Wireless Telecom Group

2019 ANNUAL REPORT

Message from the CEO

To our Shareholders,

Wishing you and your loved ones safety and health during these trying times. While the recent Coronavirus outbreak clouds the picture for 2020, I wanted to provide some color on our efforts to realize our long-term vision. As an essential business in New Jersey, our facility remains open, and we have made a number of adjustments to ensure the protection of our employees. A solutions-oriented business is only as good as its people, and we are fortunate to have a dedicated, hard-working team committed to delivering for our customers, on-time and on-spec. The WTT Board, executive team and shareholders are indebted to their service.

2019 was a year of challenges and unexpected declines in our financial results after two consecutive years of growth in revenue and Adjusted EBITDA. Unexpected delays in government spending and carrier projects along with lower Embedded Solutions software and services projects led to weaker than expected revenues. Despite those challenges, we remained focused on lean operations and profitability, and we are confident in our strategy, our people and our future.

We also made meaningful progress in 2019 towards our vision and mission to solve the most demanding wireless challenges though agile innovation and execution excellence. We launched new 5G products, expanded and strengthened partner collaboration, and expanded our product sets to wide-band spectrum and higher-frequency solutions. We signed the Holzworth acquisition, added new customers and were granted additional design-in awards.

These accomplishments are expected to expand our addressable markets, grow our customer base and lay the foundation for growth in the years ahead. Our focus remains on our customers' long-term investments in building and densifying next generation networks, 5G deployments, and increasing military and satellite spend.

Continued R&D Innovation to Drive Revenue Growth

The Company reported 2019 R&D growth of 20%, which included increases primarily within the Embedded Solutions segment. Across all of our segments, we have a common strategy to drive top-line organic revenue growth through innovative, specialized solutions to (1) address changing technology needs for new spectrum and higher frequency solutions, (2) diversify our revenue to new customers and expand non-telecom revenues, and (3) increase our total addressable market of opportunity.

Recent launches have included SMART coupler solutions for the public safety markets, Modular Point-of-Interface solutions for multicarrier combination, new noise sources for 5G system test, expanded calibrated noise sources for 67 GHz frequency ranges, new cellular reference platforms, and most importantly, our 5G R15 compliant reference stack software for small cell development. Each of these introductions were well-informed solutions in response to customer demand, as we continue to streamline collaboration between sales and R&D across our operating segments.

Our investments leverage our in-house domain expertise in 5G network deployments, sophisticated telecommunication applications, defense applications, and radar and satellite communications for the military, large defense contractors, and the government. A 2020 priority is to generate wider market awareness of our expertise and new product introductions, which should continue to drive organic revenue growth.

Holzworth Acquisition Expands our Addressable Market and Operational Scale

In 2019, we also successfully signed the purchase agreement for the acquisition of Holzworth Instrumentation, which closed in February of 2020. The acquisition strengthens our business by adding new specialized products and customer relationships, and increases our addressable markets for more precise, higher millimeter wave testing requirements driven by 5G, advanced semiconductor test requirements, satellite communication and quantum computing. Holzworth also leverages our existing segments, generating both strategic and financial synergies, and improves margins. Based on anticipated contribution margins, we expect a strong return on our investment.

Looking ahead, while we remain committed to our long-term inorganic growth aspirations, our focus in the near-term is on efficient integration of Holzworth and sound capital management.

Building Our Future

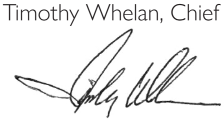
During 2019, we successfully adjusted and reduced operating costs, renegotiated supplier agreements and continued advancing a lean operations culture, while at the same time demonstrating the flexibility of our business model. Looking ahead, lean operations allow us to continue investments in R&D, advance our product roadmap development and continue sales expansion efforts to build a foundation for long-term organic growth. These efforts are anticipated to realize significant operational scale, profitability expansion, and cash flow.

The growth of wireless technology and devices, the demands of higher frequency testing, expansion of satellite communications and demands of 5G deployments, private LTE networks and network densification are expected to drive long-term opportunities for our business. In the near-term, we believe our focus on customer-responsiveness and operational excellence will lead to significant value for our shareholders.

We are dedicated to serving as a leader enabling the development, testing, and deployment of wireless technology and communications.

Thank you for your continued support of Wireless Telecom Group.

Timothy Whelan, Chief Executive Officer



PART I

Item 1. Business

Overview

Wireless Telecom Group, Inc., a New Jersey corporation, together with its subsidiaries ("we", "us", "our" or the "Company"), specializes in the design and manufacture of advanced radio frequency and microwave devices which enable the development, testing and deployment of wireless technology. The Company provides unique, highly customized and configured solutions which drive innovation across a wide range of traditional and emerging wireless technologies.

In 2019, Wireless Telecom Group was comprised of four brands – Microlab, Boonton, Noisecom, and CommAgility – organized into three reporting segments – Network Solutions, Test and Measurement and Embedded Solutions. Since our acquisition of Holzworth Instrumentation, Inc. ("Holzworth") in February of 2020, we are also offering the Holzworth brand in our Test and Measurement segment.

Our customers include wireless carriers, defense contractors, military and government agencies, satellite communication companies, network equipment manufacturers, tower companies, semiconductor device manufacturers, system integrators and medical device manufacturers.

Our products include components, modules, systems and instruments used across the lifecycle of wireless connectivity and communication development, deployment and testing. Our customers use these products in relation to commercial infrastructure development, the expansion and upgrade of distributed antenna systems, deployment of small cell technology, use of medical devices and private long term evolution ("LTE") networks. In addition, the Company's products are used in the development and testing of satellite communication systems, radar systems, semiconductor devices, automotive electronics and avionics.

The consolidated financial statements for the 2019 fiscal year include the accounts of Wireless Telecom Group, Inc., doing business as, and operating under the trade name Noise Com, Inc., and its wholly owned subsidiaries including Boonton Electronics Corporation, Microlab/FXR, Wireless Telecommunications Ltd. and CommAgility Limited. The corporate website address is www.wirelesstelecomgroup.com. Noise Com, Inc., Boonton Electronics Corporation, Microlab/FXR and CommAgility Limited Ltd. are hereinafter referred to as "Noisecom", "Boonton", "Microlab" and "CommAgility", respectively.

Market

Since the Company's incorporation in the State of New Jersey in 1985, it has been primarily engaged in supplying noise source components and instruments, electronic testing and measurement instruments, and radio frequency ("RF") passive components to customers. With the CommAgility acquisition in February of 2017 the Company expanded to include the delivery of signal processing modules and the delivery, implementation and configuration of LTE physical layer and stack software. Approximately 93% and 90% of the Company's consolidated revenues in fiscal years 2019 and 2018, respectively, were derived from commercial customers. The remaining consolidated revenues (approximately 7% and 10% in 2019 and 2018, respectively) were comprised of revenues from the United States government (particularly the armed forces) and prime defense contractors.

Products

Our Network Solutions segment is comprised of our **Microlab** business.

Microlab designs and manufactures a wide selection of RF components and integrated subsystems for signal conditioning and distribution in the wireless infrastructure markets as well as for use in medical devices. Microlab products are used in small cell deployments, distributed antenna systems, in-building wireless solutions and cellular base-stations. Microlab is a leader in low passive intermodulation ("PIM") radio frequency and microwave products for these purposes due to our quality, design consultation for specialized services, long history and expertise.

Microlab components possess unique capabilities in the area of broadband frequency coverage, minimal loss and low PIM. High performance components – such as power combiners, directional couplers, attenuators, terminators and filters – are developed for broadband applications to support commercial in-building wireless networks, public safety networks, rail and transportation deployments, corrosive salt/fog environment build-outs and global positioning system ("GPS") signal distribution.

Along with components and integrated subsystems, the Microlab portfolio also includes system performance monitoring and timing synchronization solutions. These products include a portfolio of GPS digital repeaters and splitters for cellular timing synchronization as well as a passive systems monitor for real-time diagnostics of an in-building distributed antenna system.

Our Test and Measurement segment is comprised of the **Boonton** and **Noisecom** brands and, subsequent to the closing of our acquisition of Holzworth, the **Holzworth** brand.

Boonton

Boonton is a leader in high performance RF and microwave test equipment for radar, avionics, electronic warfare, electromagnetic interference compatibility, and satellite and wireless communications applications due to our product quality and measurement speed and accuracy. Used across the semiconductor, military, aerospace, medical and commercial communications industries, Boonton products enable a wide range of radio frequency power measurements and signal analysis for radio frequency product design, production, maintenance and testing.

Boonton designs and produces electronic test and measurement equipment including power meters, power sensors, voltmeters, and audio and modulation analyzers. These products measure and analyze the performance of radio frequency and microwave systems used by the military and commercial sectors. Boonton products are also used to test terrestrial and satellite communications, radar and telemetry. Certain power meter products are designed for measuring signals based on wideband modulation formats, allowing a variety of measurements to be made, including maximum power, peak power, average power and minimum power.

Noisecom

Noisecom is a leader in radio frequency and microwave noise sources for signal jamming, system impairment, reference level comparison and calibration, receiver robustness testing, and jitter injection due to our product quality and product design flexibility. Noisecom designs and produces noise generation instruments, calibrated noise sources, noise modules and diodes. Noisecom noise products are used to provide wide band interference and test signals for sophisticated commercial communication and defense applications, and as a stable reference standard for advanced systems found in radar applications and satellite communications. Noise source products:

- simulate challenging signaling conditions in data and radio frequency transmission systems, such as jitter testing for high speed data lines used in modern computer architecture;
- send signals for noise measurement to allow wireless receivers and transmitters to be optimized;
- are used for jamming radio frequency signals, blocking or disturbing enemy radar and other communications and insulating and protecting friendly communications; and
- comprise components in radar systems as part of built-in test equipment to continuously monitor the radar receiver and in-satellite communications where the use of back-up receivers are becoming more common.

Electronic noise generation devices from Noisecom come in a variety of product types including noise diodes, built-in-test modules ("BITE"), calibrated noise sources, jitter sources, cryogenic noise standards and programmable instruments. Calibrated noise sources are available from audio to millimeter wavelengths in coaxial or waveguide modules. Programmable instruments are highly configurable and able to generate precise carrier-to-noise, signal-to-noise and broadband white noise levels. Noisecom products are customizable to meet the unique needs of challenging applications and can be designed for high power, high crest factor, and specific filtering.

Holzworth

Holzworth designs and manufactures specialty phased noise analyzers and signal generators used by government labs, the semiconductor industry, and network equipment providers, among others, in research and automated test environments. Holzworth signal generators are optimized for ultra-low phase noise performance, spectral purity and fast switching speeds and their phase noise analyzers are of the same innovative design philosophy, optimized for measurement speed, z540 traceable accuracy and high reliability while measuring to noise floors at the theoretical limit.

Our Embedded Solutions segment consists of our subsidiary **CommAgility**.

CommAgility develops the software which enables private network deployments including the LTE physical layer and stack software, for 4G and emerging 5G mobile network and related applications. CommAgility also develops embedded signal processing and radio frequency modules which enable 4G and 5G mobile network solutions and related applications. Combining the latest digital signal processing ("DSP"), field programmable gate array ("FPGA") and radio frequency technologies with advanced, industry-leading software, CommAgility provides compact, powerful and reliable products for integration into high performance test equipment, specialized radio and intelligence systems, satellite systems and R&D demonstrators.

CommAgility engineers work closely with customers to provide hardware and software solutions for the most demanding real-time signal processing, test and control challenges in wireless baseband, semiconductor processing, medical imaging, radar and sonar applications. Additionally, CommAgility licenses, implements and customizes LTE physical layer and stack software for private LTE networks supporting satellite communications, the military and aerospace industries, offering our customers unique implementation capabilities built on the LTE standard.

Marketing and Sales

The Company's products are sold globally through our in-house sales force, industry-specific manufacturers' representatives and through a network of authorized distributors. The Company promotes the sale of its products through its website, product literature, published articles, technical conference presentations, direct mailings, trade advertisements and trade show exhibitions.

The Company's relationships with its manufacturers' representatives and distributors are governed by written contracts that either run for one-year renewable periods terminable by either party on 30 to 60 days prior notice or have indefinite lives terminable by either party on 30 to 60 days prior notice. The contracts generally provide for territorial and product representation.

Customers

The Company currently sells the majority of its products to telecommunications service providers, systems integrators, neutral host operators, distributors, large defense contractors, global technology and services companies, U.S. and foreign governments, and medical device manufacturers.

For the years ended December 31, 2019 and 2018 one customer, Viavi Solutions, accounted for 24.8% and 22.0% of total consolidated revenues, respectively.

Competition

We compete against many companies which utilize similar technology, some of which are larger and have substantially greater resources and expertise in financial, technical and marketing areas than us. Some of these companies include Keysight Technologies, Inc., Rohde & Schwarz GmbH & Co. KG, Anritsu Corporation, Kathrein, Commscope, Qualcomm and Azcom. We also compete against smaller offshore vendors with significantly lower costs and expenses than us, such as Sym Technology, Inc., Innowave RF and Wireless Supply.

The Company believes its competitive strengths include:

- long-standing relationships with a core group of diverse customers in the wireless, telecommunication, satellite, military, aerospace, semiconductor and medical industries
- agility in providing highly customized and configured solutions to the customer's technical specifications
- a long tradition of developing highly engineered wireless solutions through our strong design capabilities and technology know-how
- long-standing, well-established sales channels and relationships which allow us to bring new solutions to market quickly
- diversification across multiple customer segments, providing solutions to enable development, testing and deployment
- being an approved vendor at all four of the major U.S. carriers with hundreds of approved Network Solutions products
- an embedded base of products and instruments in our Test & Measurement segment which leads to recurring purchases of our products

- extensive knowhow and IP in the Embedded Solutions segment related to 3rd Generation Partnership Project ("3GPP") 4G and 5G wireless standards which enable us to address complex and customized requirements for specialized networks

Backlog

The Company's consolidated backlog of firm orders to be shipped in the next twelve months was approximately $3.8 million at December 31, 2019, compared to approximately $8.2 million at December 31, 2018. It is anticipated that the majority of the backlog orders at December 31, 2019 will be filled during the current year. The stated backlog is not necessarily indicative of Company revenues for any future period nor is a backlog any assurance that the Company will realize a profit from the orders.

Inventory, Supplies and Manufacturing

The Company purchases components, devices and subassemblies from a wide variety of sources. The Company's procurement policy requires maintaining adequate levels of raw materials inventory to minimize the Company's production lead times with third-party suppliers and to improve the Company's capacity to expedite fulfillment of customer orders. Although the procurement team focuses its efforts to work closely with its suppliers to avoid adverse effects of shortages or delays in delivery of inventories, delays in the future may have an adverse impact on the Company's operations. For the year ended December 31, 2019, three suppliers accounted for 18%, 14%, and 10%, respectively, of total consolidated inventory purchases. For the year ended December 31, 2018, two suppliers accounted for 15% and 13%, respectively, of total consolidated inventory purchases.

The Company is not party to any long term contracts regarding the deliveries of its supplies and components. It generally purchases such items pursuant to written purchase orders of both the individual and blanket variety. Blanket purchase orders usually cover the purchase of a larger amount of items at fixed prices for delivery and payment on specific dates.

For Boonton and Noisecom products, the Company develops, designs, manufactures, assembles, calibrates and tests the products at our facility in Parsippany, New Jersey. Testing of Boonton and Noisecom products is generally accomplished at the end of the manufacturing process and is performed in-house, as are all quality control processes.

Approximately 48% of Microlab's revenues are traced to products that are sourced from offshore vendors. Certain of Microlab's products that were sourced from offshore vendors were subject to tariffs throughout the entirety of fiscal 2019, and, effective September 1, 2019, all of Microlab products that come from offshore suppliers are subject to tariffs. The impact of tariffs has decreased our consolidated gross profit margin by less than 1%. The remainder of Microlab products are designed and manufactured by the Company in Parsippany, New Jersey. All Microlab products are tested by the Company in Parsippany, New Jersey.

CommAgility hardware products are built by contract manufacturers to CommAgility designs, and tested either by the contract manufacturer or by CommAgility. Software products are licensed to customers through a system that allows the customer to download the software once access has been granted.

Warranty and Service

The Company typically provides one to three year warranties on all of its products covering both parts and labor. The Company, at its option, repairs or replaces products that are defective during the warranty period if the proper preventive maintenance procedures have been followed by its customers.

In cases of defective products the customer typically returns them to the Company's facility. The Company's service personnel replace or repair the defective items and ship them back to the customer. Generally, all servicing is done at the Company's facility, and the Company charges its customers a fee for those service items that are not covered by warranty. The Company typically does not offer their customers any formal written service contracts.

Product Liability Coverage

The testing of electronic communications equipment and the accurate transmission of information entail a risk of product liability to the Company. Product liability claims could be asserted against the Company by end-users of any of the Company's products. The Company maintains product liability insurance coverage. No claims have been asserted for product liability due to a defective or malfunctioning device in the past five years.

Intellectual Property

We believe that our intellectual property, including its methodologies, is critical to our success and competitive position. We rely on a combination of U.S. and foreign patents, copyrights, trademarks and trade secrets, as well as confidentiality agreements to establish and protect our proprietary rights. All employees are subject to the Company's policies to ensure that all of the Company's intellectual property and business information are maintained in confidence. Key employees have signed non-disclosure and non-competition agreements.

Regulation

Environmental

The Company's operations are subject to various federal, state and local environmental laws, ordinances and regulations that limit discharges into the environment, establish standards for the handling, generation, use, emission, release, discharge, treatment, storage and disposal of, or exposure to, hazardous materials, substances and waste, and require cleanup of contaminated soil and groundwater.

At this time, the Company believes that it is in material compliance with all environmental laws, does not anticipate any material expenditure to meet current or pending environmental requirements, and generally believes that its processes and products do not present any unusual environmental concerns. The Company is unaware of any existing, pending or threatened contingent environmental liability that may have a material adverse effect on its ongoing business operations.

Workplace Safety

The Company's operations are also governed by laws and regulations relating to workplace safety and worker health. The Company believes it is in material compliance with these laws and regulations and does not believe that future compliance with such laws and regulations will have a material adverse effect on its results of operations or financial condition.

ITAR and Export Controls

The Company is subject to International Traffic in Arms Regulation, or ITAR. ITAR requires export licenses from the U.S. Department of State for products shipped outside the U.S. that have military or strategic applications. Because some of the Company's products could have military or strategic applications, it must ensure its compliance with ITAR.

In addition, the Company is subject to the Export Administration Regulations, or EAR, which regulates the export of certain "dual use" items and technologies and, in some instances, requires a license from the U.S. Department of Commerce in connection with sales of the Company's products.

The Company believes it is in material compliance with all such export regulations.

FAR and DFARS

Certain of the Company's contracts with the U.S. Government are subject to Federal Acquisition Regulations ("FAR") regarding government procurement. Further, certain of the Company's contracts are subject to the IT security requirements of Defense Federal Acquisition Regulation Supplement ("DFARS") for controlled unclassified information.

The Company believes it is in material compliance with applicable requirements of FAR and DFARS.

Employees

As of February 29, 2020, the Company has 154 full time employees, including Holzworth employees. The Company is not subject to collective bargaining agreements in the United States or internationally and considers its relationship with its employees to be good.

Investor Information

The Company is subject to the disclosure requirements of the Securities Exchange Act of 1934, as amended ("Exchange Act"). Therefore, the Company files periodic reports, proxy statements and other information with the Securities and Exchange Commission ("SEC"). The SEC maintains an Internet site (http://www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers that file electronically.

You can access financial and other information, including copies of our recent SEC filings, at the Company's Investor Relations page on its website. The address of the website is www.wirelesstelecomgroup.com. The Company makes available, free of charge, copies of its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the SEC.

Forward-Looking Statements

The statements contained in this Annual Report on Form 10-K that are not historical facts, including, without limitation, the statements under "Management's Discussion and Analysis of Financial Condition and Results of Operations," are forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. Such forward-looking statements may be identified by, among other things, the use of forward-looking terminology such as "believes," "expects," "intends," "plans," "may," "will," "should," "anticipates" or "continues" or the negative thereof of other variations thereon or comparable terminology, or by discussions of strategy that involves risks and uncertainties. These statements are based on the Company's current expectations of future events and are subject to a number of risks and uncertainties that may cause the Company's actual results to differ materially from those described in the forward-looking statements. These risks and uncertainties are set forth in our annual report on Form 10-K and in this document. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, estimated or projected. The Company assumes no obligation to update any forward-looking statements as a result of new information or future events or developments.

PART II

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

The common stock of the Company is traded on the NYSE American under the name Wireless Telecom Group, Inc. (Symbol: WTT). On March 6, 2020, the Company had 364 stockholders of record. These stockholders of record do not include beneficial owners whose shares are held in "nominee" or "street name".

Recent Sales of Unregistered Securities

None in fiscal 2019.

Issuer Purchases of Equity Securities

The Company did not repurchase any securities during the year ended December 31, 2019.

Equity Compensation Plan Information

Set forth below is certain aggregated information with respect to the Company's equity compensation plans.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plan (excluding securities reflected in the previous columns)
Equity compensation plans approved by security holders	2,055,000	$1.53	1,695,079
Equity compensation plans not approved by security holders	-	-	-
Total	2,055,000	$1.53	1,695,079

Item 6. **Selected Financial Data**

Not applicable.

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

Overview

The Company is a global designer and manufacturer of advanced RF, microwave and millimeter wave components, modules, systems and instruments. Serving the wireless, telecommunication, satellite, military, aerospace, semiconductor and medical industries, Wireless Telecom Group products enable innovation across a wide range of traditional and emerging wireless technologies. With a unique set of high-performance products including peak power meters, signal analyzers, signal processing modules, LTE physical layer and stack software, power splitters and combiners, GPS repeaters, public safety monitors, noise sources, and programmable noise generators, Wireless Telecom Group supports the development, testing and deployment of wireless technologies around the globe.

Key 2019 Developments and Financial Results

Fiscal 2019 was a year with some disappointments as well as growth oriented investment. Consolidated and segment revenue declined from the prior year which negatively impacted profitability. These declines were driven by lower high margin software sales and delays of certain large projects expected to be awarded in the year. Lower software revenue was caused by the slowdown of 4G software sales which was not offset by the adoption of emerging 5G software and standards. Despite these challenges, the Company invested in future growth and profitability through acquisitions and R&D investments and believes the revenue declines in 2019 can be overcome.

The decline in Embedded Solutions software and services revenue from prior years represented declines in the Company's highest margin revenue streams. Further, the Test and Measurement segment experienced a 4.5% revenue decline as large government projects were delayed, but increased segment gross profit margin from 49.4% to 54.0%. The industry in which the Network Solutions segment operates was impacted by highly competitive pricing from offshore vendors as well as a slowdown in large venue projects. The Test and Measurement segment gross profit margin increased on higher demand of noise generation devices and real time power sensors. The Company also invested heavily in 5G NR product roadmap development in fiscal 2019 and, in January 2020, announced a collaboration with NXP Semiconductors to accelerate 5G hardware and software development. At the same time, the Company maintained an active merger and acquisition pipeline as part of its strategic plan to add complimentary, accretive and profitable businesses and drive growth opportunity through acquisitions. In connection with this, the Company signed a definitive agreement to purchase Holzworth Instrumentation, Inc. in the fourth quarter which closed on February 7, 2020. Holzworth is a Colorado based provider of specialty noise analyzers and signal generators which is an adjacent product line to our Boonton brand.

The Company presents its operations in three reportable segments: (1) Network Solutions, (2) Test and Measurement and (3) Embedded Solutions. In fiscal 2019 the Network Solutions segment is comprised primarily of the operations of Microlab; the Test and Measurement segment is comprised of the operations of Boonton and Noisecom; and the Embedded Solutions segment is comprised of CommAgility.

The financial information presented herein includes: (i) Consolidated Balance Sheets as of December 31, 2019 and 2018; (ii) Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2019 and 2018; (iii) Consolidated Statement of Changes in Shareholders' Equity for the years ended December 31, 2019 and 2018; and (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2019 and 2018.

Critical Accounting Policies

Management's discussion and analysis of the financial condition and results of operations are based upon the consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP. The preparation of these financial statements requires the Company to make estimates and judgments that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses for each period. The following represents a summary of the Company's critical accounting policies, defined as those policies that the Company believes are: (a) the most important to the portrayal of our financial condition and results of operations, and (b) that require management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain. Estimates and assumptions are made by management to assess the overall likelihood that an accounting estimate or assumption may require adjustment. It is reasonably possible that these estimates may ultimately differ materially from actual results. See Note 1 in the Notes to the Consolidated Financial Statements included elsewhere in this Form 10-K for a description of all of our significant accounting policies.

Revenue Recognition

Effective January 1, 2018 the Company adopted Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers (Topic 606)", ("Topic 606") using the "modified retrospective" method, meaning the standard is applied only to the most current period presented in the financial statements. Topic 606 requires the Company to identify the performance obligations in our revenue arrangements – that is, those promised goods and services (or bundles of promised goods or services) that are distinct – and allocate the transaction price of the revenue arrangement to those performance obligations on the basis of estimated standalone selling prices ("SSP's").

Sales of hardware which include sales of radio frequency solutions in the Network Solutions segment, digital signal processing hardware in the Embedded Solutions segment and power meters and analyzers and noise generators and components in the Test and Measurement segment generally consist of one performance obligation which is satisfied upon shipment to the customer. When contract terms require transfer of control upon delivery at a customer's location, revenue is recognized on the date of delivery. Sales of hardware to distributors that include a limited right of return are recorded net of expected returns.

Sale of software licenses in the Embedded Solutions segment may involve multiple performance obligations including multiple software releases and consultancy services. In these cases transaction price is allocated to each distinct performance obligation on the basis of SSP and revenue is recognized when the distinct performance obligation is satisfied. The company determines performance obligations and SSP's in arrangements with multiple performance obligations in accordance with Topic 606 which requires significant judgement.

Services arrangements involving repairs and calibrations in the Company's Test and Measurement segment are generally considered a single performance obligation and revenue is recognized as the services are rendered.

Certain software arrangements in the Embedded Solutions segment may involve the transfer of software along with significant customization services. In these cases the customization services and software licenses are combined as one distinct performance obligation and revenue is recognized over time as the project is completed. The duration of these performance obligations are typically one year or less.

Leases

We lease office space and certain equipment under non-cancelable lease agreements. Prior to January 1, 2019, we applied the accounting guidance in ASC 840, *Leases*, to our lease agreements. The leases were reviewed for classification as operating or capital leases. For operating leases, rent was recognized on a straight-line basis over the lease period. For capital leases, we recorded the leased asset with a corresponding liability and amortized the asset over the lease term. Payments were recorded as reductions to the liability with an appropriate interest charge recorded based on the then-outstanding remaining liability.

Effective January 1, 2019, we adopted ASU No. 2016-02, *Leases (Topic 842)* using the modified retrospective transition method and established our lease accounting policy pursuant to this new standard. We initially applied the transition provisions at January 1, 2019, which allowed us to continue to apply the legacy guidance in ASC 840 for periods prior to 2019. Based on the new guidance, we assess all arrangements, that convey the right to control the use of property, plant and equipment, at inception, to determine if it is, or contains, a lease based on the unique facts and circumstances present in that arrangement. For those leases identified, we determine the lease classification, recognition, and measurement at the lease commencement date. For arrangements that contain a lease we: (i) identify lease and non-lease components; (ii) determine the consideration in the contract; (iii) determine whether the lease is an operating or financing lease; and (iv) recognize lease Right of Use ("ROU") assets and corresponding lease liabilities. Lease liabilities are recorded based on the present value of lease payments over the expected lease term. The corresponding ROU asset is measured from the initial lease liability, adjusted by (i) accrued or prepaid rents; (ii) remaining unamortized initial direct costs and lease incentives; and (iii) any impairments of the ROU asset. The interest rate implicit in our lease contracts is typically not readily determinable and as such, we use our incremental borrowing rate based on the information available at the lease commencement date, which represents an internally developed rate that would be incurred to borrow, on a collateralized basis, over a similar term, an amount equal to the lease payments in a similar economic environment.

Business Combinations

Business combinations are accounted under the acquisition method of accounting in accordance with Accounting Standards Codification ("ASC") 805, "Business Combinations" which requires assets acquired and liabilities assumed be recorded at their fair values on the acquisition date. Goodwill represents the excess of the purchase price over the fair value of the net assets acquired. The fair values of the assets acquired and liabilities assumed are determined based upon management's valuation and involves making significant estimates and assumptions based on facts and circumstances that existed as of the acquisition date. We use a measurement period following the acquisition date to gather information that existed as of the acquisition date that is needed to determine the fair value of the assets acquired and liabilities assumed. The measurement period ends once all information is obtained, but no later than one year from the acquisition date.

Valuation of Goodwill

Goodwill represents the excess of the aggregate purchase price over the fair value of the net assets acquired in a purchase business combination. Goodwill is evaluated for impairment annually by first performing a qualitative evaluation of events and circumstances impacting the reporting unit to determine the likelihood of goodwill impairment. Based on that qualitative evaluation, if we determine it is more likely than not that the fair value of a reporting unit exceeds its carrying amount, no further evaluation is necessary. Otherwise we perform a quantitative impairment test.

As of December 31, 2019 the Company's consolidated goodwill balance of $10.1 million is comprised of $1.4 million related to the Microlab reporting unit and $8.7 million related to the CommAgility reporting unit. The Company performed a qualitative assessment in the fourth quarter of 2019 of each reporting unit. The qualitative assessment of Microlab did not indicate any impairment of goodwill. As a result of declining future demand of the CommAgility's signal processing hardware and the uncertainty associated with new software license and services revenues to offset the signal processing hardware sales decline, the Company performed a quantitative impairment test of the goodwill of the CommAgility reporting unit.

For goodwill impairment testing using the quantitative approach, the Company estimates the fair value of the selected reporting unit primarily through the use of a discounted cash flow model based on our best estimate of amounts and timing of future revenues and cash flows and our most recent business and strategic plans, and compares the estimated fair value to the carrying value of the reporting unit, including goodwill. If the fair value of the reporting unit exceeds the carrying value, no impairment charge is recorded. If the carrying value of the reporting unit exceeds the fair value an impairment charge is recorded to goodwill in the amount by which carrying value exceeds fair value. The discounted cash flow model requires judgmental assumptions about projected revenue growth, future operating margins, discount rates and terminal values over a multi-year period. There are inherent uncertainties related to these assumptions and management's judgment in applying them to the analysis of goodwill impairment. While the Company believes it has made reasonable estimates and assumptions to calculate the fair value of its reporting units, it is possible a material change could occur. If actual results are not consistent with management's estimates and assumptions, goodwill may be overstated and a charge would need to be taken against net earnings.

Changes in our projections used in the discounted cash flow model could affect the estimated fair value of the Company's reporting unit and could result in a goodwill impairment charge in a future period. In order to evaluate the sensitivity of the fair value calculations used in the quantitative goodwill impairment test, the Company applied a hypothetical 10% decrease to the fair value of the CommAgility reporting unit and compared those values to the carrying value. Based on this sensitivity analysis, the Company did not identify any goodwill impairment. Due to the many variables inherent in the estimation of a reporting unit's fair value and the relative size of our recorded goodwill, differences in assumptions may have a material effect on the results of our impairment analysis.

As of December 31, 2018 the Company's consolidated goodwill balance of $9.8 million was comprised of $1.4 million related to the Microlab reporting unit and $8.4 million related to the CommAgility reporting unit. Management's qualitative assessment performed in the fourth quarters of 2018 did not indicate any impairment of goodwill.

Intangible and Long-lived Assets

Intangible assets include patents, non-competition agreements, customer relationships and trademarks. Intangible assets with finite lives are amortized using the straight-line method over the estimated economic lives of the assets, which range from three to five years. Long-lived assets, including intangible assets with finite lives, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. Measurement of an impairment loss for long-lived assets that management expects to hold and use is based on the estimated fair value of the asset. Long-lived assets to be disposed of are reported at the lower of carrying amount or estimated fair value less costs to sell. The estimated useful lives of intangible and long-lived assets are based on many factors including assumptions regarding the effects of obsolescence, demand, competition and other economic factors, expectations regarding the future use of the asset, and our historical experience with similar assets. The assumptions used to determine the estimated useful lives could change due to numerous factors including product demand, market conditions, technological developments, economic conditions and competition. Intangible assets determined to have indefinite useful lives are not amortized but are tested for impairment annually and more frequently if events occur or circumstances change that indicate an asset may be impaired.

Income taxes

The Company records deferred taxes in accordance with ASC 740, "Accounting for Income Taxes." ASC 740 requires recognition of deferred tax assets and liabilities for temporary differences between tax basis of assets and liabilities and the amounts at which they are carried in the financial statements, based upon the enacted rates in effect for the year in which the differences are expected to reverse. The Company establishes a valuation allowance when necessary to reduce deferred tax assets to the amount expected to be realized. The Company periodically assesses the value of its deferred tax assets and determines the necessity for a valuation allowance.

Realization of the Company's deferred tax assets is dependent upon the Company generating sufficient taxable income in the appropriate tax jurisdictions in future years to obtain benefit from the reversal of net deductible temporary differences and from utilization of net operating losses. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed.

Uncertain tax positions

Under ASC 740, the Company must recognize and disclose uncertain tax positions only if it is more-likely-than-not that the tax position will be sustained on examination by the taxing authority, based on the technical merits of the position. The amounts recognized in the financial statements attributable to such position, if any, are recorded if there is a greater than 50% likelihood of being realized upon the ultimate resolution of the position.

The Company has analyzed its filing positions in all of the jurisdictions where it is required to file income tax returns. As of December 31, 2019 and 2018, the Company has identified its federal tax return and its state tax return in New Jersey as "major" tax jurisdictions, as defined in ASC 740, in which it is required to file income tax returns. Additionally, the Company has identified the United Kingdom as "major" tax jurisdiction as of December 31, 2019 and 2018. Based on the evaluations noted above, the Company has concluded that there are no significant uncertain tax positions requiring recognition or disclosure in its consolidated financial statements.

Based on a review of tax positions for all open years and contingencies as set out in the Company's Notes to the consolidated financial statements, no reserves for uncertain income tax positions have been recorded pursuant to ASC 740 during the years ended December 31, 2019 and 2018, and the Company does not anticipate that it is reasonably possible that any material increase or decrease in its unrecognized tax benefits will occur within the next twelve months.

Stock-based compensation

The Company follows the provisions of ASC 718, "Compensation - Stock Compensation" which requires that compensation expense be recognized based on the fair value of the stock awards. The fair value of the stock awards is equal to the fair value of the Company's stock on the date of grant. The fair value of options at the date of grant is estimated using the Black-Scholes option pricing model. When options are granted, the Company takes into consideration guidance under ASC 718 and SEC Staff Accounting Bulletin No. 107 (SAB 107) when determining assumptions. The expected option life is derived from assumed exercise rates based upon historical exercise patterns and represents the period of time that options granted are expected to be outstanding. The expected volatility is based upon historical volatility of our shares using daily price observations over an observation period that approximates the expected life of the options. The risk-free rate is based on the U.S. Treasury yield curve rate in effect at the time of grant for periods similar to the expected option life. The Company accounts for forfeitures when they occur.

Management estimates are necessary in determining compensation expense for stock options with performance-based vesting criteria. Compensation expense for this type of stock-based award is recognized over the period from the date the performance conditions are determined to be probable of occurring through the date the applicable conditions are expected to be met. If the performance conditions are not considered probable of being achieved, no expense is recognized until such time as the performance conditions are considered probable of being met, if ever. Management evaluates whether performance conditions are probable of occurring on a quarterly basis.

Inventories and Inventory Valuation

Inventories are stated at the lower of cost (average cost) or net realizable value. The Company reviews inventory for excess and obsolescence based on best estimates of future demand, product lifecycle status and product development plans.

Allowances for doubtful accounts

The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. A key consideration in estimating the allowance for doubtful accounts has been, and will continue to be, our customer's payment history and aging of its accounts receivable balance.

Impairment of long-lived assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted cash flows resulting from the use of the assets and their eventual disposition. Measurement of an impairment loss for long-lived assets that management expects to hold for sale is based on the fair value of the assets. Long-lived assets to be disposed of are reported at the lower of carrying amount or fair value less costs to sell.

Warranties

The Company generally offers standard warranties against product defects. We estimate future warranty costs to be incurred based on historical warranty claims experience including estimates of material and service costs over the warranty period.

Comparison of the results of operations for the year ended December 31, 2019 with the year ended December 31, 2018

Net Revenues (in thousands)

	Twelve months ended December 31					
	Revenue		% of Revenue		Change	
	2019	2018	2019	2018	Amount	Pct.
Network Solutions	$ 21,830	$ 22,275	44.6%	42.2%	$ (445)	-2.0%
Test and Measurement	13,566	14,212	27.7%	26.9%	(646)	-4.5%
Embedded Solutions	13,525	16,301	27.7%	30.9%	(2,776)	-17.0%
Total Net Revenues	$ 48,921	$ 52,788	100.0%	100.0%	$ (3,867)	-7.3%

Consolidated net revenues were impacted by declines in all three segments. Embedded Solutions revenue decreased from the prior year on lower sales of LTE software licenses and related services offset only partially by increased sales of digital processing hardware to our largest customer. We believe that the transition from 4G to 5G was a factor in the decline in software license revenue and related services. Test and Measurement revenues declined on fewer government orders and large projects. Network Solutions revenues were lower than the prior year due to fewer large venue projects and a highly competitive pricing environment impacting the entire industry.

As part of our 2020 planning process, the Company determined that demand for our Embedded Solutions digital signal processing hardware cards from the Company's largest customer will be significantly reduced from levels in fiscal 2019 and 2018. The Company expects the decline in Embedded Solutions hardware revenue to be partially offset by increased higher margin software license and services specifically related to 5G NR private network projects. Overall, however, the Company expects a decline in revenues for Embedded Solutions in 2020 as compared to 2019.

Gross Profit (in thousands)

	Twelve months ended December 31					
	Gross Profit		Gross Profit %		Change	
	2019	2018	2019	2018	Amount	Pct.
Network Solutions	$ 9,216	$ 9,756	42.2%	43.8%	$ (540)	-5.5%
Test and Measurement	7,320	7,018	54.0%	49.4%	302	4.3%
Embedded Solutions	5,753	7,393	42.5%	45.4%	(1,640)	-22.2%
Total Gross Profit	$ 22,289	$ 24,167	45.6%	45.8%	$ (1,878)	-7.8%

Consolidated gross profit margin in 2019 was flat compared to 2018. Gross profit margin in the Test and Measurement segment increased from the prior year on favorable product mix as the Company sold higher margin Noisecom noise generation devices as well as Boonton power sensors. Network Solutions gross profit margins declined year over year due to a highly competitive pricing environment impacting the entire passive RF industry as well as lower volumes resulting in lower absorption of fixed labor and overhead charges. Embedded Solutions gross profit margin declined on product mix as higher margin software and service sales declined year over year as well as lower volumes resulting in lower absorption of fixed labor and overhead charges.

Operating Expenses (in thousands)

	Twelve months ended December 31					
	Operating Expenses		% of Revenue		Change	
	2019	2018	2019	2018	Amount	Pct.
Research and Development	$ 5,917	$ 4,909	12.1%	9.3%	$ 1,008	20.5%
Sales and Marketing	7,677	7,595	15.7%	14.4%	82	1.1%
General and Administrative	10,174	10,306	20.8%	19.5%	(132)	-1.3%
Loss on Change in Fair Value of Contingent Consideration	-	578	0.0%	1.1%	(578)	-100.0%
Total Operating Expenses	$ 23,768	$ 23,388	48.6%	44.3%	$ 380	1.6%

Research and development expenses overall increased $1.0 million primarily due to increased expenses in the Embedded Solutions segment. Embedded Solutions segment research and development expenses increased $1.4 million primarily for headcount deployment on product roadmap initiatives, specifically the 5G NR product roadmap. The increase in the Embedded Solutions segment research and development expenses was offset by a $0.4 million decrease in research and development expenses in the Network Solutions and Test and Measurement segments due to headcount reductions and lower third party spend.

Sales and marketing expenses increased $0.1 million primarily due to increased headcount in the Test and Measurement and Network Solutions segments offset by lower commission expense in the Embedded Solutions segment due to lower volumes.

General and administrative expenses decreased $0.1 million due to lower bonus, legal and stock compensation expenses offset by higher mergers and acquisitions expenses.

In 2018 the Company recorded a loss on change in fair value of contingent consideration of $0.6 million as our estimate of the earn-out payment related to the CommAgility acquisition was increased from our original estimate recorded at the time of acquisition due to the then improved financial results of the business. The contingent consideration payment was made in Q1 2019.

In early fiscal 2020, the Company undertook restructuring actions and cost and expense reductions across all of its segments to drive efficiency and improved operation leverage. These actions are expected to reduce consolidated costs and expenses in fiscal 2020 by approximately $1.5 million as compared to fiscal 2019.

Other income/expense

Other expenses decreased $0.1 million due to lower foreign exchange unrealized and realized losses on transactions denominated in currencies other than our functional currencies.

Interest Expense

Interest expense decreased $0.3 million primarily due to lower interest expense related to the CommAgility contingent consideration liability as final payment was made in March 2019.

Tax

The Company recorded a tax benefit in fiscal 2019 of $1.4 million due primarily to a net taxable loss in the U.K. driven by deductible research and development expenses as compared to a tax expense in fiscal 2018 of $48,000 due to deferred federal taxes in the U.S. offset by current and deferred tax benefits related to the U.K.

Net Loss

The Company recorded a net loss in the amount of $0.4 million in fiscal 2019 as compared to net income of $35,000 in fiscal 2018 due to lower consolidated gross profit and higher operating expenses partially offset by lower consolidated interest expense and the recognition of a tax benefit.

Liquidity and Capital Resources

As disclosed in Note 4 to the Consolidated Financial Statements, on February 16, 2017 the Company entered into a Credit Facility which provided for a term loan in the aggregate principal amount of $0.8 million (the "Term Loan") and an asset based revolving loan (the "Revolver"), which is subject to a Borrowing Base Calculation (as defined in the Credit Facility) of up to a maximum availability of $9 million. The proceeds of the Term Loan and Revolver were used to finance the acquisition of CommAgility. On February 26, 2019 the Company entered into Amendment No. 3 to the Credit Facility which extended the term of the Revolver to March 31, 2020, and on November 8, 2019 the Company entered into Amendment No. 4 to the Credit Facility which extended the maturity date of the Term Loan to March 31, 2020 to coincide with that of the Revolver. As described more fully below, on February 7, 2020, in connection with the Holzworth acquisition, the Company entered into Amendment No. 5 to the Credit Facility which, inter alia, extended the Revolver maturity date to March 31, 2023. Additionally, the Company prepaid the remaining principal balance of Term Loan in the amount of $0.3 million.

As of December 31, 2019 the Company had consolidated net cash (consolidated cash and cash equivalents less consolidated debt outstanding) of $1.5 million as compared to net cash of $3.0 million as of December 31, 2018. The decrease in net cash was primarily attributable to a net loss in 2019 as compared to net earnings in 2018 and the payment of deferred purchase price and contingent consideration in the first quarter of 2019 related to the CommAgility acquisition offset by lower working capital and lower capital expenditures as compared to the prior year. As of December 31, 2019, substantially all of our cash and cash equivalents are held outside the United States. As of December 31, 2019, $2.4 million was outstanding on our asset based Revolver and $0.3 million was outstanding on our Term Loan. As of December 31, 2019 and 2018, and the date hereof, the Company is in compliance with the covenants of the Credit Facility. The asset based Revolver under our Credit Facility is secured by the Company's U.S. assets. Income taxes have been provided on foreign earnings such that there would be no significant income tax expense to repatriate the portion of this cash that is not required to meet operational needs of our international subsidiary.

Operating Activities

Cash provided by operating activities was $80,000 for the year ended December 31, 2019 as compared to cash provided by operating activities of $4.0 million for the year ended December 31, 2018. The decline was primarily due to lower operating income, the payment of contingent consideration, a portion of which is included as cash used from operations in accordance with ASU 2016-15, payment of deferred purchase price and 2018 bonuses, which are reflected as a decrease in accrued expenses and other current liabilities offset by cash generated from working capital.

Investing Activities

Cash used by investing activities was $0.8 million for the year ended December 31, 2019 and was primarily comprised of cash used for capital expenditures of $0.4 million and payment of deferred purchase price related to the CommAgility acquisition of $0.4 million. For the year ended December 31, 2018 cash used by investing activities was $1.7 million and was primarily related to cash used for the payment of the CommAgility deferred purchase price of $0.8 million and capital expenditures of $0.9 million.

Financing Activities

Cash used by financing activities was $0.2 million for the year ended December 31, 2019 as compared to cash provided by financing activities of $0.5 million for the year ended December 31, 2018. During the year ended December 31, 2019, cash used by financing included net borrowings under the Credit Facility of $0.8 million offset by payment of contingent consideration related to the CommAgility acquisition, of which $0.8 million is included in financing activities, payment of fees related to our new term loan and amended credit facility of $0.1 million, and term loan payments of $0.2 million. During the year ended December 31, 2018, net borrowings under the Credit Facility were $0.3 million and proceeds from stock option exercises were $0.3 million which were both partially offset by Term Loan principal payments of $0.2 million.

New Term Loan Facility and Amended Credit Facility

In connection with the Holzworth Acquisition, on February 7, 2020, the Company, as borrower, and its subsidiaries, as guarantors, and Muzinich BDC, Inc., as lender ("Muzinich"), entered into a Term Loan Facility, which provides for a term loan in the principal amount of $8.4 million (the "Initial Term Loan"). All proceeds of the Initial Term Loan were used to fund the cash portion of the purchase price for the Holzworth acquisition. Principal payments on the Initial Term Loan are $21,000 per quarter with a balloon payment at maturity. The term loan bears interest at LIBOR (subject to a floor of 1.0%) plus a margin of 7.25%. The Term Loan Facility includes an upfront fee of 2.50% of the aggregate principal amount of the Initial Term Loan.

The Company may prepay the Initial Term Loan at any time. Prepayments made prior to (a) February 7, 2022 are subject to a prepayment premium in the amount of 2.0% of the prepaid principal amount and (b) February 7, 2023 are subject to a prepayment premium in the amount of 1.0% of the prepaid principal amount. The Company is required to make prepayments of the Initial Term Loan with the proceeds of certain asset dispositions, insurance recoveries and extraordinary receipts, subject to specified reinvestment rights. The Company is also required to make prepayments of the Initial Term Loan upon the issuance of certain indebtedness and to make an annual prepayment based upon the Company's excess cash flow. Mandatory prepayments with asset sale, insurance or condemnation proceeds and excess cash flow may be made without penalty. Mandatory prepayments with the proceeds of indebtedness are subject to the same prepayment penalties as are applicable to voluntary prepayments. The maturity date for the Initial Term Loan is February 7, 2025.

The Term Loan Facility provides for an additional $11.6 term loan (the "Second Term Loan") to be used for a second unannounced acquisition for which the Company has entered into a confidential, non-binding letter-of-intent (the "Additional Acquisition"). There can be no assurance that the Additional Acquisition will be completed. In the event the Additional Acquisition is completed, the Second Term Loan will be made available to the Company on the same terms and conditions as the Initial Term Loan, including interest rate, amortization schedule and financial covenants, subject to the payment of an additional upfront fee and satisfaction of customary conditions to funding.

The Term Loan Facility is secured by liens on substantially all of the Company's and its subsidiaries' assets including a pledge of the equity interests in the Company's subsidiaries. The Term Loan Facility contains customary affirmative and negative covenants for a transaction of this type, including, among others, the provision of annual, quarterly and monthly financial statements and compliance certificates, maintenance of property, insurance, compliance with laws and environmental matters, restrictions on incurrence of indebtedness, granting of liens, making investments and acquisitions, paying dividends, entering into affiliate transactions and asset sales. In addition, the Company must maintain certain financial covenants typical for this type of arrangement, including a consolidated leverage ratio, a consolidated fixed charge coverage ratio and minimum liquidity of its foreign subsidiaries. The consolidated leverage ratio is defined as the ratio of total consolidated indebtedness, as defined, to consolidated EBITDA, as defined. The required leverage ratio starts at 4.75 to 1.0 for the twelve month periods ended March 31, 2020 and June 30, 2020, and decrease in various increments to 3.75 to 1.0 for the twelve months ended December 31, 2020, 2.75 to 1.0 for the twelve months ended December 31, 2021 and 2.0 to 1.0 for the twelve months ended December 31, 2022 and thereafter. The consolidated fixed charge coverage ratio is the ratio of consolidated EBITDA, as defined, less consolidated capital expenditures and cash income taxes paid to consolidated fixed charges, as defined, calculated on a twelve month basis. The consolidated fixed charge coverage ratio for the twelve month periods ended March 31, 2020, June 30 2020 and September 30, 2020 must be 1.35 to 1 and increases in various increments on a quarterly basis to 1.5 to 1.0 for the twelve month period ended December 31, 2020 and 2021, and to 1.75 to 1.0 for the 12 months ending December 31, 2022 and thereafter. Lastly, the Company must maintain minimum liquidity, defined as cash and availability under the UK borrowing base, as defined, of $1.0 million over any trailing four-week period until such time as the foreign subsidiary has positive EBITDA, as defined, for three consecutive quarters and the Holzworth deferred purchase price has been paid in full. The Term Loan Facility also provides for a number of events of default, including, among others, nonpayment, bankruptcy, inaccuracy of representations and warranties, breach of covenant, change in control, entry of final judgement or order, breach of material contracts, and as long as the Company's consolidated leverage ratio is greater than 1.0 to 1.0 (as calculated in accordance with the terms of the Term Loan Facility), the cessation of service of any two of Tim Whelan, Michael Kandell or Daniel Monopoli as Chief Executive Officer, Chief Financial Officer or Chief Technology Officer, respectively, of the Borrower without acceptable replacements within 60 days. Any exercise of remedies by Muzinich is subject to compliance with the intercreditor agreement entered into at the closing of the Term Loan Facility among the Company, Muzinich and Bank of America, N.A., as lender under the Credit Facility referenced below.

Also in connection with the Acquisition, on February 7, 2020, the Company and certain of its subsidiaries (the "Borrowers"), and Bank of America, N.A. entered into Amendment No. 5 (the "Amendment") to the Credit Facility. By entering into the Amendment, Holzworth, and CommAgility Limited, became borrowers under the Credit Facility. The obligations of the Borrowers under the Credit Facility are guaranteed by Wireless Telecom Group, Ltd. CommAgility Limited and Wireless Telecom Group, Ltd. are both wholly owned subsidiaries of the Company.

Amendment No. 5 (a) effected certain modifications to the Credit Facility to accommodate the Holzworth Acquisition, the Company's incurrence of the Initial Term Loan and the granting of the related liens and security interests, (b) subject to the satisfaction of certain conditions precedent, made available to CommAgility an asset based revolving loan, subject to a borrowing base calculation applicable to CommAgility's assets, of up to a maximum availability of $5.0 million (the "UK Revolver Commitment"), (c) reduced the interest rate margin applicable to revolving loans made under the Credit Facility from a range of 2.75% to 3.25% to a range of 2.00% to 2.50%, based on the Borrowers' Fixed Charge Coverage Ratio (as defined in the Credit Facility) of the most recently completed fiscal quarter, (d) extended the Revolver Termination Date to March 31, 2023 and (e) conditioned the Borrowers' ability to make certain debt payments under the Term Loan Facility (described above) upon compliance with a liquidity test. In all other material respects, the Credit Facility remains unchanged.

Effectiveness of Amendment No. 5 was conditioned upon, among other things, the prepayment of the remaining principal balance (approximately $0.3 million) of the $0.8 million term loan made available under the Credit Facility and the payment of a closing fee in the amount of $25,000. The Borrowers satisfied all such conditions on February 7, 2020.

Any exercise of remedies by Bank of America, N.A. under the Credit Facility is subject to compliance with the intercreditor agreement entered into at the closing of Amendment No. 5 among the Company, Muzinich, as lender under the Term Loan Facility, and Bank of America, N.A.

The Company expects to realize tax benefits in future periods due to the available net operating loss carryforwards resulting from the disposition of a former wholly owned subsidiary in 2010. Accordingly, future taxable income is expected to be offset by the utilization of operating loss carryforwards and as a result will increase the Company's liquidity as cash needed to pay federal and state income taxes will be substantially reduced. Additionally, CommAgility benefits from a research and development deduction which significantly reduces the cash needed to pay taxes in the UK.

The Company may pursue strategic opportunities, including potential acquisitions, mergers, divestitures or other activities, which may require significant use of the Company's capital resources. The Company may incur costs as a result of such activities and such activities may affect the Company's liquidity in future periods. In order to fund such activities, the Company may need to incur additional debt or issue additional securities if market conditions are favorable. However, there can be no certainty that such funding will be available in needed quantities on terms favorable to the Company or at all.

On August 27, 2018 the Company filed a shelf registration statement on Form S-3 which was declared effective on September 17, 2018. The Form S-3 will permit the Company to issue and sell, from time to time, up to $40 million in aggregate value of shares of its common stock through one or more methods of distribution, subject to applicable SEC limits on the value of securities that the Company, as a smaller reporting company, may sell during an applicable period, market conditions, and the Company's capital desires and needs. The Company has no current plans to offer any common stock under the shelf registration statement. The terms of any offering of the Company's common stock, and the intended use of the net proceeds resulting therefrom, will be established at the times of the offerings and will be described in prospectus supplements filed with the SEC at the times of the offerings. The shelf registration statement is intended to provide financial flexibility to access capital in a competitive and expeditious manner when market conditions are appropriate.

The Company expects demand for its Embedded Solutions signal processing hardware cards from the Company's largest customer to be significantly lower in fiscal 2020 as compared to fiscal 2019. The Company expects this hardware revenue decline to be partially offset by increased Embedded Solutions software and services revenue but expects this transition to take several quarters. Additionally, the Company undertook restructuring actions and cost and expense reductions across all of its segments in early 2020 to drive efficiency and improved operating leverage.

We expect borrowings available to us under our Credit Facility, our existing cash balance and cash generated by operations will be sufficient to meet our liquidity needs for the next twelve months. The Company expects the cash flow of Holzworth to fund the deferred purchase price related to the Holzworth Acquisition. Our ability to meet our cash requirements will depend on our ability to generate cash in the future, which is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

Purchase obligations consist of inventory that arises in the normal course of business operations. Future obligations and commitments as of December 31, 2019 consisted of the following:

Table of Contractual Obligations
Payments by year (in thousands)

	Total	2020	2021	2022	2023
Facility Leases	$ 1,597	$ 512	$ 474	$ 488	$ 123
Operating and Equipment Leases	117	54	54	9	-
Purchase Obligations	3,652	3,652	-	-	-
	$ 5,366	$ 4,218	$ 528	$ 497	$ 123

Off-Balance Sheet Arrangements

Other than contractual obligations incurred in the normal course of business, the Company does not have any off-balance sheet arrangements.

Effects of Inflation and Changing Prices

The Company does not anticipate that inflation or other expected changes in prices will significantly impact its business.

Recent Accounting Pronouncements Affecting the Company

A discussion of recent accounting pronouncements is included in Note 1 to the Consolidated Financial Statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8. Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Wireless Telecom Group, Inc.

To the Board of Directors and Shareholders
Wireless Telecom Group, Inc.
Parsippany, NJ

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Wireless Telecom Group, Inc. (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations and comprehensive income/(loss), changes in shareholders' equity and cash flows for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

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 financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the 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/ PKF O'Connor Davies, LLP

We have served as the Company's auditor since 2006.

New York, New York
March 19, 2020

CONSOLIDATED BALANCE SHEETS

Wireless Telecom Group, Inc.
(In thousands, except number of shares and par value)

	December 31 2019	December 31 2018
CURRENT ASSETS		
Cash & Cash Equivalents	$ 4,245	$ 5,015
Accounts Receivable - net of reserves of $69 and $44, respectively	6,152	8,638
Inventories - net of reserves of $969 and $1,910, respectively	7,325	6,884
Prepaid Expenses and Other Current Assets	1,871	1,689
TOTAL CURRENT ASSETS	19,593	22,226
PROPERTY PLANT AND EQUIPMENT - NET	2,147	2,578
OTHER ASSETS		
Goodwill	10,069	9,778
Acquired Intangible Assets, net	2,219	3,206
Deferred Income Taxes	6,013	5,592
Right of Use Assets	1,436	-
Other Assets	874	787
TOTAL OTHER ASSETS	20,611	19,363
TOTAL ASSETS	$ 42,351	$ 44,167
CURRENT LIABILITIES		
Short Term Debt	$ 2,696	$ 2,016
Accounts Payable	2,227	3,252
Short Term Leases	440	-
Accrued Expenses and Other Current Liabilities	2,657	6,083
Deferred Revenue	42	103
TOTAL CURRENT LIABILITIES	8,062	11,454
LONG TERM LIABILITIES		
Long Term Leases	1,018	-
Other Long Term Liabilities	77	115
Deferred Tax Liability	503	616
TOTAL LONG TERM LIABILITIES	1,598	731
COMMITMENTS AND CONTINGENCIES		
SHAREHOLDERS' EQUITY		
Preferred Stock, $.01 par value, 2,000,000 shares authorized, none issued	-	-
Common Stock, $.01 par value, 75,000,000 shares authorized, 34,488,252 and 34,393,252 shares issued, 21,300,251 and 21,205,251 shares outstanding	345	344
Additional Paid in Capital	49,062	48,479
Retained Earnings	7,142	7,556
Treasury Stock at Cost, 13,188,000	(24,509)	(24,509)
Accumulated Other Comprehensive Income	651	112
TOTAL SHAREHOLDERS' EQUITY	32,691	31,982
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 42,351	$ 44,167

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

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME/(LOSS)

Wireless Telecom Group, Inc.
(In thousands, except per share amounts)

	Twelve Months Ended December 31 2019	2018
NET REVENUES	$ 48,921	$ 52,788
COST OF REVENUES	26,632	28,621
GROSS PROFIT	22,289	24,167
Operating Expenses		
Research and Development	5,917	4,909
Sales and Marketing	7,677	7,595
General and Administrative	10,174	10,306
(Gain)/Loss on Change in Fair Value of Contingent Consideration	-	578
Total Operating Expenses	23,768	23,388
Operating Income/(Loss)	(1,479)	779
Other Income/(Expense)	(2)	(121)
Interest Expense	(305)	(575)
Income/(Loss) before taxes	(1,786)	83
Tax Provision/(Benefit)	(1,372)	48
Net Income/(Loss)	$ (414)	$ 35
Other Comprehensive Income/(Loss):		
Foreign Currency Translation Adjustments	539	(892)
Comprehensive Income/(Loss)	$ 125	$ (857)
Earnings/(Loss) Per Share:		
Basic	$ (0.02)	$ 0.00
Diluted	$ (0.02)	$ 0.00
Weighted Average Shares Outstanding:		
Basic	21,111	20,858
Diluted	21,111	21,566

In periods with a net loss, the basic loss per share equals the diluted loss per share as all common stock equivalents are excluded from the per share calculation because they are anti-dilutive.

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

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

Wireless Telecom Group, Inc.
(In thousands, except share amounts)

	Common Stock Issued	Common Stock Amount	Additional Paid In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income/(Loss)	Total Shareholders' Equity
Balances at December 31, 2017	**33,868,252**	**$ 339**	**$ 47,494**	**$ 7,176**	**$ (20,910)**	**$ 1,004**	**$ 35,103**
Adoption of Accounting Standard	-	-	-	345	-	-	345
Adjusted Opening Equity	**33,868,252**	**$ 339**	**$ 47,494**	**$ 7,521**	**$ (20,910)**	**$ 1,004**	**$ 35,448**
Net Income/(Loss)	-	-	-	35	-	-	35
Issuance of Shares in Connection with Stock Options Exercised	300,000	3	285	-	-	-	288
Issuance of Restricted Stock	225,000	2	(2)	-	-	-	-
Forfeiture of Shares Issued in Connection with CommAgility acquisition	-	-	-	-	(3,599)	-	(3,599)
Share-based Compensation Expense	-	-	702	-	-	-	702
Cumulative Translation Adjustment	-	-	-	-	-	(892)	(892)
Balances at December 31, 2018	**34,393,252**	**$ 344**	**$ 48,479**	**$ 7,556**	**$ (24,509)**	**$ 112**	**$ 31,982**
Net Income/(Loss)	-	-	-	(414)	-	-	(414)
Issuance of Restricted Stock	95,000	1	(1)	-	-	-	-
Share-based Compensation Expense	-	-	584	-	-	-	584
Cumulative Translation Adjustment	-	-	-	-	-	539	539
Balances at December 31, 2019	**34,488,252**	**$ 345**	**$ 49,062**	**$ 7,142**	**$ (24,509)**	**$ 651**	**$ 32,691**

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

CONSOLIDATED STATEMENTS OF CASH FLOWS
Wireless Telecom Group, Inc.
(In thousands)

	For the Twelve Months Ended December 31 2019	2018
CASH FLOWS PROVIDED BY OPERATING ACTIVITIES		
Net Income/(Loss)	$ (414)	$ 35
Adjustments to reconcile net income/(loss) to net cash provided by operating activities:		
Depreciation and Amortization	2,151	2,305
Amortization of Debt Issuance Fees	63	78
Share-based Compensation Expense	584	702
Non Cash Lease Expense	(24)	11
Deferred Income Taxes	(551)	233
Provision for Doubtful Accounts	25	-
Inventory Reserves	103	359
Changes in Assets and Liabilities:		
Accounts Receivable	2,465	231
Inventories	(502)	(751)
Prepaid Expenses and Other Assets	42	(850)
Accounts Payable	(1,055)	(735)
Payment of Contingent Consideration	(772)	-
Accrued Expenses and Other Liabilities	(2,035)	2,372
Net Cash Provided by Operating Activities	80	3,990
CASH FLOWS (USED) BY INVESTING ACTIVITIES		
Capital Expenditures	(392)	(853)
Acquisition of Business, Net of Cash Acquired	(426)	(805)
Net Cash (Used) by Investing Activities	(818)	(1,658)
CASH FLOWS PROVIDED/(USED) BY FINANCING ACTIVITIES		
Revolver Borrowings	36,544	37,695
Revolver Repayments	(35,712)	(37,355)
Term Loan Repayments	(152)	(152)
Debt Issuance Fees	(110)	-
Payment of Contingent Consideration	(782)	-
Proceeds from Exercise of Stock Options	-	288
Net Cash Provided/(Used) by Financing Activities	(212)	476
Effect of Exchange Rate Changes on Cash and Cash Equivalents	180	(251)
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	(770)	2,557
Cash and Cash Equivalents, at Beginning of Period	5,015	2,458
CASH AND CASH EQUIVALENTS, AT END OF PERIOD	$ 4,245	$ 5,015
SUPPLEMENTAL INFORMATION:		
Cash Paid During the Period for Interest	$ 185	$ 176
Cash Paid During the Period for Income Taxes	$ 108	$ 41

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

NOTE 1 - DESCRIPTION OF COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Organization and Basis of Presentation

Wireless Telecom Group, Inc., a New Jersey corporation, together with its subsidiaries ("we", "us", "our" or the "Company"), is a global designer and manufacturer of advanced RF, microwave and millimeter wave components, modules, systems and instruments and currently markets its products and services worldwide under the Boonton, Microlab, Noisecom and CommAgility brands. Serving the wireless, telecommunication, satellite, military, aerospace, and semiconductor industries, Wireless Telecom Group products enable innovation across a wide range of traditional and emerging wireless technologies. With a unique set of high-performance products including peak power meters, signal analyzers, signal processing modules, long term evolution ("LTE") physical layer ("PHY") and stack software, power splitters and combiners, global positioning system ("GPS") repeaters, public safety monitors, noise sources, and programmable noise generators, Wireless Telecom Group supports the development, testing, and deployment of wireless technologies around the globe. The consolidated financial statements include the accounts of Wireless Telecom Group, Inc., doing business as, and operating under the trade name, Noise Com, Inc. ("Noisecom"), and its wholly owned subsidiaries including Boonton Electronics Corporation ("Boonton"), Microlab/FXR ("Microlab"), Wireless Telecommunications Ltd. and CommAgility Limited ("CommAgility").

The accompanying Consolidated Financial Statements include the accounts of the Company and its wholly owned subsidiaries. The Consolidated Financial Statements have been prepared using accounting principles generally accepted in the United States ("U.S. GAAP"). All intercompany accounts and transactions have been eliminated in consolidation.

The Company presents its operations in three reportable segments: (1) Network Solutions, (2) Test and Measurement and (3) Embedded Solutions. The Network Solutions segment is comprised of the operations of Microlab. The Test and Measurement segment is comprised of the operations of Boonton and Noisecom. The Embedded Solutions segment is comprised of the operations of CommAgility.

Use of Estimates

The accompanying financial statements have been prepared in accordance with U.S. GAAP, which requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Accordingly, actual results could differ from those estimates. The most significant estimates and assumptions include management's analysis in support of inventory valuation, accounts receivable valuation, valuation of deferred tax assets, returns reserves, warranty accruals, intangible assets, estimated fair values of stock options and vesting periods of performance-based stock options and restricted stock.

Concentrations of Credit Risk, Purchases and Fair Value

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and accounts receivable.

Credit evaluations are performed on customers requiring credit over a certain amount. Credit risk is mitigated to a lesser extent through collateral such as letters of credit, bank guarantees or payment terms like cash in advance.

For the years ended December 31, 2019 and 2018 one customer, from the Embedded Solutions segment, accounted for 24.8% and 22.0% of the Company's total consolidated revenues, respectively. At December 31, 2019, one customer exceeded 10% of consolidated gross accounts receivable at 12.9%. At December 31, 2018 one customer exceeded 10% of consolidated gross accounts receivable at 32.1%.

For the year ended December 31, 2019, three suppliers comprised or exceeded 10% of consolidated inventory purchases at 18%, 14%, and 10% respectively. For the year ended December 31, 2018 two suppliers comprised or exceeded 10% of consolidated inventory purchases at 15% and 13%, respectively.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with maturities of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents consist of operating accounts.

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. Estimated allowances for doubtful accounts are reviewed periodically taking into account the customer's recent payment history, the customer's current financial statements and other information regarding the customer's credit worthiness. Account balances are charged off against the allowance when it is determined the receivable will not be recovered.

Inventories

Inventories are stated at the lower of cost (average cost) or net realizable value. Net realizable value is based upon an estimated average selling price reduced by estimated costs of completion, disposal and transportation. Reductions in inventory valuation are included in cost of revenues in the accompanying Consolidated Statements of Operations and Comprehensive Loss. Finished goods and work-in-process include material, labor and overhead expenses.

The Company reviews inventory for excess and obsolescence based on best estimates of future demand, product lifecycle status and product development plans. The Company uses historical information along with these future estimates to reduce the inventory cost basis. Subsequent changes in facts and circumstances do not result in the restoration or increase in that newly established cost basis.

Inventory carrying value is net of inventory reserves of approximately $1.0 million as of December 31, 2019 and $1.9 million as of December 31, 2018.

Inventories consist of (in thousands):	December 31, 2019	December 31, 2018
Raw materials	$ 4,023	$ 3,248
Work-in-process	406	557
Finished goods	2,896	3,079
	$ 7,325	$ 6,884

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets generally consist of income tax receivables, contract assets, prepaid insurance, prepaid maintenance agreements and the short term portion of debt issuance costs. The income tax receivable balance included in prepaid and other current assets was $1.1 million as of December 31, 2019 as compared to a balance of $0.8 million as of December 31, 2018.

Property, Plant and Equipment

Property, plant and equipment are reflected at cost, less accumulated depreciation. Depreciation and amortization are provided on a straight-line basis over the estimated useful lives of the assets. The estimated useful lives for the property, plant and equipment are:

Machinery and computer equipment	3-8 years
Furniture and fixtures	5-7 years
Transportation equipment	4 years

Leasehold improvements are amortized over the shorter of the remaining term of the lease or the estimated economic life of the improvement. Repairs and maintenance are charged to operations as incurred; renewals and betterments are capitalized.

Goodwill

Goodwill represents the excess of the aggregate purchase price over the fair value of the net assets acquired in a purchase business combination. Goodwill is evaluated for impairment annually by first performing a qualitative evaluation of events and circumstances impacting the reporting unit to determine the likelihood of goodwill impairment. Based on that qualitative evaluation, if we determine it is more likely than not that the fair value of a reporting unit exceeds its carrying amount, no further evaluation is necessary. Otherwise we perform a quantitative impairment test.

As of December 31, 2019 the Company's consolidated goodwill balance of $10.1 million is comprised of $1.4 million related to the Microlab reporting unit and $8.7 million related to the CommAgility reporting unit. The Company performed a qualitative assessment in the fourth quarter of 2019 of each reporting unit. The qualitative assessment of Microlab did not indicate any impairment of goodwill. As a result of declining future demand of the CommAgility's signal processing hardware and the uncertainty associated with new product revenues to offset the signal processing hardware sale decline, the Company performed a quantitative impairment test of the goodwill of the CommAgility reporting unit.

For goodwill impairment testing using the quantitative approach, the Company estimates the fair value of the selected reporting unit primarily through the use of a discounted cash flow model based on our best estimate of amounts and timing of future revenues and cash flows and our most recent business and strategic plans, and compares the estimated fair value to the carrying value of the reporting unit, including goodwill. If the fair value of the reporting unit exceeds the carrying value, no impairment charge is recorded. If the carrying value of the reporting unit exceeds the fair value an impairment charge is recorded to goodwill in the amount by which carrying value exceeds fair value. The discounted cash flow model requires judgmental assumptions about projected revenue growth, future operating margins, discount rates and terminal values over a multi-year period. There are inherent uncertainties related to these assumptions and management's judgment in applying them to the analysis of goodwill impairment. While the Company believes it has made reasonable estimates and assumptions to calculate the fair value of its reporting units, it is possible a material change could occur. If actual results are not consistent with management's estimates and assumptions, goodwill may be overstated and a charge would need to be taken against net earnings.

Changes in our projections used in the discounted cash flow model could affect the estimated fair value of the Company's reporting unit and could result in a goodwill impairment charge in a future period. In order to evaluate the sensitivity of the fair value calculations used in the quantitative goodwill impairment test, the Company applied a hypothetical 10% decrease to the fair value of the CommAgility reporting unit and compared those values to the carrying value. Based on this sensitivity analysis, the Company did not identify any goodwill impairment. Due to the many variables inherent in the estimation of a reporting unit's fair value and the relative size of our recorded goodwill, differences in assumptions may have a material effect on the results of our impairment analysis.

As of December 31, 2018 the Company's consolidated goodwill balance of $9.8 million was comprised of $1.4 million related to the Microlab reporting unit and $8.4 million related to the CommAgility reporting unit. Management's qualitative assessment performed in the fourth quarters of 2018 did not indicate any impairment of goodwill.

Intangible and Long-lived Assets

Intangible assets include patents, non-competition agreements, customer relationships and trademarks. Intangible assets with finite lives are amortized using the straight-line method over the estimated economic lives of the assets, which range from three to five years. Long-lived assets, including intangible assets with finite lives, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. Measurement of an impairment loss for long-lived assets that management expects to hold and use is based on the estimated fair value of the asset. Long-lived assets to be disposed of are reported at the lower of carrying amount or estimated fair value less costs to sell. The estimated useful lives of intangible and long-lived assets are based on many factors including assumptions regarding the effects of obsolescence, demand, competition and other economic factors, expectations regarding the future use of the asset, and our historical experience with similar assets. The assumptions used to determine the estimated useful lives could change due to numerous factors including product demand, market conditions, technological developments, economic conditions and competition. Intangible assets determined to have indefinite useful lives are not amortized but are tested for impairment annually and more frequently if events occur or circumstances change that indicate an asset may be impaired.

Fair Value of Financial Instruments

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The accounting guidance establishes a three-tiered hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value:

Level 1 - Quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The categorization of a financial instrument within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The carrying amounts of the Company’s financial instruments, including cash, accounts receivable, accounts payable and accrued liabilities, approximate fair value due to their relatively short maturities. The Company’s term loan and revolving credit facility bear interest at a variable interest rate plus an applicable margin and, therefore, carrying amount approximates fair value.

Foreign Currency Translation

Assets and liabilities of non-U.S. subsidiaries that operate in a local currency environment, where the local currency is the functional currency, are translated from foreign currencies into U.S. dollars at period-end exchange rates while income and expenses are translated at the weighted average spot rate for the periods presented. Translation gains or losses related to net assets located outside the U.S. are shown as a component of accumulated other comprehensive income in the Consolidated Statements of Changes in Shareholders’ Equity. Gains and losses resulting from foreign currency transactions, which are denominated in currencies other than the Company’s functional currency, are included in the Consolidated Statements of Operations and Comprehensive Loss. Foreign exchange transaction losses were not material in fiscal 2019 and were $0.1 million in 2018.

Other Comprehensive Income (Loss)

Other comprehensive income (loss) is recorded directly to a separate section of shareholders’ equity in accumulated other comprehensive income and includes unrealized gains and losses excluded from net income/(loss). These unrealized gains and losses consist of changes in foreign currency translation.

Research and Development Costs

Research and development costs are charged to operations when incurred. The amounts charged to operations for the years ended December 31, 2019 and 2018 were $5.9 million and $4.9 million, respectively.

Advertising Costs

Advertising expenses are charged to operations during the year in which they are incurred and aggregated $0.1 million for the years ended December 31, 2019 and 2018.

Stock-Based Compensation

The Company follows the provisions of Accounting Standards Codification ("ASC") 718, "Compensation – Stock Compensation" which requires that compensation expense be recognized, based on the fair value of the stock awards. The fair value of the stock awards is equal to the fair value of the Company's stock on the date of grant. The fair value of options at the date of grant are estimated using the Black-Scholes option pricing model. When performance-based options are granted, the Company takes into consideration guidance under ASC 718 and SEC Staff Accounting Bulletin No. 107 (SAB 107) when determining assumptions. The expected option life is derived from assumed exercise rates based upon historical exercise patterns and represents the period of time that options granted are expected to be outstanding. The expected volatility is based upon historical volatility of our shares using daily price observations over an observation period that approximates the expected life of the options. The risk-free rate is based on the U.S. Treasury yield curve rate in effect at the time of grant for periods similar to the expected option life. The Company accounts for forfeitures when they occur.

Management estimates are necessary in determining compensation expense for stock options with performance-based vesting criteria. Compensation expense for this type of stock-based award is recognized over the period from the date the performance conditions are determined to be probable of occurring through the implicit service period, which is the date the applicable conditions are expected to be met. If the performance conditions are not considered probable of being achieved, no expense is recognized until such time as the performance conditions are considered probable of being met, if ever. If the award is forfeited because the performance condition is not satisfied, previously recognized compensation cost is reversed. Management evaluates performance conditions on a quarterly basis.

Income Taxes

The Company records deferred taxes in accordance with ASC 740, "Accounting for Income Taxes". This ASC requires recognition of deferred tax assets and liabilities for temporary differences between tax basis of assets and liabilities and the amounts at which they are carried in the financial statements, based upon the enacted rates in effect for the year in which the differences are expected to reverse. The Company establishes a valuation allowance when necessary to reduce deferred tax assets to the amount expected to be realized.

The Company periodically assesses the value of its deferred tax asset, a majority of which has been generated by a history of net operating losses and determines the necessity for a valuation allowance. The Company evaluates which portion, if any, will more likely than not be realized by offsetting future taxable income, taking into consideration any limitations that may exist on its use of its net operating loss carry-forwards.

Under ASC 740, the Company must recognize and disclose uncertain tax positions only if it is more-likely-than-not the tax position will be sustained on examination by the taxing authority, based on the technical merits of the position. The amounts recognized in the financial statements attributable to such position, if any, are recorded if there is a greater than 50% likelihood of being realized upon the ultimate resolution of the position. Based on the evaluations noted above, the Company has concluded that there are no significant uncertain tax positions requiring recognition or disclosure in its consolidated financial statements.

Earnings (Loss) Per Common Share

Basic earnings (loss) per share is calculated by dividing net income (loss) available to common shareholders by the weighted average number of shares of common stock outstanding during the period. Diluted earnings (loss) per share is calculated by dividing net income (loss) available to common shareholders by the weighted average number of common shares outstanding for the period and, when dilutive, potential shares from stock options using the treasury stock method, the weighted average number of unvested restricted shares and the weighted-average number of restricted stock units outstanding for the period. Shares from stock options are included in the diluted earnings per share calculation only when options exercise prices are lower than the average market value of the common shares for the period presented. In periods with a net loss, the basic loss per share equals the diluted loss per share as all common stock equivalents are excluded from the per share calculation because they are anti-dilutive. In accordance with ASC 260, "Earnings Per Share", the following table reconciles basic shares outstanding to fully diluted shares outstanding.

	For the Years Ended December 31,	
	2019	2018
Weighted average common shares outstanding	21,110,632	20,858,298
Potentially dilutive equity awards	522,996	707,492
Weighted average common shares outstanding, assuming dilution	21,633,628	21,565,790

The weighted average number of options to purchase common stock not included in diluted loss per share because the effects are anti-dilutive, or the performance condition was not met in 2019 was 1,324,548. The weighted average number of options to purchase common stock not included in diluted loss per share in 2018, because the effects are anti-dilutive or the performance condition was not met, was 285,000.

Recent Accounting Pronouncements Adopted in 2019

In February 2016, the FASB issued Accounting Standards Update ("ASU") 2016-02, *Leases (Topic 842)*, which created new accounting and reporting guidelines for leasing arrangements. The new guidance requires organizations that lease assets to recognize assets and liabilities on the balance sheet related to the rights and obligations created by those leases, regardless of whether they are classified as finance or operating leases. Consistent with current guidance, the recognition, measurement, and presentation of expenses and cash flows arising from a lease primarily will depend on its classification as a finance or operating lease. The guidance also requires new disclosures to help financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases.

The Company adopted the requirements of the new standard effective January 1, 2019 using the modified retrospective transition method, which applies the provisions of the standard at the effective date without adjustment to the comparative periods presented. The Company adopted the following practical expedients and elected the following accounting policies related to this standard:

- Carry forward of historical lease classifications and accounting treatment;
- Short-term lease accounting policy election allowing lessees to not recognize right-of-use assets and liabilities for leases with a term of 12 months or less; and
- The option to not separate lease and non-lease components for certain equipment lease categories such as office printers and copiers.

Adoption of this standard resulted in the recognition of operating lease right-of-use assets and corresponding lease liabilities of $1.9 million on the consolidated balance sheet as of January 1, 2019. The standard did not materially impact operating results or liquidity. Disclosures related to the amount, timing and uncertainty of cash flows arising from leases are included in Note 2.

On June 20, 2018, the FASB issued ASU 2018-07, *Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting.* ASU 2018-07 is intended to reduce cost and complexity and to improve financial reporting for share-based payments issued to nonemployees. This ASU expands the scope of ASC Topic 718, *Compensation - Stock Compensation*, which currently only includes share-based payments issued to employees, to also include share-based payments issued to nonemployees for goods and services. Consequently, the accounting for share-based payments to nonemployees and employees will be substantially aligned. ASU 2018-07 supersedes ASC *Subtopic 505-50, Equity - Equity-Based Payments to Non-Employees*. The amendments in this ASU are effective for public companies for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. The Company adopted this standard on January 1, 2019 and it did not have an impact on our financial statements as we did not issue share-based awards to nonemployees during the year.

In January, 2017, FASB issued ASU 2017-04, *"Intangibles – Goodwill and Other (Topic 350) Simplifying the Test for Goodwill Impairment."* ASU 2017-04 removes the requirement to perform a hypothetical purchase price allocation to measure goodwill impairment. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. This pronouncement is effective for the Company's 2020 calendar year, with early adoption permitted. The Company has elected to adopt this standard effective with the December 31 2019, financials and its valuation of the CommAgility and Microlab goodwill assessment in the fourth quarter of fiscal 2019.

Recent Accounting Pronouncements Not Yet Adopted

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326)*. ASU 2016-13 changes the impairment model for most financial assets and will require the use of an "expected loss" model for instruments measured as amortized cost. This pronouncement is effective for small reporting companies for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2022. The Company plans to adopt the standard effective January 1, 2023. We do not expect the adoption of this standard to have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement, Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement (Topic 820)*. ASU 2018-13 eliminates, modifies and adds disclosure requirements for fair value measurements. This pronouncement is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. We are currently in the process of evaluating the effects of this pronouncement on our consolidated financial statements

In August 2018, the FASB issued ASU 2018-15, *"Intangibles – Goodwill and Other – Internal-Use Software, Customers Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract."* ASU 2018-15 aligns the requirements for capitalizing implementation costs in cloud computing arrangements with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This pronouncement is effective for the Company's 2023 calendar year, with early adoption permitted. The Company is in the process of evaluating the impact of ASU 2018-15 on its consolidated financial statements.

NOTE 2 - LEASES

The Company's lease agreements consist of building leases for its operating locations and office equipment leases for printers and copiers with lease terms that range from less than 12 months to 8 years. At inception, the Company determines if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. The Company's leases for office equipment such as printers and copiers contain lease and non-lease components (i.e. maintenance). The Company accounts for lease and non-lease components of office equipment as a single lease component.

All of the Company's leases are operating leases and are presented as right of use lease asset, short term lease liability and long term lease liability on the consolidated balance sheet as of December 31, 2019. These assets and liabilities are recognized at the commencement date based on the present value of remaining lease payments over the lease term using the Company's incremental borrowing rate. Short-term leases, which have an initial term of 12 months or less, are not recorded on the balance sheet.

Lease expense is recognized on a straight-line basis over the lease term and is included in cost of revenues and general and administrative expenses on the consolidated statement of operations and comprehensive income/(loss).

An initial right-of-use asset of $1.9 million was recognized as a non-cash asset addition with the adoption of the new lease accounting standard. Subsequent to adoption of the new standard there were no new right-of-use assets recognized during the twelve months ended December 31, 2019. Cash paid for amounts included in the present value of operating lease liabilities was $0.5 million during the twelve months ended December 31, 2019 and is included in operating cash flows.

Operating lease costs were $0.8 million during the twelve months ended December 2019.

The following table presents information about the amount and timing of cash flows arising from the Company's operating leases as of December 31, 2019.

(in thousands)		December 31, 2019
Maturity of Lease Liabilities		
2020	$	511
2021		474
2022		488
2023		123
Thereafter		-
Total Undiscounted operating lease payments		1,596
Less: imputed interest		(138)
Present Value of operating lease liabilities	$	1,458
Other information		
Weighted-average remaining lease term (months)		38
Weighted-average discount rate for operating leases		5.76%

Total annual commitments under non-cancelable lease agreements as of December 31, 2018 under the previous accounting guidance were as follows:

2019	$	539
2020		510
2021		474
2022		488
2023		123
Total	$	2,134

NOTE 3 – REVENUE

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for promised goods or services. The Company's performance obligations are satisfied either over time or at a point in time. Revenue from performance obligations that transferred at a point in time accounted for approximately 99% and 95% of the Company's total revenue for the twelve months ended December 31, 2019 and 2018, respectively.

Nature of Products and Services

Hardware

The Company generally has one performance obligation in its arrangements involving the sales of radio frequency solutions in the Network Solutions segment, digital signal processing hardware in the Embedded Solutions segment and noise generators and components and power meter and analyzers in the Test and Measurement segment. When the terms of a contract include the transfer of multiple products, each distinct product is identified as a separate performance obligation. Generally, satisfaction occurs when control of the promised goods is transferred to the customer in exchange for consideration in an amount for which we expect to be entitled. Generally, control is transferred when legal title of the asset moves from the Company to the customer. We sell our products to a customer based on a purchase order, and the shipping terms per each individual order are primarily used to satisfy the single performance obligation. However, in order to determine control has transferred to the customer, the Company also considers:

- when the Company has a present right to payment for the asset
- when the Company has transferred physical possession of the asset to the customer
- when the customer has the significant risks and rewards of ownership of the asset
- when the customer has accepted the asset

Software

Arrangements involving licenses of software in the Embedded Solutions segment may involve multiple performance obligations, most notably subsequent releases of the software. The Company has concluded that each software release in a multiple deliverable arrangement in the Embedded Solutions segment is a distinct performance obligation and, accordingly, transaction price is allocated to each release when the customer obtains control of the software.

Performance obligations that are not distinct at contract inception are combined. Specifically, with the Company's sales of software, contracts that include customization may result in the combination of the customization services with the license as one distinct performance obligation and recognized over time. The duration of these performance obligations are typically one year or less.

Services

Arrangements involving calibration and repair services in the Company's Test and Measurement segment are generally considered a single performance obligation and are recognized as the services are rendered.

Shipping and Handling

Shipping and handling activities performed after the customer obtains control are accounted for as fulfillment activities and recognized as cost of revenues.

Significant Judgments

For the Company's more complex software and services arrangements significant judgment is required in determining whether licenses and services are distinct performance obligations that should be accounted for separately, or, are not distinct, and thus accounted for together. Further, in cases where we determine that performance obligations should be accounted for separately, judgment is required to determine the standalone selling price for each distinct performance obligation.

Certain of the Company shipments include a limited return right. In accordance with Topic 606 the Company recognizes revenue net of expected returns.

Contract Balances

The timing of revenue recognition may differ from the timing of invoicing to customers and these timing differences result in contract assets or contract liabilities (deferred revenue) on the Company's Consolidated Balance Sheet. The Company records a contract asset when revenue is recognized prior to invoicing, or deferred revenue when revenue is recognized subsequent to invoicing. Contract assets are recorded in prepaid expenses and other current assets and are \$0.1 million and \$0.3 million as of December 31, 2019 and 2018, respectively. Deferred revenue is \$42,000 and \$0.1 million as of December 31, 2019 and 2018, respectively.

Disaggregated Revenue

We disaggregate our revenue from contracts with customers by product family and geographic location for each of our segments as we believe it best depicts how the nature, timing and uncertainty of our revenue and cash flows are affected by economic factors. See details in the tables below (in thousands).

	Twelve Months Ended December 31, 2019			
	Network Solutions	Test and Measurement	Embedded Solutions	Total
Total Net Revenues by Revenue Type				
Passive and Active RF Solutions	$ 21,830	$ -	$ -	$ 21,830
Noise Generators and Components	-	6,198	-	6,198
Power Meters and Analyzers	-	6,109	-	6,109
Signal Processing Hardware	-	-	13,013	13,013
Software Licenses	-	-	14	14
Services	-	1,259	498	1,757
Total Net Revenue	**$ 21,830**	**$ 13,566**	**$ 13,525**	**$ 48,921**
Total Net Revenues by Geographic Areas				
Americas	$ 19,318	$ 9,522	$ 1,321	$ 30,161
EMEA	2,241	2,105	12,154	16,500
APAC	271	1,939	50	2,260
Total Net Revenue	**$ 21,830**	**$ 13,566**	**$ 13,525**	**$ 48,921**

	Twelve Months Ended December 31, 2018			
	Network Solutions	Test and Measurement	Embedded Solutions	Total
Total Net Revenues by Revenue Type				
Passive and Active RF Solutions	$ 22,275	$ -	$ -	$ 22,275
Noise Generators and Components	-	6,130	-	6,130
Power Meters and Analyzers	-	6,769	-	6,769
Signal Processing Hardware	-	-	12,746	12,746
Software Licenses	-	-	704	704
Services	-	1,313	2,851	4,164
Total Net Revenue	**$ 22,275**	**$ 14,212**	**$ 16,301**	**$ 52,788**
Total Net Revenues by Geographic Areas				
Americas	$ 18,871	$ 10,223	$ 3,755	$ 32,849
EMEA	2,591	1,659	12,019	16,269
APAC	813	2,330	527	3,670
Total Net Revenue	**$ 22,275**	**$ 14,212**	**$ 16,301**	**$ 52,788**

NOTE 4 - DEBT

Debt consists of the following (in thousands):

	December 31, 2019	
Revolver at LIBOR Plus Margin	$	2,354
Term Loan at LIBOR Plus Margin		342
Total Debt		2,696
Debt Maturing within one year		(2,696)
Non-current portion of long term debt	$	-

The Company entered into a Credit Facility with Bank of America, N.A. (the "Lender") on February 16, 2017 (the "Credit Facility"), which provided for a term loan in the aggregate principal amount of $0.8 million (the "Term Loan") and an asset based revolving loan (the "Revolver"), which is subject to a Borrowing Base Calculation (as defined in the Credit Facility) of up to a maximum availability of $9.0 million ("Revolver Commitment Amount"). The borrowing base is calculated as 85% of eligible accounts receivable and inventory, as defined, subject to certain caps and limits. The borrowing base is calculated on a monthly basis. The proceeds of the Term Loan and Revolver were used to finance the acquisition of CommAgility.

In connection with the issuance of the Credit Facility, the Company paid lender and legal fees of $0.2 million which were primarily related to the Revolver and are capitalized and presented as other current and non-current assets in the Consolidated Balance Sheets. These costs are recognized as additional interest expense over the term of the related debt instrument using the straight line method which approximates the effective interest method.

The Company must repay the Term Loan in installments of $38,000 per quarter due on the first day of each fiscal quarter beginning April 1, 2017 and continuing until the Term Loan maturity date, on which the remaining balance is due in a final installment. The future principal payments under the Term Loan are $0.3 million in 2020. The Term Loan and Revolver were both scheduled to mature on November 16, 2019. On February 26, 2019 the Company entered into Amendment No. 3 to the Credit Facility which extends the termination date of the Revolver from November 16, 2019 to March 31, 2020 (See Note 15). On November 8, 2019 the Company entered into Amendment No. 4 to the Credit Facility which extends the maturity date of the Term Loan to coincide with the extension of the Revolver at March 31, 2020, and then on February 7, 2020, entered into Amendment No. 5 (see Note 15 Subsequent Event), which, inter alia, extended the maturity date of the Revolver to March 31, 2023.

The Term Loan and Revolver bear interest at the LIBOR rate plus a margin. The margin on the outstanding balance of the Company's Term Loan and Revolver were fixed at 3.50% and 3.00% per annum, respectively, through September 30, 2017. Thereafter, the margins were subject to increase or decrease by Lender on the first day of each of the Borrowers' fiscal quarters based upon the Fixed Charge Coverage Ratio (as defined in the Credit Facility) as of the most recently ended fiscal quarter falling into three levels. If the Company's Fixed Charge Coverage Ratio is greater than or equal to 1.25 to 1.00, a margin of 3.25% and 2.75%, respectively, is added to LIBOR rate with a step up to 3.50% and 3.00%, respectively, if the ratio is greater than or equal 1.00 to 1.00 but less than 1.25 to 1.00 and another step up to 3.75% and 3.25%, respectively, if the ratio is less than 1.00 to 1.00. The Company is also required to pay a commitment fee on the unused commitments under the Revolver at a rate equal to 0.50% per annum and early termination fee of (a) 2% of the Revolver Commitment Amount and Term Loan if termination occurs before the first anniversary of the Credit Facility or (b) 1% of the Revolver Commitment Amount and Term Loan if termination occurs after the first anniversary of the Credit Facility but before the second anniversary of the Credit Facility. The Company's interest rate plus margin as of December 31, 2019 was 4.63% and 5.13% for the Revolver and Term Loan, respectively. The Company's interest rate plus margin as of December 31, 2018 was 5.38% and 5.88% for the Revolver and Term Loan, respectively.

The Credit Facility is secured by liens on substantially all of the Company's and its domestic subsidiaries' assets including a pledge of 66 1/3% of the equity interests in the Company's Foreign Subsidiaries (as defined in the Credit Facility). The Credit

Facility contains customary affirmative and negative covenants for a transaction of this type, including, among others, the provision of annual, quarterly and monthly financial statements and compliance certificates, maintenance of property, insurance, compliance with laws and environmental matters, restrictions on incurrence of indebtedness, granting of liens, making investments and acquisitions, paying dividends, entering into affiliate transactions and asset sales. Events of default under the Credit Facility include but are not limited to: failure to pay obligations when due, breach or failure of any covenant, insolvency or bankruptcy, materially misleading representations or warranties, occurrence of a Change in Control (as defined) or occurrence of conditions that have a Material Adverse Effect (as defined).

As of December 31, 2019, and the date hereof, the Company is in compliance with the covenants of the Credit Facility.

NOTE 5 - GOODWILL AND INTANGIBLE ASSETS

Goodwill consists of the following (in thousands):

	Network Solutions	Embedded Solutions	Total
Balance as of January 1, 2018	**$ 1,351**	**$ 8,909**	**$ 10,260**
Foreign Currency Translation	-	(482)	(482)
Balance as of December 31, 2018	**1,351**	**8,427**	**9,778**
Foreign Currency Translation	-	291	291
Balance as of December 31, 2019	**$ 1,351**	**$ 8,718**	**$ 10,069**

Intangible assets consist of the following (in thousands):

	December 31, 2019			
	Gross Carrying Amount	Accumulated Amortization	Foreign Exchange Translation	Net Carrying Amount
Customer Relationships	$ 2,766	$ (1,644)	$ 113	$ 1,235
Patents	615	(365)	25	275
Non-Compete Agreements	1,107	(1,101)	43	49
Tradename	629	-	31	660
Total	$ 5,117	$ (3,110)	$ 212	$ 2,219

	December 31, 2018			
	Gross Carrying Amount	Accumulated Amortization	Foreign Exchange Translation	Net Carrying Amount
Customer Relationships	$ 2,766	$ (1,082)	$ 71	$ 1,755
Patents	615	(240)	15	390
Non-Compete Agreements	1,107	(727)	41	421
Tradename	629	-	11	640
Total	$ 5,117	$ (2,049)	$ 138	$ 3,206

Amortization of acquired intangible assets was $1.1 million for each of the twelve months ended December 31, 2019 and 2018. Amortization of acquired intangible assets is included as part of general and administrative expenses in the accompanying consolidated statements of operations and comprehensive loss.

The estimated future amortization expense related to intangible assets is as follows as of December 31, 2019 (in thousands):

2020	$	759
2021		710
2022		90
Total	$	1,559

NOTE 6 - PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment, consist of the following as of December 31 (in thousands):

	2019	2018
Machinery & Equipment	$ 8,662	$ 7,928
Furniture & Fixtures	461	440
Transportation Equipment	5	2
Leasehold Improvements	1,326	1,217
Gross property, plant and equipment	10,454	9,587
Less: accumulated depreciation	8,307	7,009
Net property, plant and equipment	$ 2,147	$ 2,578

Depreciation expense of $0.8 million and $1.0 million was recorded for the years ended December 31, 2019 and 2018, respectively.

NOTE 7 - OTHER ASSETS

Other assets consist of the following as of December 31 (in thousands):

		2019		2018
Deferred S3 Costs	$	255	$	255
Tax Receivable – Long Term		230		-
Product demo assets		128		351
Long term debt issuance		91		-
Deferred cost		82		96
Security deposit		50		50
Other		38		35
Total	$	874	$	787

Product demo assets are net of accumulated amortization expense of $0.3 million and $1.2 million as of December 31, 2019 and 2018, respectively. Amortization expense related to demo assets was $0.3 million and $0.2 million in 2019 and 2018, respectively.

NOTE 8 - ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consist of the following as of December 31 (in thousands):

	2019	2018
Professional fees	$ 464	$ 233
Commissions	430	444
Sales and use and VAT tax	355	374
Goods received not invoiced	346	435
Payroll and related taxes	308	755
Return Reserve	199	199
Warranty Reserve	160	90
Bonus	126	800
Severance	102	-
Other	167	459
Contingent Consideration Liability	-	1,442
Deferred Purchase Price	-	852
Total	$ 2,657	$ 6,083

NOTE 9 - ACCOUNTING FOR STOCK BASED COMPENSATION

The Company follows the provisions of ASC 718. The Company's results for the years ended December 31, 2019 and December 31, 2018 include stock based compensation expense totaling $0.6 million and $0.7 million, respectively. Such amounts have been included in the consolidated statement of operations and comprehensive loss within operating expenses.

Incentive Compensation Plan

In 2012, the Company's Board of Directors and shareholders approved the 2012 Incentive Compensation Plan (the "Initial 2012 Plan"), which provides for the grant of equity, including restricted stock awards, restricted stock units, non-qualified stock options and incentive stock options in compliance with the Internal Revenue Code of 1986, as amended, to employees, officers, directors, consultants and advisors of the Company who are expected to contribute to the Company's future growth and success. When originally approved, the Initial 2012 Plan provided for the grant of awards relating to 2 million shares of common stock, plus those shares subject to awards previously issued under the Company's 2000 Stock Option Plan that expire, are canceled or are terminated after adoption of the Initial 2012 Plan without having been exercised in full and would have been available for subsequent grants under the 2000 Stock Option Plan. In June 2014, the Company's shareholders approved the Amended and Restated 2012 Incentive Compensation Plan (the "2012 Plan") allowing for an additional 1.6 million shares of the Company's common stock to be available for future grants under the 2012 Plan. The 2012 Plan provides that if awards are forfeited, expire or otherwise terminate without issuance of the shares underlying the awards, or if the award does not result in issuance of all or part of the shares underlying the award, the unissued shares are again available for awards under the 2012 Plan. As a result of certain award forfeitures and cancellations, as of December 31, 2019, there are approximately 1.7 million shares available for issuance under the 2012 Plan.

All service-based (time vesting) options granted have ten-year terms from the date of grant and typically vest annually and become fully exercisable after a maximum of five years. However, vesting conditions are determined on a grant by grant basis. Performance-based options granted have ten-year terms and vest and become fully exercisable when determinable performance targets are achieved. Performance targets are approved by the Company's compensation committee of the Board of Directors. Under the 2012 Plan, options may be granted to purchase shares of the Company's common stock exercisable only at prices equal to or above the fair market value on the date of the grant.

The following summarizes the components of share-based compensation expense for the years ending December 31 (in thousands):

	2019	2018
Service Based Restricted Stock Awards	$ 278	$ 172
Service Based Restricted Stock Units	245	175
Performance Based Stock Options	(90)	50
Service Based Stock Options	151	305
	$ 584	$ 702

As of December 31, 2019, $0.1 million of unrecognized compensation costs related to unvested stock options is expected to be recognized over a remaining weighted average period of 1.8 years, $0.2 million of unrecognized compensation costs related to unvested restricted shares is expected to be recognized over a remaining weighted average period of 1.6 years and $0.1 million of unrecognized compensation costs related to unvested restricted stock units is expected to be recognized over 6 months.

During the twelve months ended December 31, 2019 the Company reversed $0.1 million in share based compensation expense related to 240,000 unvested stock options that were forfeited as a result of employees exiting the company.

The company had no stock option or restricted share forfeitures during the twelve months ended December 31, 2018.

Restricted Common Stock Awards

A summary of the status of the Company's non-vested restricted common stock, as granted under the Company's approved equity compensation plans, as of December 31, 2019 and 2018, and changes during the twelve months ended December 31, 2019 and 2018, are presented below:

	2019		2018	
Non-vested Restricted Shares	Number of Shares	Weighted Average Grant Date Fair Value	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested as of January 1	232,123	$1.68	159,207	$1.64
Granted	95,000	$1.56	225,000	$1.68
Vested and Issued	(64,583)	$1.70	(152,084)	$1.64
Forfeited	-	-	-	-
Non-vested as of December 31	262,540	$1.63	232,123	$1.68

The following table summarizes the restricted common stock awards granted to certain employees and officers of the Company during the years ended December 31, 2019 and 2018 under the 2012 Plan:

	Number of Shares	Fair Market Value per Granted Share	Vesting
2019			
1/11/19 - Service Grant - Employees	95,000	$1.56	Annual Vesting through January 2022
2018			
8/1/2018 – Service Grant – Employees	75,000	$2.01	Annual Vesting through August 2021
12/20/18 – Service Grant - Employees	150,000	$1.52	Annual Vesting through December 2022
2018 Total	225,000		

Restricted Stock Units:

In fiscal 2018 and fiscal 2019 the Company granted Restricted Stock Units ("RSU") to each of our board members. Each RSU represents the Company's obligation to issue one share of the Company's common stock subject to the RSU award agreement and 2012 Plan. The RSU's vest on the day before the first anniversary of the grant date or, if earlier, the effective date of a separation of service due to death or disability, provided the board member has rendered continuous service to the Company as a member of the board of directors from grant date to vesting date. Once vested, the RSU will be settled by delivery of shares to the board member no later than 30 days following: 1) the third anniversary of the grant date, 2) separation from service following, or coincident with, a vesting date, or 3) a change in control.

A summary of the status of the Company's non-vested restricted stock units, as granted under the Company's approved equity compensation plans, as of December 31, 2019 and 2018, and changes during the twelve months ended December 31, 2019 and 2018, are presented below:

	2019		2018	
Non-vested Restricted Stock Units	**Number of Shares**	**Weighted Average Grant Date Fair Value**	**Number of Shares**	**Weighted Average Grant Date Fair Value**
Non-vested as of January 1	125,000	$2.25	-	-
Granted	147,917	$1.56	125,000	$2.25
Vested and Issued	(125,000)	$2.25	-	-
Forfeited	-	-	-	-
Non-vested as of December 31	147,917	$1.56	125,000	$2.25

	Number of Shares	Fair Market Value per Granted Share	Vesting
2019			
5/30/2019 - Service Grant – Board of Directors	125,000	$1.55	Annual Board Meeting – June 2020
7/8/2019 – Service Grant – Board of Directors	22,917	$1.58	Annual Board Meeting – June 2020
2018			
6/5/2018 – Service Grant – Board of Directors	125,000	$2.25	Annual Board Meeting – May 2019

Performance-Based Stock Option Awards

A summary of performance-based stock option activity, and related information for the years ended December 31, 2019 and December 31, 2018 follows:

	2019		2018	
	Options	**Weighted Average Exercise Price**	**Options**	**Weighted Average Exercise Price**
Outstanding as of January 1	305,000	$1.45	605,000	$1.21
Granted	-	-	-	-
Exercised	-	-	(300,000)	$0.96
Forfeited	(200,000)	$1.36	-	-
Expired	-	-	-	-
Outstanding as of December 31	105,000	$1.61	305,000	$1.45
Exercisable at December 31	20,000	$0.78	20,000	$0.78

The aggregate intrinsic value of performance-based stock options outstanding that were “in the money” (exercise price was lower than the market price) as of December 31, 2019 was $13,000 and the weighted average remaining contractual life was 1.0 years. All of the aforementioned performance-based stock options were exercisable as of December 31, 2019.

The range of exercise prices of outstanding performance-based options at December 31, 2019 is $0.78 to $1.83 with a weighted average exercise price of $1.61 per share.

Under the terms of the performance-based stock option agreements, the awards will fully vest and become exercisable on the date on which the Company’s Board of Directors shall have determined that specific financial performance milestones have been met, provided the employee remains in the employ of the Company at such time; provided, however, upon a Change in Control (as defined in the stock option agreements and the 2012 Plan), the stock options shall automatically vest as permitted by the 2012 Plan. As of December 31, 2019 and 2018, the Company has determined that the performance conditions on 85,000 and 285,000 options, respectively, granted in 2013 and later are probable of being achieved by the year ending 2021. The Company’s performance-based stock options granted prior to 2013 (consisting of 20,000 options) are fully amortized.

Service-Based Stock Option Awards

A summary of service-based stock option activity and related information for the years ended December 31, 2019 and 2018 follows:

	2019		2018	
	Options	**Weighted Average Exercise Price**	**Options**	**Weighted Average Exercise Price**
Outstanding as of January 1	1,975,000	$1.52	1,815,000	$1.53
Granted	15,000	$1.56	160,000	$1.52
Exercised	-	-	-	-
Forfeited	(40,000)	$1.52	-	-
Expired	-	-	-	-
Outstanding as of December 31	1,950,000	$1.52	1,975,000	$1.52
Exercisable at December 31	1,515,000	$1.50	1,225,000	$1.49

The aggregate intrinsic value of service-based stock options outstanding that were "in the money" (exercise price was lower than the market price) as of December 31, 2019 was $77,600 and the weighted average remaining contractual life was 2.6 years. The aggregate intrinsic value of exercisable "in the money" service-based stock options as of December 31, 2019 was $72,225 and the weighted average remaining contractual life was 3.0 years.

The range of exercise prices of outstanding service-based options at December 31, 2019 is $1.30 to $1.92 with a weighted average exercise price of $1.52 per share.

The following table presents the assumptions used to estimate the fair value of stock option awards granted during the twelve months ended December 31, 2019 and 2018:

	Number of Options	**Option Term (in years)**	**Exercise Price**	**Risk Free Interest Rate**	**Expected Volatility**	**Fair Value at Grant Date**	**Expected Dividend Yield**
2019							
1/11/2019 – Service Grant	15,000	3	$1.56	2.52%	49.80%	$0.56	$0.00
2018							
12/20/2018 – Service Grant	160,000	4	$1.52	2.65%	48.53%	$0.62	$0.00

NOTE 10 - SEGMENT AND RELATED INFORMATION

Financial information by segment

The operating businesses of the Company are segregated into three reportable segments: (i) Network Solutions, (ii) Test and Measurement and (iii) Embedded Solutions.

Network Solutions

The Network Solutions segment is comprised primarily of the operations of the Company's subsidiary, Microlab. Network Solutions designs and manufactures a wide selection of RF passive components and integrated subsystems for signal conditioning and distribution in the wireless infrastructure markets, particularly for small cell deployments, distributed antenna systems ("DAS"), the in-building wireless solutions industry and radio base-station market. Network Solutions also offers active solution sets to assist in network timing for tunnels and in-building wireless signaling. Network Solutions customers include telecommunications service providers, systems integrators, neutral host operators and distributors.

Test and Measurement

The Test and Measurement segment is comprised primarily of the Company's operations of the Noisecom product line and the operations of its subsidiary, Boonton. Noisecom designs and produces noise generation equipment and instruments, calibrated noise sources, noise modules and diodes. Noise components and instruments are used as a method to provide wide band signals for sophisticated telecommunication and defense applications, and as a stable reference standard for instruments and systems, including radar and satellite communications. Boonton products are also used to test terrestrial and satellite communications, radar and telemetry. Certain power meter products are designed for measuring signals based on wideband modulation formats, allowing a variety of measurements to be made, including maximum power, peak power, average power and minimum power. Customers of the Test and Measurement segment include large defense contractors and the U.S. and foreign governments.

Embedded Solutions

The Embedded Solutions segment is comprised of the operations of CommAgility. Embedded Solutions supplies signal processing technology for network validation systems supporting LTE and emerging 5G networks. Additionally, this segment licenses, implements and configures LTE PHY layer and stack software for private LTE networks supporting satellite communications, the military and aerospace industries. Customers include wireless communication test equipment companies, defense subcontractors and global technology and services companies.

The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies. The Company allocates resources and evaluates the performance of segments based on income or loss from operations, excluding interest, corporate expenses and other income (expenses).

Financial information by reportable segment as of and for the years ended December 31, 2019 and 2018 is presented below (in thousands):

	For the twelve months ended December 31, 2019		For the twelve months ended December 31, 2018	
Net sales by segment:				
Network Solutions	$	21,830	$	22,275
Test and Measurement		13,566		14,212
Embedded Solutions		13,525		16,301
Total consolidated net sales of reportable segments	$	48,921	$	52,788
Segment income:				
Network Solutions	$	2,973	$	3,476
Test and Measurement		2,125		1,728
Embedded Solutions		(1,049)		1,093
Income from reportable segments		4,049		6,297
Other unallocated amounts:				
Corporate expenses		(5,528)		(5,519)
Other expenses - net		(307)		(695)
Consolidated income/(loss) before Income tax provision/(benefit)	$	(1,786)	$	83
Depreciation and amortization by segment:				
Network Solutions	$	393	$	539
Test and Measurement		530		527
Embedded Solutions		1,228		1,239
Total depreciation and amortization for reportable segments	$	2,151	$	2,305
Capital expenditures by segment:				
Network Solutions	$	83	$	359
Test and Measurement		149		193
Embedded Solutions		160		301
Total consolidated capital expenditures by reportable segment	$	392	$	853

	December 31, 2019		December 31, 2018	
Total assets by segment:				
Network Solutions	$	9,610	$	10,088
Test and Measurement		7,380		5,943
Embedded Solutions		14,330		16,804
Total assets for reportable segments		31,320		32,835
Corporate assets, principally cash and cash equivalents and deferred income taxes		11,031		11,332
Total consolidated assets	$	42,351	$	44,167

Regional Revenues

Net consolidated revenues from operations by region were as follows (in thousands):

	Twelve Months Ended December 31 2019	Twelve Months Ended December 31 2018
Americas	$ 30,161	$ 32,849
Europe, Middle East, Africa (EMEA)	16,500	16,269
Asia Pacific (APAC)	2,260	3,670
Total revenues	$ 48,921	$ 52,788

Net revenues are attributable to a geographic area based on the destination of the product shipment.

The majority of shipments in the Americas are to customers located within the United States. For the years ended December 31, 2019 and 2018, sales in the United States amounted to $30.0 and $31.9 million, respectively.

For the year ended December 31, 2019 shipments to the EMEA regions for all reportable segments were largely concentrated in the UK, Germany and Italy. Shipments to the UK, Germany and Italy in 2019 amounted to $12.7 million, $0.7 million and $0.5 million, respectively. For the year ended December 31, 2018 shipments to the EMEA region for all reportable segments were largely concentrated in the UK, Italy and Ireland. Shipments to the UK, Italy and Ireland in 2018 amounted $12.4 million, $0.5 million and $0.5 million, respectively.

The largest concentration of shipments in the APAC region is to China. For the years ended December 31, 2019 and 2018, shipments to China amounted to $1.3 million and $2.0 million, of all shipments to the APAC region, respectively. There were no other shipments significantly concentrated in one country in the APAC region.

NOTE 11 - RETIREMENT PLAN

The Company has a 401(k) profit sharing plan covering all eligible U.S. employees. Company contributions to the plan for the years ended December 31, 2019 and 2018 amounted to $0.3 million and $0.2 million, respectively.

NOTE 12 - INCOME TAXES

The components of income tax (benefit)/expense related to net income (loss) from operations are as follows:

	Years Ended December 31, 2019	Years Ended December 31, 2018
Current:		
Federal	$ (9)	$ -
State	45	46
Foreign	(859)	(223)
Deferred:		
Federal	(188)	389
State	(233)	(41)
Foreign	(128)	(123)
Total	$ (1,372)	$ 48

The following is a reconciliation of the maximum statutory federal tax rate to the Company's effective tax relative to operations:

	2019 % of Pre Tax Earnings	2018 % of Pre Tax Earnings
Statutory federal income tax rate	(21.0) %	21.0 %
State income tax net of federal tax benefit	0.1	137.5
Foreign rate difference	7.2	(239.7)
Change in valuation allowance	(10.6)	(138.2)
Permanent differences	0.9	11.8
Research and development incentive	(53.1)	(342.7)
Global intangible low-taxed income	1.3	607.6
Other	(1.6)	(0.2)
Total	(76.8) %	57.1 %

In 2019, the difference between the statutory and effective tax rate is due primarily to research and development deductions in the United Kingdom and a reduction in the state valuation allowance. In 2018, the difference between the statutory and effective tax rate is due to global intangible low-taxed income, research and development deductions in the United Kingdom, foreign tax rate differences and a reduction in the state valuation allowance.

The components of deferred income taxes are as follows:

	Years Ended December 31, 2019	2018
Deferred tax assets:		
Net operating loss carryforwards	$ 11,538	$ 11,259
Inventory	397	943
Research and development credit	648	648
Stock compensation	285	138
Other	326	73
Goodwill and intangible assets	(757)	(925)
Fixed assets	(275)	(438)
Gross deferred tax asset	12,162	11,698
Less valuation allowance	(6,652)	(6,722)
Net deferred tax asset	$ 5,510	$ 4,976

The Company has domestic federal and state net operating loss carryforwards at December 31, 2019 of approximately $18.2 million and $44.1 million, respectively, which begin to expire in 2029. $0.6 million of the federal net operating loss carryforward has no expiration. The Company also has foreign net operating loss carryforwards at December 31, 2019 of approximately $15.0 million for German trade tax purposes, which has no expiration. The Company has domestic federal interest expense carryforward at December 31, 2019 of approximately $0.2 million which has no expiration.

Realization of the Company's deferred tax assets is dependent upon the Company generating sufficient taxable income in the appropriate tax jurisdictions in future years to obtain benefit from the reversal of net deductible temporary differences and from utilization of net operating losses. The Company's valuation allowances of $6.7 million at December 31, 2019 and 2018 are associated with the Company's foreign net operating loss carryforward from an inactive foreign entity, state net operating loss carryforward and a state research and development credit. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. As of December 31, 2019, management believes that it is more likely than not that the Company will fully realize the benefits of its deferred tax assets associated with its domestic federal net operating loss carryforward.

The Company does not have any significant unrecognized tax positions and does not anticipate a significant increase or decrease in unrecognized tax positions within the next twelve months.

The Company has elected to record taxes related to the global intangible low-taxed income as a period cost.

NOTE 13 – FAIR VALUE MEASUREMENTS

Fair value is defined by ASC 820 "Fair Value Measurement" as the price that would be received upon selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 - Quoted prices in active markets for identical assets and liabilities.
- Level 2 - Quoted prices in active markets for similar assets and liabilities, or other inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities. This includes pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

Payment of a portion of the CommAgility purchase price was contingent on the achievement of certain financial targets for the years ending December 31, 2017 and 2018. The Company estimated the fair value of contingent consideration at acquisition date to be $0.8 million. During the twelve months ended December 31, 2018 the Company reassessed the fair value of the contingent consideration and recorded a loss in the amount of $0.6 million as a result of the improved financial results at CommAgility as compared to prior estimates. The significant inputs used in the fair value estimate included anticipated gross revenues and Adjusted EBITDA, as defined, and scenarios for the earn-out periods for which probabilities are assigned to each scenario to arrive at a single estimated outcome. The estimated outcome was then discounted based on individual risk analysis of the liability which was 15% at December 31, 2018 and was paid in March 2019. The contingent consideration liability is considered a Level 3 fair value measurement.

NOTE 14 - COMMITMENTS AND CONTINGENCIES

Warranties

The Company typically provides one to three year warranties on all of its products covering both parts and labor. The Company, at its option, repairs or replaces products that are defective during the warranty period if the proper preventive maintenance procedures have been followed by its customers.

Legal Proceeding

On June 5, 2019 Harris Corporation ("Harris") filed a request for arbitration before the American Arbitration Association in accordance with the terms of an executed purchase order, statement of work and software license agreement (collectively referred to as "Agreements") with CommAgility entered into in 2014. Harris claims that CommAgility breached the Agreements by offering for sale, marketing, and promoting techniques, capabilities, products and services that incorporate Work Product, as defined in the Agreements, owned by Harris. Harris claims that CommAgility has caused Harris monetary damages, the sum of which cannot be determined until such time as discovery has been conducted, but is estimated by Harris to be less than $250,000. Harris is also seeking an injunction against CommAgility's use of the Work Product which includes rights to certain technology used for air-to-ground communications. The Company believes the claims are without merit and intends to defend all of the claims vigorously. The Company has not accrued any amounts in respect of this matter and cannot estimate the possible loss, if any, that the Company may incur with respect to it.

The ultimate outcome of this matter is unknown but, in the opinion of management, we do not believe this proceeding will have a material adverse effect upon our financial condition, cash flows or future results of operations. Legal expenses incurred in connection with the arbitration from August 2019 are covered by our professional indemnity insurance policy.

Risks and Uncertainties

Proprietary information and know-how are important to the Company's commercial success. There can be no assurance that others will not either develop independently the same or similar information or obtain and use proprietary information of the Company. Certain key employees have signed confidentiality and non-compete agreements regarding the Company's proprietary information.

The Company believes that its products do not infringe the proprietary rights of third parties. There can be no assurance, however, that third parties will not assert infringement claims in the future.

The Company's deferred tax asset is recorded at tax rates expected to be in existence when those assets are utilized. Should the tax rates change materially in the future the amount of deferred tax asset could be materially impacted.

NOTE 15 – SUBSEQUENT EVENTS

Holzworth Acquisition

On November 13, 2019 the Company entered into a Share Purchase Agreement with Holzworth Instrumentation Inc., a Colorado corporation ("Holzworth"), Jason Breitbarth, Joe Koebel, and Leyla Bly (collectively, the "Sellers"), and Jason Breitbarth, as the designated representative of the Sellers, as amended by a First Amendment to Share Purchase Agreement, dated January 31, 2020 (collectively, the "Share Purchase Agreement"). On February 7, 2020, the Company completed the acquisition (the "Acquisition") of all of the outstanding shares of Holzworth, from the Sellers. The Acquisition was completed pursuant to the terms of the Share Purchase Agreement. Holzworth instruments which include signal generators and phased noise analyzers are used by government labs, the semiconductor industry, and network equipment providers, among others, in research and automated test environments. Holzworth is a complimentary business for our Test and Measurement segment with a common customer base and channel partners. Holzworth revenues for the year end fiscal 2018 were $4.0 million and for the nine months ended September 30, 2019 were $4.3 million. For the fiscal year ended December 31, 2020, the Company will report the financial results of Holzworth in our Test and Measurement segment.

The aggregate purchase price for the Acquisition is a maximum of $17.0 million, consisting of payments in cash and stock, deferred purchase price payments and contingent consideration in the form of an earnout. At the closing, the Company issued a promissory note, which required the Company to pay on the next business day $0.5 million of the purchase price by issuing 347,318 shares of its common stock (the "Stock Consideration"), and $8.0 million in cash (the "Cash Consideration"), reduced by an indemnification holdback of $0.8 million and payment of certain of Sellers' transaction expenses and indebtedness of Holzworth. The parties intend to make a 338(h)(10) election to treat the Acquisition as a purchase and sale of assets, and the Company has agreed to pay any incremental taxes of Sellers resulting from that election.

The first deferred purchase price payment of $750,000 is due in three equal quarterly installments on March 31, 2020, June 30, 2020 and September 30, 2020, respectively. The second deferred purchase price payment of $750,000 is payable on March 31, 2021. Each deferred payment may be reduced as provided in the Purchase Agreement if Holzworth's EBITDA (as defined in the Purchase Agreement) for each fiscal year ending December 31, 2019 and December 31, 2020, respectively, is less than $1.25 million.

The Company may also be required to pay additional amounts in cash and stock as earnout consideration. The first earnout payment will be equal to two times the amount, if any, by which Holzworth's EBITDA for the fiscal year ending December 31, 2020 exceeds $1.25 million. The second earnout payment will be equal to two times the amount, if any, by which Holzworth's EBITDA for the fiscal year ending December 31, 2021 exceeds the greater of $1.25 million or Holzworth's EBITDA for the prior fiscal year. The aggregate earnout payments, if any, cannot exceed $7.0 million.

Pursuant to the Purchase Agreement the Company entered into a lock-up and voting agreement (the "Lock-up and Voting Agreement") with each of the Sellers. Pursuant to the Lock-up and Voting Agreement, each Seller agrees to restrict the sale, assignment, transfer, encumbrance or other disposition of its portion of the Stock Consideration (the "Lock-up Shares"). For a period commencing on the closing date of the Acquisition (the "Effective Date") and ending on the date which is 36 calendar months following the Effective Date, each Seller agrees that, without prior written consent by the Company, such Seller shall not sell, assign, transfer, encumber or otherwise dispose of the Lock-up Shares or enter into any swap, option or short sale, among other transactions. Upon the prior written consent of the Company, a Seller may transfer Lock-up Shares as a bona fide gift, by will or intestacy or to a family member or trust for the benefit of the Seller or a family member; *provided* that any recipient of the Lock-up Shares sign and deliver to the Company a lock-up and voting agreement substantially in the form of the Lock-up and Voting Agreement. The Lock-up Shares cease to be locked up in the event of a Change of Control (as defined in the Lock-up and Voting Agreement).

In addition, each Seller, subject to certain limitations, agrees, among other things, to appear at each meeting of the shareholders of the Company and vote all of such Seller's Lock-up Shares (a) in favor or against any proposal presented to the shareholders in the same manner that the Company's Board of Directors (the "Board") recommends shareholders vote on such proposal and (b) in favor of any proposal presented to the shareholders with respect to an action of the Company, which the Board has approved, but as to which the Board has not made any recommendation, including in favor of any proposal to adjourn or postpone any meeting of the Company's shareholders if such adjournment or postponement is conducted in accordance with the terms of the Lock-up and Voting Agreement.

To the extent any shares of Company common stock are issued in payment of any Earnout Consideration (as defined in the Share Purchase Agreement) in accordance with the terms of the Share Purchase Agreement, such shares shall be subject to all applicable transfer restrictions, voting and other provisions set forth in the Lock-up and Voting Agreement, with the Effective Date with respect to such shares being the date such shares were issued; provided that, to the extent the portion of the first $1.5 million of Earnout Consideration that is paid in cash represents less than 30% of such Earnout Consideration, the portion of shares of Company common stock issued as Earnout Consideration constituting the difference between the cash percentage paid and 30% of the first $1.5 of Earnout Consideration shall not be considered Lock-Up Shares.

New Term Loan Facility and Amended Credit Facility
In connection with the Acquisition, on February 7, 2020, the Company, as borrower, and its subsidiaries, as guarantors, and Muzinich BDC, Inc., as lender (“Muzinich”), entered into the Term Loan Facility, which provides for a term loan in the principal amount of $8.4 million (the “Initial Term Loan”). Principal payments on the Initial Term Loan are $21,000 per quarter with a balloon payment at maturity. The term loan bears interest at LIBOR (subject to a floor of 1.0%) plus a margin of 7.25%. The Term Loan Facility includes an upfront fee of 2.50% of the aggregate principal amount of the Initial Term Loan.

The Company may prepay the Initial Term Loan at any time. Prepayments made prior to (a) February 7, 2022 are subject to a prepayment premium in the amount of 2.0% of the prepaid principal amount and (b) February 7, 2023 are subject to a prepayment premium in the amount of 1.0% of the prepaid principal amount. The Company is required to make prepayments of the Initial Term Loan with the proceeds of certain asset dispositions, insurance recoveries and extraordinary receipts, subject to specified reinvestment rights. The Company is also required to make prepayments of the Initial Term Loan upon the issuance of certain indebtedness and to make an annual prepayment based upon the Company’s excess cash flow. Mandatory prepayments with asset sale, insurance or condemnation proceeds and excess cash flow may be made without penalty. Mandatory prepayments with the proceeds of indebtedness are subject to the same prepayment penalties as are applicable to voluntary prepayments. The maturity date for the Initial Term Loan is February 7, 2025.

The Term Loan Facility provides for an additional $11.6 term loan (the “Second Term Loan”) to be used for a second unannounced acquisition for which the Company has entered into a confidential, non-binding letter-of-intent (the “Additional Acquisition”). There can be no assurance that the Additional Acquisition will be completed. In the event the Additional Acquisition is completed, the Second Term Loan will be made available to the Company on the same terms and conditions as the Initial Term Loan, including interest rate, amortization schedule and financial covenants, subject to the payment of an additional upfront fee and satisfaction of customary conditions to funding.

The Term Loan Facility is secured by liens on substantially all of the Company’s and its subsidiaries’ assets including a pledge of the equity interests in the Company’s subsidiaries. The Term Loan Facility contains customary affirmative and negative covenants for a transaction of this type, including, among others, the provision of annual, quarterly and monthly financial statements and compliance certificates, maintenance of property, insurance, compliance with laws and environmental matters, restrictions on incurrence of indebtedness, granting of liens, making investments and acquisitions, paying dividends, entering into affiliate transactions and asset sales. In addition, the Company must maintain certain financial covenants typical for this type of arrangement, including a consolidated leverage ratio, a consolidated fixed charge coverage ratio and minimum liquidity of its foreign subsidiaries. The consolidated leverage ratio is defined as the ratio of total consolidated indebtedness, as defined, to consolidated EBITDA, as defined. The required leverage ratio starts at 4.75 to 1.0 for the twelve month periods ended March 31, 2020 and June 30, 2020, and decrease in various increments to 3.75 to 1.0 for the twelve months ended December 31, 2020, 2.75 to 1.0 for the twelve months ended December 31, 2021 and 2.0 to 1.0 for the twelve months ended December 31, 2022 and thereafter. The consolidated fixed charge coverage ratio is the ratio of consolidated EBITDA, as defined, less consolidated capital expenditures and cash income taxes paid to consolidated fixed charges, as defined, calculated on a twelve month basis. The consolidated fixed charge coverage ratio for the twelve month periods ended March 31, 2020, June 30 2020 and September 30, 2020 must be 1.35 to 1 and increases in various increments on a quarterly basis to 1.5 to 1.0 for the twelve month period ended December 31, 2020 and 2021, and to 1.75 to 1.0 for the 12 months ending December 31, 2022 and thereafter. Lastly, the Company must maintain minimum liquidity, defined as cash and availability under the UK borrowing base, as defined, of $1.0 million over any trailing four-week period until such time as the foreign subsidiary has positive EBITDA, as defined, for three consecutive quarters and the Holzworth deferred purchase price has been paid in full. The Term Loan Facility also provides for a number of events of default, including, among others, nonpayment, bankruptcy, inaccuracy of representations and warranties, breach of covenant, change in control, entry of final judgement or order, breach of material contracts, and as long as the Company’s consolidated leverage ratio is greater than 1.0 to 1.0 (as calculated in accordance with the terms of the Term Loan Facility), the cessation of service of any two of Tim Whelan, Michael Kandell or Daniel Monopoli as Chief Executive Officer, Chief Financial Officer or Chief Technology Officer, respectively, of the Borrower without a satisfactory replacement within 60 days. Any exercise of remedies by Muzinich is subject to compliance with the intercreditor agreement entered into at the closing of the Term Loan Facility among the Company, Muzinich and Bank of America, N.A., as lender under the Credit Facility referenced below.

Also in connection with the Acquisition, on February 7, 2020, the Company and certain of its subsidiaries (the “Borrowers”), and Bank of America, N.A. entered into Amendment No. 5 (the “Amendment”) to the Credit Facility. By entering into the Amendment, Holzworth, together with CommAgility Limited, became borrowers under the Credit Facility. The obligations of the Borrowers under the Credit Facility are guaranteed by Wireless Telecom Group, Ltd. CommAgility Limited and Wireless Telecom Group, Ltd. are both wholly owned subsidiaries of the Company.

The Amendment (a) effected certain modifications to the Credit Facility to accommodate the Acquisition, the Company’s incurrence of the Initial Term Loan and the granting of the related liens and security interests, (b) subject to the satisfaction of certain conditions precedent, made available to CommAgility an asset based revolving loan, subject to a borrowing base calculation applicable to CommAgility’s assets, of up to a maximum availability of $5.0 million (the “UK Revolver Commitment”), (c) reduced the interest rate margin applicable to revolving loans made under the Credit Facility from a range of 2.75% to 3.25% to a range of 2.00% to 2.50%, based on the Borrowers’ Fixed Charge Coverage Ratio (as defined in the Credit Facility) of the most recently completed fiscal quarter, (d) extended the Revolver Termination Date to March 31, 2023 and (e) conditioned the Borrowers’ ability to make certain debt payments under the Term Loan Facility (described above) upon compliance with a liquidity test. In all other material respects, the Credit Facility remains unchanged.

Effectiveness of the Amendment was conditioned upon, among other things, the prepayment of the remaining principal balance (approximately $0.3 million) of the $0.8 million term loan made available under the Credit Facility and the payment of a closing fee in the amount of $25,000. The Borrowers satisfied all such conditions on February 7, 2020.

Issuance of Stock Warrants

Pursuant to the Term Loan Facility, the Company issued a Warrant, dated February 7, 2020 (the “Warrant”), to Muzinich. Under the Warrant, Muzinich has the right to purchase 266,167 shares of common stock of the Company at an exercise price of $1.3923 per share (an aggregate value of approximately $370,588), based on a 90-day volume weighted average price for shares of stock of the Company (the “Warrant Stock”). The Warrant is exercisable for an indefinite period from the date of the Warrant and may be exercised on a cashless basis. The number of shares of common stock deliverable upon exercise of the Warrant is subject to adjustment for subdivision or consolidation of shares and other standard dilutive events. In connection with the issuance of the Warrant, the Company granted Muzinich one demand registration right and piggyback registration rights with respect to the Warrant Stock, subject to certain exceptions.

If the Additional Acquisition is consummated, the Company has agreed to issue to Muzinich at the closing of the Additional Acquisition an additional Warrant for the right to purchase 367,564 shares of common stock of the Company at an exercise price of $1.3923 per share (an aggregate value of approximately $511,765), based upon a 90-day volume weighted average price for shares of stock of the Company as of February 7, 2020 (the “Additional Warrant”). The Additional Warrant will contain the same terms and conditions as the Warrant, except that Muzinich will have only one demand registration right, subject to certain exceptions, with respect to shares of common stock of the Company issued under the Warrant and the Additional Warrant.

NOTE 16 - SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

The following is a summary of selected quarterly financial data from operations (in thousands, except per share amounts).

2019	Quarter			
	1st	**2nd**	**3rd**	**4th**
Net revenues	$ 13,032	$ 13,508	$ 10,812	$ 11,569
Gross profit	5,727	6,133	4,825	5,604
Operating income/(loss)	(398)	146	(677)	(550)
Net income/(loss)	(345)	157	(460)	234
Diluted earnings/(loss) per share	$ (0.02)	$ 0.01	$ (0.02)	$ 0.01

2018	Quarter			
	1st	**2nd**	**3rd**	**4th**
Net revenues	$ 13,264	$ 13,414	$ 14,019	$ 12,091
Gross profit	6,268	6,171	6,464	5,264
Operating income/(loss)	568	33	919	(741)
Net income/(loss)	374	(179)	558	(718)
Diluted earnings/(loss) per share	$ 0.02	$ (0.01)	$ 0.03	$ (0.03)

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

None.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, as of the end of the period covered by this report, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Act of 1934. Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be included in our SEC reports is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, relating to Wireless Telecom Group, Inc. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the period covered by this report, our disclosure controls and procedures are effective.

(b) Management's Report on Internal Control over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed under the supervision of the Company's principal executive officer and principal financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external purposes in accordance with U.S. GAAP. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurances with respect to financial statement preparation and presentation. Additionally, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As of December 31, 2019, management assessed the effectiveness of the Company's internal control over financial reporting based on the criteria for effective internal control over financial reporting established in "Internal Control — Integrated Framework," issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on the assessment, management determined that the Company maintained effective internal control over financial reporting as of December 31, 2019.

This annual report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's independent registered public accounting firm pursuant to the Dodd-Frank Wall Street and Consumer Protection Act, which exempts non-accelerated filers and smaller reporting companies from the auditor attestation requirement of Section 404 (b) of the Sarbanes-Oxley Act.

(c) Changes in Internal Controls over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Corporate Profile

Directors

Alan L. Bazaar
Chief Executive Officer of Hollow Brook Wealth Management LLC, *Private Equity Firm*

Joseph Garrity
Chief Operating Officer & Chief Financial Officer, Salem Global Partners, Inc., *Strategic Consulting and Recruiting Company*

Mitchell Herbets
Managing Principal, Herbets Consulting LLC, *Consulting Company*
Chairman of Thales Defense and Security, Inc.

Michael H. Millegan
Former President, Verizon Global Wholesale

Allan D. L. Weinstein
Managing Partner, Gainline Capital Partners LP, *Private Equity Firm*

Joseph M. Manko Jr.
Senior Principal, Horton Capital Management
Investment Advisor

Timothy Whelan
Wireless Telecom Group, Chief Executive Officer

Officers

Timothy Whelan
Chief Executive Officer

Michael Kandell
Chief Financial Officer and Corporate Secretary

Daniel Monopoli
Chief Technology Officer

Transfer Agent and Registrar

American Stock Transfer & Trust Company

Independent Accountants

PKF O'Connor Davies, LLP

Legal Counsel

Bryan Cave Leighton Paisner LLP, New York, NY

Exchange Listing

NYSE-American Symbol: WTT

Annual Meeting

The Annual Meeting of the Stockholders will be held at 8:00 a.m. on Thursday, June 4, 2020 via live webcast at:
www.virtualshareholdermeeting.com/WTT2020

A copy of the Annual Report on Form 10-K as filed with the Securities and Exchange Commission may be obtained without charge by written request addressed to:

Michael Kandell
Chief Financial Officer and Corporate Secretary
Wireless Telecom Group, Inc.
25 Eastmans Road
Parsippany, NJ 07054
USA

Certifications

The Company has filed as exhibits to its Annual Report on Form 10-K for the fiscal year ended December 31, 2019, the Chief Executive Officer and Chief Financial Officer certifications required by Section 302 of the Sarbanes-Oxley Act of 2002. The Company has also filed with the New York Stock Exchange the required annual Chief Executive Officer certification as required by the New York Stock Exchange Listed Company Manual.

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