

xG TECHNOLOGY, INC.
Form S-3
December 14, 2018

As filed with the Securities and Exchange Commission on December 13, 2018

Registration No. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT UNDER THE

SECURITIES ACT OF 1933

xG Technology, Inc.

(Exact name of registrant as specified in its charter)

Delaware	20-5856795
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

Roger Branton

xG Technology, Inc.

**240 S. Pineapple Avenue, Suite 701
Sarasota, FL 34236
(941) 953-9035**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**The Company Corporation
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Wilmington, DE 19808
(800) 474-8135**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies of communications, including communications sent to agent for service, should be sent to:

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Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. []

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. []

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. []

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. []

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer [] Accelerated filer []
 Non-accelerated filer [X] Smaller reporting company [X]
 Emerging growth company [X]

CALCULATION OF REGISTRATION FEE

Title of Each Class of Security to be Registered	Amount Registered ⁽¹⁾		Proposed Maximum Offering Price Per Share ⁽⁴⁾	Proposed Maximum Aggregate Offering Price ⁽⁴⁾	Amount of Registration Fee
Common Stock underlying Second Amended May Debentures	20,853,338 ⁽²⁾	\$ 0.345	\$7,194,401.61	\$ 871.96	
Common Stock underlying December Debentures	12,736,853 ⁽³⁾	\$ 0.345	\$4,394,214.29	\$ 532.58	
Compensatory Shares	302,655	\$ 0.345	\$104,415.98	\$ 12.66	
Total	33,892,846	\$ 0.345	\$11,693,031.87	\$ 1,417.20	

All shares registered pursuant to this registration statement are to be offered by the Selling Securityholders.

Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement (1) also covers such indeterminate number of additional shares of the registrant's common stock, \$0.00001 par value per share (the "Common Stock"), issued to prevent dilution resulting from stock splits, stock dividends or similar events.

(2) Represents the maximum aggregate number of shares of Common Stock initially issuable upon conversion of the Second Amended May Debentures (as defined below).

(3) Represents the maximum aggregate number of shares of Common Stock initially issuable upon conversion of the December Debentures (as defined below).

Estimated solely for purposes of calculating the amount of the registration fee in accordance with Rule 457(c) under the Securities Act based on the average of the high and low sales prices of the registrant's Common Stock on (4) the NASDAQ Capital Market on December 12, 2018, which date is within five (5) business days of the filing of this registration statement.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS SUBJECT TO COMPLETION DATED DECEMBER 13, 2018

33,892,846 Shares of

Common Stock

This prospectus relates to the offer and resale by the Selling Securityholders identified in this prospectus of up to an aggregate of 33,892,846 shares of our Common Stock, \$0.00001 par value per share (the “Common Stock”), which consists of (i) 20,853,338 shares of Common Stock issuable upon conversion of Second and Amended Restated 6% Senior Secured Convertible Debentures (the “Second Amended May Debentures”) held by certain institutional investors (the “Majority Investors”), (ii) 12,736,853 shares of Common Stock issuable upon conversion of 10% Senior Secured Convertible Debentures (the “December Debentures”) held by the Majority Investors, and (iii) an aggregate of 302,655 shares of Common Stock issued as compensatory shares (the “Compensatory Shares”) to the Majority Investors. The Majority Investors (as defined below) are also referred to herein as the Selling Securityholders (each, a “Selling Securityholder”).

The Company may not issue (i) shares of Common Stock underlying the (a) Original May Debentures (as defined below and as applicable), (b) the May Warrants (as defined below), (c) the Second Amended May Debentures, and (d) the December Debentures, and (ii) the Compensatory Shares, in the aggregate, equal to more than 19.99% of the issued and outstanding shares of Common Stock as of May 29, 2018, without stockholder approval. As such, the Selling Securityholders cannot sell any of the shares of Common Stock underlying the foregoing securities and the Compensatory Shares without such stockholder approval.

We will not receive any of the proceeds from the sale of the Common Stock by the Selling Securityholders.

The Selling Securityholders identified in this prospectus may offer the shares of Common Stock from time to time through public or private transactions at prevailing market prices or at privately negotiated prices. See “Plan of Distribution.”

We have agreed to pay certain expenses in connection with the registration of the shares of Common Stock. The Selling Securityholders will pay all brokerage expenses, fees, discounts and selling commissions, if any, in connection with the sale of the shares of Common Stock.

Our Common Stock is currently traded on the NASDAQ Capital Market (“NASDAQ”) under the symbol “XGTI.” On December 12, 2018, the last reported sale price of our Common Stock as reported on the NASDAQ was \$0.3358 per share.

On June 20, 2016, we effected a 1-for-12 reverse stock split of our outstanding Common Stock. On December 15, 2016, we effected a 1-for-10 reverse stock split of our outstanding Common Stock. All share and per share information included in this prospectus has been retroactively adjusted to account for such reverse stock splits.

We are an “emerging growth company” as the term is used in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”) and, as such, have elected to comply with certain reduced public company reporting requirements for this and future filings.

Investing in our securities involves risks. You should carefully review the risks described under the heading “Risk Factors” beginning on page 6 and in the documents which are incorporated by reference herein and contained in the applicable prospectus supplement before you invest in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2018.

TABLE OF CONTENTS

<u>ABOUT THIS PROSPECTUS</u>	1
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	2
<u>PROSPECTUS SUMMARY</u>	3
<u>RISK FACTORS</u>	6
<u>USE OF PROCEEDS</u>	20
<u>ISSUANCE OF SECURITIES</u>	21
<u>SELLING SECURITYHOLDERS</u>	24
<u>PLAN OF DISTRIBUTION</u>	27
<u>LEGAL MATTERS</u>	28
<u>EXPERTS</u>	28
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	28
<u>INFORMATION INCORPORATED BY REFERENCE</u>	29

ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement. We and the Selling Securityholders have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell securities, and it is not soliciting an offer to buy securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or any prospectus supplement, as well as information we have previously filed with the Securities and Exchange Commission (the “SEC”) and incorporated by reference, is accurate as of the date on the front of those documents only. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus may not be used to consummate a sale of our securities unless it is accompanied by a prospectus supplement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Unless stated otherwise or the context otherwise requires, references in this prospectus to the “Company,” “xG,” “xG Technology,” “we,” “us” or “our” refer to xG Technology, Inc.

The xG logo is a trademark of xG Technology, Inc. All other trademarks and service marks appearing in this prospectus are the property of their respective holders.

On June 20, 2016, the Company effected a one-for-twelve reverse stock split. Upon effectiveness of the reverse stock split, every 12 shares of outstanding Common Stock decreased to one share of Common Stock. On December 15, 2016, the Company effected a one for 10 reverse stock split. Upon effectiveness of the reverse stock split, every 10 shares of outstanding Common Stock decreased to one share of Common Stock. The reverse splits were retroactively applied to all shares and per share information for all periods presented throughout this prospectus.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, the applicable prospectus supplement and the information incorporated by reference in this prospectus contain various forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), which represent our expectations or beliefs concerning future events. Forward-looking statements include statements that are predictive in nature, which depend upon or refer to future events or conditions, and/or which include words such as “believes,” “plans,” “intends,” “anticipates,” “estimates,” “expects,” “may,” “will” or similar expressions. In addition, any statements concerning future financial performance, ongoing strategies or prospects, and possible future actions, which may be provided by our management, are also forward-looking statements. Forward-looking statements are based on current expectations and projections about future events and are subject to risks, uncertainties, and assumptions about our company, economic and market factors, and the industry in which we do business, among other things. These statements are not guarantees of future performance, and we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by law. Actual events and results may differ materially from those expressed or forecasted in forward-looking statements due to a number of factors. Factors that could cause our actual performance, future results and actions to differ materially from any forward-looking statements include, but are not limited to, those discussed under the heading “Risk Factors” in any of our filings with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act. The forward-looking statements in this prospectus, the applicable prospectus supplement and the information incorporated by reference in this prospectus represent our views as of the date such statements are made. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date such statements are made.

PROSPECTUS SUMMARY

This summary highlights selected information contained in greater detail elsewhere in this prospectus. This summary does not contain all the information you should consider before investing in our Common Stock. You should read the entire prospectus and the documents incorporated by reference herein carefully before making an investment decision.

Our Company

The overarching strategy of xG Technology, Inc. (“xG” or the “Company”) is to design, develop and deliver advanced wireless communications solutions that provide customers in its target markets with enhanced levels of reliability, mobility, performance and efficiency in their business operations and missions. xG’s business lines include the brands of Integrated Microwave Technologies LLC (“IMT”) and Vislink Communication Systems (“Vislink” or “VCS”). There is considerable brand interaction, owing to complementary market focus, compatible product and technology development roadmaps, and solution integration opportunities.

IMT:

IMT develops, manufactures and sells microwave communications equipment utilizing COFDM (Coded Orthogonal Frequency Division Multiplexing) technology. COFDM is a transmission technique that combines encoding technology with OFDM (Orthogonal Frequency Division Multiplexing) modulation to provide the low latency and high image clarity required for real-time live broadcasting video transmissions. IMT has extensive experience in ultra-compact COFDM wireless technology, and this has allowed IMT to develop integrated solutions that deliver reliable video footage captured from both aerial and ground-based sources to fixed and mobile receiver locations.

Vislink:

Vislink Communications Systems (“Vislink” or “VCS”) specializes in the wireless capture, delivery and management of secure, high-quality, live video from the field to the point of usage. VCS designs and manufactures products encompassing microwave radio components, satellite communication, cellular and wireless camera systems, and associated amplifier items. VCS serves two core markets: broadcast and media and law enforcement, public safety and surveillance. In the broadcast and media market, VCS provides broadcast communication links for the collection of live news and sports and entertainment events. VCS’ customers in the broadcast and media market include national broadcasters, multi-channel broadcasters, network owners and station groups, sports and live broadcasters and hosted

service providers. In the law enforcement, public safety and surveillance market, VCS provides secure video communications and mission-critical solutions for law enforcement, defense and homeland security applications. VCS' customers in the law enforcement, public safety and surveillance market include metropolitan, regional and national law enforcement agencies as well as domestic and international defense agencies and organizations.

Our Strengths

We believe the following strengths position us for sustainable growth:

Our IMT and Nucomm brands are well-established. Our IMT unit and the Nucomm brand have developed a significant following over the past 20 years, based on their reputation for product performance, reliability and use of advanced technology. IMT has developed a diverse and stable customer base for repeat product purchases from blue chip, tier-1 clients in the Broadcasting and Sports and Entertainment markets, as well as among high-profile agencies and organizations in Surveillance (Military and Government) markets.

Our IMT products solve a growing market need for stable, high-definition, wireless video communications. IMT's high definition wireless video solutions are used in applications in growing market segments, including in-game sports video mobile feeds, real-time capture and display of footage from drones and other aerial platforms, and rapid-response electronic news gathering operations.

We have a broad patent portfolio and unencumbered use of our intellectual property. We maintain a broad patent portfolio consisting of patents and patent applications in the United States and many international jurisdictions. As of December 12, 2018, in the United States, we have 51 patents granted, 1 patent application pending and 1 provisional applications pending. Internationally, we have 25 patents granted and 1 patent applications pending. We have solely funded the development of our intellectual property, which is, accordingly, unencumbered by any federal government unlimited use licenses.

We have an accomplished leadership team. Our management team and Board of Directors bring a wealth of experience in the telecommunications and military sectors as well as hardware and software development. Our engineering team has a strong track record developing ad-hoc networking domains at Motorola and Mesh Networks. In addition, most of our leadership team has strong ties to our target markets, including public safety organizations and the military.

Our Strategy

IMT and Vislink video brands

Our acquisitions of IMT and Vislink in 2016 and 2017, respectively, are part of our plan to diversify and grow the broadcast, sports and entertainment and public safety, surveillance and defense markets. They allow us to offer a broad array of end-to-end, high-reliability, high-data rate, long-range wireless video transmission solutions. These solutions are being used for applications in growing market segments, including in-game sports video mobile feeds, real-time capture and display of footage from drones and other aerial platforms, and rapid-response electronic news gathering operations.

The key sector strategies for IMT and Vislink are to expand the various markets for existing miniature wireless video products which include educational sectors, videographers, and video service providers, provide complete end-to-end solutions for the video surveillance market, and introduce complete end-to-end IP technology into the broadcast market.

We believe that the acquisition of Vislink offer us the opportunity to realize synergies with our IMT business unit, while allowing both entities to offer an expanded suite of services and product offerings in the markets they are already active in. A key advantage is that there is currently limited overlap in product offerings, sales channels and market coverage between the two companies. For example, Vislink has a substantial client base in international markets where IMT has had a limited presence. In addition, IMT has a very strong product portfolio targeted to US federal law enforcement and high-end sports broadcasting customers who will now have access to additional solutions based on Vislink's product configurations. Finally, Vislink has traditionally focused on licensed spectrum solutions where IMT has pioneered the use of non-licensed spectrum for many applications.

Risks That We Face

An investment in our securities involves a high degree of risk. You should carefully consider the risks summarized below. The risks are discussed more fully in the “Risk Factors” section of this prospectus immediately following this prospectus summary.

These risks include, but are not limited to:

we have a history of operating losses and we may continue to realize net losses for at least the next 12 months;

we may not be able to continue as a going concern and may not be able to operate in the future;

our business depends upon our ability to generate sustained sales of our products and technology;

our business depends on our ability to continually develop and commercialize new products and technologies and penetrate new markets;

we need to obtain or maintain patents or other appropriate protection for the intellectual property utilized in our technologies;

our industry is highly competitive and we may not be able to compete with companies with larger resources than we have;

we may require additional capital to develop new products;

new regulations or standards or changes in existing regulations or standards related to our products may result in unanticipated costs or liabilities; and

we may fail to meet publicly announced financial guidance or other expectations about our business.

Company Information

The Company was originally organized as a limited liability company under the laws of the State of Delaware on August 26, 2002 under the name JTS Acquisitions, LLC. On March 21, 2003, we changed our name to xG Technology, LLC. Pursuant to a certificate of conversion and a certificate of incorporation filed with the State of Delaware on November 8, 2006, xG Technology, LLC converted to a Delaware corporation under the name xG Technology, Inc. Our executive offices are located at 240 S. Pineapple Avenue, Suite 701, Sarasota, FL 34236, and our telephone number is (941) 953-9035. Our website address is www.xgtechnology.com. Information contained in our website does not form part of the report and is intended for informational purposes only.

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or JOBS Act since we went public in the U.S. in July 2013. We will remain an emerging growth company for up to the last day of the fiscal year following the fifth anniversary of our initial public offering, or until the earliest of (i) the last day of the first fiscal year in which our annual gross revenue exceeds \$1.07 billion, (ii) the date that we become a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our Common Stock that is held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter or (iii) the date on which we have issued more than \$1 billion in non-convertible debt during the preceding three-year period. Pursuant to Section 102 of the JOBS Act, we have provided reduced executive compensation disclosure and have omitted a compensation discussion and analysis from this Report. Pursuant to Section 107 of the JOBS Act, we have elected to utilize the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards.

Where You Can Find Us

Our executive offices are located at 240 S. Pineapple Avenue, Suite 701, Sarasota, FL 34236, and our telephone number is (941) 953-9035. Our website address is www.xgtechnology.com. Information contained on our website does not form part of this prospectus and is intended for informational purposes only.

The Offering

Common Stock Offered by the Selling Securityholders: Up to 33,892,846 shares of Common Stock.

Common Stock Outstanding after this Offering (assuming conversion of all of the Second Amended May Debentures and December Debentures): 55,790,747 shares of Common Stock (based on 18,700,556 shares of Common Stock outstanding as of December 12, 2018).

Terms of the Offering: The Selling Securityholders will determine when and how they sell the Common Stock offered in this prospectus, as described in “Plan of Distribution.”

Use of Proceeds: We will not receive any of the proceeds from the sale of the shares of Common Stock being offered under this prospectus. See “Use of Proceeds.”

NASDAQ Symbol: Our Common Stock is listed on the NASDAQ Capital Market under the symbol “XGTI”.

Risk Factors: You should read the “Risk Factors” section of this prospectus for a discussion of factors to carefully consider before deciding to invest in shares of our Common Stock.

Recent Developments

On October 19, 2018, the Company accepted Gary Cuccio's resignation from his position as the Executive Chairman of the Company and as a member of the Board, each effective October 31, 2018. Also on October 19, 2018, the Company accepted the resignation of Kenneth Hoffman from his position as a member of the Board, effective October 31, 2018. In connection with the foregoing, on October 19, 2018, the Board appointed Susan Swenson as a member of the Board and to the role of Chairman, each effective October 31, 2018.

For a more detailed description of the transactions pursuant to which the Company issued the Second Amended May Debentures, the December Debentures, and the Compensatory Shares, see "Issuance of Securities".

RISK FACTORS

An investment in our Common Stock involves a high degree of risk. You should consider and read carefully all the risks and uncertainties described below, together with all the other information contained or incorporated by reference into this prospectus and in any free writing prospectus before deciding to invest in our Common Stock. If any of the following risks, or any risk described elsewhere in this prospectus or in the documents incorporated by reference herein, occurs, our business, business prospects, financial condition, results of operations or cash flows could be materially adversely affected. In any such case, the trading price of our Common Stock could decline, and you could lose all or part of your investment. The risks described below and in the documents incorporated by reference herein are not the only ones facing us. Additional risks not currently known to us or that we currently deem immaterial may also adversely affect us. This prospectus also contains forward-looking statements, estimates and projections that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements because of specific factors, including the risks described below and in the documents incorporated by reference herein.

You should carefully consider the following risk factors in evaluating our business and us. The factors listed below and in the prospectus, represent certain important factors that we believe could cause our business results to differ. These factors are not intended to represent a complete list of the general or specific risks that may affect us. It should be recognized that other risks may be significant, presently or in the future, and the risks set forth below may affect us to a greater extent than indicated. If any of the following risks occur, our business, financial condition or results of operations could be materially and adversely affected. You should also consider the other information included in our annual report on Form 10-K for the year ended December 31, 2017 and subsequent quarterly reports filed with the Securities and Exchange Commission.

Risks Related to the Company and Our Business

We have included in our financial statements disclosure regarding our liquidity and financial condition as a result of our recurring operating losses and cash used from operations.

As reflected in the condensed consolidated financial statements, we had working capital and an accumulated deficit of \$5.4 million and \$231.6 million, respectively, at September 30, 2018. In addition, we had a loss from operations of approximately \$12.2 million and cash used in operating activities of \$5.2 million for the nine months ended September 30, 2018.

Our condensed consolidated financial statements are prepared assuming we can continue as a going concern, which contemplates continuity of operations through realization of assets, and the settling of liabilities in the normal course

of business. We completed a cost reduction plan announced in April 2018 that resulted in approximately \$8.2 million in annual savings. Savings were realized through immediate cost reductions affecting the xMax division by eliminating certain personnel costs, associated benefits and reduction in facilities and other expenses. We also identified an additional \$1.3 million in additional savings, primarily related to facilities consolidation and severance. We believe we can raise additional working capital through equity or debt offerings; however, no assurance can be provided that we will be successful in such capital raising efforts. Because of such cost reduction efforts and our existing working capital, management believes we have sufficient working capital to continue as a going concern for a period of at least twelve months from the date these financial statements have been issued.

On May 29, 2018, we completed a private placement of \$4 million in principal amount of 6% Senior Secured Convertible Debentures and warrants to purchase 3,000,000 shares of Common Stock, by executing certain agreements with accredited institutional investors (for a more detailed description of the private placement, see “Issuance of Securities”). We received \$3,637,000 net of debt issuance costs consisting of legal and placement fees totaling \$363,000. Because of such cost reduction efforts and our existing working capital, management believes that we have sufficient working capital to continue as a going concern for a period of at least twelve months from the date these financial statements have been issued.

The ability to recognize revenue and ultimately cash receipts is contingent upon, but not limited to, acceptable performance of the delivered equipment and services. If we are unable to close on some of its revenue producing opportunities in the near term, the carrying value of its assets may be materially impacted.

We may require additional capital in the future to develop new products. If we do not obtain any such additional financing, if required, our business prospects, financial condition and results of operations will be adversely affected.

We may require additional capital in the future to develop new products. We may not be able to secure adequate additional financing when needed on acceptable terms, or at all. To execute our business strategy, we may issue additional equity securities in public or private offerings, potentially at a price lower than the public offering price in this offering or the market price of our Common Stock at the time of such issuance. If we cannot secure sufficient additional funding we may be forced to forego strategic opportunities or delay, scale back and eliminate future product development.

Defects or errors in our products and services or in products made by our suppliers could harm our brand and relations with our customers and expose us to liability. If we experience product recalls, we may incur significant expenses and experience decreased demand for our products.

Our products are inherently complex and may contain defects and errors that are only detectable when the products are in use. Because our products are used for both personal and business purposes, such defects or errors could have a serious impact on our end customers, which could damage our reputation, harm our customer relationships and expose us to liability. Defects or impurities in our components, materials or software, equipment failures or other difficulties could adversely affect our ability, and that of our customers, to ship products on a timely basis as well as customer or licensee demand for our products. Any such shipment delays or declines in demand could reduce our revenues and harm our ability to achieve or sustain desired levels of profitability. We and our customers may also experience component or software failures or defects that could require significant product recalls, rework and/or repairs that are not covered by warranty reserves.

We may fail to meet publicly announced financial guidance or other expectations about our business, which would cause our stock to decline in value.

From time to time, we provide preliminary financial results or forward-looking financial guidance, to our investors. Such statements are based on our current views, expectations and assumptions and involve known and unknown risks and uncertainties that may cause actual results, performance, achievements or share prices to be materially different from any future results, performance, achievements or share prices expressed or implied by such statements. Such risks and uncertainties include, among others, changes to the assumptions used to forecast or calculate such guidance

We may not fully realize anticipated benefits from our acquisitions.

Although we expect to realize strategic, operational and financial benefits as a result of our IMT and VCS acquisitions, we cannot predict whether and to what extent such benefits will be achieved, or that any operational or financial benefits will be achieved. The success of the acquisitions will depend upon, among other things, our ability to integrate acquired personnel, operations, products and technologies into our organization effectively, to retain and motivate key personnel of IMT and VCS and to retain their customers. Any acquisition may result in diversion of management's attention from other business concerns, and may result in unanticipated costs and operational challenges.

Although certain technical problems experienced by users may not be caused by our products, our business and reputation may be harmed if users perceive our solutions as the cause of a slow or unreliable network connection, or a high-profile network failure.

We expect that our products will be in many different locations and user environments and will be capable of providing transmission of video, mobile broadband connectivity and interference mitigation, among other applications. The ability of our products to operate effectively can be negatively impacted by many different elements unrelated to our products. Although certain technical problems experienced by users may not be caused by our products, users often may perceive the underlying cause to be a result of poor performance of our technology. This perception, even if incorrect, could harm our business and reputation. Similarly, a high-profile network failure may be caused by improper operation of the network or failure of a network component that we did not supply, but other service providers may perceive that our products were implicated, which, even if incorrect, could harm our business, operating results and financial condition.

Our ability to sell our products will be highly dependent on the quality of our support and services offerings, and our failure to offer high-quality support and services would have a material adverse effect on our sales and results of operations.

Once our products are deployed, our channel partners and end-customers will depend on our support organization to resolve any issues relating to our products. A high level of support will be important for the successful marketing and sale of our products. In many cases, our channel partners will likely provide support directly to our end-customers. We will not have complete control over the level or quality of support provided by our channel partners. These channel partners may also provide support for other third-party products, which may potentially distract resources from support for our products. If we and our channel partners do not effectively assist our end-customers in deploying our products, succeed in helping our end-customers quickly resolve post-deployment issues or provide effective ongoing support, our ability to sell our products to existing end-customers could be adversely affected and our reputation with potential end-customers could be harmed. In some cases, we guarantee a certain level of performance to our channel partners and end-customers, which could prove to be resource-intensive and expensive for us to fulfill if unforeseen technical problems were to arise.

We may fail to recruit and retain qualified personnel.

We expect to rapidly expand our operations and grow our sales, development and administrative operations. This expansion is expected to place a significant strain on our management and will require hiring a significant number of qualified personnel. Accordingly, recruiting and retaining such personnel in the future will be critical to our success. There is intense competition from other companies for qualified personnel in the areas of our activities. If we fail to identify, attract, retain and motivate these highly skilled personnel, we may be unable to continue our marketing and development activities, and this could have a material adverse effect on our business, financial condition, results of operations and future prospects.

We rely on key executive officers, and their knowledge of our business and technical expertise would be difficult to replace.

We are highly dependent on our executive officers because of their expertise and experience in the telecommunications industry. We have agreements with our executive officers containing customary non-disclosure, non-compete, confidentiality and assignment of inventions provisions. We do not have “key person” life insurance policies for any of our officers. The loss of the technical knowledge and management and industry expertise of any of our key personnel could result in delays in product development, loss of customers and sales and diversion of management resources, which could adversely affect our operating results.

We purchase some components, subassemblies and products from a limited number of suppliers. The loss of any of these suppliers may substantially disrupt our ability to obtain orders and fulfill sales as we design and qualify new components.

We sometimes rely on third party components and technology to build and operate our products, and, until full integration with IMT and VCS, we may rely on our contract manufacturers to obtain the components, subassemblies and products necessary for the manufacture of our products. Shortages in components that we use in our products are possible, and our ability to predict the availability of such components is limited. While components and supplies are generally available from a variety of sources, we and our contract manufacturers currently depend on a single or limited number of suppliers for several components for our products. If our suppliers of these components or technology were to enter into exclusive relationships with other providers of wireless networking equipment or were to discontinue providing such components and technology to us and we were unable to replace them cost effectively, or at all, our ability to provide our products would be impaired. We and our contract manufacturers generally rely on purchase orders rather than long-term contracts with these suppliers. As a result, even if available, we and our contract manufacturers may not be able to secure sufficient components at reasonable prices or of acceptable quality to build our products in a timely manner. Therefore, we may be unable to meet customer demand for our products, which would have a material adverse effect on our business, operating results and financial condition.

We do not have long-term contracts with our existing contract manufacturers. The loss of any of our existing contract manufacturers could have a material adverse effect on our business, operating results and financial condition.

We do not have long-term contracts with our existing contract manufacturers. If any of our existing contract manufacturers are unable or unwilling to manufacture our products in the future, the loss of such contract manufacturers could have a material adverse effect on our business, operating results and financial condition.

Our intellectual property protections may be insufficient to properly safeguard our technology.

Our success and ability to compete effectively are, in large part, dependent upon proprietary technology that we have developed internally. Given the rapid pace of innovation and technological change within the wireless and broadband industries, the technological and creative skill of our personnel, consultants and contractors and their ability to develop, enhance and market new products and upgrades to existing products are critical to our continued success. We rely primarily on patent laws to protect our proprietary rights. As of December 12, 2018, in the United States, we have 51 patents granted, 1 patent application pending and 1 provisional applications pending. Internationally, we have 25 patents granted and 1 patent applications pending. There can be no assurance that patents pending or future patent applications will be issued, or that if issued, we would have the resources to protect any such issued patent from infringement. Further, we cannot patent much of the technology that is important to our business. To date, we have relied on copyright, trademark and trade secret laws, as well as confidentiality procedures, non-compete and/or work for hire invention assignment agreements and licensing arrangements with our employees, consultants, contractors, customers and vendors, to establish and protect our rights to this technology and, to the best extent possible, control the access to and distribution of our technology, software, documentation and other proprietary information. Despite these precautions, it may be possible for a third party to copy or otherwise obtain and use this technology without authorization. Policing unauthorized use of this technology is difficult. There can be no assurance that the steps we take or will take will prevent misappropriation of, or prevent an unauthorized third party from obtaining or using, the technology we rely on. In addition, effective protection may be unavailable or limited in some jurisdictions. Litigation may be necessary in the future to enforce or protect our rights.

We may be subject to claims of intellectual property infringement or invalidity. Expenses incurred with respect to monitoring, protecting, and defending our intellectual property rights could adversely affect our business.

Competitors and others may infringe on our intellectual property rights, or may allege that we have infringed on theirs. Monitoring infringement and misappropriation of intellectual property can be difficult and expensive, and we may not be able to detect infringement or misappropriation of our proprietary rights. We may also incur significant litigation expenses in protecting our intellectual property or defending our use of intellectual property, reducing our ability to fund product initiatives. These expenses could have an adverse effect on our future cash flows and results of operations. If we are found to infringe on the rights of others we could be required to discontinue offering certain products or systems, to pay damages, or purchase a license to use the intellectual property in question from its owner. Litigation can also distract management from the day-to-day operations of the business.

Enforcement of our intellectual property rights abroad, particularly in China, is limited and it is often difficult to protect and enforce such rights.

Patent protection outside the United States is generally not as comprehensive as in the United States and may not protect our intellectual property in some countries where our products are sold or may be sold in the future. Even if patents are granted outside the United States, effective enforcement in those countries may not be available. Many companies have encountered substantial intellectual property infringement in countries where we sell, or intend to sell, products or have our products manufactured.

In particular, the legal regime relating to intellectual property rights in China is limited and it is often difficult to protect and enforce such rights. The regulatory scheme for enforcing China's intellectual property laws may not be as developed as regulatory schemes in other countries. Any advancement of an intellectual property enforcement claim through China's regulatory scheme may require an extensive amount of time, allowing intellectual property infringers to continue largely unimpeded, to our commercial detriment in the Chinese and other export markets. In addition, rules of evidence may be unclear, inconsistent or difficult to comply with, making it difficult to prove infringement of our intellectual property rights. As a result, enforcement cases involving technology, such as copyright infringement of software code, or unauthorized manufacture or sale of products containing patented inventions, may be difficult or not possible to sustain.

These factors may make it increasingly complicated for us to enforce our intellectual property rights against parties misappropriating or copying our technology or products without our authorization, allowing competing enterprises to harm our business in the Chinese or other export markets by affecting the pricing for our products, reducing our own sales and diluting our brand or product quality reputation.

The intellectual property rights of others may prevent us from developing new products or entering new markets.

The telecommunications industry is characterized by the rapid development of new technologies, which requires us to continuously introduce new products and expand into new markets that may be created. Therefore, our success depends in part on our ability to continually adapt our products and systems to incorporate new technologies and to expand into markets that may be created by new technologies. If technologies are protected by the intellectual property rights of others, including our competitors, we may be prevented from introducing new products or expanding into new markets created by these technologies. If the intellectual property rights of others prevent us from taking advantage of innovative technologies, our financial condition, operating results or prospects may be harmed.

Further impairment charges could have a material adverse effect on our financial condition and results of operations.

We are required to test our finite-lived intangible assets for impairment if events occur or circumstances change that would indicate the remaining net book value of the finite-lived intangible assets might not be recoverable. These events or circumstances could include a significant change in the business climate, including a significant sustained decline in an entity's market value, legal factors, operating performance indicators, competition, sale or disposition of a significant portion of our business, potential government actions and other factors. If the fair value of our finite-lived intangible assets is less than their book value in the future, we could be required to record impairment charges. During 2016, we recognized an impairment charge of \$2.7 million on software development costs due to our analysis of the net realizable value of our capitalized software costs. Although we did not recognize any impairment in 2017, the amount of any further impairment could be significant and could have a material adverse effect on our reported financial results for the period in which the charge is taken.

We rely on the availability of third-party licenses. If these licenses are available to us only on less favorable terms or not at all in the future, our business and operating results would be harmed.

We have incorporated third-party licensed technology into our products. It may be necessary in the future to renew licenses relating to various aspects of these products or to seek additional licenses for existing or new products. There can be no assurance that the necessary licenses will be available on acceptable terms or at all. The inability to obtain certain licenses or other rights, or to obtain those licenses or rights on favorable terms, or the need to engage in litigation regarding these matters, could result in delays in product releases until such time, if ever, as equivalent technology could be identified, licensed or developed and integrated into our products and might have a material adverse effect on our business, operating results and financial condition. Moreover, the inclusion in our products of intellectual property licensed from third parties on a nonexclusive basis could limit our ability to protect our proprietary rights in our products.

Our customers could also become the target of litigation relating to the patent and other intellectual property rights of others.

Any litigation relating to the intellectual property rights of others could trigger technical support and indemnification obligations in licenses or customer agreements that we may enter into. These obligations could result in substantial expenses, including the payment by us of costs and damages relating to claims of intellectual property infringement. In addition to the time and expense required for us to provide support or indemnification to our customers, any such litigation could disrupt the businesses of our customers, which in turn could hurt our relationships with such customers and cause the sale of our products to decrease. No assurance can be given that claims for indemnification will not be made, or that if made, such claims would not have a material adverse effect on our business, operating results or financial conditions.

We expect to base our inventory purchasing decisions on our forecasts of customers' demand, and if our forecasts are inaccurate, our operating results could be materially harmed.

As our customer base increases, we expect to place orders with our contract manufacturers based on our forecasts of our customers' demand. Our forecasts will be based on multiple assumptions, each of which may cause our estimates to be inaccurate, affecting our ability to provide products to our customers. When demand for our products increases significantly, we may not be able to meet demand on a timely basis, and we may need to expend a significant amount of time working with our customers to allocate limited supply and maintain positive customer relations, or we may incur additional costs in order to rush the manufacture and delivery of additional products. If we underestimate customers' demand, we may forego revenue opportunities, lose market share and damage our customer relationships. Conversely, if we overestimate customer demand, we may purchase more inventory than we are able to sell at any given time or at all. In addition, we grant our distributors stock rotation rights, which require us to accept stock back from a distributor's inventory, including obsolete inventory. As a result of our failure to properly estimate demand for our products, we could have excess or obsolete inventory, resulting in a decline in the value of our inventory, which would increase our costs of revenues and reduce our liquidity. Our failure to accurately manage inventory relative to demand would adversely affect our operating results.

If our technology does not work as well as planned or if we are unsuccessful in developing and selling new products or in penetrating new markets, our business and operating results would suffer.

Our success and ability to compete are dependent on technology which we have developed or may develop in the future. There is a risk that the technology that we have developed or may develop may not work as intended, or that the marketing of the technology may not be as successful as anticipated. Further, the markets in which we and our customers compete or plan to compete are characterized by constantly and rapidly changing technologies and technological obsolescence. Our ability to compete successfully depends on our ability to design, develop, manufacture, assemble, test, market and support new products and enhancements on a timely and cost-effective basis

to keep pace with market needs and satisfy the demands of customers. A fundamental shift in technologies in any of our target markets could harm our competitive position within these markets. Our failure to anticipate these shifts, to develop new technologies or to react to changes in existing technologies could materially delay our development of new products, which could result in product obsolescence, decreased revenue and a loss of customer wins to our competitors. The development of new technologies and products generally require substantial investment and can require long development and testing periods before they are commercially viable. We intend to continue to make substantial investments in developing new technologies and products and it is possible that that we may not successfully be able to develop or acquire new products or product enhancements that compete effectively within our target markets or differentiate our products based on functionality, performance or cost and that our new technologies and products will not result in meaningful revenue. Any delays in developing and releasing new or enhanced products could cause us to lose revenue opportunities and customers. Any technical flaws in product releases could diminish the innovative impact of our products and have a negative effect on customer adoption and our reputation. If we fail to introduce new products that meet the demands of our customers or target markets or do not achieve market acceptance, or if we fail to penetrate new markets, our revenue will not increase over time and our operating results and competitive position would suffer.

Computer malware, viruses, hacking and phishing attacks could harm our business and results of operations.

Computer malware, viruses, and computer hacking and phishing attacks have become more prevalent in our industry and may occur on our systems in the future. Though it is difficult to determine what, if any, harm may directly result from any specific interruption or attack, any failure to maintain performance, reliability, security, and availability of our products and technical infrastructure to the satisfaction of our users may harm our reputation and our ability to attract and retain customers.

Our operating expenses will increase as we make further expenditures to enhance and expand our operations in order to support additional growth in our business.

Historically, we limited our investment in infrastructure; however, in the future we expect our infrastructure investments to increase substantially to support our anticipated growth. We intend to make additional investments in systems and personnel in order to expand our business and continue to expand our operations to support anticipated growth in our business. In addition, we may determine the need in the future to make changes to our sales model, which changes may result in higher selling, general and administrative expenses as a percentage of our revenues. As a result of these factors, we expect our operating expenses to increase.

If we do not effectively manage changes in our business, these changes could place a significant strain on our management and operations.

Our ability to grow successfully requires an effective planning and management process. The expansion and growth of our business could place a significant strain on our management systems, infrastructure and other resources. To manage our growth successfully, we must continue to improve and expand our systems and infrastructure in a timely and efficient manner. Our controls, systems, procedures and resources may not be adequate to support a changing and growing company. If our management fails to respond effectively to changes and growth in our business, including acquisitions, this could have a material adverse effect on our business, financial condition, results of operations and future prospects.

If our estimates relating to our critical accounting policies are based on assumptions or judgments that change or prove to be incorrect, our operating results could fall below expectations of securities analysts and investors, resulting in a decline in our stock price.

The preparation of financial statements in conformity with U.S. GAAP requires our management to make estimates, assumptions and judgments that affect the amounts reported in the financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. Our operating results may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our operating results to fall below the expectations of financial analysts and investors, resulting in a decline in our stock price. Significant assumptions and estimates used in preparing our financial statements include those related to revenue recognition, inventory, product warranties, allowance for doubtful accounts, stock-based compensation expense, capitalization of intangible assets, impairment of long-lived assets and income taxes.

Our exposure to the credit risks of our customers may make it difficult to collect accounts receivable and could adversely affect our operating results and financial condition.

In the course of our sales to customers, we may encounter difficulty collecting accounts receivable and could be exposed to risks associated with uncollectible accounts receivable. Economic conditions may impact some of our customers' ability to pay their accounts payable. While we will attempt to monitor these situations carefully and attempt to take appropriate measures to collect accounts receivable balances, we have written down accounts receivable and written off doubtful accounts in prior periods and may be unable to avoid accounts receivable write-downs or write-offs of doubtful accounts in the future. Such write-downs or write-offs could negatively affect our operating results for the period in which they occur.

Demand for our defense-related products and products for emergency response services depends on government spending.

The U.S. military market is largely dependent upon government budgets, particularly the defense budget. The funding of government programs is subject to Congressional appropriation. Although multi-year contracts may be authorized in connection with major procurements, Congress generally appropriates funds on a fiscal year basis even though a program may be expected to continue for several years. Consequently, programs are often only partially funded and additional funds are committed only as Congress makes further appropriations. No assurance can be given that an increase in defense spending will be allocated to programs that would benefit our business. A decrease in levels of defense spending or the government's termination of, or failure to fully fund, one or more of the contracts for which our products may be utilized could have a material adverse effect on our financial position and results of operations.

In addition, the sale of our products to local municipalities for emergency response services depends on government spending allocated to such areas. There can be no assurance that government spending will be allocated to emergency response services at a level that would benefit our business. A decrease in levels of government spending for emergency response services, or the government's termination of, or failure to fully fund, one or more of the contracts for which our products may be utilized with respect to emergency response services, could have a material adverse effect on our financial position and results of operations.

Our failure to obtain and maintain required certifications could impair our ability to bid on defense contracts.

In order for us to participate in certain government programs we could be required to obtain and maintain quality certification and certain standards for Department of Defense wireless security such as certification by the Joint Interoperability and Test Command (JITC) and to meet production standards in order to be eligible to bid on government contracts. If we fail to maintain these certifications or any additional certification which may be required, we will be ineligible to bid for contracts which may impair our financial operations and consequently, our ability to continue in business.

Regulation of the telecommunications industry could harm our operating results and future prospects.

The traditional telecommunications industry is highly regulated, and our business and financial condition could be adversely affected by changes in regulations relating to the Internet telecommunications industry. Currently, there are few laws or regulations that apply directly to access to or commerce on IP networks, but future regulations could include sales taxes and tariffs in previously unregulated areas and provider access charges. We could be adversely affected by regulation of IP networks and commerce in any country where we market equipment and services to service or content providers. Regulations governing the range of services and business models that can be offered by service providers or content providers could adversely affect those customers' needs for products designed to enable a wide range of such services or business models. For instance, the U.S. Federal Communications Commission has issued regulations governing aspects of fixed broadband networks and wireless networks. These regulations might impact service provider and content provider business models and as such, providers' needs for Internet telecommunications equipment and services. In addition, many jurisdictions are evaluating or implementing regulations relating to cyber security, privacy and data protection, which could affect the market and requirements for networking and security equipment.

In addition, environmental regulations relevant to electronic equipment manufacturing or operations may impact our business and financial condition adversely. For instance, the European Union has adopted regulations on Electronic waste, e-waste, e-scrap, or waste electrical and electronic equipment ("WEEE"), Restriction of the Use of Certain Hazardous Substances ("ROHS") and Registration, Evaluation, Authorisation and Restriction of Chemical substances ("REACH"). Furthermore, some governments have regulations prohibiting government entities from purchasing security products that do not meet specified indigenous certification criteria even though those criteria may be in conflict with accepted international standards. Similar regulations are in effect or under consideration in several jurisdictions where we do business.

The adoption and implementation of such regulations could decrease demand for our products, increase the cost of building and selling our products and impact our ability to ship products into affected areas and recognize revenue in a timely manner. Any of these impacts could have a material adverse effect on our business, financial condition, and results of operations.

We are an emerging growth company within the meaning of the Securities Act, and if we decide to take advantage of certain exemptions from various reporting requirements applicable to emerging growth companies, our Common Stock could be less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act. For as long as we continue to be an emerging growth company ("EGC"), we may take advantage of exemptions from various reporting requirements that are not applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations

regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years, although we could lose that status sooner if our annual gross revenues exceed \$1.07 billion, if we issue more than \$1 billion in non-convertible debt in a three year period, or if the market value of our Common Stock held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter, in which case we would no longer be an emerging growth company as of the following December 31. We cannot predict if investors will find our Common Stock less attractive because we may rely on these exemptions. If some investors find our Common Stock less attractive as a result, there may be a less active trading market for our Common Stock and the price of our Common Stock may be more volatile.

Under the JOBS Act, emerging growth companies may also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. We will lose our emerging growth status on December 31, 2018 and as a result may have increased reporting responsibilities and associated costs with the increased disclosure obligations that we will need to undertake in anticipation of and upon losing our EGC status.

Risks Relating to Our Industry

Our industry is subject to rapid technological change, and we must make substantial investments in new products, services and technologies to compete successfully.

New technological innovations generally require a substantial investment before they are commercially viable. We intend to continue to make substantial investments in developing new products and technologies, and it is possible that our development efforts will not be successful and that our new technologies will not result in meaningful revenues. Our future success will depend on our ability to continue to develop and introduce new products, technologies and enhancements on a timely basis. Our future success will also depend on our ability to keep pace with technological developments, protect our intellectual property, satisfy customer requirements, meet customer expectations, price our products and services competitively and achieve market acceptance. The introduction of products embodying new technologies and the emergence of new industry standards could render our existing products and technologies, and products and technologies currently under development, obsolete and unmarketable. If we fail to anticipate or respond adequately to technological developments or customer requirements, or experience any significant delays in development, introduction or shipment of our products and technologies in commercial quantities, demand for our products and our customers' and licensees' products that use our technologies could decrease, and our competitive position could be damaged.

We may be subject to infringement claims in the future.

We may be unaware of filed patent applications and issued patents that could include claims covering our products. Parties making claims of infringement may be able to obtain injunctive or other equitable relief that could effectively block our ability to sell or supply our products or license our technology and could cause us to pay substantial royalties, licensing fees or damages. The defense of any lawsuit could divert management's efforts and attention from ordinary business operations and result in time-consuming and expensive litigation, regardless of the merits of such claims. These outcomes may (i) require us to stop selling products or using technology that contains the allegedly infringing intellectual property; (ii) require us to redesign those products that contain the allegedly infringing intellectual property; (iii) require us to pay substantial damages to the party whose intellectual property rights we may be found to be infringing; (iv) result in the loss of existing customers or prohibit the acquisition of new customers; (v) cause us to attempt to obtain a license to the relevant intellectual property from third parties, which may not be available on reasonable terms or at all; (vi) materially and adversely affect our brand in the market place and cause a substantial loss of goodwill; (vii) cause our stock price to decline significantly; (viii) materially and adversely affect our liquidity, including our ability to pay debts and other obligations as they become due; or (ix) lead to our bankruptcy or liquidation.

Our industry is highly competitive and we may not be able to compete effectively.

The communications industry is highly competitive, rapidly evolving, and subject to constant technological change. We expect that new competitors are likely to join existing competitors. Many of our competitors may be larger and have greater financial, technical, operational, marketing and other resources and experience than we do. In the event that a competitor expends significant resources we may not be able to successfully compete. In addition, the pace of technological change makes it impossible for us to predict whether we will face new competitors using different technologies to provide products. If our competitors were to provide better and more cost effective products than our products we may not be able to capture any significant market share.

Regulation of Voice over Internet Protocol ("VoIP") services is developing and therefore uncertain and future legislative, regulatory or judicial actions could adversely affect our business.

VoIP services have developed in an environment largely free from government regulation. However, the United States and other countries have begun to assert regulatory authority over VoIP and are continuing to evaluate how VoIP will be regulated in the future. Both the application of existing rules to us and our prospective customers and the effects of future regulatory developments are uncertain. Future legislative, judicial or other regulatory actions could have a negative effect on our business. In addition, future regulatory developments could increase our cost of doing business and limit its growth.

New regulations or standards or changes in existing regulations or standards in the United States or internationally related to our products may result in unanticipated costs or liabilities, which could have a material adverse effect on our business, results of operations and future sales, and could place additional burdens on the operations of our business.

Our products may be subject to governmental regulations in a variety of jurisdictions. In order to achieve and maintain market acceptance, our technology and products will have to comply with these regulations as well as a significant number of industry standards. In the United States, our technology and products will have to comply with various regulations defined by the Federal Communications Commission, (“FCC”), and others. We may also have to comply with similar international regulations. For example, our wireless communication products operate through the transmission of radio signals, and radio emissions are subject to regulation in the United States and in other countries in which we intend to do business. In the United States, various federal agencies including the Center for Devices and Radiological Health of the Food and Drug Administration, the FCC, the Occupational Safety and Health Administration and various state agencies have promulgated regulations that concern the use of radio/electromagnetic emissions standards. Member countries of the European Union have enacted similar standards concerning electrical safety and electromagnetic compatibility and emissions, and chemical substances and use standards.

As these regulations and standards evolve, and if new regulations or standards are implemented, we may be required to modify our technology or products or develop and support new versions of our technology or products, and our compliance with these regulations and standards may become more burdensome. The failure of technology or our products to comply, or delays in compliance, with the various existing and evolving industry regulations and standards could prevent or delay introduction of our technology or products, which could harm our business. End-customer uncertainty regarding future policies may also affect demand for communications products, including our products. Moreover, channel partners or end-customers may require us, or we may otherwise deem it necessary or advisable, to alter our technology or products to address actual or anticipated changes in the regulatory environment. Our inability to alter our technology or products to address these requirements and any regulatory changes may have a material adverse effect on our business, operating results and financial condition.

Compliance with environmental, health and safety laws and regulations, including new regulations requiring higher standards, may increase our costs, limit our ability to utilize supply chains, and force design changes to our products.

Our operations are subject to a variety of environmental, health and safety laws and regulations and equivalent local, state, and regulatory agencies in each of the jurisdictions in which we currently operate or may operate in the future. The manufacturing of our products uses substances regulated under various federal, state, local laws and regulations governing the environment and worker health and safety. If we, including any contract manufacturers that we may employ, do not comply with these laws including any new regulations, such non-compliance could reduce the net realizable value of our products, which would result in an immediate charge to our income statements. Our non-compliance with such laws could also negatively impact our operations and financial position as a result of fines, penalties that may be imposed on us, and increase the cost of mandated remediation or delays to any contract manufacturers we may utilize, thus we may suffer a loss of revenues, be unable to sell our products in certain markets and/or countries, be subject to penalties and enforced fees and/or suffer a competitive disadvantage. Costs to comply with current laws and regulations and/or similar future laws and regulations, if applicable, could include costs associated with modifying our products, recycling and other waste processing costs, legal and regulatory costs and insurance costs. We cannot assure you that the costs to comply with these new laws or with current and future environmental and worker health and safety laws will not have a material adverse effect on our business, operating results and financial condition.

Governmental regulations affecting the import or export of products or affecting products containing encryption capabilities could negatively affect our revenues.

The United States and various foreign governments have imposed controls, export license requirements, and restrictions on the import or export of some technologies, especially encryption technology. In addition, from time to time, governmental agencies have proposed additional regulation of encryption technology, such as requiring certification, notifications, review of source code, or the escrow and governmental recovery of private encryption keys. For example, Russia and China recently have implemented new requirements relating to products containing encryption and India has imposed special warranty and other obligations associated with technology deemed critical. Governmental regulation of encryption or IP networking technology and regulation of imports or exports, or our failure to obtain required import or export approval for our products, could harm our international and domestic sales prospects and adversely affect our revenue expectation. In addition, failure to comply with such regulations could result in penalties, costs, and restrictions on import or export privileges or adversely affect sales to government agencies or government funded projects.

If wireless devices pose safety risks, we may be subject to new regulations, and demand for our products and those of our licensees and customers may decrease.

Concerns over the effects of radio frequency emissions, even if unfounded, may have the effect of discouraging the use of wireless devices, which may decrease demand for our products and those of our licensees and customers. In recent years, the FCC and foreign regulatory agencies have updated the guidelines and methods they use for evaluating radio frequency emissions from radio equipment, including wireless phones and other wireless devices. In addition, interest groups have requested that the FCC investigate claims that wireless communication technologies pose health concerns and cause interference with airbags, hearing aids and medical devices. Concerns have also been expressed over the possibility of safety risks due to a lack of attention associated with the use of wireless devices while driving. Any legislation that may be adopted in response to these expressions of concern could reduce demand for our products and those of our licensees and customers in the United States as well as foreign countries.

Risks Relating to our Common Stock and this Offering

Exercise of options or warrants or conversion of convertible securities may have a dilutive effect on your percentage ownership and may result in a dilution of your voting power and an increase in the number of shares of Common Stock eligible for future resale in the public market, which may negatively impact the trading price of our shares of Common Stock.

The exercise or conversion of some or all of our outstanding options, warrants, or convertible securities could result in significant dilution in the percentage ownership interest of investors in this offering and in the percentage ownership interest of our existing Common Stockholders and in a significant dilution of voting rights and earnings per share.

As of December 12, 2018, we have outstanding warrants to purchase up to 11,892,373 shares of our Common Stock at a weighted exercise price of \$2.21 per share.

Additionally, the issuance of up to 6,092,168 shares of Common Stock upon exercise of stock options outstanding under our stock incentive plans will further dilute our stockholders' voting interests. To the extent options and/or warrants and/or conversion rights are exercised, additional shares of Common Stock will be issued, and such issuance will dilute stockholders.

In addition to the dilutive effects described above, the exercise of those securities would lead to an increase in the number of shares of Common Stock eligible for resale in the public market. Sales of substantial numbers of such shares of Common Stock in the public market could adversely affect the market price of our shares of Common Stock. Substantial dilution and/or a substantial increase in the number of shares of Common Stock available for future resale may negatively impact the trading price of our shares of Common Stock.

We may seek to raise additional funds, finance acquisitions or develop strategic relationships by issuing securities that would dilute your ownership. Depending on the terms available to us, if these activities result in significant dilution, it may negatively impact the trading price of our shares of Common Stock.

We have financed our operations, and we expect to continue to finance our operations, acquisitions, if any, and the development of strategic relationships by issuing equity and/or convertible securities, which could significantly reduce the percentage ownership of our existing stockholders. Further, any additional financing that we secure, may require the granting of rights, preferences or privileges senior to, or *pari passu* with, those of our Common Stock. Any issuances by us of equity securities may be at or below the prevailing market price of our Common Stock and in any event may have a dilutive impact on your ownership interest, which could cause the market price of our Common Stock to decline. We may also raise additional funds through the incurrence of debt or the issuance or sale of other securities or instruments senior to our shares of Common Stock. We cannot be certain how the repayment of those promissory notes will be funded and we may issue further equity or debt in order to raise funds to repay the promissory notes, including funding that may be highly dilutive. The holders of any securities or instruments we may issue may have rights superior to the rights of our Common Stockholders. If we experience dilution from the issuance of additional securities and we grant superior rights to new securities over Common Stockholders, it may negatively impact the trading price of our shares of Common Stock and you may lose all or part of your investment.

The market price of our shares of Common Stock is particularly volatile given our status as a relatively unknown company with a generally small and thinly traded public float and lack of profits, which could lead to wide fluctuations in our share price. You may be unable to sell your shares of Common Stock at or above your purchase price, which may result in substantial losses to you.

The market for our shares of Common Stock is characterized by significant price volatility when compared to the shares of larger, more established companies that trade on a national securities exchange and have large public floats, and we expect that our share price will continue to be more volatile than the shares of such larger, more established companies for the indefinite future. The volatility in our share price is attributable to a number of factors, including the fact that our shares are thinly traded relative to larger, more established companies. The price for our shares of Common Stock could, for example, decline precipitously in the event that a large number of our shares of Common Stock are sold on the market without commensurate demand. In addition, because we may be considered a speculative or “risky” investment due to our lack of profits to date, certain investors may, under the fear of losing all or most of their investment in the event of negative news or lack of progress, be more inclined to sell their shares of Common Stock on the market more quickly and at greater discounts, thus resulting in a rapid downward decline in the price of our Common Stock. Many of these factors are beyond our control and may decrease the market price of our shares of Common Stock, regardless of our operating performance.

The market price of our Common Stock is still likely to be highly volatile and subject to wide fluctuations, and you may be unable to resell your shares of Common Stock at or above the price at which you acquired them.

The market price of our Common Stock is likely to be highly volatile and could be subject to wide fluctuations in response to a number of factors that are beyond our control, including, but not limited to:

variations in our revenues and operating expenses;

actual or anticipated changes in the estimates of our operating results or changes in stock market analyst recommendations regarding our Common Stock, other comparable companies or our industry generally;

market conditions in our industry, the industries of our customers and the economy as a whole;

actual or expected changes in our growth rates or our competitors' growth rates;

developments in the financial markets and worldwide or regional economies;

announcements of innovations or new products or services by us or our competitors;

announcements by the government relating to regulations that govern our industry;

sales of our Common Stock or other securities by us or in the open market; and

changes in the market valuations of other comparable companies; and

we may fail to meet publicly announced financial guidance or other expectations about our business.

In addition, if the market for technology stocks or the stock market in general experiences loss of investor confidence, the trading price of our Common Stock could decline for reasons unrelated to our business, financial condition or operating results. The trading price of our shares of Common Stock might also decline in reaction to events that affect other companies in our industry, even if these events do not directly affect us. In the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if

instituted against us, could result in substantial costs and diversion of management's attention and resources, which could materially and adversely affect our business, operating results and financial condition.

Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our Common Stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could delay or prevent a change in control of our Company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

authorizing the Board of Directors to issue, without stockholder approval, preferred stock with rights senior to those of our Common Stock;

limiting the persons who may call special meetings of stockholders; and

requiring advance notification of stockholder nominations and proposals.

In addition, the provisions of Section 203 of the Delaware General Corporation Law govern us. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time without the consent of our Board of Directors.

These and other provisions in our amended and restated certificate of incorporation and our amended and restated bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay in the future for shares of our Common Stock and result in the market price of our Common Stock being lower than it would be without these provisions.

The independent members of our Board, who are not our employees or affiliates, do not represent a majority of our Board. If our Common Stock is delisted from NASDAQ, the liquidity and price of our Common Stock could decrease and our ability to obtain financing could be impaired.

We currently do not have a majority of independent directors who constitute a majority of our board of directors. NASDAQ Rule 5605(b) requires that a majority of the board of directors of NASDAQ listed companies be comprised of independent directors. In accordance with Listing Rules 5605(b)(1)(A), the Company has a cure period in order to regain compliance. If we do not regain compliance with this listing standard, then we expect that NASDAQ will provide notice that our Common Stock is subject to delisting from the NASDAQ Capital Market. Any delisting of our

Common Stock from the NASDAQ Capital Market could adversely affect our ability to attract new investors, decrease the liquidity of our outstanding shares of Common Stock, reduce our ability to raise additional capital, reduce the price at which our Common Stock trades, and increase the transaction costs inherent in trading such shares with overall negative effects for our stockholders. In addition, the delisting of our Common Stock could deter broker-dealers from making a market in or otherwise seeking or generating interest in our Common Stock, and might deter certain institutions and persons from investing in our securities at all.

In the event that our Common Stock is delisted from NASDAQ, U.S. broker-dealers may be discouraged from effecting transactions in shares of our Common Stock because they may be considered penny stocks and thus be subject to the penny stock rules.

On May 17, 2018 the Company, received a written notification from NASDAQ indicating that the Company was not in compliance with NASDAQ Listing Rule 5550(a)(2) as Company's closing bid price was below \$1.00 per share for the previous 30 consecutive business days.

Pursuant to the Nasdaq Listing Rule 5810(c)(3)(A), the Company was granted a 180-day compliance period, or until November 13, 2018, to regain compliance with the minimum bid price requirements. During the compliance period, the Company's shares of Common Stock will continue to be listed and traded on NASDAQ.

The Company has been afforded a second 180 calendar day grace period by NASDAQ to regain compliance with the minimum bid price requirements. If the Company does not regain compliance by May 12, 2019, NASDAQ will provide notice that the Company's shares of Common Stock will be subject to delisting.

The SEC has adopted a number of rules to regulate “penny stock” that restrict transactions involving stock which is deemed to be penny stock. Such rules include Rules 3a51-1, 15g-1, 15g-2, 15g-3, 15g-4, 15g-5, 15g-6, 15g-7, and 15g-9 under the Securities and Exchange Act of 1934, as amended (the “Exchange Act”). These rules may have the effect of reducing the liquidity of penny stocks. “Penny stocks” generally are equity securities with a price of less than \$5.00 per share (other than securities registered on certain national securities exchanges or quoted on the NASDAQ Stock Market if current price and volume information with respect to transactions in such securities is provided by the exchange or system). Our shares of Common Stock have in the past constituted, and may again in the future constitute, “penny stock” within the meaning of the rules. The additional sales practice and disclosure requirements imposed upon U.S. broker-dealers may discourage such broker-dealers from effecting transactions in shares of our Common Stock, which could severely limit the market liquidity of such shares of Common Stock and impede their sale in the secondary market.

A U.S. broker-dealer selling penny stock to anyone other than an established customer or “accredited investor” (generally, an individual with net worth in excess of \$1,000,000 or an annual income exceeding \$200,000, or \$300,000 together with his or her spouse) must make a special suitability determination for the purchaser and must receive the purchaser’s written consent to the transaction prior to sale, unless the broker-dealer or the transaction is otherwise exempt. In addition, the “penny stock” regulations require the U.S. broker-dealer to deliver, prior to any transaction involving a “penny stock”, a disclosure schedule prepared in accordance with SEC standards relating to the “penny stock” market, unless the broker-dealer or the transaction is otherwise exempt. A U.S. broker-dealer is also required to disclose commissions payable to the U.S. broker-dealer and the registered representative and current quotations for the securities. Finally, a U.S. broker-dealer is required to submit monthly statements disclosing recent price information with respect to the “penny stock” held in a customer’s account and information with respect to the limited market in “penny stocks”.

Stockholders should be aware that, according to the SEC, the market for “penny stocks” has suffered in recent years from patterns of fraud and abuse. Such patterns include (i) control of the market for the security by one or a few broker-dealers that are often related to the promoter or issuer; (ii) manipulation of prices through prearranged matching of purchases and sales and false and misleading press releases; (iii) “boiler room” practices involving high-pressure sales tactics and unrealistic price projections by inexperienced sales persons; (iv) excessive and undisclosed bid-ask differentials and markups by selling broker-dealers; and (v) the wholesale dumping of the same securities by promoters and broker-dealers after prices have been manipulated to a desired level, resulting in investor losses. Our management is aware of the abuses that have occurred historically in the penny stock market. Although we do not expect to be in a position to dictate the behavior of the market or of broker-dealers who participate in the market, management will strive within the confines of practical limitations to prevent the described patterns from being established with respect to our securities.

We have not paid dividends in the past and do not expect to pay dividends for the foreseeable future, and any return on investment may be limited to potential future appreciation in the value of our Common Stock.

We currently intend to retain any future earnings to support the development and expansion of our business and do not anticipate paying cash dividends on our shares of Common Stock in the foreseeable future. Our payment of any future dividends will be at the discretion of our Board of Directors after taking into account various factors, including without limitation, our financial condition, operating results, cash needs, growth plans and the terms of any credit agreements that we may be a party to at the time. To the extent we do not pay dividends, our shares of Common Stock may be less valuable because a return on investment will only occur if and to the extent our stock price appreciates, which may never occur. In addition, investors must rely on sales of their Common Stock after price appreciation as the only way to realize their investment, and if the price of our Common Stock does not appreciate, then there will be no return on investment. Investors seeking cash dividends should not purchase our Common Stock.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our Common Stock adversely, our share price and trading volume could decline.

The trading market for our shares of Common Stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. If any of the analysts who may cover us change their recommendation regarding our Common Stock adversely, or provide more favorable relative recommendations about our competitors, our share price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our Common Stock price or trading volume to decline.

The requirements of being a U.S. public company may strain our resources and divert management's attention.

As a U.S. public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Act, the listing requirements of NASDAQ, and other applicable securities rules and regulations. Compliance with these rules and regulations will increase our legal and financial compliance costs, make some activities more difficult, time-consuming, or costly, and increase demand on our systems and resources. The Exchange Act requires, among other things, that we file annual and current reports with respect to our business and operating results.

As a result of disclosure of information in this prospectus and in filings required of a public company, our business and financial condition is more visible, which we believe may result in threatened or actual litigation, including by competitors and other third parties. If such claims are successful, our business and operating results could be harmed, and even if the claims do not result in litigation or are resolved in our favor, these claims, and the time and resources necessary to resolve them, could divert resources of our management and harm our business and operating results.

We acknowledge material weaknesses in the controls and procedures of our financial reporting and may identify additional material weaknesses in the future that may cause us to fail to meet our reporting obligations, including timeliness, or result in material misstatements of our financial statements. If we continue to fail to remediate our material weaknesses or if we fail to implement effective controls and procedures for our financial reporting, our ability to accurately and timely report our financial results could be adversely affected, which likely would adversely affect the value of our Common Stock.

Our management has previously identified material weaknesses in our internal control over financial reporting as a result of not properly performing an effective risk assessment or monitoring of our internal controls over financial reporting. With the acquisitions of IMT and Vislink, there are risks related to the timing and accuracy of the integration of information from various accounting and Material Requirement Planning (“MRP”) systems whereby the Company has experienced delays in receiving information in a timely manner from its subsidiaries. As of September 30, 2018, we concluded that certain of these material weaknesses continued to exist.

The Company expects improvements to be made on the integration of information issues in 2018 and continuing into 2019 as we plan to move towards one accounting and MRP system. The Company is continuing to further remediate the material weakness identified above as its resources permit.

A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Failure of our internal control systems to prevent error or fraud could materially adversely impact us, could lead to restatements of our financial statements and investors not being able to rely on the completeness and accuracy of the financial information contained in our filings with the SEC, and could potentially subject us to sanctions or investigations by the SEC or other regulatory authorities or stockholder litigation. Any such failure could also cause investors to lose confidence in our reported financial information or our ongoing ability to meet SEC filing deadlines, which likely would adversely affect the value of our Common Stock and severely limit or even eliminate the prospects for our success in obtaining new capital.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the section entitled “Risk Factors”, contains forward-looking statements that include information relating to future events, future financial performance, strategies, expectations, our competitive environment, regulation and availability of resources. These forward-looking statements include, without limitation, statements regarding: proposed new products or services; our statements concerning litigation or other matters; statements concerning projections, predictions, expectations, estimates or forecasts for our business, financial and operating results and future economic performance; statements of management’s goals and objectives; trends affecting our financial condition, results of operations or future prospects; our financing plans or growth strategies; and other similar expressions concerning matters that are not historical facts. Words such as “may”, “will”, “should”, “could”, “would”, “predicts”, “potential”, “continue”, “expects”, “anticipates”, “future”, “intends”, “plans”, “believes” and “estimates,” and similar expressions, as well as similar statements in the future tense, identify forward-looking statements.

Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by which, that performance or those results will be achieved. Forward-looking statements are based on information available at the time they are made and/or management’s good faith belief as of that time with respect to future events, and are subject to risks and uncertainties that could cause actual performance or results to differ materially from what is expressed in or suggested by the forward-looking statements.

Forward-looking statements speak only as of the date they are made. You should not put undue reliance on any forward-looking statements. We assume no obligation to update forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting forward-looking information, except to the extent required by applicable securities laws. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.

USE OF PROCEEDS

The Selling Securityholders will receive all of the proceeds from the sale of shares of Common Stock under this prospectus. We will not receive any proceeds from these sales. The Selling Securityholders will pay any agent's commissions and expenses they incur for brokerage, accounting, tax or legal services or any other expenses they incur in disposing of the shares of Common Stock. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares of Common Stock covered by this prospectus and any prospectus supplement. These may include, without limitation, all registration and filing fees, SEC filing fees and expenses of compliance with state securities or "blue sky" laws.

ISSUANCE OF SECURITIES

May 2018 Private Placement and Subsequent Amendments

Background

On May 30, 2018, the Company completed a private placement (the “May 2018 Private Placement”) of \$4 million in principal amount of 6% Senior Secured Convertible Debentures (the “Original May Debentures”) and warrants (the “May Warrants”) to purchase 3,000,000 shares of Common Stock to certain institutional investors (the “May Investors”). The Original May Debentures and May Warrants were issued pursuant to a Securities Purchase Agreement, dated May 29, 2018 (the “May Purchase Agreement”), by and among the Company and the May Investors. The May 2018 Private Placement resulted in gross proceeds of \$4 million before fees and other expenses associated with the transaction. The proceeds will be used primarily for working capital and general corporate purposes.

Pursuant to the terms of a Security Agreement, dated May 29, 2018 (the “May Security Agreement”), by and among the Company, its subsidiaries, and the May Investors, the Company’s obligations under the Original May Debentures and the subsidiary companies’ obligations under the Subsidiary Guarantee, dated May 29, 2018 (the “May Subsidiary Guarantee”), executed by such subsidiaries, are secured by all of the assets of the Company and the subsidiary companies, including without limitation all right, title and interest of the Company in and to all trademarks, patents and copyrights and applications and licenses therefore and products and proceeds thereof.

Pursuant to the Registration Rights Agreement, dated May 29, 2018 (the “May Registration Rights Agreement”), by and among the Company and the May Investors, the Company must within thirty (10) days of the closing date file with the SEC a registration statement on Form S-3 (or other applicable registration statement under the Securities Act) covering the resale of all shares of Common Stock issuable upon conversion of the Original May Debentures.

In connection with the foregoing, the Company obtained from the May Investors Voting Agreements, dated May 29, 2018 (each, a “May Voting Agreement”), whereby the May Investors agree to vote all shares of Common Stock over which they have voting control in favor of any resolution presented to the stockholders of the Company to approve the issuance, in the aggregate, of more than 19.99% of the number of shares of Common Stock outstanding on May 29, 2018.

On October 11, 2018, the Company agreed with a majority of the May Investors (the “Majority Investors”) to modify the Original May Debentures by issuing amended and restated debentures (the “First Amended May Debentures”) to the

Majority Investors (the “October 2018 Amendments”). In connection with the October 2018 Amendments, the Company issued to the Majority Investors an aggregate of 302,655 shares of Common Stock as compensatory shares (the “Compensatory Shares”).

On December 3, 2018, the Company agreed with the Majority Investors to modify the First Amended May Debentures by issuing the second amended and restated debentures (the “Second Amended May Debentures”) to the Majority Investors.

A.G.P./Alliance Global Partner served as the placement agent for the Company.

The foregoing does not purport to be a complete description of: (i) the Original May Debentures, the May Warrants, the May Purchase Agreement, the May Security Agreement, the May Subsidiary Guarantee, the May Registration Rights Agreement, and the May Voting Agreements, and are qualified in their entirety by reference to the full text of such documents, which are attached as Exhibits 10.2, 10.3, 10.1, 10.4, 10.5, 10.6, and 10.7, to the Current Reports on Form 8-K filed with the Securities and Exchange Commission on May 30, 2018, respectively, and are incorporated by reference herein; and (ii) the First Amended May Debentures, and are qualified in their entirety by reference to the full text of such documents, which is attached as Exhibits 4.1, to the Current Reports on Form 8-K filed with the SEC on October 11, 2018, and is incorporated by reference herein.

Description of the Second Amended May Debentures

The Second Amended May Debentures contain a five percent (5%) original issue discount to the principal amounts contained therein. Prior to the May Debentures Maturity Date (as defined below), the Second Amended May Debentures bear interest at 10% per annum, with 12 months interest guaranteed. Interest shall be paid quarterly in cash on January 1, April 1, July 1, and October 1 beginning on the first such date after the issuance of the Second Amended May Debentures, on each Conversion Date (as defined in the Second Amended May Debentures), on each redemption date (as set forth in the Second Amended May Debentures), and on the May Debentures Maturity Date (as defined below). The Second Amended May Debentures rank senior to the Company’s existing and future indebtedness and are secured to the extent and as provided in the May Security Agreement and the May Subsidiary Guarantee.

The Second Amended May Debentures are convertible at any time after their date of issuance at the option of the Majority Investors into shares of Common Stock at \$0.45 per share (the “May Conversion Price”). The Second Amended May Debentures mature on September 30, 2019 (the “May Debentures Maturity Date”). Commencing on December 1, 2018, and continuing for each fiscal month thereafter through the May Debentures Maturity Date, the Company will make payments of principal and interest as Monthly Redemptions (as defined in the Second Amended May Debentures) to the Majority Investors in order to fully amortize the Second Amended May Debentures. The May Conversion Price is subject to adjustment for Events of Default (as defined in the Second Amended May Debentures) and upon stock splits, reverse stock splits, and similar capital changes.

At any time after issuance of the Second Amended May Debentures, and subject to the certain Equity Conditions (as defined in the Second Amended May Debentures) the Company may redeem any portion of the principal amount of the Second Amended May Debentures, any accrued and unpaid, and any other amounts due under the Second Amended May Debentures. If the Company exercises its right to prepay the Second Amended May Debentures, the Company will pay to the Majority Investors an amount in cash equal to the sum of the then outstanding principal amount of the Second Amended May Debentures and guaranteed interest as follows: (i) from the initial issuance date of the Second Amended May Debentures to the day prior to the 181-day anniversary of the issuance of the Second Amended May Debentures, a 110% premium; and (ii) from the 181-day anniversary of the issuance of the Second Amended May Debentures to the May Debentures Maturity Date, a 115% premium. The Majority Investors may continue to convert the Second Amended May Debentures until the Optional Redemption Payment (as defined in the Second Amended May Debentures) is paid.

At any time after issuance of the Second Amended May Debentures, in the event that the Company consummates a Subsequent Financing (as defined in the Second Amended May Debentures), the Company must make a mandatory redemption in full of the Second Amended May Debentures, in cash, to the Holders at the same premiums described with respect to the Optional Redemption (as defined in the Second Amended May Debentures).

Until the 60-day anniversary of the Second Amended May Debentures, the Company may not consummate a Subsequent Financing (as defined in the Second Amended May Debentures). So long as the Second Amended May Debentures are outstanding, the Company is prohibited from entering into any Variable Rate Transactions (as defined in the Second Amended May Debentures).

The conversion of the Second Amended May Debentures are subject to beneficial ownership limitations such that a Majority Holder may not convert a Second Amended May Debenture to the extent that such conversion would result in the Majority Holder being the beneficial owner in excess of 4.99% (or, upon election of such Majority Holder, 9.99%), which beneficial ownership limitation may be increased or decreased up to 9.99% upon notice to the Company, provided that any increase in such limitation will not be effective until 61 days following notice to the Company. Additionally, the Company may not issue shares of Common Stock underlying the Second Amended May Debentures equal to more than 19.99% of the issued and outstanding shares of Common Stock as of May 29, 2018, without stockholder approval.

The foregoing does not purport to be a complete description of the Second Amended May Debentures, and is qualified in its entirety by reference to the full text of such document, which is attached as Exhibit 4.1 to the Current Reports on Form 8-K filed with the SEC on December 4, 2018, and is incorporated by reference herein.

December 2018 Private Placement

On December 3, 2018, the Company closed a tranche of a December private placement (the “December Private Placement”) of \$3.5 million in principal amount of 10% Senior Secured Convertible Debentures (the “December Debentures”). The December Debentures were issued pursuant to a Securities December Purchase Agreement, dated December 3, 2018 (the “December Purchase Agreement”), by and among the Company and Majority Investors. The initial closing of the December Private Placement resulted in gross proceeds of \$2 million before fees and other expenses associated with the transaction. The proceeds will be used primarily for working capital and general corporate purposes.

The December Debentures contain a five percent (5%) original issue discount to the principal amounts contained therein. Prior to the December Debentures Maturity Date (as defined below), the December Debentures bear interest at 10% per annum, with 12 months interest guaranteed. Interest shall be paid quarterly in cash on January 1, April 1, July 1, and October 1 beginning on the first such date after the issuance of the December Debentures, on each Conversion Date (as defined in the December Debentures), on each redemption date (as set forth in the December Debentures), and on the December Debentures Maturity Date (as defined below). The December Debentures rank senior to the Company’s existing and future indebtedness (except with respect to the Second Amended May Debentures) and are secured to the extent and as provided in that certain Security Agreement, dated December 3, 2018 (the “December Security Agreement”), by and among the Company, its subsidiaries, and the Majority Investors, and that certain Subsidiary Guarantee, dated December 3, 2018 (the “December Subsidiary Guarantee”), executed by each of the Company’s subsidiaries.

The December Debentures are convertible at any time after their date of issuance at the option of the Majority Investors into shares of Common Stock at \$0.45 per share (the “December Conversion Price”). The December Debentures mature on September 30, 2019 (the “December Debentures Maturity Date”). Commencing on February 1, 2019, and continuing for each fiscal month thereafter through the December Debentures Maturity Date, the Company will make payments of principal and interest as Monthly Redemptions (as defined in the December Debentures) to the Majority Investors in order to fully amortize the December Debentures. The December Conversion Price is subject to adjustment for Events of Default (as defined in the December Debentures) and upon stock splits, reverse stock splits, and similar capital changes.

At any time after issuance of the December Debentures, and subject to the certain Equity Conditions (as defined in the December Debentures) the Company may redeem any portion of the principal amount of the December Debentures, any accrued and unpaid, and any other amounts due under the December Debentures. If the Company exercises its right to prepay the December Debentures, the Company will pay to the Majority Investors an amount in cash equal to the sum of the then outstanding principal amount of the December Debentures and guaranteed interest as follows: (i) from the initial issuance date of the Debentures to the day prior to the 181-day anniversary of the issuance of the December Debentures, a 110% premium; and (ii) from the 181-day anniversary of the issuance of the December Debentures to the December Debentures Maturity Date, a 115% premium. The Majority Investors may continue to convert the December Debentures until the Optional Redemption Payment (as defined in the December Debentures) is paid.

At any time after issuance of the December Debentures, in the event that the Company consummates a Subsequent Financing (as defined in the December Debentures), the Company must make a mandatory redemption in full of the December Debentures, in cash, to the Holders at the same premiums described with respect to the Optional Redemption (as defined in the December Debentures).

Until the 90-day anniversary of the December Debentures, the Company may not consummate a Subsequent Financing (as defined in the December Debentures). So long as the December Debentures are outstanding, the Company is prohibited from entering into any Variable Rate Transactions (as defined in the December Debentures).

The conversion of the December Debentures are subject to beneficial ownership limitations such that a Majority Holder may not convert a December Debenture to the extent that such conversion would result in the Majority Holder being the beneficial owner in excess of 4.99% (or, upon election of such Majority Holder, 9.99%), which beneficial ownership limitation may be increased or decreased up to 9.99% upon notice to the Company, provided that any increase in such limitation will not be effective until 61 days following notice to the Company. Additionally, the Company may not issue (i) shares of Common Stock underlying the (a) Original May Debentures (as applicable), (b) the May Warrants, (c) the Second Amended May Debentures, (d) the December Debentures, and (ii) the Compensatory Shares, in the aggregate, equal to more than 19.99% of the issued and outstanding shares of Common Stock as of May 29, 2018, without stockholder approval.

Pursuant to the terms of the December Security Agreement, the Company's obligations under the December Debentures and the subsidiary companies' obligations under the December Subsidiary Guarantee, are secured by all of the assets of the Company and the subsidiary companies, including without limitation all right, title and interest of the Company in and to all trademarks, patents and copyrights and applications and licenses therefore and products and proceeds thereof.

Pursuant to the Registration Rights Agreement, dated December 3, 2018 (the "December Registration Rights Agreement"), by and among the Company and the Majority Investors, the Company must within ten (10) days of the

initial closing date file with the SEC a registration statement on Form S-3 (or other applicable registration statement under the Securities Act) covering the resale of all shares of Common Stock issuable upon conversion of the December Debentures.

In connection with the foregoing, the Company obtained from the Majority Investors Voting Agreements, dated December 3, 2018 (each, a “December Voting Agreement”), whereby the Majority Investors agree to vote all shares of Common Stock over which they have voting control in favor of any resolution presented to the stockholders of the Company to approve the issuance, in the aggregate, of more than 19.99% of the number of shares of Common Stock outstanding on May 29, 2018.

A.G.P./Alliance Global Partner served as the placement agent for the Company.

The foregoing does not purport to be a complete description of the December Purchase Agreement, the December Debentures, the December Security Agreement, the December Subsidiary Guarantee, the December Registration Rights Agreement, and the December Voting Agreements, and are qualified in their entirety by reference to the full text of such documents, which are attached as Exhibits 10.1, 4.2, 10.2, 10.3, 10.4, and 10.5, respectively, to the Current Report on Form 8-K filed with the SEC on December 4, 2018, and are incorporated by reference herein.

SELLING SECURITYHOLDERS

This prospectus covers the offering of up to 33,892,846 shares of Common Stock being offered by the Selling Securityholders, which includes Common Stock acquirable upon the conversion of the Second Amended May Debentures and December Debentures held by the Selling Securityholders as described herein. We are registering the shares of Common Stock in order to permit the Selling Securityholders to offer their shares of Common Stock for resale from time to time.

The table below lists the Selling Securityholders and other information regarding the “beneficial ownership” of the shares of Common Stock by the Selling Securityholders. In accordance with Rule 13d-3 of the Exchange Act, “beneficial ownership” includes any shares of Common Stock as to which the Selling Securityholders have sole or shared voting power or investment power and any shares of Common Stock the Selling Securityholders have the right to acquire within sixty (60) days (including shares of Common Stock issuable pursuant to convertible notes currently convertible or exercisable, or convertible or exercisable within 60 days), and the Second Amended May Debentures and December currently convertible or convertible within sixty (60) days.

The first column indicates the number of shares of Common Stock beneficially owned by each of the Selling Securityholders, based on its ownership as of December 12, 2018.

The second column lists the shares of Common Stock being offered by this prospectus by the Selling Securityholders. Such aggregate amount of Common Stock does not take into account any applicable limitations on conversion of the Second Amended May Debentures or December Debentures.

This prospectus covers the resale of: (i) all of the shares of Common Stock issued and issuable upon conversion of the Second Amended May Debentures; (ii) any additional shares of Common Stock issued and issuable in connection with the Second Amended May Debentures (in each case without giving effect to any limitations on conversion set forth in the Second Amended May Debentures); (iii) any securities issued or then issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the Second Amended May Debentures; (iv) all of the shares of Common Stock issued and issuable upon conversion of the December Debentures; (v) any additional shares of Common Stock issued and issuable in connection with the December Debentures (in each case without giving effect to any limitations on conversion set forth in the December Debentures); (vi) any securities issued or then issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the December Debentures; and (vi) the Compensatory Shares.

Because the conversion price of the Second Amended May Debentures and the December Debentures may be adjusted, and the interest accruing on Second Amended May Debentures and December Debentures is also

convertible, the number of shares of Common Stock that will actually be issued upon the conversion of the Second Amended May Debentures and December Debentures may be more or less than the number of shares of Common Stock being offered by this prospectus. The Selling Securityholders can offer all, some or none of their shares of Common Stock, thus we have no way of determining the number of shares of Common Stock they will hold after this offering. Therefore, the fourth and fifth columns assume that the Selling Securityholders will sell all shares of Common Stock covered by this prospectus. See "Plan of Distribution."

Notwithstanding the foregoing, the Company may not issue (i) shares of Common Stock underlying (a) the Original May Debentures (as applicable), (b) the May Warrants, (c) the Second Amended May Debentures, (d) the December Debentures, and (ii) the Compensatory Shares, in the aggregate, equal to more than 19.99% of the issued and outstanding shares of Common Stock as of May 29, 2018, without stockholder approval. As such, the Selling Securityholders cannot sell any of the shares of Common Stock underlying the foregoing securities or the Compensatory Shares without such stockholder approval. The table below assumes such stockholder approval is received.

Each of the Selling Securityholders identified below has confirmed to us that it is not a broker-dealer or an affiliate of a broker-dealer within the meaning of United States federal securities laws.

Name of Selling Securityholder	Number of Shares of Common Stock Beneficially Owned Prior to Offering(1) (5)	Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Number of Shares of Common Stock Beneficially Owned After Offering	Percentage Beneficially Owned After Offering(2)	
Anson Investments Master Fund LP(3)	26,720,783	20,777,309	5,943,474	4.99	%(6)
MEF I, L.P. (4)	15,823,494	13,115,537	2,707,957	4.99	%(6)
TOTAL	42,544,277	33,892,846	8,651,431	4.99	%(6)

*Less than 1%

(1) Beneficial ownership includes shares of Common Stock as to which a person or group has sole or shared voting power or dispositive power. Shares of Common Stock registered hereunder, as well as shares of Common Stock subject to options, warrants or other convertible securities that are exercisable or convertible currently or within sixty (60) days of December 12, 2018, are deemed outstanding for purposes of computing the number of shares beneficially owned and percentage ownership of the person or group holding such shares of Common Stock, options, warrants or convertible securities, but are not deemed outstanding for computing the percentage of any other person. Represents the total number of shares of our Common Stock issued or issuable to each Selling Securityholders as of the date of this prospectus.

(2) Percentages are based on 55,790,747 shares of Common Stock consisting of 47,139,316 shares of Common Stock outstanding after the offering, which assumes the sale of all shares of Common Stock pursuant to this prospectus and 8,651,431 shares of Common Stock beneficially owned by the Selling Securityholders as of December 12, 2018.

(3) Anson Advisors Inc. and Anson Funds Management LP, the Co-Investment Advisers of Anson Investments Master Fund LP (“Anson”), hold voting and dispositive power over the Common Shares held by Anson. Bruce Winson is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Winson, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these Common Shares except to the extent of their pecuniary interest therein. The principal business address of Anson is 190 Elgin Ave; George Town, Grand Cayman. Ownership prior to completion of the offering includes warrants to purchase up to 2,427,013 shares of Common Stock relating to prior financings.

(4) Magna Management LLC (“MMLLC”) is the investment manager of MEF and consequently has voting control and investment discretion over securities held by MEF. Magna GP LLC (“Magna GP”) is the general partner of MEF and may be considered the beneficial owner of any securities deemed to be beneficially owned by MEF. Joshua Sason is the Chief Executive Officer of MMLLC. Joshua Sason is the sole managing members of Magna GP and as a result may be considered beneficial owners of any securities deemed beneficially owned by MEF and Magna GP. Each of MMLLC, Magna GP and Messrs. Sason disclaim beneficial ownership of these securities. Ownership prior to completion of the offering includes warrants to purchase up to 3,604 shares of Common Stock held by related entities consisting of 3,125 warrants held by Magna Equities I, LLC and 50% of the 958 warrants held by an entity 50% owned by Magna Equities II, LLC.

(5) The conversion of the Second Amended May Debentures and December Debentures are subject to beneficial ownership limitations such that a Selling Securityholder may not convert a Second Amended May Debentures or December Debenture to the extent that such conversion or exercise would result in such holder being the beneficial owner in excess of 4.99% (or, upon election of purchaser, 9.99%), which beneficial ownership limitation may be increased or decreased up to 9.99% upon notice to the Company, provided that any increase in such limitation will not be effective until 61 days following notice to the Company. Additionally, the Company may not issue (i) shares of Common Stock underlying (a) the Second Amended May Debentures, (b) the Original May Debentures (as applicable), (c) the May Warrants, (d) the December Debentures, and (ii) the Compensatory Shares, in the aggregate,

equal to more than 19.99% of the issued and outstanding shares of Common Stock as of May 29, 2018, without stockholder approval.

(6) The warrants issued by the Company in prior financings that are held by this Securityholder are subject to beneficial ownership limitations such that the Selling Securityholder may not exercise these warrants to the extent that such conversion or exercise would result in such holder being the beneficial owner in excess of 4.99% (or, upon election of purchaser, 9.99%), which beneficial ownership limitation may be increased or decreased up to 9.99% upon notice to the Company, provided that any increase in such limitation will not be effective until 61 days following notice to the Company.

Material Relationships with Selling Securityholders

In addition to the transactions described above in “Issuance of Securities” we have had the following material relationships with the Selling Securityholders in the last three years:

Anson Investments Master Fund LP

Except for its participation in our financings on May 16, 2016, July 20, 2016, December 27, 2016, February 14, 2017, August 18, 2017, and May 29, 2018 we have had no material relationships with this Selling Securityholder.

MEF I, L.P.

January 2016 Financing

On January 29, 2016, we entered into a securities purchase agreement pursuant to which we sold 5% Senior Secured Convertible Promissory Notes to accredited investors for an aggregate purchase price of \$500,000 for net proceeds of \$500,000. An affiliate of MEF I, L.P. participated in this offering. The 5% Senior Secured Convertible Promissory Notes have subsequently been repaid.

February 2016 Financing

On February 29, 2016, we closed a public offering of 29,639 Units, at a price of \$120.00 per Unit, each of which consisted of one share of our Series B Convertible Preferred Stock and 0.5 of a warrant to purchase one share of our common stock at an exercise price of \$25.20 per warrant. We received approximately \$3,556,660 in gross proceeds from the offering, before deducting placement agent fees and offering expenses payable by the Company. An affiliate of MEF I, L.P. participated in this offering.

Warrant Amendments

On April 29, 2016, we entered into amendments with certain holders of our Series A Warrant to Purchase Common Stock, dated August 19, 2015, and our Warrant to Purchase Common Stock, dated February 29, 2016. Each of such warrants was amended to reduce the exercise price to \$8.40. An affiliate of MEF I, L.P. were among the holders of such warrants.

April 2016 Financing

On April 15, 2016, the Company entered into a securities purchase agreement with certain accredited investors pursuant to which we sold a principal amount of \$550,000 of 5% Senior Secured Convertible Promissory Notes for an aggregate purchase price of \$500,000. In connection with the Securities Purchase Agreement, we also entered into a security agreement, dated April 15, 2016, pursuant to which we granted the investors a security interest in all of our assets. An affiliate of MEF I, L.P. participated in this offering. The 5% Senior Secured Convertible Promissory Notes have subsequently been repaid.

February 2017 Financing

On February 6, 2017, MEF I, L.P. received 4,518,500 shares (the “Series D Shares”) of Series D Convertible Preferred Stock issued in connection with the Company’s acquisition of certain assets and liabilities relating to the business of Integrated Microwave Technologies, LLC (“IMT”) pursuant to an Asset Purchase Modification Agreement, dated April 12, 2016, between the Company and IMT. The Series D Shares held by MEF I, L.P. have been fully converted into shares of Common stock.

PLAN OF DISTRIBUTION

The Selling Securityholders of the securities and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on any trading market, stock exchange or other trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. The Selling Securityholders may use any one or more of the following methods when selling securities:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

settlement of short sales;

in transactions through broker-dealers that agree with the Selling Securityholders to sell a specified number of such securities at a stipulated price per security;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

a combination of any such methods of sale; or

any other method permitted pursuant to applicable law.

The Selling Securityholders may also sell securities under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Securityholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Securityholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities covered hereby, the Selling Securityholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Securityholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Securityholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Securityholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling securityholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the Selling Securityholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because the Selling Securityholders may be deemed to be an “underwriter” within the meaning of the Securities Act, it will be subject to the prospectus delivery requirements of the Securities Act, including Rule 172 thereunder. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. Each selling securityholder has advised us that there is no underwriter or coordinating broker acting in connection with the proposed sale of the resale securities by the selling securityholder.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Securityholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information requirement under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition,

the Selling Securityholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the Common Stock by the Selling Securityholders or any other person. We will make copies of this prospectus available to the Selling Securityholders and have informed the Selling Securityholders of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

Robinson Brog Leinwand Greene Genovese & Gluck P.C. will render a legal opinion as to the validity of the securities to be registered hereby.

EXPERTS

Our financial statements as of and for the years ended December 31, 2017 and 2016 incorporated by reference in this prospectus have been audited by Marcum, LLP, independent registered public accountants, to the extent and for the periods set forth in their report incorporated by reference herein, and in reliance on such report given upon the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We filed with the SEC a registration statement on Form S-3 under the Securities Act for the Common Stock underlying the securities in this offering. This prospectus does not contain all of the information in the registration statement and the exhibits and schedules that were filed with the registration statement. For further information with respect to us and our Common Stock, we refer you to the registration statement and the exhibits that were filed with the registration statement. Statements contained in this prospectus about the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and we refer you to the full text of the contract or other document filed as an exhibit to the registration statement.

We file annual, quarterly, and current reports and other information with the SEC. Our filings with the SEC are available to the public on the SEC's website at www.sec.gov. Those filings are also available to the public on our corporate website at www.xgtechnology.com. The information we file with the SEC or contained on, or linked to through, our corporate website or any other website that we may maintain is not part of this prospectus or the registration statement of which this prospectus is a part. Information contained on our website is not a part of, and is not incorporated into, this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. You may also read and copy, at the SEC's prescribed rates, any document we file with the SEC, including the registration statement (and its exhibits) of which this prospectus is a part, at the SEC's Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. You can call the SEC at 1-800-SEC-0330 to obtain information on the operation of the Public Reference Room.

INFORMATION INCORPORATED BY REFERENCE

We incorporate by reference the filed documents listed below (excluding those portions of any Current Report on Form 8-K that are not deemed “filed” pursuant to the General Instructions of Form 8-K), except as superseded, supplemented or modified by this prospectus or any subsequently filed document incorporated by reference herein as described below:

Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on April 2, 2018;

Quarterly Reports on Form 10-Q for the fiscal quarter ended March 31, 2018, filed with the SEC on May 15, 2018, for the fiscal quarter ended June 30, 2018, filed with the SEC on August 14, 2018, and for the fiscal quarter ended September 30, 2018, filed with the SEC on November 14, 2018;

Current Reports on Form 8-K filed with the SEC on April 27, 2018, May 23, 2018, May 30, 2018, June 14, 2018, June 15, 2018, July 27, 2018, August 17, 2018, October 11, 2018, October 24, 2018, November 19, 2018, December 4, 2018, and December 7, 2018;

Definitive Proxy Statement filed with the SEC on April 30, 2018; and

The description of the Common Stock contained in the registration statement on Form 8-A, filed with the SEC on June 26, 2013, as amended by Amendment No. 1 thereto, filed with the SEC on July 18, 2013.

We also incorporate by reference into this prospectus additional documents we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date hereof but before the completion or termination of this offering (excluding any information not deemed “filed” with the SEC). Any statement contained in a previously filed document is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in a subsequently filed document incorporated by reference herein modifies or supersedes the statement, and any statement contained in this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in a subsequently filed document incorporated by reference herein modifies or supersedes the statement.

We will provide, without charge, to each person to whom a copy of this prospectus is delivered, including any beneficial owner, upon the written or oral request of such person, a copy of any or all of the documents incorporated by reference herein, including exhibits. Requests should be directed to:

xG Technology, Inc.
240 S. Pineapple Avenue, Suite 701
Sarasota, FL 34236
(941) 953-9035

Attention: Corporate Secretary

29

**33,892,846 Shares of
Common Stock**

xG Technology, Inc.

PROSPECTUS

The date of this prospectus is , 2018

PART II— INFORMATION NOT REQUIRED IN THE PROSPECTUS**Item 14. Other Expenses of Issuance and Distribution.**

Securities and Exchange Commission registration fee	\$1,417.20
Accounting fees and expenses	15,000.00
Legal fees and expense	20,000.00
Miscellaneous Expenses	20.00
Total	\$36,437.20

All amounts are estimates other than the SEC's registration fee. We are paying all expenses of the offering listed above. No portion of these expenses will be borne by the Selling Securityholders. The Selling Securityholders, however, will pay any other expenses incurred in selling the Common Stock, including any brokerage commissions or costs of sale.

Item 15. Indemnification of Directors and Officers.

The Delaware General Corporation Law and certain provisions of our certificate of incorporation and bylaws under certain circumstances provide for indemnification of our officers, directors and controlling persons against liabilities which they may incur in such capacities. A summary of the circumstances in which such indemnification is provided for is contained herein, but this description is qualified in its entirety by reference to our certificate of incorporation, bylaws and to the statutory provisions.

In general, any officer, director, employee or agent may be indemnified against expenses, fines, settlements or judgments arising in connection with a legal proceeding to which such person is a party, if that person's actions were in good faith, were believed to be in our best interest, and with respect to any criminal action or proceeding, such person had no reasonable cause to believe their actions were unlawful. Unless such person is successful upon the merits in such an action, indemnification may be awarded only after a determination by independent decision of the board of directors, by legal counsel, or by a vote of the stockholders, that the applicable standard of conduct was met by the person to be indemnified.

The circumstances under which indemnification is granted in connection with an action brought on our behalf is generally the same as those set forth above; however, with respect to such actions, indemnification is granted only with respect to expenses actually incurred in connection with the defense or settlement of the action. In such actions, unless the court determines otherwise, the person to be indemnified must have acted in good faith and in a manner

believed to have been in our best interest, and have not been adjudged liable to the corporation.

Indemnification may also be granted pursuant to the terms of agreements which we are currently party to with each of our directors and executive officers, agreements which we may enter into in the future or pursuant to a vote of stockholders or directors. Delaware law and our certificate of incorporation also grant the power to us to purchase and maintain insurance which protects our officers and directors against any liabilities incurred in connection with their service in such a position, and such a policy may be obtained by us.

A stockholder's investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. There is no pending litigation or proceeding involving any of our directors, officers or employees regarding which indemnification by us is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Item 16. Exhibits.

The list of exhibits in the Exhibit Index to this registration statement is incorporated herein by reference.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

II-1

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; Provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to

which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; and

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of an undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against

such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

II-2

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Sarasota, State of Florida, on December 13, 2018.

xG TECHNOLOGY, INC.

By: */s/ Roger Branton*
 Chief Executive Officer
 (Principal Executive Officer)

POWER OF ATTORNEY: KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints George Schmitt and Roger G. Branton, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agent, with full power of each to act alone, with full powers of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments and any related registration statements filed pursuant to Rule 462 and otherwise), and to file the same with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that all said attorneys-in-fact and agents, or any of them or their substitute or resubstitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated

Signature	Title	Date
<i>/s/ Roger G. Branton</i> Roger G. Branton	Chief Executive Officer, Chief Financial Officer (Principal Financial and Accounting Officer), and Director	December 13, 2018
<i>/s/ Susan Swenson</i> Susan Swenson	Director and Chairman of the Board	December 13, 2018
<i>/s/ John Coleman</i> John Coleman	Director	December 13, 2018

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<i>/s/ Richard L. Mooers</i> Richard L. Mooers	Director	December 13, 2018
<i>/s/ Raymond M. Sidney</i> Raymond M. Sidney	Director	December 13, 2018
<i>/s/ James T. Conway</i> James T. Conway	Director	December 13, 2018
<i>/s/ George Schmitt</i> George Schmitt	Director	December 13, 2018

II-3

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
4.1	<u>Form of 6% Senior Secured Debenture⁽¹⁾</u>
4.2	<u>Form of Common Stock Purchase Warrant⁽¹⁾</u>
4.3	<u>Form of Amended and Restated 6% Senior Secured Debenture⁽²⁾</u>
4.4	<u>Form of Second Amended and Restated 6% Senior Secured Convertible Debenture⁽³⁾</u>
4.5	<u>Form of 10% Senior Secured Convertible Debenture ⁽³⁾</u>
10.1	<u>Form of Securities Purchase Agreement, dated May 29, 2018, by and among the Company and the purchaser signatories thereto⁽¹⁾</u>
10.2	<u>Form of Security Agreement, dated May 29, 2018, by and among the Company and each of the secured parties thereto⁽¹⁾</u>
10.3	<u>Form of Subsidiary Guarantee, dated May 29, 2018 executed by each of the Company's subsidiaries⁽¹⁾</u>
10.4	<u>Form of Registration Rights Agreement, dated May 29, 2018, by and among the Company and the purchasers under the Securities Purchase Agreement, dated May 29, 2018⁽¹⁾</u>
10.5	<u>Form of Voting Agreement, each dated May 29, 2018, executed by each purchaser under the Securities Purchase Agreement , dated May 29, 2018⁽¹⁾</u>
10.6	<u>Form of Securities Purchase Agreement, dated December 3, 2018, by and among the Company and the purchaser signatories thereto⁽³⁾</u>
10.7	<u>Form of Security Agreement, dated December 3, 2018, by and among the Company and each of the secured parties thereto⁽³⁾</u>
10.8	<u>Form of Subsidiary Guarantee, dated December 3, 2018 executed by each of the Company's subsidiaries⁽³⁾</u>
10.9	<u>Form of Registration Rights Agreement, dated December 3, 2018, by and among the Company and the purchasers under the Securities Purchase Agreement, dated December 3, 2018⁽³⁾</u>
10.10	<u>Form of Voting Agreement, each dated December 3, 2018, executed by each purchaser under the Securities Purchase Agreement , dated December 3, 2018⁽³⁾</u>
5.1*	<u>Opinion of Robinson Brog Leinwand Greene Genovese & Gluck P.C.</u>
23.1*	<u>Consent of Marcum LLP</u>
23.2*	<u>Consent of Robinson Brog Leinwand Greene Genovese & Gluck P.C. (included in Exhibit 5.1)</u>
24.1*	<u>Power of Attorney (included on signature pages to the registration statement)</u>

* Filed herewith

(1)Filed as an Exhibit on Current Report on Form 8-K with the SEC on May 23, 2018.

(2)Filed as an Exhibit on Current Report on Form 8-K with the SEC on October 11, 2018.

(3)Filed as an Exhibit on Current Report on Form 8-K/A with the SEC on December 4, 2018.

