multiemployer Plan" means a multiemployer plan (as defined in Section 4001(a)(3) of ERISA) to which Borrower or any ERISA Affiliate contributes or is obligated to contribute.

"Negotiable Collateral" means all of Borrower's present and future letters of credit of which it is a beneficiary, drafts, instruments (including promissory notes), securities, documents of title, and chattel paper, and Borrower's Books relating to any of the foregoing.

"Obligations" means, in each case, whether now in existence or hereafter arising: (a) the principal of and interest on (including interest accruing after the filing of any bankruptcy or similar petition) the Term Loan Advances, (b) enforcement costs, and (c) all other fees and commissions (including attorneys' fees and expenses), charges, indebtedness, loans, liabilities, financial accommodations, obligations, covenants and duties owing by the Loan Parties and each of their respective Subsidiaries to Lender or to any parent, affiliate or subsidiary of Lender of every kind, nature and description, direct or indirect, primary or secondary, absolute or contingent, due or to become due, contractual or tortious, liquidated or unliquidated, whether several, joint, or joint and several, and whether or not evidenced by any note, and including any debt, liability or obligation awing from Borrower to others that Lender may have obtained by assignment or otherwise, and interest and fees that accrue after the commencement by or against any Loan Party or any Subsidiary thereof of any bankruptcy or similar proceeding, naming such Person as the debtor in such proceeding, regardless of whether such interest and fees are allowed claims in such proceeding; provided, however, Obligations shall not include any obligations under any warrant or equity securities issued by Borrower to Lender.

"OFAC" means the United States Office of Foreign Assets Control.

"Other Taxes" means all present or future stamp, intangible or documentary taxes or any other excise or property taxes, charges or similar levies arising from any payment made hereunder or under any other Loan Document or from the execution, delivery or enforcement of, or otherwise with respect to, this Agreement or any other Loan Document.

"Parent" means any Person now or at any time or times hereafter owning or controlling (alone or with any other Person) at least a majority of the issued and outstanding equity of Borrower and, if Borrower is a partnership, the general partner of Borrower.

"Patents" means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

"PBGC" means the Pension Benefit Guaranty Corporation.

"Pension Plan" means a pension plan (as defined in Section 3(2) of ERISA) maintained for employees of Borrower or any ERISA Affiliate and covered by Title IV of ERISA.

"Permitted Indebtedness" means:

(a) Indebtedness of Borrower in favor of Lender;

(b) Senior Debt of Borrower to the extent that it does not exceed the dollar cap specified in the Subordination Agreement;

(c) hedging obligations of Borrower under Swap Agreements with respect to the Senior Debt or with respect to other Indebtedness to the extent that such other Indebtedness does not exceed $1,000,000;

(d) Indebtedness existing on the Effective Date and disclosed in the Disclosure Schedules;

(e) Indebtedness of Borrower not to exceed $250,000 in the aggregate in any Fiscal Year secured by a Lien described in clause (c) of the defined term "Permitted Liens," provided such Indebtedness does not exceed the lesser of the cost or fair market value of the equipment financed with such Indebtedness;

(f) Unsecured Subordinated Debt of Borrower;

(g) Indebtedness to trade creditors incurred in the ordinary course of business;

(h) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of business;

(i) Indebtedness in connection with intercompany loans that are Permitted Investments;

(j) Contingent Obligations incurred in the ordinary course of business with respect to surety and appeal bonds, performance bonds and other similar obligations and with respect to bonds provided to utilities with respect to utility services provided to Borrower in the ordinary course of business;

(k) Contingent Obligations arising with respect to customary indemnification obligations in favor of purchasers in connection with Permitted Transfers;

(l) Deferred taxes;

(m) Indebtedness in respect of netting services, overdraft protections and otherwise in connection with deposit accounts of Borrower;

(n) Liabilities pursuant to Pension Plans in effect on the Effective Date;

(o) Indebtedness of Borrower not to exceed $250,000, incurred to finance insurance premiums;

(p) Intercompany Indebtedness arising in connection with Permitted Intercompany Transactions;

(q) Other indebtedness of Borrower not otherwise described in this definition not exceeding $250,000 in the aggregate outstanding at any time, provided that an Event of Default does not then exist and would not exist after giving effect to such indebtedness; and

(r) Extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

"Permitted Intercompany Transactions" means transactions by and among Borrower and its Subsidiaries in the ordinary course of business and consistent with past practice of the types and in materially same amounts as those described on Schedule 5.17.

"Permitted Investment" means:

(a) Investments existing on the Effective Date disclosed in the Disclosure Schedules;

(b) Investments made pursuant to Swap Agreements to the extent permitted under clause (c) of the defined term "Permitted Indebtedness";

(c) Marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one year from the date of acquisition thereof, (ii) commercial paper maturing no more than one year from the date of creation thereof and currently having rating of at least A-2 or P-2 from either Standard & Poor's Corporation or Moody's Investors Service, (iii) Lender's certificates of deposit maturing no more than one year from the date of investment therein, and (iv) Lender's money market accounts;

(d) Repurchases of stock from former employees or directors of Borrower under the terms of applicable repurchase agreements permitted under Section 7.6;

(e) Investments accepted in connection with Permitted Transfers;

(f) Investments of Subsidiaries in or to other Subsidiaries or Borrower; Investments by Borrower in any Guarantor or by any Guarantor in another Guarantor; and Investments by Borrower in other Subsidiaries not to exceed $250,000 in the aggregate in any Fiscal Year;

(g) Investments not to exceed $100,000 in the aggregate in any Fiscal Year consisting of (1) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plan agreements approved by the Board;

(h) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower's business;

(i) Deposit and securities accounts maintained with banks and other financial institutions to the extent expressly permitted under this Agreement;

(j) Joint ventures or strategic alliances in the ordinary course of business of Borrower consisting of the nonexclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash investments and guaranties of and recourse obligations of such joint ventures and strategic alliances by Borrower do not exceed $250,000 in the aggregate during any Fiscal Year;

(k) Intercompany loans, advances and Investments arising in connection with Permitted Intercompany Transactions;

(l) Other investments not otherwise described in this definition not exceeding $250,000 in the aggregate outstanding at any time; and

(m) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business, provided that this subparagraph (h) shall not apply to Investments of Borrower in any Subsidiary.

"Permitted Liens" means: (a) statutory Liens of landlords, carriers, warehousemen, processors, mechanics, materialmen or suppliers incurred in the ordinary course of business and securing amounts not yet overdue for a period of more than 30 days or amounts which are being contested in good faith and by appropriate proceedings and for which Borrower has maintained adequate reserves; (b) Liens or security interests in favor of Lender; (c) zoning restrictions and easements, licenses, covenants and other restrictions affecting the use of real property that do not individually or in the aggregate have a Material Adverse Change; (d) Liens in connection with purchase money indebtedness with respect to Equipment and capitalized leases otherwise permitted pursuant to this Agreement, provided, that such Liens attach only to the assets the purchase of which was financed by such purchase money indebtedness or which is the subject of such capitalized leases; (e) Liens set forth in the Disclosure Schedules; (1) Liens specifically permitted by Lender in writing; (g) involuntary Liens securing amounts less than $250,000 and which are released or for which a bond acceptable to Lender, in its sole discretion, has been posted within ten (10)days of its creation; (h) Liens for taxes, assessments and other government charges or levies not yet delinquent or which are being contested in good faith and by appropriate proceedings and for which Borrower has maintained adequate reserves; (i) Liens consisting of deposits or pledges made in the ordinary course of business in connection with workers' compensation, unemployment, social security and similar laws, or to secure the performance of statutory obligations, bids, leases, government contracts, trade contracts, and other similar obligations (exclusive of obligations for the payment of borrowed money); (j) licenses (with respect to intellectual property and other property), leases and subleases granted to third parties and not interfering in any material respect with ordinary conduct of business of Borrower; (k) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods; (l) the Senior Lender's Lien, (m) Liens of collecting banks under the UCC on items in the course of collection, statutory Liens and rights of setoff of banks; (n) Liens arising from filing UCC financing statements relating solely to leases not prohibited by this Agreement; (o) pledges and deposits in the ordinary course of business securing insurance premiums or reimbursement obligations or indemnification obligations under insurance policies or self-insurance arrangements, in each case payable to insurance carriers that provide insurance to the Borrower or any of its Subsidiaries; (p) Liens on cash and cash equivalents on deposit with Lenders and Affiliates of Lenders securing obligations owing to such Persons under any treasury, depository, overdraft or other cash management services agreements or arrangements with any Subsidiary; (r) Liens arising out of conditional sale, title retention, consignment or similar arrangements for sale of goods entered into by the Borrower or any of its Subsidiaries in the ordinary course of business and not prohibited by this Agreement; and (s) judgment Liens in respect of judgments that do not constitute an Event of Default; (t) liens consisting of the rights of licensors under license of intellectual property to Borrower; (u) liens in favor of other financial institutions arising in connection with Borrower's deposit or securities accounts held at such institutions to secure standard fees for deposit or other services charged by, but not financing made available by such institutions, provided that Lender has a perfected security interest in the amounts held in such deposit or securities accounts; (v) liens in favor of other financial institutions arising in connection with Borrower's deposit and/or securities accounts held at such institutions, including banker's liens, rights of setoff and similar liens incurred on deposits made in the ordinary course of business, provided that Lender has a perfected security interest in the amounts held in such deposit and/or securities accounts; and (w) liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by liens of the type described in clauses (a) through (v) above, provided that any extension, renewal or replacement liens shall be limited to the property encumbered by the existing lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase.

"Permitted Program" means (i) the program in effect on the Effective Date for the sale of Accounts to Citibank, and (ii) any program for the sale of Accounts entered into after the Effective Date with Senior Lender's consent.

"Permitted Transfer" means the conveyance, sale, lease, transfer or disposition by Borrower or any Subsidiary of:

(a) Inventory in the ordinary course of business;

(b) Non-exclusive licenses and similar arrangements for the use of the property of Borrower or its Subsidiaries in the ordinary course of business and other licenses (with respect to intellectual property and other property), leases and subleases granted to third parties and not interfering in any material respect with the ordinary conduct of business of Borrower;

(c) Worn-out, surplus or obsolete Equipment;

(d) Transfers that constitute Permitted Investments or Permitted Liens;

(e) Intercompany transfers among Borrower and its Subsidiaries arising in connection with Permitted Intercompany Transactions;

(f) Transfers of Accounts pursuant to Permitted Programs, which Transfers shall be free and clear of the Lender's Lien hereunder; or

(g) Other assets of Borrower or its Subsidiaries that do not in the aggregate exceed $100,000 during any Fiscal Year.

"Person" means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, entity, party or foreign or United States government (whether federal, state, county, city, municipal or otherwise), including any instrumentality, division, agency, body or department thereof.

"Plan" means an employee benefit plan (as defined in Section 3(3) of ERISA) maintained for employees of Borrower or any ERISA Affiliate.

"Potential Default" means any event or circumstance that with the passing of time, or giving of notice or both would constitute an Event of Default.

"Prepayment Charge**"** means, with respect to any prepayment of the Term Loan, an amount equal to: (i) three percent (3%) of the outstanding principal prepaid, if the prepayment occurs prior to the first anniversary of the Effective Date, (ii) two percent (2%) of the outstanding principal prepaid, if the prepayment occurs on or after the first anniversary of the Effective Date and prior to the second anniversary of the Effective Date, and (iii) one percent (1%) of the outstanding principal prepaid, if the prepayment occurs on or after the second anniversary of the Effective Date and prior to the third anniversary of the Effective Date.

"Reportable Event" means a reportable event (as defined in Section 4043 of ERISA), other than an event for which the 30-day notice requirement under ERISA has been waived in regulations issued by the PBGC.

"Requirement of Law" is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"Responsible Officer" means each of the Chief Executive Officer, the Chief Operating Officer, the Chief Financial Officer and the Controller of Borrower.

"SEC" shall mean the Securities and Exchange Commission, any successor thereto, and any analogous Governmental Authority.

"Senior Debt" means, to the extent that they do not exceed the dollar limit specified in the Subordination Agreement: (i) the Obligations, as defined in the Senior Loan Agreement, including any Obligations incurred after the filing of a petition with respect to Borrower under the Bankruptcy Code (including any interest accruing under the Senior Loan Agreement after the filing of any such petition whether or not allowed as a claim in the bankruptcy proceeding); and (ii) renewals, extensions, refinancings, refundings, amendments, restatements, supplements, and modifications of any and all of the foregoing obligations to the extent permitted under the Subordination Agreement.

"Senior Default" means an Event of Default, as defined in the Senior Loan Agreement.

"Senior Lender" means East West Bank as lender pursuant to the Senior Loan Documents.

"Senior Lien" means a first priority security interest in and Lien on the Collateral that Senior Lender has pursuant to the Senior Loan Documents.

"Senior Loan Agreement" means the Amended and Restated Loan and Security Agreement, dated as of January 22, 2016, between Borrower and Senior Lender, as amended and restated from time to time in accordance with the Subordination Agreement.

"Senior Loan Documents" means the "Loan Documents" as such term is defined the Senior Loan Agreement.

"Shares" means (i) 65% of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower in any Subsidiary of Borrower which is not an entity organized under the laws of the United States or any territory thereof, and (ii) 100% of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower in any Subsidiary or Borrower which is an entity organized under the laws of the United States or any territory thereof.

"SOS Reports" means the official reports from the Secretary of State of the Borrower State and from all other applicable federal, state or local government offices identifying all current security interests filed in the Collateral and Liens of record as of the date of such report.

"Subordinated Debt" means any debt incurred by Borrower that is subordinated in writing to the debt owing by Borrower to Lender for amounts and on terms acceptable to Lender (and identified as being such by Borrower and Lender).

"Subordinated Debt Documents" means all promissory notes, agreements, documents or instruments now or at any time evidencing, securing, guarantying or otherwise executed and delivered in connection with the Subordinated Debt, as the same may from time to time be amended, restated, supplemented or modified with Lender's approval.

"Subordination Agreement" means the Subordination Agreement, dated as of the Effective Date, by and among Borrower, Lender and Senior Lender, as amended and restated from time to time.

"Subsidiary" means any corporation, partnership or limited liability company or joint venture in which (i) any general partnership interest or (ii) more than 50% of the stock, limited liability company interest or joint venture of which by the terms thereof ordinary voting power to elect the board of directors, managers or trustees of the entity, at the time as of which any determination is being made, is owned by Borrower, either directly or through an Affiliate.

"Taxes" means all present or future taxes, levies, imposts, duties, deductions, withholdings, assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"Term Loan" means the aggregate Term Loan Advances made by Lender pursuant to the terms of Section 2.1(b).

"Term Loan Advance" has the meaning specified in Section 2.1(b).

"Term Loan Availability Period" means the period from the Effective Date through the Maturity Date.

"Term Loan Commitment" means an amount equal to Ten Million Dollars ($10,000,000).

"Term Loan Note" means the Subordinated Secured Promissory Note, dated as of the Effective Date, in the original principal amount of the Term Loan Commitment, executed by Borrower to the order of Lender, in form and substance satisfactory to Lender.

"Trademarks" means any trademark and service mark rights, whether registered or not, applications to register (other than "intent to use" applications until a verified statement of use is filed with respect to such application) and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

"UCC" means the Uniform Commercial Code as in effect in the State of California, as amended or supplemented from time to time.

EXHIBIT B

COLLATERAL DESCRIPTION ATTACHMENT TO LOAN AND SECURITY AGREEMENT

All personal property of Borrower (herein referred to as "Borrower" or "Debtor") whether presently existing or hereafter created or acquired, and wherever located, including, but not limited to:

(a) all accounts (including health-care-insurance receivables), chattel paper (including tangible and electronic chattel paper), deposit accounts, documents (including negotiable documents), equipment (including all accessions and additions thereto), general intangibles (including payment intangibles and software), goods (including fixtures), instruments (including promissory notes), inventory (including all goods held for sale or lease or to be furnished under a contract of service, and including returns and repossessions), investment property (including securities and securities entitlements), letter of credit rights, money, and all of Debtor's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records;

(b) all present and future United States registered copyrights and copyright registrations (including all of the exclusive rights afforded a copyright registrant in the United States under 17 U.S.C. Section 106 and any exclusive rights which may in the future arise by act of Congress or otherwise), and all present and future applications for copyright registrations (including applications for copyright registrations of derivative works and compilations) (collectively, "Registered Copyrights"), and any and all royalties, payments and other amounts payable to Borrower in connection with Registered Copyrights, together with all renewals and extensions of Registered Copyrights, the right to recover for all past, present and future infringements of Registered Copyrights, and all computer programs and tangible property embodying or incorporating Registered Copyrights, and all other rights of every kind whatsoever accruing thereunder or pertaining thereto;

(c) all present and future copyrights, mask works, computer programs and other rights subject to (or capable of becoming subject to) United States copyright protection which are not registered in the United States Copyright Office (collectively, "Unregistered Copyrights"), whether now owned or hereafter acquired, and any and all royalties, payments, and other amounts payable to Borrower in connection with Unregistered Copyrights, together with all renewals and extensions of Unregistered Copyrights, the right to recover for all past, present and future infringements of Unregistered Copyrights, and all computer programs and all tangible property embodying or incorporating Unregistered Copyrights, and all other rights of every kind whatsoever accruing thereunder or pertaining thereto;

(d) all trademark and service mark rights, whether registered or not, applications to register (other than "intent to use" applications until a verified statement of use is filed with respect to such application) and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks;

(e) all (i) patents and patent applications filed in the United States Patent and Trademark Office or any similar office of any foreign jurisdiction, and interests under patent license agreements, including, without limitation, the inventions and improvements described and claimed therein, (ii) licenses pertaining to any patent whether Debtor is licensor or licensee, (iii) income, royalties, damages, payments, accounts and accounts receivable now or hereafter due and/or payable under and with respect thereto, including, without limitation, damages and payments for past, present or future infringements thereof, (iv) right (but not the obligation) to sue in the name of Debtor and/or in the name of Secured Party for past, present and future infringements thereof, (v) rights corresponding thereto throughout the world in all jurisdictions in which such patents have been issued or applied for, and (vi) reissues, divisions, continuations, renewals, extensions and continuations-in-part with respect to any of the foregoing; and

(f) all cash proceeds and/or noncash proceeds of any of the foregoing, including, without limitation, insurance proceeds, and all supporting obligations and the security therefor or for any right to payment. All terms above have the meanings given to them in the California Uniform Commercial Code, as amended or supplemented from time to time.

Notwithstanding the foregoing, the Collateral shall not include any property to the extent any such property (i) is non-assignable by its terms without the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, §9406 and §940$ of the Code), (ii) is property for which the granting of a security interest therein is contrary to applicable law, provided that upon the cessation of any such restriction or prohibition, such property shall automatically become part of the Collateral, (iii) constitutes the capital stock of a controlled foreign corporation (as defined in the IRC), in excess of 65% of the voting power of all classes of capital stock of such controlled foreign corporations entitled to vote, or (iv) is property (including any attachments, accessions or replacements) that is subject to a Lien that is permitted pursuant to clause (d) of the definition of Permitted Liens, if the grant of a security interest with respect to such property pursuant to this Agreement would be prohibited by the agreement creating such Permitted Lien or would otherwise constitute a default thereunder, provided, that such property will be deemed "Collateral" hereunder upon the termination and release of such Permitted Lien.

EXHIBIT C

ADVANCE REQUEST

To: B. Riley Principal Investments, LLC Date:_____, 20__
21255 Burbank Boulevard, Suite 400
Woodland Hills, CA 91367
Attention: Mr. Kenny Young, Chief
Executive Officer
Tel: 703-469-1900
E-mail: kyoung@brileyfin.com

SONIM TECHNOLOGIES, INC. ("**Borrower**") hereby requests from B. RILEY PRINCIPAL INVESTMENTS, LLC ("**Lender**") a Term Loan Advance in the amount of _____ Dollars ($_____) on _____, _____ (the "**Funding Date**") pursuant to the Loan and Security Agreement by and between Borrower and Lender (as amended, modified, supplemented, extended or restated from time to time, the "**Agreement**"). Capitalized words and other terms used but not otherwise defined herein are used with the same meanings as defined in the Agreement.

Please:

Issue a check payable to Borrower _____ or
Wire Funds to Borrower's account _____
Bank: _____
Address: _____
_____
ABA Number: _____
Account Name: _____

and

Deduct the following amounts from the foregoing Term Loan Advance to be applied to [Lender Expenses] [fees and expenses] currently due and owing: $_____

Borrower will apply the proceeds of the Term Loan Advance as specified in **Attachment "1"** hereto.

Borrower represents that each of the conditions precedent to the Term Loan Advance set forth in the Agreement are satisfied and shall be satisfied upon the making of such Term Loan, including but not limited to: (i) that no event that has had or could reasonably be expected to have a Material Adverse Change has occurred and is continuing; (ii) that the representations and warranties set forth in the Agreement and in the other Loan Documents are and shall be true and correct in all material respects on and as of the Funding Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date (in which case they remain true and correct in all material respects as of such earlier date); provided, however, that such materiality qualifiers shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; (iii) that Borrower is in compliance with all the terms and provisions set forth in each Loan Document on its part to be observed or performed; and (iv) that as of the Funding Date, no Potential Default or Event of Default exists under the Loan Documents.

Borrower hereby represents that Borrower's corporate status and locations have not changed since the date of the Agreement or, if the Attachment to this Advance Request is completed, are as set forth in the Attachment to this Advance Request.

Borrower agrees to notify Lender promptly before the funding of the Term Loan Advance if any of the matters which have been represented above shall not be true and correct in all material respects on the Funding Date and if

Lender has received no such notice before the Funding Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct in all material respects as of the Funding Date.

Borrower hereby promises to repay the Term Loan Advance to the order of Lender in accordance with the terms set forth in the Agreement.

This Advance Request is hereby executed as of [_____ __], 20[__].

BORROWER:

SONIM TECHNOLOGIES, INC.

By: _____
Name: _____
Title: _____

ATTACHMENT "1" TO ADVANCE REQUEST

Dated: _____

Borrower hereby represents and warrants to Lender that Borrower's current name and organizational status is as follows:

Name:	SONIM TECHNOLOGIES, INC.
Type of Organization:	C-Corporation
State of organization:	Delaware
Organization file number:	3079326

Borrower hereby represents and warrants to Lender that the street addresses, cities, states and postal codes of its current locations are as follows:

Borrower hereby represents, warrants and covenants that the proceeds of the Term Loan Advances shall be used as follows:

( ) for working capital purposes in accordance with the attached budget and the most recent business plan of Borrower approved by Lender

( ) in accordance with the attached budget for the following non-working capital purposes in the ordinary course of business to be approved by Lender (such approval not to be unreasonably withheld): _____

( ) in accordance with the attached budget for the following purposes not in the ordinary course of business to be approved by Lender in its sole discretion:

_____

FIRST AMENDMENT dated as March 30, 2018 (this "Amendment"), to the Subordinated Term Loan and Security Agreement dated as of October 23, 2017(the "Agreement"), by and between **B. RILEY PRINCIPAL INVESTMENTS, LLC**, a Delaware limited liability company ("Lender"), and **SONIM TECHNOLOGIES, INC.**, a Delaware corporation ("Borrower"). Capitalized terms used herein and not otherwise defined herein have the meanings given such terms in the Agreement.

RECITAL

Borrower has requested that Lender increase the term loan commitment under the Agreement from $10,000,000 to $12,000,000, and Lender is willing to agree to such increase on the terms and conditions of this Amendment.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual provisions, covenants and agreements herein contained, the parties hereto hereby agree as follows:

Section 1. Amendment. Borrower and Lender hereby agree to amend the Agreement by changing the definition of "Term Loan Commitment" to read as follows:

> "Term Loan Commitment" means an amount equal to Twelve Million Dollars ($12,000,000).

In connection with such increase in the Term Loan Commitment, Borrower shall execute and deliver to Lender an amended and restated subordinated secured promissory note (the "New Note") dated the Amendment Effective Date (as defined below) and substantially in the form attached hereto as Exhibit A, and Borrower and Lender hereby agree further to amend the Agreement by changing the definition of "Term Loan Note" to read as follows:

> "Term Loan Note" means the Amended and Restated Subordinated Secured Promissory Note, dated the effective date of the first amendment to this Agreement, in the principal amount of the Term Loan Commitment (as amended by such first amendment), executed by Borrower to the order of Lender, in form and substance satisfactory to Lender.

The term loan note originally issued by Borrower to Lender under the Agreement (the "Original Note") shall be exchanged for the New Note, and all outstanding Term Loans and Term Loan Advances under the Original Note shall be deemed to (i) be made under the New Note, (ii) continue in full force and effect under the New Note and the Agreement (as amended hereby) and (iii) be secured by the uninterrupted and continued security interest in the Collateral granted pursuant to the Agreement.

Notwithstanding the provisions of Section 2.2(d) of the Agreement, prepayments of the Term Loan which do not reduce the aggregate outstanding principal amount of the Term Loan below $10,000,000 may be made without the requirement to pay a Prepayment Charge.

Section 2. Representations and Warranties. Borrower hereby represents and warrants to Lender that as of the Amendment Effective Date:

(a) The execution, delivery, and performance of this Amendment and the New Note are within Borrower's powers, have been duly authorized, and are not in conflict with nor constitute a breach of any provision contained in Borrower's organizational documents, nor will they constitute an event of default under any material agreement by which Borrower is bound.

(b) This Amendment and the New Note are the legal, valid and binding obligations of Borrower and are enforceable against Borrower in accordance with their respective terms.

(c) The Agreement and the other Loan Documents are in full force and effect and shall remain in full force and effect as amended hereby following the effectiveness of this Amendment.

(d) All outstanding Term Loans and Term Loan Advances under the Original Note shall continue in full force and effect under the New Note and the Agreement, and be secured by the uninterrupted and continued security interest in the Collateral granted pursuant to the Agreement.

(e) Borrower is in full compliance with all terms and provisions set forth in the Agreement and the other Loan Documents to be observed or performed by it, as amended by the express terms of this Amendment.

(f) The representations and warranties of Borrower set forth in the Agreement, except for those relating to a specific date other than the date hereof, are true and correct in all material respects on and as of the date hereof as if made on and as of the date hereof.

(g) After giving effect to this Amendment, no Event of Default, or any event that upon notice, lapse of time or both would become an Event of Default is continuing.

Section 3. Effectiveness**.** This Amendment shall become effective as of the date (the "Amendment Effective Date") that all the following conditions precedent are satisfied: (i) the execution and delivery of this Amendment by Borrower and Lender, (ii) the execution and delivery of the New Note by Borrower to Lender in exchange for the Original Note and (iii) the receipt by Lender of a legal opinion of Borrower's counsel covering this Amendment and the New Note in a form as may be reasonably satisfactory to Lender.

Section 4. General.

(a) Full Force and Effect. The Agreement, as expressly amended hereby, and the other Loan Documents (including the New Note) shall continue in full force and effect in accordance with the provisions thereof, and no change or modification in any of the terms thereof except for the amendments to the Agreement specifically set forth in Section 1 hereof has been effected. As used in the Agreement, "hereinafter," "hereto," "hereof," and words of similar import shall, unless the context otherwise requires, mean the Agreement as amended by this Amendment, and all references to the "Term Loan Note" in the Agreement and the other Loan Documents shall be deemed to be references to the New Note.

(b) Applicable Law. This Amendment shall be governed by, and construed in accordance with, the internal laws of the State of California, without regard to principles of conflicts of law.

(c) Counterparts. This Amendment may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same instrument.

(d) Further Assurance. Borrower shall execute and deliver to Lender such documents and certificates as Lender may reasonably request to effect the amendment contemplated by this

Amendment.

(e) Headings. The headings of this Amendment are for the purposes of reference only and shall not affect the construction of this Amendment.

(f) Waiver and Release. Borrower hereby ratifies, reaffirms, acknowledges and agrees that the Agreement (as amended hereby) and the other Loan Documents to which Borrower is a party (including the New Note) represent valid and enforceable obligations of Borrower. Borrower agrees that there are no existing claims, defenses (personal or otherwise) or rights of offset whatsoever on behalf of Borrower with respect to the Term Loans or any of the Loan Documents (other than payments made thereunder). In addition, Borrower hereby expressly waives, releases and absolutely and forever discharges Lender and its present and former members, directors, officers, employees and agents (and their separate and respective heirs, personal representatives, successors and assigns) from any and all liabilities, claims, demands, damages, actions and causes of action, known or unknown, contingent or matured, of which Borrower now has, had prior to the date hereof or that may hereafter arise with respect to acts, omissions or events occurring prior to the date hereof, arising out of or in any way connected with the Term Loans, this Amendment, the Agreement or the other Loan Documents.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective duly authorized officers as of the date first above written.

SONIM TECHNOLOGIES, INC., a Delaware corporation

By:_____
Name:_____
Title:_____

B. RILEY PRINCIPAL INVESTMENTS, LLC, a Delaware limited liability company

By: Kenneth M. Young
Name: Kenneth Young
Title: CEO

EXHIBIT A [Form of New Note]

THIS AMENDED AND RESTATED SUBORDINATED SECURED CONVERTIBLE PROMISSORY NOTE IS SUBJECT TO THE TERMS OF THE SUBORDINATION AGREEMENT, DATED AS OF OCTOBER 23, 2017, IN FAVOR OF EAST WEST BANK (OR ITS SUCCESSOR THEREUNDER), WHICH SUBORDINATION AGREEMENT (AS AMENDED IN ACCORDANCE WITH ITS TERMS) IS INCORPORATED HEREIN BY REFERENCE**.**

AMENDED AND RESTATED SUBORDINATED SECURED CONVERTIBLE PROMISSORY NOTE

$12,000,000 March __, 2018

FOR VALUE RECEIVED, the undersigned, **SONIM TECHNOLOGIES, INC.**, a Delaware corporation ("Borrower"), hereby promises to pay to the order of **B. RILEY PRINCIPAL INVESTMENTS, LLC**, a Delaware limited liability company ("Lender"), at such place as Lender may designate in writing, in lawful money of the United States of America, the principal sum of the lesser of (i) Twelve Million Dollars ($12,000,000) and (ii) the aggregate unpaid principal amount of the Term Loan Advances made pursuant to this Amended and Restated Subordinated Secured Promissory Note (this "Note"), and accrued interest thereon, as provided in the Subordinated Term Loan and Security Agreement, dated as of October 23, 2017, by and between Borrower and Lender (as amended from time to time, the "Loan Agreement").

Capitalized terms used and not otherwise defined herein shall have the meanings given to them in the Loan Agreement.

1. Interest. Interest shall accrue on the terms and conditions set forth in Section 2.2 of the Loan Agreement.

2 . Payment. The outstanding principal amount of the Term Loan Advances shall be repaid in full on the Maturity Date. Borrower may prepay all or any portion of the Term Loan at any time and from time to time, in whole or in part, subject to the terms and conditions set forth in Section 2.2(d) of the Loan Agreement. Principal and interest and all other amounts due hereunder are to be paid in lawful money of the United States of America in federal or other immediately available funds.

3 . Security Interest. Payment of the amounts due hereunder is secured by Borrower's grant to Lender of a security interest in the Collateral pursuant to the terms of the Loan Agreement and, subject to the terms of the Subordination Agreement, Lender shall have all the rights with respect to the Collateral set forth in the Loan Agreement, as well as all the rights of a secured party under the UCC.

4. Optional Conversion.

(a) Upon the written election of Lender delivered to Borrower at any time on or prior to the Maturity Date (an "Election Notice"), the Convertible Amount shall be converted in full into shares of the Series A-3 Preferred Stock of Borrower (the "Series A-3 Preferred"), with such conversion deemed to be effective upon Borrower's receipt of the Election Notice. The number of shares of Series A-3 Preferred to be issued upon such conversion shall be the number obtained by dividing (A) the Convertible Amount on the date of conversion by (B) 0.59136 (such price to be adjusted for stock splits, stock dividends and the like with respect to the Series A-3 Preferred), rounded to the nearest whole share. "Convertible Amount" on any date is the sum of (A) the lesser of (i) the principal outstanding on such date and (ii) the product of (x) the aggregate principal amount of the Term Loan Advances made by Lender to Borrower and (y) the Designated Percentage, and (B) the accrued interest on such date, including, if it has not yet been compounded and added to this Note's principal in accordance with the Loan Agreement, the interest accrued prior to the first anniversary of the Effective Date. The "Designated Percentage" is (i) one hundred percent (100%) if the conversion date is prior to the first anniversary of the Effective Date, (ii) seventy-five percent (75%) if the conversion date is on or after the first anniversary of the Effective Date and prior to the second anniversary of the conversion date, (iii) fifty percent (50%) if the conversion date is on or after the second anniversary of the Effective Date and prior to the third anniversary of the conversion date, (iv) twenty-five percent (25%) if the conversion date is on or after the third anniversary of the Effective Date and prior to the fourth anniversary of the conversion date, and (v) twelve and a half of percent (12.5%) if the conversion date is on or after the fourth anniversary of the Effective Date and on or prior to the Maturity Date.

(b) If the conversion of this Note would result in the issuance of a fractional share, Borrower shall, in lieu of issuance of such fractional share, pay Lender a sum in cash equal to the product resulting from multiplying the then current fair market value, as determined in good faith by Borrower's Board of Directors, of one share of Series A-3 Preferred Stock by such fraction.

(c) As a condition precedent to Lender's receipt of Series A-3 Preferred shares upon conversion of the Convertible Amount, the Lender shall execute and deliver counterpart signature pages to the agreements between Borrower and the holders of the outstanding Series A-3 Preferred (the "Stockholder Documents"). Upon such execution and delivery, Lender shall be entitled to the rights and benefits granted to the other holders of Series A-3 Preferred pursuant to the Stockholder Documents, including, but not limited to, any registration rights, information rights, preemptive rights, rights of first refusal, co-sale rights and voting rights. As soon as practicable after conversion of this Note, the Company, at its expense, will cause to be issued in the name of and delivered to Lender, a certificate or certificates representing the number of fully paid and nonassessable shares of the Series A-3 Preferred to which Lender shall be entitled upon such conversion.

(d) Borrower shall at all times maintain and reserve a sufficient number of shares of Series A-3 Preferred Stock for issuance upon the conversion of this Note in accordance with this Section 4. If, notwithstanding the foregoing covenant, at the time of conversion there are insufficient authorized shares of Series A-3 Preferred to permit full conversion of the Convertible

Amount, then Borrower shall take all corporate action necessary to authorize a sufficient number of shares of Series A-3 Preferred to permit such conversion in full. Borrower stipulates that Lender's remedies at law in the event of any default or threatened default by Borrower of this Section 4(d) are not and will not be adequate to the fullest extent permitted by law, and that this Section 4(d) may be specifically enforced by a decree for the specific performance of this Section
4(d) or by an injunction against a violation of this Section 4(d).

5 . Waiver. Borrower waives presentment, diligence, demand of payment, notice, protest and all other demands and notices in connection with the delivery, acceptance, performance, default or enforcement of this Note and the Loan Agreement. In any action on this Note, Lender need not produce or file the original of this Note, but need only file a photocopy of this Note certified by Lender to be a true and correct copy of this Note in all material respects.

6 . Governing Law; Interpretation. This Note shall be governed by, and construed in accordance with, the internal laws of the State of California, without regard to principles of conflicts of law. Whenever possible, each provision of this Note shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision is prohibited by or invalid under applicable law, it shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of the provision or the remaining provisions of this Note.

7. Time of Essence. Time is of the essence of each and every provision of this Note.

8 . Amendment and Restatement. This Note amends and restates the Subordinated Secured Promissory Note dated October 23, 2017 (the "Original Note"), which was executed and delivered in connection with the execution and delivery of the Loan Agreement. All outstanding Term Loans and Term Loan Advances under the Original Note shall be deemed to (i) be made under this Note, (ii) continue in full force and effect under this Note and the Loan Agreement and (iii) be secured by the uninterrupted and continued security interest in the Collateral granted pursuant to the Loan Agreement.

SONIM TECHNOLOGIES, INC.

By:_____
Name:_____
Title:_____

THIS AMENDED AND RESTATED SUBORDINATED SECURED CONVERTIBLE PROMISSORY NOTE IS SUBJECT TO THE TERMS OF THE SUBORDINATION AGREEMENT, DATED AS OF OCTOBER 23, 2017, IN FAVOR OF EAST WEST BANK (OR ITS SUCCESSOR THEREUNDER), WHICH SUBORDINATION AGREEMENT (AS AMENDED IN ACCORDANCE WITH ITS TERMS) IS INCORPORATED HEREIN BY REFERENCE.

AMENDED AND RESTATED SUBORDINATED SECURED CONVERTIBLE PROMISSORY NOTE

$12,000,000 April 9, 2018

FOR VALUE RECEIVED, the undersigned, **SONIM TECHNOLOGIES, INC.**, a Delaware corporation ("Borrower"), hereby promises to pay to the order of **B. RILEY PRINCIPAL INVESTMENTS, LLC**, a Delaware limited liability company ("Lender"), at such place as Lender may designate in writing, in lawful money of the United States of America, the principal sum of the lesser of (i) Twelve Million Dollars ($12,000,000) and (ii) the aggregate unpaid principal amount of the Term Loan Advances made pursuant to this Amended and Restated Subordinated Secured Promissory Note (this "Note"), and accrued interest thereon, as provided in the Subordinated Term Loan and Security Agreement, dated as of October 23, 2017, by and between Borrower and Lender (as amended from time to time, the "Loan Agreement").

Capitalized terms used and not otherwise defined herein shall have the meanings given to them in the Loan Agreement.

1. Interest. Interest shall accrue on the terms and conditions set forth in Section 2.2 of the Loan Agreement.

2. Payment. The outstanding principal amount of the Term Loan Advances shall be repaid in full on the Maturity Date. Borrower may prepay all or any portion of the Term Loan at any time and from time to time, in whole or in part, subject to the terms and conditions set forth in Section 2.2(d) of the Loan Agreement. Principal and interest and all other amounts due hereunder are to be paid in lawful money of the United States of America in federal or other immediately available funds.

3. Security Interest. Payment of the amounts due hereunder is secured by Borrower's grant to Lender of a security interest in the Collateral pursuant to the terms of the Loan Agreement and, subject to the terms of the Subordination Agreement, Lender shall have all the rights with respect to the Collateral set forth in the Loan Agreement, as well as all the rights of a secured party under the UCC.

4. Optional Conversion.

(a) Upon the written election of Lender delivered to Borrower at any time on or prior to the Maturity Date (an "Election Notice"), the Convertible Amount shall be converted in full into shares of the Series A-3 Preferred Stock of Borrower (the "Series A-3 Preferred"), with such

conversion deemed to be effective upon Borrower's receipt of the Election Notice. The number of shares of Series A-3 Preferred to be issued upon such conversion shall be the number obtained by dividing (A) the Convertible Amount on the date of conversion by (B) 0.59136 (such price to be adjusted for stock splits, stock dividends and the like with respect to the Series A-3 Preferred), rounded to the nearest whole share. "Convertible Amount" on any date is the sum of (A) the lesser of (i) the principal outstanding on such date and (ii) the product of (x) the aggregate principal amount of the Term Loan Advances made by Lender to Borrower and (y) the Designated Percentage, and (B) the accrued interest on such date, including, if it has not yet been compounded and added to this Note's principal in accordance with the Loan Agreement, the interest accrued prior to the first anniversary of the Effective Date. The "Designated Percentage" is (i) one hundred percent (100%) if the conversion date is prior to the first anniversary of the Effective Date, (ii) seventy-five percent (75%) if the conversion date is on or after the first anniversary of the Effective Date and prior to the second anniversary of the conversion date, (iii) fifty percent (50%) if the conversion date is on or after the second anniversary of the Effective Date and prior to the third anniversary of the conversion date, (iv) twenty-five percent (25%) if the conversion date is on or after the third anniversary of the Effective Date and prior to the fourth anniversary of the conversion date, and (v) twelve and a half of percent (12.5%) if the conversion date is on or after the fourth anniversary of the Effective Date and on or prior to the Maturity Date.

(b) If the conversion of this Note would result in the issuance of a fractional share, Borrower shall, in lieu of issuance of such fractional share, pay Lender a sum in cash equal to the product resulting from multiplying the then current fair market value, as determined in good faith by Borrower's Board of Directors, of one share of Series A-3 Preferred Stock by such fraction.

(c) As a condition precedent to Lender's receipt of Series A-3 Preferred shares upon conversion of the Convertible Amount, the Lender shall execute and deliver counterpart signature pages to the agreements between Borrower and the holders of the outstanding Series A-3 Preferred (the "Stockholder Documents"). Upon such execution and delivery, Lender shall be entitled to the rights and benefits granted to the other holders of Series A-3 Preferred pursuant to the Stockholder Documents, including, but not limited to, any registration rights, information rights, preemptive rights, rights of first refusal, co-sale rights and voting rights. As soon as practicable after conversion of this Note, the Company, at its expense, will cause to be issued in the name of and delivered to Lender, a certificate or certificates representing the number of fully paid and nonassessable shares of the Series A-3 Preferred to which Lender shall be entitled upon such conversion.

(d) Borrower shall at all times maintain and reserve a sufficient number of shares of Series A-3 Preferred Stock for issuance upon the conversion of this Note in accordance with this Section 4. If, notwithstanding the foregoing covenant, at the time of conversion there are insufficient authorized shares of Series A-3 Preferred to permit full conversion of the Convertible Amount, then Borrower shall take all corporate action necessary to authorize a sufficient number of shares of Series A-3 Preferred to permit such conversion in full. Borrower stipulates that Lender's remedies at law in the event of any default or threatened default by Borrower of this Section 4(d) are not and will not be adequate to the fullest extent permitted by

law, and that this Section 4(d) may be specifically enforced by a decree for the specific performance of this Section 4(d) or by an injunction against a violation of this Section 4(d).

5. Waiver. Borrower waives presentment, diligence, demand of payment, notice, protest and all other demands and notices in connection with the delivery, acceptance,

performance, default or enforcement of this Note and the Loan Agreement. In any action on this Note, Lender need not produce or file the original of this Note, but need only file a photocopy of this Note certified by Lender to be a true and correct copy of this Note in all material respects.

6 . Governing Law; Interpretation. This Note shall be governed by, and construed in accordance with, the internal laws of the State of California, without regard to principles of conflicts of law. Whenever possible, each provision of this Note shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision is prohibited by or invalid under applicable law, it shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of the provision or the remaining provisions of this Note.

7. Time of Essence. Time is of the essence of each and every provision of this Note.

8. Amendment and Restatement. This Note amends and restates the Subordinated Secured Promissory Note dated October 23, 2017 (the "Original Note"), which was executed and delivered in connection with the execution and delivery of the Loan Agreement. All outstanding Term Loans and Term Loan Advances under the Original Note shall be deemed to (i) be made under this Note, (ii) continue in full force and effect under this Note and the Loan Agreement and (iii) be secured by the uninterrupted and continued security interest in the Collateral granted pursuant to the Loan Agreement.

SONIM TECHNOLOGIES, INC.

By: Bob Plaschke

Name: Bob Plaschke

Title: CEO

Exhibit 21.1

Sonim Technologies, Inc.
List of Subsidiaries

Subsidiary	Jurisdiction
Sonim Technologies (INDIA) Private Limited	India
Sonim Technologies (Shenzhen) Limited	China
Sonim Technologies Shenzhen Limited Beijing Branch	China
Sonim Technologies Spain SL	Spain
Sonim Communications (India) Private Limited	India
Sonim Technologies (Hong Kong) Limited	Hong Kong
Sonim Technologies (Canada), Inc.	Canada

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-231457) of Sonim Technologies, Inc. of our report dated March 27, 2020, relating to the consolidated financial statements of Sonim Technologies, Inc. (which report expresses an unqualified opinion and includes explanatory paragraphs relating to a going concern emphasis and a change in the method of accounting for revenue) appearing in this Annual Report on Form 10-K for the year ended December 31, 2019.

/s/ Moss Adams LLP

Campbell, California

March 27, 2020

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

I, Thomas W. Wilkinson, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sonim Technologies, Inc.;

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

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

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

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

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

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

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

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

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

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

Date March 27, 2020

By: /s/ Thomas W. Wilkinson

Thomas W. Wilkinson
Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

I, Robert Tirva, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sonim Technologies, Inc.;

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

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

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

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

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

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

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

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

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

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

Date March 27, 2020

By: /s/ Robert Tirva

Robert Tirva
Interim Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Sonim Technologies, Inc. (the "Company") on Form 10-K for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: March 27, 2020

By: /s/ Thomas W. Wilkinson

Thomas W. Wilkinson
Chief Executive Officer

Exhibit 32.2

CERTIFICATION OF INTERIM CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Sonim Technologies, Inc. (the "Company") on Form 10-K for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: March 27, 2020

By: /s/ Robert Tirva

Robert Tirva
Interim Chief Financial Officer