

PARKERVISION INC  
Form 424B5  
August 14, 2017

Prospectus Supplement Filed pursuant to Rule 424(b)(5)  
(to Prospectus dated November 30, 2016) Registration No. 333-214598

PARKERVISION, INC.

\$4,363,000

Common Stock

We have entered into an At Market Issuance Sales Agreement, which we refer to as the sales agreement, with FBR Capital Markets & Co., or FBR, dated August 14, 2017, relating to the sale of shares of our common stock offered by this prospectus. In accordance with the terms of the sales agreement, under this prospectus we may offer and sell shares of our common stock, \$0.01 par value per share, having an aggregate offering price of up to \$4,363,000 from time to time through FBR, acting as agent.

Our common stock is listed on the Capital Market of The Nasdaq Stock Market (“Nasdaq”) under the symbol “PRKR.” On August 7, 2017, the last sale price of our common stock was \$1.80 per share.

Sales of our common stock, if any, under this supplement prospectus will be made by any method that is deemed an “at the market offering” as defined in Rule 415 under the Securities Act of 1933, as amended, or the Securities Act. With our consent, FBR may also sell shares of our common stock by any other method permitted by law, including but not limited to negotiated transactions. FBR is not required to sell any certain number of shares or dollar amount of our common stock, but will act as our sales agents using commercially reasonable efforts consistent with its normal trading and sales practices. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

FBR will be entitled to compensation at a commission rate equal to 3.0% of the gross sales price per share sold. In connection with the sale of the common stock on our behalf, FBR may be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of FBR may be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to FBR with respect to certain liabilities, including liabilities under the Securities Act.

The aggregate market value of our outstanding common stock held by non-affiliates, or public float, was approximately \$43,089,662 based on 17,779,236 shares of outstanding common stock, of which 16,964,434 are held by non-affiliates, and a per share price of \$2.54, the closing sale price of our common stock on the Nasdaq Capital Market on June 20, 2017. We sold \$10,000,000 in securities pursuant to General Instruction I.B.6 of Form S-3 during the 12-month period that ends on and includes the date of this prospectus supplement. In no event will we sell

securities in public primary offerings on Form S-3 with a value exceeding more than one-third of our public float in any 12 calendar month period so long as our public float remains below \$75 million.

Investing in our securities involves a high degree of risk. See the section entitled “Risk Factors” beginning on page S-8 of this prospectus supplement and elsewhere in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein or therein for a discussion of information that should be considered in connection with an investment in our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

FBR

The date of this prospectus supplement is August 14, 2017

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You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying base prospectus. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted.

This prospectus supplement and the accompanying base prospectus are part of a registration statement on Form S-3 (Registration No. 333-214598) that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. The base prospectus provides you with a general description of us and the securities we may offer, some of which may not apply to this offering.

This prospectus supplement provides specific details regarding this offering of shares of our common stock having an aggregate offering price of up to \$4,363,000. To the extent there is a conflict between the information contained in this prospectus supplement and the base prospectus, you should rely on the information in this prospectus supplement. This prospectus supplement, the base prospectus and the documents we incorporate by reference herein and therein include important information about us and our common stock, and other information you should know before

investing. You should read both this prospectus supplement and the base prospectus, together with the additional information described below under the heading “Where You Can Find More Information.”

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You should not assume that the information appearing in this prospectus supplement or the base prospectus is accurate as of any date other than the date on the front cover of the respective documents. You should not assume that the information contained in the documents incorporated by reference in this prospectus supplement or the base prospectus is accurate as of any date other than the respective dates of those documents. Our business, financial condition, results of operations, and prospects may have changed since that date. We will advise investors of any material changes to the extent required by applicable law.

References in this prospectus supplement to “ParkerVision,” the “Company” and “we,” “us” and “our” refer to ParkerVision, Inc., a Florida corporation.

## PROSPECTUS SUPPLEMENT SUMMARY

This summary contains basic information about us but does not contain all of the information that is important to your investment decision. You should read this summary together with the more detailed information contained elsewhere in this prospectus supplement and the accompanying base prospectus and the documents incorporated herein and therein by reference.

### Company Summary

#### General

We are in the business of innovating fundamental wireless technologies and products. We have designed and developed a consumer distributed Wi-Fi product line that is being marketed under the brand name Milo™. We also design, develop and market our proprietary radio frequency (“RF”) technologies and integrated circuits for use in wireless communication products, including our own internally developed products. We have expended significant financial and other resources to research and develop our RF technologies and to obtain patent protection for those technologies in the United States and certain foreign jurisdictions. We believe certain patents protecting our proprietary technologies have been broadly infringed by others and therefore our business plan includes enforcement of our intellectual property rights through patent infringement litigation and licensing efforts.

We have a growth strategy that includes wireless product development, manufacturing and sales and intellectual property licensing and enforcement. On a longer-term basis, our growth strategy includes the acquisition of, or other product ventures with, companies that have businesses that are synergistic with our products and technologies, particularly in the Internet of Things (“IoT”) space. We have made significant investments in developing and protecting our technologies and products, the returns on which are dependent upon the generation of future revenues from product sales and/or licensing for realization.

We were incorporated under the laws of the State of Florida on August 22, 1989. Our executive offices are located at 7915 Baymeadows Way, Suite 400, Jacksonville, Florida 32256. Our telephone number is (904) 732-6100.

### Recent Developments

#### Wi-Fi Product Introduction

In June 2017, we launched a direct marketing campaign for a new Wi-Fi home and small business networking product line that is cost-effective and provides highly reliable distributed Wi-Fi coverage throughout a residential space, eliminating dead zones, extending Wi-Fi to new coverage areas, and creating a more even distribution of high data rates. We will begin taking orders for this product line in mid-August 2017 and anticipate initial shipments to begin in September 2017.

#### PV6870 Wi-Fi System on Chip

In August 2017, we introduced the PV6870, a complete single chip Wi-Fi solution intended for sale to product manufacturers who want to incorporate Wi-Fi wireless connectivity into their products. The PV6870 can be used in a wide range of devices and applications that require Wi-Fi connectivity.

#### Nasdaq Compliance

On August 11, 2017, we received a notice from the Listing Qualifications Department of Nasdaq stating that, for the last 30 consecutive business days, the market value of the Company's listed securities ("MVLS") had been below the minimum of \$35 million required for continued inclusion on the Capital Market under Nasdaq Listing Rule 5550(b)(2). The notification letter stated that we would be afforded 180 calendar days, or until February 7, 2018, to regain compliance. In order to regain compliance, the Company's MVLS must remain at \$35 million or more for a minimum of ten consecutive business days.

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The notification letter also stated that in the event we do not regain compliance within the 180 day period, our securities may be subject to delisting.

#### Termination of ITC Proceedings

In January 2016, the U.S. International Trade Commission (“ITC”) instituted an investigation against Apple, Inc. (“Apple”), LG Electronics, Inc., LG Electronics U.S.A., Inc., and LG Electronics MobileComm U.S.A., Inc. (collectively “LG”), Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Semiconductor, Inc. (collectively “Samsung”) and Qualcomm Incorporated (“Qualcomm”) based on a complaint we filed in December 2015 alleging that these companies have engaged in unfair trade practices by unlawfully importing into the U.S. and selling various products that infringe certain of our patent claims. For expediency, we later narrowed the proceedings to a single patent. Our complaint requested that the ITC bar the defendants from continuing to import and sell infringing products in the U.S. We filed a corresponding patent infringement complaint in the Middle District of Florida against these same defendants. The district court case was stayed pending the outcome of the ITC proceedings. On March 13, 2017, the date the ITC hearing was scheduled to commence, we filed a motion to terminate the ITC proceedings as a result of a pre-trial ruling that precluded us from presenting key evidence in our case. On April 28, 2017, the ITC granted our motion to withdraw. Following termination of the ITC proceedings, we moved to lift the stay on the corresponding district court case. This motion was granted on May 25, 2017 and the court has set a claim construction hearing for January 2018. Due to recently issued precedent regarding proper venue, we removed LG from the Florida district court case in July 2017 at which time we filed a corresponding case against LG in the district of New Jersey.

#### Development of Our Business

Our business has been primarily focused on the development, marketing and licensing of our RF technologies for mobile and other wireless products and applications, including our own internally developed end-user wireless products. Our technologies represent among other things, unique, proprietary methods for processing RF waveforms in wireless applications. Our technologies apply to both transmit and receive functions of transmitters, receivers, and transceivers as well as other related RF communications functions. A portion of our transmit technology is marketed as Direct2Power™, or d2p™, and enables the transformation of a baseband data signal to an RF carrier waveform, at the desired RF power output level, in a single unified operation. A portion of our receiver technology is marketed as Direct2Data™, or d2d™, and enables the direct conversion of an RF carrier to a baseband data signal, as well as enabling the direct conversion of a baseband signal to a modulated RF carrier signal. This technology is also referred to as energy transfer sampling down conversion and/or pulse-shaping up conversion. We have developed these and a number of additional innovations which are protected by the intellectual property we have secured in various patent families for RF and related functions in RF-based communications.

Prior to 2005, our business was primarily focused on our direct conversion transceiver technology. Our business plan included efforts to license the technology as well as the development and sale of retail wireless networking products that incorporated the technology. In 2005, we exited our retail business activities in order to better focus on our licensing efforts and on product and component development, manufacturing and sales. This strategy coincided with the introduction of a new family of wireless technologies, the transmit, or d2p, technology family. Our primary target



market became the mobile handset industry and over the next several years we focused our marketing and sales efforts within this industry.

From 2007 through 2013, we partnered with VIA Telecom, Inc. (“VIA”), a CDMA baseband provider, on a CDMA-based transceiver product. We initially entered into a licensing and engineering services agreement with VIA which allowed VIA a royalty-based license to manufacture devices based on our technology and also preserved our right to manufacture and sell such devices ourselves to third parties.

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By 2009, VIA had not manufactured any royalty-producing devices under this agreement, and we began working with VIA on the joint development of reference platforms that incorporated our RF products and VIA's baseband processors without the exchange of intellectual property rights. We also worked with VIA to co-develop a sample 3G mobile handset which verified our technology in a working implementation and tested our technology's performance. The results of these efforts were utilized to market our product to VIA's customers. From 2010 through 2013, we modified our circuit layout and packaging to meet design requirements of specific VIA customers. In 2013, we entered into a formal development agreement with VIA whereby we compensated VIA for their development and ongoing support and maintenance of the custom interfaces between our products for a specific customer. In 2014, we terminated our formal development agreement with VIA prior to VIA's completion of the interface to its latest model baseband processor due to the uncertainty of the specific customer's future use of the VIA baseband in its products. VIA subsequently sold its CDMA-based mobile assets, including its baseband processors, to Intel Corporation ("Intel") in 2015.

Our lack of tenure in the mobile handset industry coupled with the unique nature of our technology resulted in lengthy and intense technology evaluation and due diligence efforts by potential customers. Furthermore, in order to utilize our technology in a mobile handset application, we were reliant upon the provider of the baseband processor that generates the data to be transmitted or received by our RF chipsets. Although our technology is capable of interfacing with any baseband processor, the development of the interface between the baseband processor and our chipset requires a cooperative effort with the baseband provider. Accordingly, our marketing efforts were dependent on the activities of third parties. In addition, we believe our technology has been broadly infringed by others thereby reducing the competitive advantage of our technologies. We believe these factors hindered our sales efforts, particularly in the mobile handset market.

In 2011, through analysis of conference papers and tear down reports, we concluded that Qualcomm's products were infringing our energy transfer sampling down conversion technology. Based on our belief that our technology is widely-deployed in the mobile handset market as a result of infringement of our patents, we began to more vigorously pursue an intellectual property licensing strategy which included enforcement actions. We filed a patent infringement lawsuit against Qualcomm in July 2011 (the "Qualcomm I Action"). Although this case resulted in a \$173 million jury award in 2013 for Qualcomm's infringement of several of our patents, the jury decision was ultimately overturned by the district court judge, a decision that was later upheld on appeal. Despite the courts' decisions in the Qualcomm I Action, we continue to believe that certain of our technologies are broadly infringed and have wide-spread application in the industry. From 2014 through 2016, we pursued licensing opportunities for our technologies, including through additional litigation where we deemed necessary to protect our patent rights. These efforts resulted in a patent license and settlement agreement with Samsung in 2016. See "Legal Proceedings" in Note 13 to our consolidated financial statements included in Item 8 for a full discussion of our patent-related litigation activities.

In 2016, we received an aggregate of \$13 million in funding from Brickell Key Investments ("BKI"), the majority of which was designated for the payment of legal fees and expenses in connection with certain patent infringement proceedings. BKI has a right to reimbursement and compensation from gross proceeds we receive from patent enforcement and other patent monetization actions. We repaid approximately \$3.3 million of this contractual obligation in 2016 from proceeds received from a patent license and settlement agreement. BKI is entitled to priority payment of at least the next \$9.7 million in proceeds received by us from any patent-related action. Thereafter, BKI is entitled to a portion of additional patent-related proceeds up to a contractual minimum return that varies depending upon the timing of the repayment. In addition, proceeds from patent-related activities may be subject to prorated

contingent payments to legal counsel.

From 2013 through 2016, our product development efforts were focused on the development and production of modulator/demodulator integrated circuits (“ICs”) based on our proprietary technologies.

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These ICs are targeted at less integrated markets than those markets where we believe our technologies are already deployed through the unauthorized use by others. In 2015 and early 2016, we also offered engineering design services to third-parties for a negotiated fee, to assist customers in their development or testing of components, including wireless devices. We ceased offering design services in early 2016 in favor of deploying our limited resources toward the development of our consumer distributed Wi-Fi product.

We anticipate our future business will include the development and sale of ICs and products based on our technologies as well as the licensing of our intellectual property for incorporation into wireless devices designed and manufactured by others.

Our technology is capable of being incorporated for any of the mobile handset standards, as well as numerous other communications protocols, including Wi-Fi. By pursuing both licensing and product opportunities, we believe our technologies can be deployed in multiple markets that incorporate RF transmitters, receivers, and/or transceivers, including mobile handsets, tablets, femtocells, digital television, machine-to-machine, RF identification, cable modems, satellite communication, and infrastructure, among others. In order to secure proper compensation for the unauthorized use of our technologies by others, our licensing efforts also include enforcement actions against parties in some of these markets who we believe have already deployed products that infringe certain of our patented technologies.

#### Products and Services

Our current products include a modulator/demodulator component based on our proprietary technologies, the PV5870 IC, as well as a small number of supporting components that are used in the assembly of wireless devices. The PV5870 IC was targeted for markets that use less integrated RF transceivers than those used by the mobile handset market, such as infrastructure, industrial and military applications. We sell our PV5870 IC through manufacturers' representatives who operate on a commission basis and a distribution relationship with RFMW, Ltd. Our sales of these ICs have been minimal to date.

In 2016 and 2017, our product development efforts included the incorporation of the intellectual property core of the PV5870, along with additional microprocessor capabilities and controls, to create a complete Wi-Fi system-on-chip, the PV6870. Development kits and samples of the PV6870 are now available for evaluation. We expect to utilize this IC in our own end-user products as well as market this IC to third-parties for non-competing Wi-Fi offerings.

In 2017, we introduced a new Wi-Fi home and small business networking product line, marketed under the brand name Milo™. The Milo system is cost-effective and provides highly reliable distributed Wi-Fi coverage, eliminating dead zones, extending Wi-Fi to new coverage areas, and creating a more even distribution of high data rates. In early to mid-2017, we completed development of prototypes of our Wi-Fi product and commenced production activities for this product, including purchasing of inventory for use in assembly of the final product, development of test programs, and recruiting of additional staff to support product operations. In June 2017, we launched a direct marketing campaign and in August 2017 we will began taking orders for our Wi-Fi product line.

#### Licensing

In 2014, we launched a formal licensing campaign to explore licensing opportunities with wireless communications companies that make, use or sell chipsets and/or products that incorporate RF. We engaged a third-party, 3LP Advisors (“3LP”) to manage our licensing operations under a licensing services agreement that compensated 3LP through a combination of fixed fees and commission-based payments. We terminated our agreement with 3LP in late 2015, but continue to commit both internal and external resources towards our licensing efforts which include litigation or patent-enforcement efforts. Currently, we have a perpetual, worldwide license to our current patent portfolio, subject to certain confidential exclusions, with Samsung.

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## Production and Supply

We carry finished product inventory of our modulator/demodulator ICs to support our component sales efforts. Our work-in-process inventory includes unprocessed wafers that can be diced, packaged and tested with minimal lead time to provide additional finished product inventory. In addition, we own the tooling to fabricate additional components, subject to a standard foundry lead time, through our fabrication relationships with IBM Microelectronics (“IBM”). Our next generation ICs are being produced at Taiwan Semiconductor Manufacturing Company Limited (“TSMC”) using a 28 nanometer CMOS semiconductor process. We believe IBM and TSMC have sufficient capacity to meet our foreseeable needs.

For our new Wi-Fi product line, we purchase raw materials and subassemblies from third-party vendors and will complete final assembly, testing and packaging of the product in our facilities. Our materials generally have multiple sources of supply and relatively short lead-times.

## Competitive Position

We operate in a highly competitive industry against companies with substantially greater financial, technical, and sales and marketing resources. Our technologies and IC products face competition from incumbent providers of transceivers, such as Broadcom, Fujitsu, Intel, MediaTek, NVidia, Qualcomm, STMicroelectronics, Marvell, Texas Instruments, and others, as well as incumbent providers of power amplifiers, including companies such as Anadigics, Qorvo, and Skyworks, among others. Each of our competitors, however, also has the potential of becoming a licensing or product customer for our technologies.

To date, we are unaware of any competing or emerging RF technologies, other than infringing products that provide all the simultaneous benefits that certain of our technologies enable. Our unique technologies process RF carriers in a more optimal manner than prior traditional technologies, thereby allowing the creation of handsets and other products that have extended battery life, lower operating temperatures, more easily incorporate multiple air interface standards and frequencies in smaller form factors, improve operational performance, and reduce manufacturing costs. One or more of these benefits enable some of the key features that can be found in high volume wireless products. Our technologies provide such attractive benefits, in part, because of their unique operational and/or circuit architectures. The benefits our technologies enable include highly accurate transmission and reception of RF carriers that use less power than traditional architectures and components, thereby extending battery life, reducing heat and enabling certain size, cost, performance, and packaging advantages.

We believe the most significant hurdle to the licensing and/or sale of our technologies and products is the widespread use of certain of our technologies in infringing products produced by companies with significantly greater financial, technical and sales and marketing resources. In some cases, the required integration of our technologies with other sub-systems in semiconductor systems on-chip and our lack of tenure in the markets we are targeting provide further hurdles to adoption. We believe we can gain adoption and/or secure licensing agreements with unauthorized current users of one or more of our technologies, and therefore compete, based on a solid and defensible patent portfolio and the advantages enabled by our unique circuit architectures. Our circuit architectures are capable of being compliant with all current mobile phone and numerous other wireless industry standards and can be configured to accept all standard baseband data interfaces with the cooperation of the baseband processor providers. In addition, we believe that one or more of our technology’s abilities to provide improved power efficiencies, highly accurate RF carrier

waveforms, reduced cost, smaller form factors and better manufacturing yields, provides a sought-after solution to existing problems in applications for current and next-generation mobile wireless standards, as well as in other applications that use wireless and wired RF where we believe our technologies can provide an attractive solution.

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Our Wi-Fi end user products are expected to face competition from Netgear, Belkin, Linksys, Google and others who offer home Wi-Fi networking products. We believe we can gain adoption of our new product offering, and compete, based on price, performance and superior customer experience.

#### Patents and Trademarks

We consider our intellectual property, including patents, patent applications, trademarks, and trade secrets to be significant to our competitive positioning. We have a program to file applications for and obtain patents, copyrights, and trademarks in the U.S. and in selected foreign countries where we believe filing for such protection is appropriate to establish and maintain our proprietary rights in our technology and products. During 2016, we evaluated our foreign patent portfolio and elected to abandon patents in select jurisdictions where we do not believe the ongoing cost to maintain these patents is justified. As of June 30, 2017, we had 199 U.S. and 36 foreign patents related to our RF technologies. In addition, we have approximately 30 U.S. and foreign patent applications pending. We estimate the economic lives of our patents to be fifteen to twenty years and our current portfolio of issued patents have expirations ranging from 2018 to 2034.

From time to time, we obtain licenses from others for circuit designs that are peripheral to our core technologies or that provide additional system-on-chip functionality. We believe there are multiple sources for these types of circuit designs, and we estimate the economic lives of the licenses to be two to five years based on estimated technological obsolescence.

#### Research and Development

For the six months ended June 30, 2017 and for the years ended December 31, 2016, 2015, and 2014 we spent approximately \$2.6 million, \$3.3 million, \$4.1 million, and \$7.0 million, respectively, on Company-sponsored research and development activities. Our research and development efforts have been, and are expected to continue to be, devoted to the development and advancement of RF technologies, including the development of prototype ICs and products, the development of production-ready silicon samples, reference designs and products for specific applications, the development of software interfaces for our ICs and products, and the creation of test programs for quality control testing of our chipsets and/or products.

#### Employees

As of June 30, 2017, we had 35 full-time and 6 part-time employees, of which 18 are employed in engineering research and development, 12 in sales, marketing and customer support and 11 in executive management, finance, and administration. Our employees are not represented by a labor union. We consider our employee relations satisfactory.



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## The Offering

Shares of our common stock having an aggregate offering price of up to \$4,363,000. In no event will we sell stock securities with a value exceeding more than one-third of our “public float” (the market value of our common stock offered and any other equity securities that we may issue in the future that are held by non-affiliates) in any twelve hereby calendar month period, so long as our public float remains below \$75 million.

Up to 20,203,124 shares (as more fully described in the notes following this table), assuming sales of \$4,363,000 stock of our common stock in this offering at an offering price of \$1.80 per share, which was the last reported sale outstanding of our common stock on the Nasdaq Capital Market on August 7, 2017. The actual number of shares issued after will vary depending on the sales price under this offering.(1)  
the  
offering

At the market offering” that may be made from time to time through our agent, FBR Capital Markets & Co. See of the section entitled “Plan of Distribution” on page S-14 of this prospectus supplement.  
offering

We intend to use the net proceeds from the sale of the shares in this offering to fund our research, our sales and of marketing activities and our infringement litigation, and for other working capital and general corporate purposes. See the section entitled “Use of Proceeds” on page S-11.

Nasdaq  
Capital  
Market  
PRKR  
symbol  
for  
our

common  
stock

Risk See the section entitled “Risk Factors” beginning on page S-8 for a discussion of factors you should consider factors carefully before deciding to invest in our common stock.

(1) Based on 17,779,236 shares of common stock outstanding as August 7, 2017. Excludes 1,121,696 shares of our common stock subject to options and warrants outstanding as of August 7, 2017, with exercise prices ranging from \$1.80 to \$45.10 per share, and 180,000 shares of our common stock subject to restricted stock units outstanding as of August 7, 2017.

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## RISK FACTORS

Any investment in our securities involves a high degree of risk. Potential investors are urged to read and consider the risk factors relating to an investment in our company set forth below, in the accompanying base prospectus and in our SEC filings, including our annual report on Form 10-K for the year ended December 31, 2016 and our quarterly reports for the quarters ended March 31, 2017 and June 30, 2017, as well as any amendment or update to our risk factors reflected in subsequent filings with the SEC. You should carefully consider all such material risks before you decide to invest in our company.

### Risks Relating to Our Securities and the Offering

Management will have broad discretion as to the use of the proceeds from this offering and may not use the proceeds effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business and cause the price of our common stock to decline.

Because we do not expect to pay dividends on our common stock, shareholders will benefit from an investment in our common stock only if it appreciates in value.

We have never paid cash dividends on our common stock. The payment of dividends in the future is at the discretion of the board of directors and will depend upon our ability to generate earnings, our capital requirements and financial condition, and other relevant factors. We do not intend to declare any dividends in the foreseeable future, but instead intend to retain all earnings, if any, for use in the business. As a result, the success of an investment in our common stock will depend upon any future appreciation in its value. There is no guarantee that our common stock will appreciate in value or even maintain the price at which stockholders have purchased their shares.

Investors in this offering will experience immediate and substantial dilution and may experience further dilution in the future.

The public offering price of the shares of common stock offered hereby will exceed the net tangible book value per share of our common stock. Therefore, if you purchase shares of common stock in this offering, you will incur immediate and substantial dilution in the pro forma net tangible book value per share of common stock from the price per share that you pay for the common stock. See the section entitled "Dilution" on page S-12. In addition, as of August 7, 2017, there were 1,121,696 shares of our common stock subject to outstanding warrants and options, with exercise prices ranging from \$1.80 to \$45.10 per share, and 180,000 shares of our common stock subject to outstanding restricted stock units. Furthermore, we expect that we will seek to raise additional capital from time to time in the future. Such financings may involve the issuance of equity and/or securities convertible into or exercisable or exchangeable for our equity securities. We also expect to continue to utilize equity-based compensation. To the extent the warrants and options are exercised, the restricted stock units vest or we issue common stock, preferred stock, or securities such as warrants or notes that are convertible into, exercisable or exchangeable for, our common stock or preferred stock, in the future, you may experience further dilution.

Sales of a substantial number of shares of our common stock in the public market by existing stockholders, or the perception that they may occur, could cause our stock price to decline.

Substantially all of the currently outstanding shares of our common stock are freely tradable under federal and state securities laws or are eligible for resale without limitations pursuant to effective registration statements or available exemptions under the Securities Act of the 1933, as amended (the “Securities Act”), except for shares held by our affiliates, including our directors and officers, which may be subject to volume and other limitations. In addition, as of August 7, 2017, there were 1,121,696 shares of our common stock subject to outstanding warrants and options, with exercise prices ranging from \$1.80 to

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\$45.10 per share, and 180,000 shares of our common stock subject to outstanding restricted stock units. Furthermore, we expect that we will seek to raise additional capital from time to time in the future, which may involve the issuance of shares of common stock and/or securities convertible into or exercisable or exchangeable for our shares of common stock. Sales of substantial amounts of our common stock by us or by our stockholders, announcements of the proposed sales of substantial amounts of our common stock or the perception that substantial sales may be made, could cause the market price of our common stock to decline.

There can be no assurance that our common stock will continue to trade on the Nasdaq Capital Market or another national securities exchange.

On August 11, 2017, we received a notice from the Listing Qualifications Department of Nasdaq stating that, for the last 30 consecutive business days, the market value of the Company's MVLS had been below the minimum of \$35 million required for continued inclusion on the Capital Market under Nasdaq Listing Rule 5550(b)(2). The notification letter stated that we would be afforded 180 calendar days (until February 7, 2018) to regain compliance. In order to regain compliance, the Company's MVLS must remain at \$35 million or more for a minimum of ten consecutive business days. There can be no assurance that we will regain compliance with the MVLS continued listing standard within such time frame, or that we will remain in compliance with the other Nasdaq continued listing standards. If we are unable to regain compliance with the MVLS continued listing standard within the time frame described above, or if we cease to comply with any other continued listing standard and are unable to regain compliance within the applicable time frame, our common stock may no longer be listed on the Nasdaq Capital Market or another national securities exchange and the liquidity and market price of our common stock may be adversely affected.

## NOTE ON FORWARD-LOOKING STATEMENTS

Some of the statements contained in this prospectus supplement and incorporated by reference herein are forward-looking statements that relate to possible future events, our future performance and our future operations. In some cases, you can identify these forward-looking statements by the use of words such as “may,” “will,” “should,” “anticipates,” “believes,” “expects,” “plans,” “future,” “intends,” “could,” “estimate,” “predict,” “potential,” “continue,” or the like. These statements are only our predictions. We cannot guarantee future results, levels of activities, performance or achievements. Our actual results could differ materially from these forward-looking statements for many reasons, including the risks described from time to time in our SEC filings and those risks identified under the section entitled “Risk Factors” in this prospectus supplement and the accompanying base prospectus. Important factors, among others, that may affect our actual results include:

- Our history of losses;
- Our need for additional capital;
- The pace of technological change in our industry;
- Our ability to gain commercial acceptance of our products;
- Our ability to protect our intellectual property;
- The outcome of litigation related to our intellectual property;
- The effect of competition from other technologies;
- Our dependence on key business and sales relationships; and
- Our ability to attract and retain key executives and other highly skilled employees.

We are under no duty to update or revise any of the forward-looking statements or risk factors to conform them to actual results or to changes in our expectations.

## USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$4,363,000 from time to time. Because there is no minimum amount of shares that must be sold as a condition to closing this offering, the actual number of shares of common stock sold and net proceeds to us are not presently determinable and may be substantially less than the amounts set forth above.

We intend to use the net proceeds from the sale of the shares, if any, in this offering to fund our research and our sales and marketing activities, and for other working capital and general corporate purposes. We have not identified the amounts we will spend on any specific purpose. The amounts actually expended for any purpose may vary significantly depending upon numerous factors, including assessments of potential market opportunities and competitive developments. Pending use of the net proceeds of this offering, we intend to invest the net proceeds in accordance with our investment policy guidelines, which currently provide for investment of funds in cash equivalents, money market funds and U.S. government obligations.

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## DILUTION

If you invest in our shares, your ownership interest will be diluted to the extent of the difference between the price you paid per share of common stock in this offering and the net tangible book value per share of our common stock after this offering. Net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of common stock outstanding. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares in this offering and the net tangible book value per share of common stock immediately after the closing of this offering.

Our net tangible book value (deficit) as of June 30, 2017 was approximately \$(11.0) million, or approximately \$(0.62) per share of common stock. After giving effect to the sale of our common stock in the aggregate amount of \$4,363,000 at an assumed offering price of \$1.80 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on August 7, 2017, and after deducting commissions and other estimated offering expenses payable by us, our pro forma net tangible book value (deficit) as of June 30, 2017 would have been approximately \$(6.8) million, or \$(0.34) per share of common stock. This represents an immediate increase in net tangible book value of \$0.28 per share to existing stockholders and an immediate dilution of \$2.14 per share to new investors purchasing shares in this offering.

The following table illustrates this dilution on a per share basis:

Assumed public offering price per share in this offering	\$1.80
Net tangible book value per share as of June 30, 2017	(0.62)
Increase in net tangible book value attributable to this offering	0.28
Pro forma net tangible book value per share as of June 30, 2017, as adjusted after this offering	(0.34)
Dilution per share to new investors in this offering	\$2.14

The calculations above are based on 17,779,236 shares of common stock outstanding as June 30, 2017 and 20,203,124 shares of common stock outstanding as of June 30, 2017 after giving effect to the sale of all of the shares offered hereby. These numbers exclude 1,121,696 shares of our common stock subject to options and warrants outstanding as of June 30, 2017, with a weighted average exercise price of \$10.02 per share, and 180,000 shares of our common stock subject to restricted stock units outstanding as of June 30, 2017.

Because there is no minimum amount of shares that must be sold as a condition to closing this offering, the dilution per share to new investors may be more than that indicated above in the event that the actual number of shares sold, if any, is less than the maximum number of shares we are offering.

If we issue additional shares of our common stock in the future, including upon the exercise of outstanding options or warrants or the vesting of the restricted stock units, you may experience further dilution.



## DESCRIPTION OF COMMON STOCK

Upon consummation of the offering, assuming the sale of \$4,363,000 of our common stock in this offering at an offering price of \$1.80 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on August 7, 2017, 20,203,124 shares of common stock will be outstanding. In addition, as of August 7, 2017, there were 1,121,696 shares of our common stock subject to outstanding options and warrants, with exercise prices ranging from \$1.80 to \$45.10 per share, and 180,000 shares of our common stock subject to outstanding restricted stock units.

For a description of our common stock, please see “Description of Capital Stock” in the accompanying base prospectus.

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## PLAN OF DISTRIBUTION

We have entered into a sales agreement with FBR under which we may offer and sell shares of our common stock from time to time through FBR, acting as agent. Sales of shares of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made by any method that is deemed to be an “at the market offering” as defined in Rule 415 under the Securities Act. With our consent, FBR may also sell shares of our common stock by any other method permitted by law, including but not limited to negotiated transactions.

FBR will offer our common stock subject to the terms and conditions of the sales agreement as agreed upon by us and FBR. We will designate the number of shares which we desire to sell, the time period during which sales are requested to be made, any limitation on the number of shares that may be sold in one day and any minimum price below which sales may not be made. Subject to the terms and conditions of the sales agreement, FBR will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us. Either of FBR or we may suspend the offering of our common stock being made under the sales agreement upon proper notice to the other party.

We will pay commissions to FBR for its services in acting as agents in the sale of our common stock at a commission rate equal to 3.0% of the gross sale price per share sold. FBR may also receive customary brokerage commissions from purchases of the common stock in compliance with FINRA rule 2121. FBR may effect sales to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from FBR and/or purchasers of shares of common stock for whom they may act as agents or to whom they may sell as principal.

We estimate that our total expenses for this offering, excluding commissions payable under the sales agreement, will be approximately \$90,000. We have agreed to reimburse FBR its reasonable out-of-pocket expenses, including attorneys’ fees, in an amount not to exceed \$35,000 in the aggregate, which amount is included in our estimated total expenses for this offering.

Settlement for sales of common stock will occur on the third business day following the date on which any sales are made, or on another date that is agreed upon by us and FBR in connection with a particular transaction, in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sale of the common stock on our behalf, FBR may be deemed to be an underwriter within the meaning of the Securities Act, and the compensation may be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to FBR against certain civil liabilities, including liabilities under the Securities Act.

This offering will terminate upon the earlier of (1) the issuance and sale of all shares of our common stock covered by this prospectus supplement and (2) the termination of the sales agreement as permitted therein.

FBR and each of its affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, FBR will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus supplement. This summary of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions. A copy of the sales agreement has been filed with the SEC on a Current Report on Form 8-K.



## LEGAL MATTERS

The validity of the securities offered will be passed on for us by Graubard Miller, New York, New York. The placement agent has been represented in connection with this offering by Duane Morris LLP, Newark, New Jersey.

## EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2016 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered certified public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities that we are offering under this prospectus supplement. It is important for you to read and consider all of the information contained in the registration statement and you should refer to our registration statement and its exhibits for further information.

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. Our SEC filings are available to the public over the Internet at the SEC's web site at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about the public reference room.

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede this information. This prospectus supplement incorporates by reference our documents listed below and any future filings we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until all of the securities are sold.

- Annual Report on Form 10-K for the fiscal year ended December 31, 2016 (filed on March 30, 2017 and amended on April 28, 2017);
- Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2017 (filed on May 15, 2017) and June 30, 2017 (filed on August 14, 2017);
- Current Reports on Form 8-K dated January 19, 2017 (filed on January 20, 2017), February 27, 2017 (filed on February 27, 2017), March 13, 2017 (filed on March 13, 2017), April 27, 2017 (filed on April 28, 2017) July 13, 2017 (filed on July 13, 2017), and August 11, 2017 (filed on August 14, 2017);
- Proxy Statement dated May 26, 2017, used in connection with the annual meeting of shareholders held on July 11, 2017; and
- Form 8-A effective on November 30, 1993 and Form 8-A effective on November 22, 2005, as amended, registering our common stock and our rights to purchase our Series E Preferred Stock, respectively, under Section 12(g) of the Exchange Act.

Any statement contained in a document filed before the date of this prospectus supplement and incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained herein or therein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus

supplement. Any information that we file after the date

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of this prospectus supplement with the SEC will automatically update and supersede the information contained in this prospectus supplement. Notwithstanding the foregoing, we are not incorporating any document or portion thereof or information deemed to have been furnished and not filed in accordance with SEC rule.

We will provide you with a copy of any or all of the information that has been incorporated by reference in this prospectus, without charge, upon written or oral request directed to ParkerVision, Inc., Attention: Investor Relations, 7915 Baymeadows Way, Suite 400, Jacksonville, Florida 32256, telephone number (904) 737-1367.

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Prospectus

PARKERVISION, INC.

\$15,000,000

**COMMON STOCK, PREFERRED STOCK, WARRANTS AND DEBT SECURITIES**

By this prospectus, we will offer and sell from time to time shares of our common stock and preferred stock, warrants and debt securities at an aggregate initial offering price not to exceed \$15,000,000. The debt securities that we may offer may consist of senior debt securities or subordinated debt securities, in each case consisting of notes or other evidence of indebtedness in one or more series. The warrants that we may offer will consist of warrants to purchase any of the other securities that may be sold under this prospectus. The securities offered under this prospectus may be offered separately, together, or in separate series, and in amounts, at prices and on terms to be determined at the time of sale. We will provide the specific terms of these securities in supplements to this prospectus. You should read this prospectus and any supplements carefully before you invest.

We expect to use the net proceeds from the sale of the securities offered hereby to fund working capital, capital expenditures, acquisitions, and other general corporate purposes.

Our common stock is listed for trading on the NASDAQ Capital Market under the symbol "PRKR." On November 9, 2016, the last reported sale price of our common stock was \$3.25. As of November 9, 2016, the aggregate market value of our outstanding voting and nonvoting common equity held by non-affiliates was \$35,947,116, based on a last sale price of \$3.25 per share of our common stock and 13,100,344 outstanding shares of our common stock held by non-affiliates as of such date. As of the date hereof, excluding the securities offered hereby, none of our securities have been sold pursuant to General Instruction I.B.6 of Form S-3 during the preceding 12 months.

Investing in our securities involves a high degree of risk. See the section entitled "Risk Factors" appearing on page 9 in this prospectus and elsewhere in any supplements for a discussion of information that should be considered in connection with an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus may not be used to consummate the sale of any securities unless accompanied by a prospectus supplement relating to the securities offered.

The date of this prospectus is November 30, 2016



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You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted.

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## PROSPECTUS SUMMARY

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (“SEC”) using a “shelf” registration process. Under this shelf process, we may, from time to time, sell or issue any of the combination of securities described in this prospectus in one or more offerings with a maximum aggregate offering price of up to \$15,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement, together with the additional information described below under the heading “Where You Can Find More Information.”

You should not assume that the information appearing in this prospectus is accurate as of any date other than the date on the front cover of this prospectus. You should not assume that the information contained in the documents incorporated by reference in this prospectus is accurate as of any date other than the respective dates of those documents. Our business, financial condition, results of operations, and prospects may have changed since that date.

References in this prospectus to “ParkerVision,” “we,” “us” and “our” refer to ParkerVision, Inc., a Florida corporation.

### Company Summary

#### General

We are in the business of innovating fundamental wireless technologies. We design, develop and market our proprietary radio frequency (“RF”) technologies and products for use in wireless communication products and applications. We have expended significant financial and other resources to research and develop our RF technologies and to obtain patent protection for those technologies in the United States (“U.S.”) and certain foreign jurisdictions. We believe certain patents protecting our proprietary technologies have been broadly infringed by others and therefore our business plan includes enforcement of our intellectual property rights through patent infringement litigation and licensing efforts.

We were incorporated under the laws of the State of Florida on August 22, 1989. Our executive offices are located at 7915 Baymeadows Way, Suite 400, Jacksonville, Florida 32256. Our telephone number is (904) 732-6100.

#### Recent Developments

##### Patent License and Settlement Agreement with Samsung

On July 15, 2016, we entered into a patent license and settlement agreement with Samsung Electronics Co., Ltd. and its affiliates, or collectively “Samsung.” Under the terms of the agreement, we granted Samsung a perpetual, worldwide license to our current patent portfolio, subject to certain exclusions. We also agreed to terminate Samsung from the U.S. International Trade Commission, or “ITC,” investigation and to dismiss our claims against Samsung in two district court cases. Refer to “ITC Complaint and Other Litigation” for a further discussion of these cases.



## ITC Complaint and Other Litigation

In December 2015, we filed a complaint with the ITC, alleging that Apple, Inc., or “Apple,” LG Electronics, Inc., LG Electronics U.S.A., Inc., and LG Electronics MobileComm U.S.A., Inc., or collectively “LG,” Samsung, and Qualcomm Incorporated, or “Qualcomm,” have engaged in unfair trade practices by unlawfully importing into the U.S. and selling various products that infringe certain of our patents. The complaint requested that the ITC bar the defendants from continuing to import and sell infringing products in the U.S. In December 2015, we also filed a corresponding patent infringement complaint in the Middle District of Florida against these same defendants seeking undisclosed damages for the alleged infringement of four of our patents. In January 2016, the ITC instituted an investigation based on our complaint. Following the ITC institution decision, in February 2016, the corresponding district court case against these defendants and the ongoing district court proceeding against Qualcomm, HTC (HTC Corporation and HTC America, Inc.), and Samsung that was filed in 2014 were stayed pending the outcome of the ITC proceedings. In July 2016, we filed a motion to dismiss Samsung from the ITC action and both district court infringement cases as a result of a patent license and settlement agreement reached between the parties. The actions are still ongoing with respect to the remaining parties with a hearing scheduled for March 2017.

In June 2016, our wholly-owned German subsidiary, ParkerVision GmbH, filed a complaint against LG Electronics Deutschland GmbH, a German subsidiary of LG Electronics, seeking damages and injunctive relief for the alleged infringement of one of our European patents. A hearing in this case was held on November 10, 2016. On November 14, 2016, the court concluded that certain LG products using Qualcomm RF circuitry infringe our patent. Subject to successful completion of the co-pending nullity action pending in the German Federal Patent Court in Munich, the regional court will enjoin the sale and importation of these LG products in Germany. The nullity action is a validity only challenge and a ruling in the nullity proceeding is expected as early as the first half of 2017.

In October 2016, ParkerVision GmbH filed a complaint against Apple, Apple Distribution International and Apple Retail Germany B.V. & Co. KG seeking damages and injunctive relief for the alleged infringement of the same European patent cited in the June 2016 case against LG. A hearing has been scheduled for May 2017.

All of our current litigation, including the ITC investigation, is being funded under third-party litigation funding arrangements (see discussion below) and contingency funding relationships with legal counsel.

## Litigation Funding

In February 2016, we entered into an agreement with Brickell Key Investments LP, or “BKI,” a special purpose fund under the management of Juridica Asset Management Limited, to fund the ITC and related district court action, or the “Funded Actions.” We received \$11 million from BKI to be used primarily for payment of legal fees and expenses for the Funded Actions. Under the terms of the funding agreement, we will reimburse and compensate BKI from gross proceeds generated from our patent assets, including the Funded Actions and our other patent enforcement actions and patent monetization activities, up to an agreed minimum return. Thereafter, BKI is entitled to a prorated portion of proceeds solely from the Funded Actions and only to the extent the proceeds from Funded Actions exceed the specified minimum return.

In May, 2016, BKI exercised its right under the agreement to fund an additional \$2 million, or the “Additional Funds,” to be used to pay our legal fees and expenses in connection with specified future patent enforcement actions. The agreement was amended to provide that one-half of the



Additional Funds will be restricted for a specific use with the remainder usable by us for working capital purposes. The amendment also provides that BKI will be compensated for the Additional Funds on substantially the same terms and conditions set forth in the original agreement. The legal fees and expenses for our German complaint filed in June 2016 will be funded with the Additional Funds received from BKI.

In connection with the BKI agreement, in February 2016, we issued BKI a warrant for the purchase of up to 250,000 shares of our common stock at an exercise price of \$3.50 per share. In connection with the amendment to the agreement, on May 27, 2016, we exchanged BKI's warrant for a new warrant, or the "BKI warrant," to purchase up to 350,000 shares of our common stock at an exercise price of \$2.00 per share. The BKI warrant is exercisable for five years from the date of issuance.

We granted BKI a senior security interest in our assets until such time as the specified minimum return has been paid, at which time, the security interest will be released except with respect to the proceeds and patents specific to the Funded Actions. The security interest is enforceable by BKI in the event that we are in default under the agreement.

All of the funds received from Samsung as a result of our recent patent license and settlement agreement with them were paid to BKI as reimbursement under the funding agreement.

#### Private Placement

On July 6, 2016, we consummated the sale of 1,090,909 shares of our common stock in a private placement, or the "July private placement," at a price of \$2.75 per share, pursuant to a securities purchase agreement dated July 6, 2016 with an accredited investor. The sale of the shares generated total gross proceeds of approximately \$3.0 million. The total number of shares sold in the July private placement represented 9.3% of the issued and outstanding shares of our common stock immediately prior to the entry into the securities purchase agreement.

#### Warrant Exchange

On July 8, 2016, we entered into an agreement with 1624 PV, LLC, or "1624," for the exchange of all of the warrants held by them. 1624 agreed to exchange three common stock purchase warrants each entitling 1624 to acquire up to 188,406 shares of our common stock at exercise prices of \$15, \$25 and \$35, respectively, and expiring on January 15, 2018, for a new common stock purchase warrant entitling 1624 to acquire up to 200,000 shares of our common stock at an exercise price of \$3.25 per share and expiring on June 16, 2018. The new warrant is substantially in the form of the old warrants, except for the changes described above. As a result of the exchange, the number of shares of our common stock subject to warrants decreased by 365,218 shares.

#### Development of Our Business

Our business has been primarily focused on the development, marketing and legal enforcement of our RF technologies for mobile and other wireless products and applications. Our technologies represent among other things, unique, proprietary methods for processing RF waveforms in wireless applications. Our technologies apply to both transmit and receive functions of transmitters, receivers, and transceivers as well as other related RF communications functions. A portion of our transmit technology is marketed as Direct2Power™, or d2p™, and enables the transformation of a baseband data signal to an RF carrier waveform, at the desired RF power output level, in a single unified operation. A portion of our receiver technology is marketed as Direct2Data™, or d2d™, and enables the direct conversion of an RF carrier to a baseband data signal, as well as enabling the direct conversion of a baseband signal to a modulated RF carrier signal. This technology is also referred to as energy transfer sampling down conversion and/or





pulse-shaping up conversion. We have developed these and a number of additional innovations which are protected by the intellectual property we have secured in various patent families for RF and related functions in RF-based communications.

Prior to 2005, our business was primarily focused on our direct conversion transceiver technology. Our business plan included efforts to license the technology as well as the development and sale of retail wireless networking products that incorporated the technology. In 2005, we exited our retail business activities in order to better focus on our licensing efforts and on product and component development, manufacturing and sales. This strategy coincided with the introduction of a new family of wireless technologies, the transmit, or d2p, technology family. Our primary target market became the mobile handset industry and over the next several years we focused our marketing and sales efforts within this industry.

In 2007, we entered into a licensing and engineering services agreement with VIA Telecom, Inc., or “VIA,” a CDMA baseband provider, under the terms of which VIA had the right to manufacture devices based on our technology and pay us a per unit royalty for the license. However, the license also provided us with the right to manufacture and sell such devices ourselves to third parties. Starting in 2009, because VIA had not manufactured any royalty-producing devices under this agreement, we began working with VIA on the joint development of reference platforms that incorporated our RF products and VIA’s baseband processors without the exchange of intellectual property rights. We also worked with VIA to co-develop a sample 3G mobile handset which verified our technology in a working implementation and tested our technology’s performance. The results of these efforts were utilized to market our product to VIA’s customers. Starting in 2010, we modified our circuit layout and packaging to meet design requirements of specific VIA customers. In 2013, we entered into a formal development agreement with VIA whereby we would compensate VIA for the resources required for their development and ongoing support and maintenance of the custom interfaces between our products for a specific customer. Pursuant to the development agreement, VIA completed the custom interface for certain of its baseband processors. In 2014, we terminated our formal development agreement with VIA prior to VIA’s completion of the interface to its latest model baseband processor due to the uncertainty of the specific customer’s future use of the VIA baseband in its products. VIA subsequently sold its CDMA-based mobile assets, including its baseband processors, to Intel Corporation, or “Intel,” in 2015.

Our lack of tenure in the mobile handset industry coupled with the unique nature of our technology resulted in lengthy and intense technology evaluation and due diligence efforts by potential customers. Furthermore, in order to utilize our technology in a mobile handset application, our RF chipsets must interface with the baseband processor that generates the data to be transmitted and/or received. Although our technology is capable of interfacing with any baseband processor, the development of the interface between the baseband processor and our chipset requires a cooperative effort with the baseband provider. Accordingly, our marketing efforts were dependent on the activities of third parties. In addition, we believe our technology has been broadly infringed by other participants in our primary market thereby reducing the competitive advantage of our technologies. We believe these factors hindered our sales efforts, particularly in our primary market.

In 2011, through analysis of conference papers and tear down reports, we concluded that Qualcomm’s products were infringing our energy transfer sampling down conversion technology. Based on our belief that our technology is widely-deployed in the mobile handset market as a result of infringement of our patents, we began to more vigorously pursue an intellectual property licensing strategy which included enforcement actions. We filed our first patent infringement lawsuit against Qualcomm in July 2011, or the “Qualcomm I Action.” In 2013, a jury ruled in our favor and awarded us \$173 million in damages. In 2014, the district court overturned this jury



decision and in 2015, the appellate court upheld the district court's ruling. On March 28, 2016, the Supreme Court of the United States denied our petition requesting a review of the appellate court's decision. Despite the courts' decisions in the Qualcomm I Action, we continue to believe that certain of our technologies are broadly infringed and have wide-spread application in the industry.

We plan to continue to vigorously pursue the successful commercialization of those technologies through every means available to us. We have a patent infringement case pending against Qualcomm and HTC filed in 2014 and a third infringement case pending against Apple, LG, and Qualcomm filed in December 2015. These cases have been stayed pending the resolution of our ITC action. Samsung has been dismissed as a defendant in these cases as a result of our recent patent license and settlement agreement with them. See "Recent Developments" above.

In addition to our licensing and related enforcement efforts, we began to shift our primary target market for products. In 2013, we focused our product development efforts on internally developed component products that target markets that use less integrated RF transceivers than the mobile handset market. In 2015 and 2016, we further leveraged our investment in these components by creating a line of WiFi end user products based on these internally-developed components and technologies.

### Strategy

We have a three-part growth strategy for commercializing our innovations that includes intellectual property licensing and/or product ventures, intellectual property enforcement, and product and component development, manufacturing and sales.

- Intellectual Property Licensing and Product Ventures. In 2014, we launched a licensing/product venture campaign to explore licensing and joint product development opportunities with wireless communications companies that make, use or sell chipsets and/or products that incorporate RF. We believe there are a number of communications companies that can benefit from the use of the RF technologies we have developed, whether through a license or, in certain cases, a joint product venture that would include licensing rights. During 2014 and 2015, 3LP Advisors, LLC, or "3LP," managed our licensing operations under a licensing services agreement with us, largely on a commission basis. We terminated our agreement with 3LP effective December 31, 2015, but continue to commit both internal and external resources toward a domestic and international licensing program. In July 2016, Samsung entered into an agreement for the license of our current patent portfolio on a worldwide basis, subject to certain exclusions. See "Recent Developments."
- Intellectual Property Enforcement. We are involved in litigation against others in order to protect and defend our intellectual property rights. We are currently involved in a number of patent infringement cases in various forums against Qualcomm and certain of their customers, including Apple, HTC, and LG for the unauthorized use of certain of our patents. We recently entered into a patent license and settlement agreement with Samsung as a result of our enforcement actions. See "Recent Developments" and "General Business" above for a more complete discussion of our patent-related legal proceedings and settlement agreement.
- Product and Component Sales and Services. Our product development and marketing efforts for components are focused on our RF technologies in communications industries that do not use highly integrated semiconductors, such as infrastructure, industrial and military applications. In 2014, we established a network of sales representatives throughout the U.S. and Asia and also initiated production of component products in

order to provide inventory to support our sales efforts. Sales of these component products to date have been nominal; however a number of customers who have purchased sample products and evaluation kits have indicated that they are in the process of, or intend to, design these components into their current or next generation products. These component products, which use our patented technology, are also the basis for an end user product line that is currently under development. We also offer, from time to time, engineering design and consulting services, for negotiated fees, to assist customers in designing and/or testing various wireless products.

From 2005 to 2015, we generated no licensing revenue from our RF technologies and our product and services revenue has been nominal to date. We began recognizing licensing revenues in 2016 as a result of our recent patent license and settlement agreement with Samsung. Our ability to generate revenues sufficient to offset costs and our contingent repayment obligations is subject to our ability to successfully enforce and defend our intellectual property rights and to secure new product and/or licensing customers for our technologies and products.

We believe the investments we make in new technology innovations and obtaining intellectual property rights on those innovations are critical business processes and, as such, we have and will continue to devote substantial resources to research and development for this purpose. We protect our intellectual property rights by securing patent protection and, where necessary, defending those patents against infringement by others. We also continue to invest in the development of products incorporating our intellectual property.

#### Products and Services

Our current products include a modulator/demodulator component that incorporates our proprietary technologies, as well as a small number of supporting components that are used in the assembly of wireless devices. We also have working prototypes of a WiFi product line and have initiated market testing of these products. In addition, we offer engineering design and consulting services to third parties for negotiated fees to assist them in developing and/or testing products. As discussed above, we previously designed and produced RF chipsets that interface specifically with baseband processors produced by VIA. However, in 2014, we terminated our formal development agreement with VIA and in 2015 VIA's CDMA assets, including its baseband processors, were sold to Intel.

We anticipate our future business will include licensing of our intellectual property, the joint development and/or sale of integrated circuits based on our technology for incorporation into wireless devices designed and manufactured by our customers, and the sale of products and components developed and manufactured by us. In addition, from time to time, we may provide engineering consulting and design services to our customers, for a negotiated fee, to assist them in developing and testing prototypes and/or products incorporating our wireless technologies.

Our technology is capable of being incorporated for any of the mobile handset standards, as well as numerous other communications protocols such as WiFi, Bluetooth, Zigbee, and GPS. By pursuing both licensing and product opportunities, we believe our technologies can be deployed in multiple markets that incorporate RF transmitters, receivers, and/or transceivers, including mobile handsets, tablets, femtocells, digital television, machine-to-machine, RF identification, cable modems, satellite communication, and infrastructure, among others. In order to secure proper compensation for the unauthorized use of our technologies by others, our licensing efforts also include enforcement actions against parties in these markets who we believe have already deployed products that infringe certain of our patented technologies.

## Competitive Position

We operate in a highly competitive industry against companies with substantially greater financial, technical, and sales and marketing resources. Our technologies face competition from incumbent providers of transceivers, such as Broadcom, Fujitsu, Intel, MediaTek, NVidia, Qualcomm, STMicroelectronics, Marvell, Texas Instruments, and others, as well as incumbent providers of power amplifiers, including companies such as Anadigics, Qorvo, and Skyworks, among others. Each of our competitors, however, also has the potential of becoming a licensing or product customer for our technologies. Competition in our industry is generally based on price and technological performance.

To date, we are unaware of any competing or emerging RF technologies, other than infringing products, that provide all the simultaneous benefits that certain of our technologies enable. Our unique technologies process RF carriers in a more optimal manner than prior traditional technologies, thereby allowing the creation of handsets and other products that have extended battery life, lower operating temperatures, more easily incorporate multiple air interface standards and frequencies in smaller form factors, improve operational performance, and reduce manufacturing costs. One or more of these benefits enable some of the key features that can be found in high volume wireless products. Our technologies provide such attractive benefits, in part, because of their unique operational and/or circuit architectures. The benefits our technologies enable include highly accurate transmission and reception of RF carriers that use less power than traditional architectures and components, thereby extending battery life, reducing heat and enabling certain size, cost, performance, and packaging advantages.

We believe the most significant hurdle to the licensing and/or sale of our technologies and products is the widespread use of certain of our technologies in infringing products produced by companies with significantly greater financial, technical and sales and marketing resources. In some cases, the disruptive nature of our technologies, the required integration of our technologies with other sub-systems in semiconductor systems on-chip, and our lack of tenure in the markets we are targeting provide further hurdles to adoption. We believe we can gain adoption and/or secure licensing agreements with unauthorized current users of one or more of our technologies, and therefore compete, based on a solid and defensible patent portfolio and the advantages enabled by our unique circuit architectures. Our circuit architectures are capable of being compliant with all current mobile phone and numerous other wireless industry standards and can be configured to accept all standard baseband data interfaces with the cooperation of the baseband processor providers. In addition, we believe that one or more of our technologies' abilities to provide improved power efficiencies, highly accurate RF carrier waveforms, reduced cost, smaller form factors and better manufacturing yields, provides a sought-after solution to existing problems in applications for 3G, 4G, and next-generation mobile wireless standards, as well as in other applications that use wireless and wired RF where we believe our technologies can provide an attractive solution.

## Patents and Trademarks

We consider our intellectual property, including patents, patent applications, trademarks, and trade secrets to be significant to our competitive positioning. We have a program to file applications for and obtain patents, copyrights, and trademarks in the U.S. and in selected foreign countries where we believe filing for such protection is appropriate to establish and maintain our proprietary rights in our technology and products. As of September 30, 2016, we had 197 U.S. and 90 foreign patents related to our RF technologies. In addition, we have approximately 35 U.S. and foreign patent applications pending. We estimate the economic lives of our patents to be fifteen to twenty years and our current portfolio of issued patents have expirations ranging from 2018 to 2032.



From time to time, we obtain licenses from others for standard industry circuit designs that are integrated into our own integrated circuits as supporting components that are peripheral to our core technologies. We believe there are multiple sources for these types of standard circuits and we estimate the economic lives of the licenses to be two to five years based on estimated technological obsolescence.

#### Research and Development

For the nine months ended September 30, 2016 and the years ended December 31, 2015, 2014, and 2013 we spent approximately \$2.5 million, \$4.3 million, \$7.3 million, and \$9.3 million, respectively, on Company-sponsored research and development activities. Our research and development efforts have been, and are expected to continue to be, devoted to the development and advancement of RF technologies, including the development of prototype integrated circuits for proof of concept purposes, the development of production-ready silicon samples, reference designs and products for specific applications, and the creation of test programs for quality control testing of our chipsets and/or products.

#### Employees

As of September 30, 2016, we had 22 full-time and 3 part-time employees, of which 13 are employed in engineering research and development and 12 are employed in executive management, sales, marketing, finance, and administration. Our employees are not represented by a labor union. We consider our employee relations satisfactory.



## RISK FACTORS

You should carefully consider the risks and uncertainties described below and other information included in our filings with the SEC which are incorporated herein by reference. The risks and uncertainties described below are not the only ones facing us. Additional risks not presently known to us or that we currently believe are immaterial may also impair our business operations. Our business, financial condition or results of operation could be materially adversely affected by any of these risks. The trading price of our common stock could decline because of any one of these risks, and you may lose all or part of your investment.

Our financial condition raises substantial doubt as to our ability to continue as a going concern.

Our independent registered certified public accounting firm has included in their audit opinion on our financial statements as of and for the year ended December 31, 2015 a statement with respect to substantial doubt regarding our ability to continue as a going concern. Our financial statements have been prepared assuming we will continue to operate as a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. If we become unable to continue as a going concern, we may have to liquidate our assets and the values we receive for our assets in liquidation or dissolution could be significantly lower than the values reflected in our financial statements. The substantial doubt as to our ability to continue as a going concern may adversely affect our ability to negotiate reasonable terms with our suppliers and may adversely affect our ability to raise additional capital in the future.

We have had a history of losses which may ultimately compromise our ability to implement our business plan and continue in operation.

We have had losses in each year since our inception in 1989, and continue to have an accumulated deficit which, at September 30, 2016, was approximately \$346.5 million. Our net losses for the nine months ended Sept 30, 2016 and for the year ended December 31, 2015 were approximately \$15.8 million and \$17.1 million, respectively. To date, our technologies and products have not produced revenues sufficient to cover operating, research and development and overhead costs. We will continue to make expenditures on patent protection and enforcement, research and development, marketing, and general operations in order to secure and fulfill any contracts that we achieve for the sale of our products or technologies. Our revenues in 2016 will not bring us to profitability and our current capital resources may not be sufficient to sustain our operations through 2016. If we are not able to generate sufficient revenues or obtain sufficient capital resources, we will not be able to implement our business plan and investors will suffer a loss in their investment. This may also result in a change in our business strategies.

We expect to need additional capital in the future. Failure to raise such additional capital may prevent us from implementing our business plan as currently formulated.

Because we have had net losses and, to date, have not generated positive cash flow from operations, we have funded our operating losses from the sale of equity securities from time to time and from loans from a litigation funding party. We anticipate that our business plan will continue to require significant expenditures for patent protection, research and development, marketing, and general operations. Furthermore, we expect that the implementation of significant cost reduction measures in order to reduce our cash needs may jeopardize our operations and future growth plans. Our current unrestricted capital resources include cash and available-for-sale securities of \$1.1 million at September 30, 2016. We received \$10 million in February 2016 and an additional \$1 million in May 2016 under a litigation funding arrangement; however, these funds are for specified use in patent enforcement actions initiated in December 2015 and June 2016. Furthermore, our funding party is entitled to priority reimbursement and compensation



from any litigation settlements, licenses and other patent-related proceeds. Without the generation of sufficient revenues and/or the receipt of proceeds sufficient to reimburse our litigation funder, our current capital resources will not be sufficient to meet our working capital needs for 2016, and we may require additional capital to fund our operations. Financing, if any, may be in the form of additional litigation funding arrangements or additional sales of equity securities, including common or preferred stock. Additional litigation funding arrangements will result in further reductions in the amount of net proceeds from litigation and/or licensing activities retained by us. The sale of preferred stock may result in the imposition of operational limitations and other covenants and payment obligations, any of which may be burdensome to us. The sale of equity securities, including common or preferred stock, may result in dilution to the current shareholders' ownership. The long-term continuation of our business plan is dependent upon the generation of sufficient revenues from patent enforcement actions or the sale or license of our products or technologies, additional funding, reducing expenses or a combination of the foregoing. The failure to generate sufficient revenues, raise capital or reduce expenses will have a material adverse effect on our ability to achieve our long-term business objectives.

If our patents and intellectual property rights do not provide us with the anticipated market protections, our competitive position, business, and prospects will be impaired.

We rely on our intellectual property rights, including patents and patent applications, to provide competitive advantage and protect us from theft of our intellectual property. We believe that our patents are for entirely new technologies and that our patents are valid, enforceable and valuable. However, third parties have made claims of invalidity with respect to certain of our patents and other similar claims may be brought in the future. For example, in the Qualcomm I Action, the appellate court ruled that ten of eleven patent claims that were subject of our Qualcomm I Action were invalid. If our patents are shown not to be as broad as currently believed, or are otherwise challenged such that some or all of the protection is lost, we will suffer adverse effects from the loss of competitive advantage and our ability to offer unique products and technologies. As a result, there would be an adverse impact on our financial condition and business prospects. Furthermore, defending against challenges to our patents may give rise to material costs for defense and divert resources away from our other activities.

Our litigation can be time-consuming, costly and we cannot anticipate the results.

Since 2011, we have spent a significant amount of our financial and management resources to pursue patent infringement litigation against third parties. We believe this litigation, and others that we may in the future determine to pursue, could continue to consume management and financial resources for long periods of time. There can be no assurance that our current or future litigation matters will ultimately result in a favorable outcome for us. In addition, even if we obtain favorable interim rulings or verdicts in particular litigation matters, they may not be predictive of the ultimate resolution of the matter. Unfavorable outcomes could result in exhaustion of our financial resources and could otherwise hinder our ability to pursue licensing and/or product opportunities for our technologies which would have a material adverse impact on our financial condition, results of operations, cash flows, and business prospects. We have contingent fee arrangements in place with others to reduce our litigation related expenditures; however any litigation-based, or other patent related, amounts collected by us will be subject to contingency payments to our legal counsel and other funding parties which will reduce the amount retained by us.

We are subject to outside influences beyond our control, including new legislation that could adversely affect our licensing and enforcement activities and have an adverse impact on the execution of our business plan.



Our licensing and enforcement activities are subject to numerous risks from outside influences, including new legislation, regulations and rules related to obtaining or enforcing patents. For instance, the U.S. recently enacted sweeping changes to the U.S. patent system including changes that transition the U.S. from a “first-to-invent” to a “first to file” system and that alter the processes for challenging issued patents. To the extent that we are unable to secure patent protection for our future technologies and/or our current patents are challenged such that some or all of our protection is lost, we will suffer adverse effects to our ability to offer unique products and technologies. As a result, there would be an adverse impact on our financial position, results of operations and cash flows and our ability to execute our business plan.

Our industry is subject to rapid technological changes which if we are unable to match or surpass, will result in a loss of competitive advantage and market opportunity.

Because of the rapid technological development that regularly occurs in the wireless technology industry, we must continually devote substantial resources to developing and improving our technology and introducing new product offerings. For example, in the nine months ended September 30, 2016 and in the fiscal years 2015 and 2014, we spent approximately \$2.5 million, \$4.3 million and \$7.3 million, respectively, on research and development and, we expect to continue to spend a significant amount in this area in the future. These efforts and expenditures are necessary to establish market share and, ultimately, to generate revenues. If another company offers better products or technologies, a competitive position or market window opportunity may be lost, and therefore our revenues or revenue potential may be adversely affected.

If our technologies and/or products are not commercially accepted, our developmental investment will be lost and our ability to do business will be impaired.

There can be no assurance that our research and development will produce commercially viable technologies and products, or that our technologies and products will be established in the market as improvements over current competitive offerings. If our existing or new technologies and products are not commercially accepted, the funds expended will not be recoverable, and our competitive and financial position will be adversely affected. In addition, perception of our business prospects will be impaired with an adverse impact on our ability to do business and to attract capital and employees.

Our business is highly reliant on our business relationships with baseband suppliers for support of the interface of their product to our technology and the support of our sales and marketing efforts to their customers, the failure of which will have an adverse impact on our business.

The successful commercialization of our products will be impacted, in part, by factors outside of our control including the success and timing of product development and sales support activities of the suppliers of baseband processors with which our products interface. Delays in or failure of a baseband supplier’s product development or sales support activities, such as occurred in the case of our relationship with VIA, will hinder the commercialization of our products which will have an adverse impact on our ability to generate revenues and recover development expenses.

We rely, in large part, on key business and sales relationships for the successful commercialization of our products, which if not developed or maintained, will have an adverse impact on achieving market awareness and acceptance and will result in a loss of business opportunity.

To achieve a wide market awareness and acceptance of our products and technologies, as part of our business strategy, we will attempt to enter into a variety of business relationships with



other companies which will incorporate our technologies into their products and/or market products based on our technologies. The successful commercialization of our products and technologies will depend in part on our ability to meet obligations under contracts with respect to the products and related development requirements. The failure to develop or maintain these business relationships will limit the commercialization of our products and technologies which will have an adverse impact on our business development and our ability to generate revenues and recover development expenses.

We are highly dependent on Mr. Jeffrey Parker as our chief executive officer. If his services were lost, it would have an adverse impact on the execution of our business plan.

Because of Mr. Parker's leadership position in the company and the respect he has garnered in both the industry in which we operate and the investment community, the loss of his services might be seen as an impediment to the execution of our business plan. If Mr. Parker was no longer available to the company, investors might experience an adverse impact on their investment. We currently have an employment agreement and maintain key-employee life insurance for our benefit for Mr. Parker.

If we are unable to attract or retain key executives and other highly skilled employees, we will not be able to execute our current business plans.

Our business is very specialized, and therefore it is dependent on having skilled and specialized key executives and other employees to conduct our research, development and customer support activities. The inability to obtain or retain these key executives and other specialized employees would have an adverse impact on the research, development and technical customer support activities that our products require. These activities are instrumental to the successful execution of our business plan.

Our outstanding options, warrants, and restricted share units may affect the market price and liquidity of the common stock.

At September 30, 2016, we had 13,100,344 shares of common stock outstanding and had 1,350,846 options, warrants, and restricted share units outstanding for the purchase and/or issuance of additional shares of common stock. Of these outstanding equity instruments, 959,396 were exercisable as of September 30, 2016. All of the shares of common stock underlying these securities are registered for sale to the holder or for public resale by the holder. The amount of common stock available for the sales may have an adverse impact on our ability to raise capital and may affect the price and liquidity of the common stock in the public market. In addition, the issuance of these shares of common stock will have a dilutive effect on current shareholders' ownership.

The price of our common stock may be subject to substantial volatility.

The trading price of our common stock has been and may continue to be volatile. Between September 30, 2014 and September 30, 2016 (after giving effect to the one-for-ten reverse stock split completed on March 29, 2016), the reported high and low sales prices for our common stock ranged between \$1.50 and \$13.30 per share. The price of our common stock may continue to be volatile as a result of a number of factors, some of which are beyond our control. These factors include, but are not limited to, developments in outstanding litigations, our performance and prospects, general conditions of the markets in which we compete, and economic and financial conditions. Such volatility could materially and adversely affect the market price of our common stock in future periods.





There can be no assurance that we will be able to maintain compliance with the listing standards for trading on the NASDAQ Capital Market or another national securities exchange.

From April 21, 2015 to April 15, 2016, we were not in compliance with the NASDAQ minimum bid price requirement of \$1. While we were able to regain compliance with this requirement, there can be no assurance that we will be able to continue maintain such compliance, or that we will be able to maintain compliance with NASDAQ's other continued listing standards. If we are unable to maintain compliance, our common stock may no longer be listed on NASDAQ or another national securities exchange and the liquidity and market price of our common stock may be adversely affected.

We do not currently pay dividends on our common stock and thus stockholders must look to appreciation of our common stock to realize a gain on their investments.

We do not currently pay dividends on our common stock and intend to retain our cash and future earnings, if any, to fund our business plan. Our future dividend policy is within the discretion of our board of directors and will depend upon various factors, including our business, financial condition, results of operations and capital requirements. We therefore cannot offer any assurance that our board of directors will determine to pay special or regular dividends in the future. Accordingly, unless our board of directors determines to pay dividends, stockholders will be required to look to appreciation of our common stock to realize a gain on their investment. There can be no assurance that this appreciation will occur.

Provisions in our certificate of incorporation and by-laws could have effects that conflict with the interest of shareholders.

Some provisions in our certificate of incorporation and by-laws could make it more difficult for a third party to acquire control of us. For example, our board of directors is divided into three classes with directors having staggered terms of office, our board of directors has the ability to issue preferred stock without shareholder approval, and there are advance notification provisions for director nominations and submissions of proposals from shareholders to a vote by all the shareholders under the by-laws. Florida law also has anti-takeover provisions in its corporate statute.

We have a shareholder protection rights plan that may delay or discourage someone from making an offer to purchase the company without prior consultation with the board of directors and management, which may conflict with the interests of some of the shareholders.

On November 17, 2005, as amended on November 20, 2015, our board of directors adopted a shareholder protection rights plan which called for the issuance, on November 29, 2005, as a dividend, of rights to acquire fractional shares of preferred stock. The rights are attached to the shares of common stock and transfer with them. In the future the rights may become exchangeable for shares of preferred stock with various provisions that may discourage a takeover bid. Additionally, the rights have what are known as "flip-in" and "flip-over" provisions that could make any acquisition of the company more costly. The principal objective of the plan is to cause someone interested in acquiring the company to negotiate with the board of directors rather than launch an unsolicited bid. This plan may limit, prevent, or discourage a takeover offer that some shareholders may find more advantageous than a negotiated transaction. A negotiated transaction may not be in the best interests of the shareholders.

## NOTE ON FORWARD-LOOKING STATEMENTS

Some of the statements contained in this prospectus and incorporated by reference herein are forward-looking statements that relate to possible future events, our future performance and our future operations. In some cases, you can identify these forward-looking statements by the use of words such as “may,” “will,” “should,” “anticipates,” “believes,” “expects,” “plans,” “future,” “intends,” “could,” “estimate,” “predict,” “potential,” “continue,” or the negative of these terms or similar expressions. Examples of forward-looking statements include, among others, statements we make regarding: expected operating results; anticipated levels of capital expenditures; product development and commercialization; litigation; and strategies for risk management, intellectual property protection and capturing intellectual property value.

These statements are only our predictions. We cannot guarantee future results, levels of activities, performance or achievements. Our actual results could differ materially from these forward-looking statements for many reasons, including as a result of the risks described from time to time in our SEC filings and those risks identified under sections entitled “Risk Factors” in any prospectus supplement. Important factors, among others, that may affect our actual results include:

- our history of losses;
- our need for additional capital;
- the pace of technological change in our industry;
- our ability to gain commercial acceptance of our products;
- our ability to protect our intellectual property;
- the outcome of litigation related to our intellectual property;
- the effect of competition from other technologies;
- our reliance on baseband suppliers in commercializing our products;
- our dependence on key business and sales relationships; and
- our ability to attract and retain key executives and other highly skilled employees.

We are under no duty to update or revise any of the forward-looking statements or risk factors to conform them to actual results or to changes in our expectations.

## USE OF PROCEEDS

Unless otherwise indicated in the applicable prospectus supplement, the net proceeds from the sale of the securities offered hereby will be used to fund working capital, capital expenditures, acquisitions, and other general corporate purposes.

## RATIO OF EARNINGS TO FIXED CHARGES

Our deficiency (excess) of earnings to fixed charges for the indicated periods are set forth below. The information set forth below should be read in conjunction with the financial information incorporated by reference herein.

(Amounts in thousands of dollars)

	For the Nine Months Ended September 30, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014	For the Year Ended December 31, 2013	For the Year Ended December 31, 2012	For the Year Ended December 31, 2011
Ratio of earnings to fixed charges (A)	-	-	-	-	-	-
Deficiency of earnings to fixed charges	\$15,178	\$17,075	\$23,569	\$27,872	\$20,322	\$14,573

(A) Due to our losses from continuing operations, the ratio coverage is less than 1:1.

This table sets forth our ratio of earnings to fixed charges on a historical basis for the periods indicated. The ratios are calculated by dividing earnings by fixed charges. For the purposes of computing the ratio of earnings to fixed charges, earnings consist of pretax losses from continuing operations plus fixed charges. Fixed charges consist of interest expense and an estimate of interest inherent in rental expense.

We had no shares of preferred stock outstanding for any period presented. As a result, the ratio of earnings to combined fixed charges and preferred stock dividends is the same as the ratio of earnings to fixed charges.

## DESCRIPTION OF CAPITAL STOCK

The following description of our common stock and our preferred stock is a summary. You should refer to our certificate of incorporation and our bylaws for the actual terms of our capital stock.

## Common Stock

We are authorized to issue up to 20,000,000 shares of common stock, \$0.01 par value per share. As of November 9, 2016, there were 13,100,344 shares of our common stock outstanding. Holders of our common stock are entitled to one vote per share on all matters submitted to a vote of stockholders and may not cumulate votes for the election of directors. Common stockholders have the right to receive dividends when, as, and if declared by the board of directors from funds legally available therefore. Holders of common stock have no preemptive rights and have no rights to convert their common stock into any other securities. Our common stock is subject to the express terms of our preferred stock and any series thereof.



## Preferred Stock

We are authorized to issue up to 15,000,000 shares of preferred stock, \$1.00 par value per share. As of November 9, 2016, there were no preferred shares issued or outstanding. The shares of preferred stock have such rights and preferences as our board of directors shall determine, from time to time. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisition and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or discourage a third party from acquiring, a majority of our outstanding common stock. Our board of directors may issue preferred stock with voting and conversion rights that could adversely affect the voting power of the holders of our common stock or holders of other series of preferred stock.

If we offer a series of preferred stock, we will describe the specific terms of that series in a prospectus supplement, including:

- the title of the series of preferred stock and the number of shares offered;
- the price at which the preferred stock will be issued;
  - the dividend rate, if any, the dates on which the dividends will be payable and other terms relating to the payment of dividends on the preferred stock;
- the voting rights of the preferred stock;
- whether the preferred stock is redeemable or subject to a sinking fund, and the terms of any such redemption or sinking fund;
- whether the preferred stock is convertible into any other securities, and the terms and conditions of any such conversion;
- the liquidation preference of the preferred stock; and
- any additional rights, preferences and limitations of the preferred stock.

The description of the terms of a series of preferred stock to be set forth in an applicable prospectus supplement will not be complete and will be subject to and qualified in its entirety by reference to the certificate of designation relating to that series of preferred stock. The registration statement of which this prospectus forms a part will include the certificate of designation as an exhibit or as a document incorporated by reference.

Any preferred stock will, when issued, be fully paid and non-assessable.

## Series E Preferred Stock

On November 17, 2005, the board of directors designated 100,000 shares of authorized preferred stock as the Series E Preferred Stock in conjunction with its adoption of a Shareholder Protection Rights Plan (as described below). As of November 9, 2016, there were no shares of this series issued and outstanding. The following description of the Series E Preferred Stock, and any description of this series included in a prospectus supplement, may not be complete and is subject to and qualified in its entirety by reference to the certificate of designations, which was filed with the SEC on November 22, 2005 as Exhibit 4.02 to a Current Report on Form 8-K.

Certain rights of this series of preferred stock are defined in terms of a “Reference Package.” The “Reference Package” is initially 1,000 shares of common stock, as adjusted for stock dividends, subdivisions and combinations.

The holders of full or fractional shares of this series are entitled to receive dividends, when and as declared by the board of directors, on each date that dividends or other distributions (other than dividends or distributions payable in our common stock) are payable on or in respect of common



stock comprising part of the Reference Package, in an amount per whole share of this series equal to the aggregate amount of dividends or other distributions that would be payable on such date to a holder of the Reference Package. In addition, on the last day of March, June, September and December in each year, the holders of this series are entitled to receive dividends in an amount per whole share of this series equal to the excess (if any) of \$100 over the aggregate dividends paid per whole share of this series during the three-month period ending on such last day. Dividends on each full and each fractional share of this series are cumulative from the date such full or fractional share is originally issued.

In the event of any liquidation, dissolution or winding up of our affairs, whether voluntary or involuntary, the holders of full and fractional shares of this series shall be entitled, before any distribution or payment is made on any date to the holders of the common stock or any other stock of ours ranking junior to this series upon liquidation, to be paid in full an amount per whole share of this series equal to the greater of \$100 or the aggregate amount distributed or to be distributed in connection with such liquidation, dissolution or winding up to a holder of the Reference Package, together with accrued dividends to such distribution or payment date, whether or not earned or declared.

This series shall rank junior to all other series or classes of our preferred stock, now existing or hereafter created, as to payment of dividends and the distribution of assets, unless the terms of any such other series or class shall provide otherwise.

Each whole share of this series shall, on any matter, vote as a class with any other capital stock comprising part of the Reference Package and voting on such matter and shall have the number of votes thereon that a holder of the Reference Package would have.

#### Shareholder Protection Rights Plan

We have a Shareholder Protection Rights Agreement (“Rights Agreement”), originally adopted on November 21, 2005 and amended on November 20, 2015, pursuant to which we issued, on November 29, 2005, as a dividend, one right to acquire a fraction of a share of Series E Preferred Stock for each then outstanding share of common stock. Each share of common stock issued by us after such date also has included, and any subsequent shares of common stock issued by us prior to the Separation Time (as defined in the Rights Agreement) will include, an attached right. The following description of the Rights Agreement, and any description of the Rights Agreement included in a prospectus supplement, may not be complete and is subject to and qualified in its entirety by reference to the terms and provisions of the Rights Agreement, which was filed with the SEC on November 22, 2005 as Exhibit 4.01 to a Current Report on Form 8-K.

The principal objective of the Rights Agreement is to cause someone interested in acquiring us to negotiate with our board of directors rather than launch an unsolicited or hostile bid. The Rights Agreement subjects a potential acquirer to substantial voting and economic dilution.

The rights initially are not exercisable and trade with our common stock. In the future, the rights may become exercisable with various provisions that may discourage a takeover bid. If a potential acquirer initiates a takeover bid or becomes the beneficial owner of 15% or more of our common stock, the rights will separate from the common stock. Upon separation, the holders of the rights may exercise their rights at an exercise price of \$14.50 per right (the “Exercise Price”), subject to adjustment and payable in cash. Additionally, the rights have what are known as “flip-in” and “flip-over” provisions that could make any acquisition of us more costly to the potential acquirer. The “flip-in” provision provides that, in the event a potential acquirer acquires 15% or more of the outstanding shares of our common stock, upon payment of the exercise price, the holders of the rights will receive from us that number of shares of common stock having an aggregate market price equal to twice the Exercise Price, as adjusted. The “flip-over” provision





allows the holder to purchase that number of shares of common/voting equity of a successor entity, if we are not the surviving corporation in a business combination, with an aggregate market price equal to twice the Exercise Price.

We have the right to substitute for any of our shares of common stock that we are obligated to issue, shares of Series E Preferred Stock at a ratio of one thousandth of a share of Series E Preferred Stock for each share of common stock.

The rights may be redeemed upon approval of the board of directors at a redemption price of \$0.01. The Rights Agreement expires on November 20, 2020.

#### Classified Board; Director Nominations; Special Meetings

Our board of directors is divided into three classes, with only one class of directors elected at each annual meeting, and our shareholders may remove our directors only for cause. Nominations for our board of directors may be made by our board or by any holder of common stock. A shareholder entitled to vote for the election of directors may nominate a person for election as director only if the shareholder provides written notice of his nomination to our secretary not later than 120 days in advance of the same day and month that our proxy statement was released to shareholders in connection with the previous year's annual meeting of shareholders or, if no annual meeting was held in the previous year, then by the end of the fiscal year to which the annual meeting in which the nomination will be made relates. A special meeting of our shareholders may be called only by our board of directors or our chief executive officer. These provisions and the board of directors' right to issue shares of our preferred stock from time to time, in one or more classes or series without stockholder approval, are intended to enhance the likelihood of continuity and stability in the composition of the policies formulated by our board of directors. These provisions are also intended to discourage some tactics that may be used in proxy fights.

#### Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, 6201 15th Avenue, Brooklyn, NY 11219, and can be reached at (800) 937-5449. The transfer agent and registrar for any series of preferred stock will be set forth in the applicable prospectus supplement.

#### DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of preferred stock, common stock or debt securities, or any combination of these securities. Warrants may be issued independently or together with other securities and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between a warrant agent and us. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. The following outlines some of the general terms and provisions of the warrants that we may issue from time to time. Additional terms of the warrants and the applicable warrant agreement will be set forth in the applicable prospectus supplement. The following description, and any description of the warrants included in a prospectus supplement, may not be complete and is subject to and qualified in its entirety by reference to the terms and provisions of the applicable warrant agreement, which we will file with the SEC in connection with any offering of warrants.

## Debt Warrants

The prospectus supplement relating to a particular issue of warrants exercisable for debt securities will describe the terms of those warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of the warrants;
- the designation and terms of the debt securities purchasable upon exercise of the warrants;
- if applicable, the designation and terms of the securities that the warrants are issued with and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the principal amount and price of debt securities that may be purchased upon exercise of a warrant;
- the dates on which the right to exercise the warrants commence and expire;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- whether the warrants represented by the warrant certificates or debt securities that may be issued upon exercise of the warrants will be issued in registered or bearer form;
- information relating to book-entry procedures, if any;
- if applicable, a discussion of material U.S. federal income tax considerations;
- anti-dilution provisions of the warrants, if any;
- redemption or call provisions, if any, applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

## Stock Warrants

The prospectus supplement relating to a particular issue of warrants exercisable for common stock or preferred stock will describe the terms of the common stock warrants and preferred stock warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of the warrants;
- the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the securities that the warrants are issued with and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;

- the number of shares and price of common stock or preferred stock that may be purchased upon exercise of a warrant;
- the dates on which the right to exercise the warrants commence and expire;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- if applicable, a discussion of material U.S. federal income tax considerations;
- anti-dilution provisions of the warrants, if any;
- redemption or call provisions, if any, applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

#### Exercise of Warrants

Each warrant will entitle the holder of the warrant to purchase at the exercise price set forth in the applicable prospectus supplement the principal amount of debt securities or shares of common stock or preferred stock being offered. Holders may exercise warrants at any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will be void. Holders may exercise warrants as set forth in the prospectus supplement relating to the warrants being offered.

Until a holder exercises the warrants to purchase any securities underlying the warrants, the holder will not have any rights as a holder of the underlying securities by virtue of ownership of warrants.

#### DESCRIPTION OF DEBT SECURITIES

We may offer any combination of senior debt securities or subordinated debt securities. We may issue the senior debt securities and the subordinated debt securities under separate indentures between us, as issuer, and the trustee or trustees identified in a prospectus supplement. Further information regarding the trustee may be provided in the prospectus supplement. The form for each type of indenture is filed as an exhibit to the registration statement of which this prospectus is a part.

The prospectus supplement will describe the particular terms of any debt securities we may offer and may supplement the terms summarized below. The following summaries of the debt securities and the indentures are not complete. We urge you to read the indentures filed as exhibits to the registration statement that includes this prospectus and the description of the additional terms of the debt securities included in the prospectus supplement.

#### General

Within the total dollar amount of this shelf registration statement, we may issue an unlimited principal amount of debt securities in separate series. We may specify a maximum aggregate principal amount for the debt securities of any series. The debt securities will have terms that are consistent with the indentures. Senior debt securities will be unsubordinated obligations and will rank equal with all our other unsubordinated debt. Subordinated debt securities will be paid only if all payments due under our senior indebtedness, including any outstanding senior debt securities, have been made.

The indentures might not limit the amount of other debt that we may incur or whether that debt is senior to the debt securities offered by this prospectus, and might not contain financial or similar



restrictive covenants. The indentures might not contain any provision to protect holders of debt securities against a sudden or dramatic decline in our ability to pay our debt.

The prospectus supplement will describe the debt securities and the price or prices at which we will offer the debt securities. The description will include:

- the title and form of the debt securities;
- any limit on the aggregate principal amount of the debt securities or the series of which they are a part;
- the date or dates on which we must repay the principal, the maturity date and the principal amount due at maturity and whether the securities will be offered at a price such that they will be deemed an “original issue discount”;
- the person to whom any interest on a debt security of the series will be paid;
- the rate or rates at which the debt securities will bear interest;
- if any, the date or dates from which interest will accrue, and the dates on which we must pay interest;
- the place or places where we must pay the principal and any premium or interest on the debt securities;
- the terms and conditions on which we may redeem any debt security, if at all;
- any obligation to redeem or purchase any debt securities, and the terms and conditions on which we must do so;
- the denominations in which we may issue the debt securities;
- the currency in which we will pay the principal of and any premium or interest on the debt securities and whether we may pay in property other than cash, including our securities;
- the principal amount of the debt securities that we will pay upon declaration of acceleration of their maturity;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- if applicable, that the debt securities are defeasible and the terms of such defeasance;
- if applicable, the terms of any right to convert debt securities into, or exchange debt securities for, shares of our debt securities, preferred stock or common stock or other securities or property;
- whether we will issue the debt securities in the form of one or more global securities and, if so, the respective depositaries for the global securities and the terms of the global securities;
- the subordination provisions that will apply to any subordinated debt securities;
- any addition to or change in the events of default applicable to the debt securities and any change in the right of the trustee or the holders to declare the principal amount of any of the debt securities due and payable;
- any addition to or change in the covenants in the indentures; and

· any other terms of the debt securities not inconsistent with the applicable indentures.

We may sell the debt securities at a substantial discount below their stated principal amount. We will describe U.S. federal income tax considerations, if any, applicable to debt securities sold at an original issue discount in the prospectus supplement. An “original issue discount security” is any debt security sold for less than its face value, and which provides that the holder cannot receive the full face value if maturity is accelerated. The prospectus supplement relating to any original issue discount securities will describe the particular provisions relating to acceleration of the maturity upon the occurrence of an event of default. In addition, we will describe U.S. federal income tax or other considerations applicable to any debt securities that are denominated in a currency or unit other than U.S. dollars in the prospectus supplement.

#### Conversion and Exchange Rights

The prospectus supplement will describe, if applicable, the terms on which you may convert debt securities into or exchange them for debt securities, preferred stock and common stock or other securities or property. The conversion or exchange may be mandatory or may be at our option or at your option. The prospectus supplement will describe how the amount of debt securities, number of shares of preferred stock and common stock or other securities or property to be received upon conversion or exchange would be calculated.

#### Subordination of Subordinated Debt Securities

The indebtedness underlying any subordinated debt securities will be payable only if all payments due under our senior indebtedness, as defined in the applicable indenture and any indenture supplement, including any outstanding senior debt securities, have been made. If we distribute our assets to creditors upon any dissolution, winding-up, liquidation or reorganization or in bankruptcy, insolvency, receivership or similar proceedings, we must first pay all amounts due or to become due on all senior indebtedness before we pay the principal of, or any premium or interest on, the subordinated debt securities. In the event the subordinated debt securities are accelerated because of an event of default, we may not make any payment on the subordinated debt securities until we have paid all senior indebtedness or the acceleration is rescinded. If the payment of subordinated debt securities accelerates because of an event of default, we must promptly notify holders of senior indebtedness of the acceleration.

If we experience a bankruptcy, dissolution or reorganization, holders of senior indebtedness may receive more, ratably, and holders of subordinated debt securities may receive less, ratably, than our other creditors. The indenture for subordinated debt securities may not limit our ability to incur additional senior indebtedness.

#### Form, Exchange and Transfer

We will issue debt securities only in fully registered form, without coupons, and only in denominations of \$1,000 and integral multiples thereof, unless the prospectus supplement provides otherwise. The holder of a debt security may elect, subject to the terms of the indentures and the limitations applicable to global securities, to exchange them for other debt securities of the same series of any authorized denomination and of similar terms and aggregate principal amount.

Holders of debt securities may present them for exchange as provided above or for registration of transfer, duly endorsed or with the form of transfer duly executed, at the office of the transfer agent we designate for that purpose. We will not impose a service charge for any registration of transfer or exchange of debt securities, but we may require a payment sufficient to cover any tax or other governmental charge payable in connection with the transfer or exchange. We will name the transfer agent in the prospectus supplement. We may designate additional transfer agents or



rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, but we must maintain a transfer agent in each place where we will make payment on debt securities.

If we redeem the debt securities, we will not be required to issue, register the transfer of or exchange any debt security during a specified period prior to mailing a notice of redemption. We are not required to register the transfer of or exchange of any debt security selected for redemption, except the unredeemed portion of the debt security being redeemed.

#### Global Securities

The debt securities may be represented, in whole or in part, by one or more global securities that will have an aggregate principal amount equal to that of all debt securities of that series. Each global security will be registered in the name of a depositary identified in the prospectus supplement. We will deposit the global security with the depositary or a custodian, and the global security will bear a legend regarding the restrictions on exchanges and registration of transfer.

No global security may be exchanged in whole or in part for debt securities registered, and no transfer of a global security in whole or in part may be registered, in the name of any person other than the depositary or any nominee or successor of the depositary unless:

- the depositary is unwilling or unable to continue as depositary; or
- the depositary is no longer in good standing under the Exchange Act or other applicable statute or regulation.

The depositary will determine how all securities issued in exchange for a global security will be registered.

As long as the depositary or its nominee is the registered holder of a global security, we will consider the depositary or the nominee to be the sole owner and holder of the global security and the underlying debt securities. Except as stated above, owners of beneficial interests in a global security will not be entitled to have the global security or any debt security registered in their names, will not receive physical delivery of certificated debt securities and will not be considered to be the owners or holders of the global security or underlying debt securities. We will make all payments of principal, premium and interest on a global security to the depositary or its nominee. The laws of some jurisdictions require that some purchasers of securities take physical delivery of such securities in definitive form. These laws may prevent you from transferring your beneficial interests in a global security.

Only institutions that have accounts with the depositary or its nominee and persons that hold beneficial interests through the depositary or its nominee may own beneficial interests in a global security. The depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants. Ownership of beneficial interests in a global security will be shown only on, and the transfer of those ownership interests will be effected only through, records maintained by the depositary or any such participant.

The policies and procedures of the depositary may govern payments, transfers, exchanges and other matters relating to beneficial interests in a global security. We and the trustee will assume no responsibility or liability for any aspect of the depositary's or any participant's records relating to, or for payments made on account of, beneficial interests in a global security.

#### Payment and Paying Agents

We will pay principal and any premium or interest on a debt security to the person in whose name the debt security is registered at the close of business on the regular record date for such interest.





We will pay principal and any premium or interest on the debt securities at the office of our designated paying agent. Unless the prospectus supplement indicates otherwise, the corporate trust office of the trustee will be the paying agent for the debt securities.

Any other paying agents we designate for the debt securities of a particular series will be named in the prospectus supplement. We may designate additional paying agents, rescind the designation of any paying agent or approve a change in the office through which any paying agent acts, but we must maintain a paying agent in each place of payment for the debt securities.

The paying agent will return to us all money we pay to it for the payment of the principal, premium or interest on any debt security that remains unclaimed for a specified period. Thereafter, the holder may look only to us for payment, as an unsecured general creditor.

#### Consolidation, Merger and Sale of Assets

Under the terms of the indentures, so long as any securities remain outstanding, we may not consolidate or enter into a share exchange with or merge into any other person, in a transaction in which we are not the surviving corporation, or sell, convey, transfer or lease our properties and assets substantially as an entirety to any person, unless:

- the successor assumes our obligations under the debt securities and the indentures; and
- we meet the other conditions described in the indentures.

#### Events of Default

Each of the following will constitute an event of default under each indenture:

- failure to pay any interest on any debt security when due, for more than a specified number of days past the due date;
- failure to pay any principal or deposit any sinking fund payment when due;
- failure to perform any covenant or agreement in the indenture that continues for a specified number of days after written notice has been given by the trustee or the holders of a specified percentage in aggregate principal amount of the debt securities of that series;
- events of bankruptcy, insolvency or reorganization; and
- any other event of default specified in the prospectus supplement.

If an event of default occurs and continues, both the trustee and holders of a specified percentage in aggregate principal amount of the outstanding securities of that series may declare the principal amount of the debt securities of that series to be immediately due and payable. The holders of a majority in aggregate principal amount of the outstanding securities of that series may rescind and annul the acceleration if all events of default, other than the nonpayment of accelerated principal, have been cured or waived.

Except for its duties in case of an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request or direction of any of the holders, unless the holders have offered the trustee reasonable indemnity. If they provide this indemnification and subject to conditions specified in the applicable indenture, the holders of a majority in aggregate principal amount of the outstanding securities of any series may direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series.

No holder of a debt security of any series may institute any proceeding with respect to the indentures, or for the appointment of a receiver or a trustee, or for any other remedy, unless:



- the holder has previously given the trustee written notice of a continuing event of default;
- the holders of a specified percentage in aggregate principal amount of the outstanding securities of that series have made a written request upon the trustee, and have offered reasonable indemnity to the trustee, to institute the proceeding;
- the trustee has failed to institute the proceeding for a specified period of time after its receipt of the notification; and
- the trustee has not received a direction inconsistent with the request within a specified number of days from the holders of a specified percentage in aggregate principal amount of the outstanding securities of that series.

#### Modification and Waiver

We and the trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture; and
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of notes may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, we and the trustee may only make the following changes with the consent of the holder of any outstanding debt securities affected:

- extending the fixed maturity of the series of notes;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or any premium payable upon the redemption, of any debt securities; or
- reducing the percentage of debt securities the holders of which are required to consent to any amendment.

The holders of a majority in principal amount of the outstanding debt securities of any series may waive any past default under the indenture with respect to debt securities of that series, except a default in the payment of principal, premium or interest on any debt security of that series or in respect of a covenant or provision of the indenture that cannot be amended without each holder's consent.

Except in limited circumstances, we may set any day as a record date for the purpose of determining the holders of outstanding debt securities of any series entitled to give or take any direction, notice, consent, waiver or other action under the indentures. In limited circumstances, the trustee may set a record date. To be effective, the action must be taken by holders of the requisite principal amount of such debt securities within a specified period following the record date.

#### Defeasance

To the extent stated in the prospectus supplement, we may elect to apply the provisions in the indentures relating to defeasance and discharge of indebtedness, or to defeasance of restrictive covenants, to the debt securities of any series. The indentures provide that, upon satisfaction of the requirements described below, we may terminate all of our obligations under the debt securities of any series and the applicable indenture, known as legal defeasance, other than our obligation:

- to maintain a registrar and paying agents and hold monies for payment in trust;
- to register the transfer or exchange of the notes; and
- to replace mutilated, destroyed, lost or stolen notes.

In addition, we may terminate our obligation to comply with any restrictive covenants under the debt securities of any series or the applicable indenture, known as covenant defeasance.

We may exercise our legal defeasance option even if we have previously exercised our covenant defeasance option. If we exercise either defeasance option, payment of the notes may not be accelerated because of the occurrence of events of default.

To exercise either defeasance option as to debt securities of any series, we must irrevocably deposit in trust with the trustee money and/or obligations backed by the full faith and credit of the United States that will provide money in an amount sufficient in the written opinion of a nationally recognized firm of independent public accountants to pay the principal of, premium, if any, and each installment of interest on the debt securities. We may only establish this trust if, among other things:

- no event of default shall have occurred or be continuing;
- in the case of legal defeasance, we have delivered to the trustee an opinion of counsel to the effect that we have received from, or there has been published by, the Internal Revenue Service a ruling or there has been a change in law, which in the opinion of our counsel, provides that holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred;
- in the case of covenant defeasance, we have delivered to the trustee an opinion of counsel to the effect that the holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred; and
- we satisfy other customary conditions precedent described in the applicable indenture.

Notices

We will mail notices to holders of debt securities as indicated in the prospectus supplement.

Title

We may treat the person in whose name a debt security is registered as the absolute owner, whether or not such debt security may be overdue, for the purpose of making payment and for all other purposes.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York.

## PLAN OF DISTRIBUTION OF SHELF SECURITIES

We may sell or issue the shelf securities from time to time in any one or more of the following ways:

- through underwriters or dealers;
- through agents; or
- directly to a limited number of purchasers or to a single purchaser.

Registration of the shelf securities covered by this prospectus does not mean, however, that those securities will necessarily be offered or sold. For each offering of securities hereunder, we will describe the method of distribution of such securities, among other things, in a prospectus supplement. Such methods may include, without limitation, a rights offering, exercises of warrants or other rights, an “at the market” offering, within the meaning of Rule 415(a)(4) of the Securities Act of 1933, as amended, to or through a market maker or into an existing trading market on an exchange or otherwise, a block trade in which a broker-dealer will attempt to sell as agent, but may position or resell a portion of the block, as principal, in order to facilitate the transaction, purchases by a broker-dealer, as principal, and resale by the broker-dealer for its account, ordinary brokerage transactions and transactions in which a broker solicits purchasers and privately negotiated transactions. The distribution of the securities may be effected from time to time in one or more transactions, at a fixed price, or prices, which may be changed from time to time, at market prices prevailing at the time of sale, at prices related to such prevailing market prices, or at negotiated prices. A prospectus supplement will set forth the terms of the offering of the shelf securities, including:

- the name or names of any underwriters and the respective amounts of any securities underwritten or purchased by each of them;
- the name or names of any person or persons to whom we sell or issue any securities;
- the initial public offering price and the proceeds we will receive;
- any discounts, commissions or concessions allowed or paid to underwriters, agents or dealers; and
- any securities exchanges on which the securities may be listed.

Only underwriters named in the prospectus supplement are deemed to be underwriters in connection with the shelf securities offered.

If underwriters are used in the sale of any shelf securities, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Unless otherwise set forth in the applicable prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions precedent and the underwriters will be obligated to purchase all of the securities if any are purchased. Any initial public offering price and any discounts or concessions allowed or paid to dealers may be changed from time to time.

The shelf securities may be sold or issued directly by us or through agents designated by us from time to time. Any agent involved in the offer or sale of the securities in respect of which a prospectus supplement is delivered will be named, and any commissions payable by us to such agent will be set forth, in the prospectus supplement. Unless otherwise indicated in the

prospectus supplement, any agent will be acting on a best efforts basis for the period of its appointment.

We may authorize underwriters, dealers or agents to solicit offers by institutional investors, such as commercial banks and investment companies, to purchase the shelf securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The conditions to these contracts and the commissions payable for solicitation of the contracts will be set forth in the applicable prospectus supplement.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8.0% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

Agents and underwriters may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act of 1933, or to contribution with respect to payments which the agents or underwriters may be required to make in respect of their liabilities. Agents and underwriters may be our customers, engage in transactions with us, or perform services for us in the ordinary course of business.

During and after an offering through underwriters, the underwriters may purchase and sell the securities in the open market. These transactions may include over allotment and stabilizing transactions and purchases to cover syndicate short positions created in connection with the offering. The underwriters may also impose a penalty bid, whereby selling concessions allowed to syndicate members or other broker-dealers for the offered securities sold for their account may be reclaimed by the syndicate if such offered securities are repurchased by the syndicate in stabilizing or covering transactions. These activities may stabilize, maintain or otherwise affect the market price of the offered securities, which may be higher than the price that might otherwise prevail in the open market. If commenced, these activities may be discontinued at any time.

Any underwriters who are qualified market makers may engage in passive market making transactions in the securities in accordance with Rule 103 of Regulation M.

Unless otherwise specified in the applicable prospectus supplement, securities offered under this prospectus will be a new issue and, other than the common stock, which is quoted on the NASDAQ Capital Market, will have no established trading market. We may elect to list any other class or series of securities on an exchange, and in the case of the common stock, on any additional exchange, but, unless otherwise specified in the applicable prospectus supplement, we shall not be obligated to do so. Any underwriters to whom securities are sold for public offering and sale may make a market in the securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. The securities may or may not be listed on a national securities exchange or a foreign securities exchange. No assurance can be given as to the liquidity of the trading market for any of the securities.

We will bear all costs, expenses and fees associated with the registration of the shares of common stock.

## LEGAL MATTERS

The legality of the common stock offered by this prospectus has been passed upon by Graubard Miller, New York, New York. Graubard Miller owns 25,000 shares of our common stock. Such shares have an aggregate value of \$81,250 based on the closing sale price of our common stock on November 9, 2016.





## EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to our ability to continue as a going concern as described in Note 2 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered certified public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's web site at <http://www.sec.gov>. You may also read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about the public reference room.

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. This prospectus incorporates by reference our documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until all of the securities are sold.

- Annual Report on Form 10-K for the fiscal year ended December 31, 2015 (filed on March 30, 2016 and amended on April 27, 2016);
  - Quarterly Reports on Forms 10-Q for the fiscal quarters ended March 31, 2016 (filed on May 16, 2016), June 30, 2016 (filed on August 15, 2016), and September 30, 2016 (filed on November 14, 2016);
- Current Reports on Form 8-K dated January 15, 2016 (filed on January 19, 2016), January 21, 2016 (filed on January 21, 2016), January 25, 2016 (filed on January 25, 2016), February 25, 2016 (filed on February 26, 2016), March 24, 2016 (filed on March 29, 2016), April 14, 2016 (filed on April 15, 2016), May 27, 2016 (filed on May 31, 2016), June 1, 2016 (filed on June 6, 2016), July 6, 2016 (filed on July 7, 2016), July 8, 2016 (filed on July 8, 2016), July 15, 2016 (filed on July 18, 2016), August 12, 2016 (filed on August 18, 2016); and August 15, 2016 (filed on August 22, 2016);
- Proxy Statement dated June 24, 2016, used in connection with the annual meeting of shareholders that was held on August 12, 2016; and
- Form 8-A effective on November 30, 1993 and Form 8-A effective on November 22, 2005, as amended, registering our common stock and our rights to purchase our Series E Preferred Stock, respectively, under Section 12(g) of the Exchange Act.

Any statement contained in a document filed before the date of this prospectus and incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. Any information that we file after the date of this prospectus with the SEC will automatically update and supersede the information contained in this prospectus. Notwithstanding the foregoing, we are not incorporating any document or portion thereof or information deemed to have been furnished and not filed in accordance with SEC rule.



We will provide you with a copy of any or all of the information that has been incorporated by reference in this prospectus, without charge, upon written or oral request directed to ParkerVision, Inc., Attention: Investor Relations, 7915 Baymeadows Way, Suite 400, Jacksonville, Florida 32256, telephone number (904) 732-6100.

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\$4,363,000

PARKERVISION, INC.

Common Stock

PROSPECTUS SUPPLEMENT

FBR

August 14, 2017

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