FORM S-1

General form of registration statement for all companies including face-amount certificate companies

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FILER

PARKERVISION INC

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SIC: **3663** Radio & tv broadcasting & communications equipment

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As filed with the Securities and Exchange Commission on January 13, 2022

Registration No. 333-

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

FORM S-1
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

PARKERVISION, INC.

(Exact Name of Registrant as Specified in its Charter)

Florida	**3663**	**59-2971472**
(State of Incorporation)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer ID No.)

4446-1A Hendricks Avenue, Suite 354,
Jacksonville, Florida 32207
Phone: (904) 732-6100
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Jeffrey Parker, Chairman of the Board
ParkerVision, Inc.
4446-1A Hendricks Avenue, Suite 354
Jacksonville, Florida 32207
(904) 732-6100
(Name, address and telephone number, including area code, of agent for service)

with a copy to:

David Alan Miller, Esq.
Graubard Miller
The Chrysler Building
405 Lexington Avenue - 11th floor
New York, NY 10174-1901

Approximate date of commencement of proposed sale to the public: **As soon as possible after the Registration Statement is declared effective.**

If any of the securities being registered on this Form are to be offered on a delayed or continued basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: ☒

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

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

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

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (3)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value $0.01 per share	1,052,631 (1)	$0.90 (4)	$ 947,368	$ 87.82
Common Stock, par value $0.01 per share	526,315 (2)	$1.00 (5)	$ 526,315	$ 48.79
Total	1,578,946		$ 1,473,683	$ 136.61

(1) Represents shares of common stock, par value $0.01 per share ("Common Stock") issued pursuant to a securities purchase agreement dated December 14, 2021 with the selling stockholder named herein.

(2) Represents 526,315 warrants to purchase shares of Common Stock issuable upon the exercise of warrants to purchase shares of Common Stock ("Warrants") issued pursuant to a securities purchase agreement dated December 14, 2021 with the selling stockholder named herein.

(3) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers any additional shares of Common Stock which may become issuable to prevent dilution from stock splits, stock dividends and similar events.

(4) Pursuant to Rule 457(c) of the Securities Act, this amount represents the average of the high and low prices of our Common Stock as reported on the OTCQB on January 7, 2022.

(5) Pursuant to Rule 457(g) of the Securities Act, this amount represents the exercise price of the Warrants.

The registrant hereby amends this Registration Statement on Form S-1 on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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

SUBJECT TO COMPLETION, DATED JANUARY 13, 2022

PROSPECTUS

PARKERVISION, INC.

1,578,946 Shares of Common Stock

This prospectus relates to the resale by the selling stockholder listed under the heading "*Selling Stockholder*" of up to 1,578,946 shares of our common stock, par value $0.01 per share ("Common Stock") consisting of an aggregate of 1,052,631 shares of Common Stock and 526,315 shares of Common Stock underlying warrants ("Warrants") issued pursuant to a securities purchase agreement dated December 14, 2021.

We are registering these shares of Common Stock as required by the terms of a registration rights agreement between the selling stockholder and us. The registration of the shares of Common Stock offered by this prospectus does not mean that the selling stockholder will offer or sell any of these shares. The selling stockholder may offer the shares of Common Stock at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. See "*Plan of Distribution*" on page 16 for additional information.

We will not receive proceeds from the sale of the shares of Common Stock by the selling stockholder. To the extent the Warrants are exercised for cash, we will receive up to an aggregate of $526,315 in gross proceeds. We expect to use the proceeds received from the exercise of the Warrants, if any, for general working capital purposes, including payment of litigation expenses.

We will pay the expenses of registering these shares of Common Stock, but all selling and other expenses incurred by the selling stockholder will be paid by the selling stockholder.

Our Common Stock is listed on the OTCQB Venture Capital Market under the ticker symbol "PRKR."

You should read this prospectus and any prospectus supplement carefully before you invest in any of our securities.

Investing in our securities involves a high degree of risk. See "*Risk Factors*" beginning on page 5 of this prospectus 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 these securities or determined whether this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is **_____________, 2022**.

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We have not, and the selling stockholder has not, authorized anyone to provide you with information different from that contained in this prospectus or in any supplement to this prospectus or free writing prospectus, and neither we nor the selling stockholder take any responsibility for any other information that others may give you. This prospectus is not an offer to sell, nor is it a solicitation of an offer to buy, the securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus or any prospectus supplement or free writing prospectus is accurate as of any date other than the date on the front cover of those documents, regardless of the time of delivery of this prospectus or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements in this prospectus are forward-looking statements that involve risks and uncertainties. These forward-looking statements include statements about our plans, objectives, expectations, intentions and assumptions, and all other statements that are not statements of historical fact. Words such as “may,” “will,” should,” “estimates,” “plans,” “expects,” “believes,” “intends” and similar expressions may identify forward-looking statements, but the absence of such words does not mean that a statement is not forward-looking. We cannot guarantee future results, levels of activity, performance or achievements. Our actual results and the timing of certain events may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such a discrepancy include those discussed in “*Our Company*,” “*Risk Factors*,” and elsewhere in this prospectus and any prospectus supplements. You are cautioned not to place undue reliance on any forward-looking statements. 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.

PROSPECTUS SUMMARY

This summary highlights certain selected information about us, this offering and the securities offered hereby. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our Common Stock. For a more complete understanding of our Company and this offering, we encourage you to read the entire prospectus, including the information presented under the section entitled "Risk Factors" and the financial data and related notes. Unless we specify otherwise, all references in this prospectus to "ParkerVision," "we," "our," "us," and "our company," refer to ParkerVision, Inc. and its wholly-owned German subsidiary, ParkerVision GmbH.

Our Company

We were incorporated under the laws of the state of Florida on August 22, 1989. We have designed and developed proprietary radio frequency ("RF") technologies and integrated circuits based on those technologies and we license our technologies to others for use in wireless communication 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 of America ("U.S.") and certain foreign jurisdictions. We believe certain patents protecting our proprietary technologies have been broadly infringed by others and therefore the primary focus of our business plan is the enforcement of our intellectual property rights through patent infringement litigation and licensing efforts. We currently have patent enforcement actions ongoing in various U.S. district courts against mobile handset providers and providers of smart televisions and other WiFi products and, in certain cases, their chip suppliers for the infringement of several of our RF patents. We have made significant investments in developing and protecting our technologies, the returns on which are dependent upon the generation of future revenues for realization. Our patent-related legal proceedings are more fully described in in Note 12 to our consolidated financial statements and Note 12 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus.

Our business address is 4446-1A Hendricks Avenue, Suite 354, Jacksonville, Florida 32207 and our telephone number is (904) 732-6100. We maintain a website at www.parkervision.com. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

Background of the Offering

On December 14, 2021, we sold an aggregate of 1,052,631 shares of our Common Stock ("Shares") and 526,315 Warrants at a price of $0.95 per Share in a private placement transaction with an accredited investor, Alpine Partners (BVI), LP (the "Investor") for aggregate proceeds of $1.0 million. The Warrants are exercisable through December 14, 2026 at an exercise price of $1.00 per share.

We entered into a registration rights agreement (the "Registration Rights Agreement") with the Investor pursuant to which we will register the Common Stock issued to the Investor, including the shares of Common Stock issuable upon the exercise of the Warrants ("Warrant Shares"). We have committed to file the registration statement within 30 days and to cause the registration statement to become effective within 60 days (or, 90 days in the case of a review by the Commission) following the date of the Registration Rights Agreement. The Registration Rights Agreement provides for liquidated damages upon the occurrence of certain events including our failure to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or $60,000.

The Offering

Common Stock being offered by the selling stockholder	1,578,946 shares of Common Stock including 1,052,631 Shares and 526,315 Warrant Shares issued pursuant to a securities purchase agreement dated December 14, 2021.
Common Stock outstanding prior to the Offering	76,991,801 shares as of December 31, 2021 (1)
Common Stock outstanding after the Offering	77,518,116 shares (2)
Terms of Offering	The selling stockholder will determine when and how it will sell the Common Stock offered hereby, as described in "*Plan of Distribution*" beginning on page 16.
Use of proceeds	The selling stockholder will receive all of the proceeds from the sale of the shares offered under this prospectus. We will not receive proceeds from the sale of the shares by the selling stockholder. However, to the extent the Warrants are exercised for cash, we will receive up to an aggregate of $526,315 in gross proceeds. We expect to use the proceeds from the exercise of Warrants, if any, for general working capital purposes, including payment of litigation expenses.
OTCQB Symbol	PRKR
Risk Factors	Investing in our securities involves a high degree of risk. You should carefully review and consider the "*Risk Factors*" section of this prospectus for a discussion of factors to consider before deciding to invest in shares of our Common Stock.

(1) This amount includes 1,052,631 Shares issued pursuant to a securities purchase agreement dated December 14, 2021 that are being registered hereby. This amount does not include:

- Warrants to purchase up to 10,345,604 shares of Common Stock, including Warrants to purchase 526,315 shares of Common Stock that are being registered hereby.
- Up to 20,157,152 shares of Common Stock issuable upon the conversion of the outstanding principal amount of our convertible promissory notes;
- Up to 23,214,755 shares of Common Stock issuable upon exercise of outstanding options, including 16,703,680 options that are currently exercisable and 6,511,075 options that may become exercisable in the future.
- Up to 3,234,839 additional shares of Common Stock reserved for issuance upon the payment in shares of interest on outstanding convertible promissory notes; and
- 1,979,632 shares of Common Stock that have been reserved for issuance in connection with future grants under our long-term equity incentive plans.

(2) This amount includes all 526,315 shares issuable upon exercise of the Warrants.

RISK FACTORS

You should carefully consider the risks and uncertainties described below. 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.

Financial and Operating Risks

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

We have had significant losses and negative cash flows in every year since inception, and continue to have an accumulated deficit which, at September 30, 2021, was approximately $430.1 million. Our net losses for the nine months ended September 30, 2021 and for the year ended December 31, 2020 were approximately $9.0 million and $19.6 million, respectively. In conjunction with the issuance of our condensed consolidated interim financial statements for the nine months ended September 30, 2021, we were required to evaluate our ability to continue as a going concern. Note 2 to the condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus includes a discussion regarding our liquidity and our conclusion that there is substantial doubt about our ability to continue as a going concern. Additionally, our independent registered public accounting firm has included in their audit opinion on our consolidated financial statements as of and for the year ended December 31, 2020, a statement with respect to substantial doubt about our ability to continue as a going concern. Note 2 to our consolidated financial statements included elsewhere in this prospectus includes a discussion regarding our liquidity and our ability to continue as a going concern. Our consolidated 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 consolidated 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 vendors 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.

To date, our technologies and products have not produced revenues sufficient to cover our operating costs. We will continue to make expenditures on patent protection and enforcement and general operations in order to continue our current patent enforcement and licensing efforts. Those efforts may not produce a successful financial outcome in 2022, or at all. Without a successful financial outcome from one or more of our patent enforcement and licensing efforts, we will not achieve profitability. Furthermore, our current capital resources may not be sufficient to sustain our operations through 2022. If we are not able to generate sufficient revenues or obtain sufficient capital resources, we may not be able to implement our business plan or meet our current obligations and investors will suffer a loss in their investment. This may also result in a change in our business strategies.

We will need to raise substantial additional capital in the future to fund our operations. 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 primarily from the sale of debt and equity securities, including our secured contingent debt obligation. Our capital resources include cash and cash equivalents of $0.8 million at September 30, 2021. In addition, we received approximately $1.0 million in December 2021 from the sale of our common stock. Although we implemented significant cost reduction measures in 2019 and 2020, our business plan will continue to require expenditures for patent protection and enforcement and general operations. For the nine months ended September 30, 2021 and the year ended December 31, 2020, we used $6.9 million and $4.8 million, respectively in cash for operations which was funded primarily through the sale of convertible debt and equity securities. Our current capital resources will not be sufficient to meet our working capital needs for 2022 and we will require additional capital to fund our operations. Additional capital may be in the form of debt securities, the sale of equity securities, including common or preferred stock, additional litigation funding, or a combination thereof. Failure to raise additional capital may have a material adverse impact on our ability to achieve our business objectives.

Raising additional capital by issuing debt securities or additional equity securities may result in dilution and/or impose covenants or restrictions that create operational limitations or other obligations.

We may require additional capital to fund our operations and meet our current obligations. Financing, if any, may be in the form of debt or sales of equity securities, including common or preferred stock. Debt instruments or 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 and may have a material adverse impact on our ability to implement our business plan as currently formulated. The sale of equity securities, including common or preferred stock, may result in dilution to the current stockholders' ownership and may be limited by the number of shares we have authorized and available for issuance.

We may be obligated to repay outstanding notes at a premium upon the occurrence of an event of default.

We have $3.0 million in outstanding principal under convertible notes payable at September 30, 2021. If we fail to comply with the various covenants set forth in each of the notes, including failure to pay principal or interest when due or, under certain notes, consummating a change in control, we could be in default thereunder. Upon an event of default under each of the notes, the interest rate of the notes will increase to 12% per annum and the outstanding principal balance of the notes plus all accrued unpaid interest may be declared immediately payable by the holders. We may not have sufficient available funds to repay the notes upon an event of default, and we cannot provide assurances that we will be able to obtain other financing at terms acceptable to us, or at all.

Our ability to utilize our tax benefits could be substantially limited if we fail to generate sufficient income or if we experience an "ownership change."

We have cumulative net operating loss carryforwards ("NOLs") totaling approximately $323.2 million at December 31, 2020, of which $294.1 million is subject to expiration in varying amounts from 2021 to 2037. Our ability to fully recognize the benefits from those NOLs is dependent upon our ability to generate sufficient income prior to their expiration. In addition, our NOL carryforwards may be limited if we experience an ownership change as defined by Section 382 of the Internal Revenue Code ("Section

382”). In general, an ownership change under Section 382 occurs if 5% shareholders increase their collective ownership of the aggregate amount of our outstanding shares by more than 50 percentage points over a relevant lookback period. We have sold a significant number of equity securities over the relevant lookback period which increases the risk of triggering an ownership change under Section 382 from the future sale of additional equity securities. An ownership change under Section 382 will significantly limit our ability to utilize our tax benefits.

Our litigation funding arrangements may impair our ability to obtain future financing and/or generate sufficient cash flows to support our future operations.

We have funded much of our cost of litigation through contingent financing arrangements with Brickell Key Investments LP (“Brickell”) and others and contingent fee arrangements with legal counsel. The repayment obligation to Brickell is secured by the majority of our assets until such time that we have repaid a specified minimum return. Furthermore, our contingent arrangements will result in reductions in the amount of net proceeds retained by us from litigation, licensing and other patent-related activities. The contingent fees payable to legal counsel, Brickell and others will consume all of our initial future proceeds up to specified limits and could exceed half of our proceeds thereafter depending on size and timing of proceeds, among other factors. The long-term continuation of our business plan is dependent upon our ability to secure sufficient financing to support our business, and our ability to generate revenues and/or patent related proceeds sufficient to offset expenses and meet our contingent payment obligations. Failure to generate revenue or other patent-related proceeds sufficient to repay our contingent obligations may impede our ability to obtain additional financing which will have a material adverse effect on our ability to achieve our long-term business objectives.

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 other litigation matters that we may in the future determine to pursue, will 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 or that our financial resources will not be exhausted before achieving a favorable outcome. 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 hinder our ability to pursue licensing and/or product opportunities for our technologies in the future. Failure to achieve favorable outcomes from one or more of our patent enforcement actions will have a material adverse impact on our financial condition, results of operations, cash flows, and business prospects.

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 2019, the Federal Patent Court in Munich invalidated one of our patents that was the subject of infringement cases against LG and Apple in Germany following a nullity action filed by Qualcomm. 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 business, results of operations, and financial condition may be impacted by the coronavirus (COVID-19) pandemic.

The global spread of COVID-19 has created significant volatility and uncertainty in financial markets. If such volatility and uncertainty persist, we may be unable to raise additional capital on terms that are acceptable to us, or at all. Additionally, in response to the pandemic, governments and the private sector have taken a number of drastic measures to contain the spread of COVID-19. While our employees currently have the ability and are encouraged to work remotely, such measures may have a substantial impact on employee attendance or productivity, which, along with the possibility of employees' illness, may adversely affect our operations.

In addition, COVID-19 has negatively impacted the timing of our current patent infringement actions as a result of office closures, travel restrictions and court closures. For example, our patent infringement trial in Orlando, Florida has been delayed twice due to the impact of COVID-19. It is possible that further delays in our cases could occur.

Although COVID-19 is currently not material to our results of operations, there is significant uncertainty relating to the potential impact of COVID-19 on our business. The extent to which COVID-19 impacts our ongoing patent enforcement actions and our ability to obtain financing, as well as our results of operations and financial condition, generally, will depend on future developments which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of COVID-19 and the actions taken by governments and private businesses to contain COVID-19 or treat its impact, among others. If the disruptions posed by COVID-19 continue for an extensive period of time, our business, results of operations, and financial condition may be materially adversely affected.

We are subject to outside influences beyond our control, including 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. has 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, along with shifting user needs and the introduction of competing products and services, we have historically devoted substantial resources to developing and improving our technology and introducing new product offerings. As a result of our limited financial resources, we have ceased our research and development activities which could result in a loss of future market opportunity which could adversely affect our future revenue potential.

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, the relationships he has garnered in both the industry in which we operate and the investment community and the key role he plays in our patent litigation strategies, 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 maintain $5 million in key-employee life insurance for our benefit for Mr. Parker.

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

Our business is dependent on having skilled and specialized key executives and other employees to conduct our business activities. The inability to retain these key executives and other specialized employees would have an adverse impact on the technical support activities and the financial reporting and regulatory compliance activities that our business requires. These activities are instrumental to the successful execution of our business plan.

Any disruptions to our information technology systems or breaches of our network security could interrupt our operations, compromise our reputation, and expose us to litigation, government enforcement actions, and costly response measures and could have a material adverse effect on our business, financial condition and results of operations.

We rely on information technology systems, including third-party hosted servers and cloud-based servers, to keep business, financial, and corporate records, communicate internally and externally, and operate other critical functions. If any of our internal systems or the systems of our third-party providers are compromised due to computer virus, unauthorized access, malware, and the like, then sensitive documents could be exposed or deleted, and our ability to conduct business could be impaired. Cyber incidents can result from deliberate attacks or unintentional events. These incidents can include, but are not limited to, unauthorized access to our systems, computer viruses or other malicious code, denial of service attacks, malware, ransomware, phishing, SQL injection attacks, human error, or other events that result in security breaches or give rise to the manipulation or loss of sensitive information or assets. Cyber incidents can be caused by various persons or groups, including disgruntled employees and vendors, activists, organized crime groups, and state-sponsored and individual hackers. Cyber incidents can also be caused or aggravated by natural events, such as earthquakes, floods, fires, power loss, and telecommunications failures. The risk of cybersecurity breach has generally increased as the number, intensity, and sophistication of attempted attacks from around the world has increased. While we have cyber security procedures in place, given the evolving nature of these threats, there can be no assurance that we will not suffer material losses in the future due to cyber-attacks.

To date, we have not experienced any material losses relating to cyber-attacks, computer viruses or other systems failures. Although we have taken steps to protect the security of data maintained in our information systems, it is possible that our security measures will not be able to prevent the systems' improper functioning or the improper disclosure of personally identifiable information, such as in the event of cyber-attacks. In addition to operational and business consequences, if our cybersecurity is breached, we could be held liable to our customers or other parties in regulatory or other actions, and we may be exposed to reputation damages and loss of trust and business. This could result in costly investigations and litigation, civil or criminal penalties, fines and negative publicity.

Risks Relating to our Common Stock

Our outstanding options and warrants may affect the market price and liquidity of the common stock.

At December 31, 2021, we had 77.0 million shares of common stock outstanding and had outstanding options and warrants for the purchase of up to 33.6 million additional shares of common stock, of which approximately 27.0 million were exercisable as of December 31, 2021. In addition, as described more fully below, holders of convertible notes may elect to receive a substantial number of shares of common stock upon conversion of the notes and we may elect to pay accrued interest on the notes in shares of our common stock. All of the shares of common stock underlying these securities are or will be registered for sale to the holder or for public resale by the holder. The amount of common stock reserved for issuance may have an adverse impact on our ability to raise capital and may affect the price and liquidity of our common stock in the public market. In addition, the issuance of these shares of common stock will have a dilutive effect on current stockholders' ownership.

The conversion of outstanding convertible notes into shares of common stock, and the issuance of common stock by us as payment of accrued interest upon the convertible notes, could materially dilute our current stockholders.

We have an aggregate principal amount of $3.0 million in convertible notes outstanding at September 30, 2021. The notes are convertible into shares of our common stock at fixed conversion prices, which may be less than the market price of our common stock at the time of conversion. If the entire principal were converted into shares of common stock, we would be required to issue an aggregate of up to 20.8 million shares of common stock. If we issue all of these shares, the ownership of our current stockholders will be diluted.

Further, we may elect to pay interest on the notes, at our option, in shares of common stock, at a price equal to the then-market price for our common stock. To date, we have issued approximately 2.7 million shares of common stock as in-kind interest payments on our convertible notes. We currently do not believe that we will have the financial ability to make payments on the notes in cash when due. Accordingly, we currently intend to make such payments in shares of our common stock to the greatest extent possible. Such interest payments could further dilute our current stockholders.

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 January 1, 2020 and December 31, 2021, the reported high and low sales prices for our common stock ranged between $0.15 and $1.91 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 litigation, our performance and prospects, general conditions of the markets in which we compete, economic and financial conditions, and the impact of COVID-19 on global financial markets. Such volatility could materially and adversely affect the market price of our common stock in future periods.

Our common stock is quoted on OTCQB, an over-the-counter market. There can be no assurance that our common stock will continue to trade on the OTCQB or on another over-the-counter market or securities exchange.

Our common stock began trading on the OTCQB, an over-the-counter market, in August 2018 immediately following delisting from Nasdaq, under the symbol "PRKR". The over-the-counter market is a significantly more limited market than a nationally-recognized securities exchange such as Nasdaq, and the quotation of our common stock on the over-the-counter market has resulted in a less liquid market available for existing and potential stockholders to trade shares of our common stock. Securities traded in the over-the-counter market generally have less liquidity due to factors such as the reduced number of investors that will consider investing in the securities, the reduced number of market makers in the securities, and the reduced number of securities analysts that follow such securities. As a result, holders of shares of our common stock may find it difficult to resell their shares at prices quoted in the market or at all. We are also subject to additional compliance requirements under applicable state laws relating to the issuance of our securities. This could have a long-term adverse effect on our ability to raise capital, which ultimately could adversely affect the market price of our common stock. We cannot provide any assurances as to if or when we will be in a position to relist our common stock on a nationally-recognized securities exchange.

Our common stock is classified as a "penny stock" under SEC rules, which means broker-dealers who make a market in our stock will be subject to additional compliance requirements.

Our common stock is deemed to be a "penny stock" as defined in the Securities Exchange Act of 1934 (the "Exchange Act"). Penny stocks are stocks (i) with a price of less than five dollars per share; (ii) that are not traded on a recognized national exchange; (iii) whose prices are not quoted on an automated quotation system sponsored by a recognized national securities association; or (iv) whose issuer has net tangible assets less than $2,000,000 (if the issuer has been in continuous operation for at least three years); or $5,000,000 (if continuous operations for less than three years); or with average revenues of less than $6,000,000 for the last three years. The Exchange Act requires broker-dealers dealing in penny stocks to provide potential investors with a document disclosing the risks of penny stocks and to obtain a manually signed and dated written receipt of the document before effecting any transaction in a penny stock for the investor's account. Potential investors in our common stock are urged to obtain and read such disclosure carefully before purchasing any shares that are deemed to be "penny stock." Further, the Exchange Act requires broker-dealers dealing in penny stocks to approve the account of any investor for transactions in such stocks before selling any penny stock to that investor. These procedures require the broker-dealer to (i) obtain from the investor information concerning his, her or its financial situation, investment experience and investment objectives; (ii) reasonably determine, based on that information, that transactions in penny stocks are suitable for the investor, and that the investor has sufficient knowledge and experience as to be reasonably capable of evaluating the risks of penny stock transactions; (iii) provide the investor with a written statement setting forth the basis on which the broker dealer made the determination in (ii) above; and (iv) receive a signed and dated copy of such statement from the investor, confirming that it accurately reflects the investor's financial situation, investment experience and investment objectives. Compliance with these requirements may affect the ability or willingness of broker-dealers to sell our securities, and accordingly would affect the ability of stockholders to sell their securities in the public market. These additional procedures could also limit our ability to raise additional capital in the future.

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 and November 20, 2020, 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.

Sales of substantial amounts of our Common Stock by the selling stockholder, or the perception that these sales could occur, could adversely affect the price of our Common Stock.

The sale by the selling stockholder of a significant number of shares of Common Stock, or the perception in the public markets that these sales will occur, could have a material adverse effect on the market price of our Common Stock. We cannot predict the effect, if any, that market sales of those shares of common stock or the availability of those shares of common stock for public sale will have on the market price of our common stock.

USE OF PROCEEDS

The selling stockholders will receive all of the proceeds from the sale of the shares of Common Stock offered under this prospectus. We will not receive proceeds from the sale of the shares by the selling stockholder. However, to the extent the Warrants are exercised for cash, we will receive up to an aggregate of $526,315 in gross proceeds. We expect to use the proceeds from the cash exercise of the Warrants, if any, for general working capital purposes, including litigation expenses.

THE PRIVATE PLACEMENT

On December 14, 2021, we entered into a securities purchase agreement with an accredited investor for the sale of an aggregate of 1,052,631 shares of our Common Stock and 526,315 Warrants at a price of $0.95 per share of Common Stock for proceeds of $1.0 million.

The Warrants are immediately exercisable at an exercise price of $1.00 per share, expire December 14, 2026 and are subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our Common Stock and also upon any distributions of assets to our stockholders. The Warrants contain provisions that prohibit exercise if the holder, together with its affiliates, would beneficially own in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to such exercise. The holder of the Warrants may increase (up to 14.99%) or decrease this percentage by providing at least 61 days' prior notice to the Company. In the event of certain corporate transactions, the holder of the Warrants will be entitled to receive, upon exercise of such Warrants, the kind and amount of securities, cash or other property that the holder would have received had it exercised the Warrants immediately prior to such transaction. The Warrants do not contain voting rights or any of the other rights or privileges as a holder of our Common Stock.

We entered into a Registration Rights Agreement with the investor pursuant to which we will register the shares of Common Stock, including the shares of Common Stock underlying the Warrants. We have committed to file the registration statement within 30 days and to cause the registration statement to become effective within 60 days (or, 90 days in the case of a review by the Commission). The Registration Rights Agreement provides for liquidated damages upon the occurrence of certain events including our failure to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or an aggregate of approximately $60,000.

SELLING STOCKHOLDER

This prospectus relates to the offer and sale by the selling stockholder from time to time of up to an aggregate of 1,578,946 shares of Common Stock including an aggregate of 1,052,631 shares of Common Stock and 526,315 shares of Common Stock underlying Warrants issued pursuant to a securities purchase agreement dated December 14, 2021.

When we refer to the "selling stockholder" in this prospectus, we mean the entity listed in the table below, and each of its respective pledgees, donees, permitted transferees, assignees, successors and others who later come to hold any of such selling stockholder's interests in shares of our Common Stock other than through a public sale.

Other than as described in this prospectus, the selling stockholder has not within the past three years had any position, office or other material relationship with us or any of our predecessors or affiliates other than as a holder of our securities. The selling stockholder is not a broker-dealer or affiliate of a broker-dealer.

The table below presents information regarding the selling stockholder, the shares of Common Stock that it may sell or otherwise dispose of from time to time under this prospectus and the number of shares and percentage of our outstanding shares of Common Stock the selling stockholder will own assuming all of the shares covered by this prospectus are sold by the selling stockholder.

We do not know when or in what amounts the selling stockholder may sell or otherwise dispose of the shares of Common Stock offered hereby. The selling stockholder might not sell or dispose of any or all of the shares covered by this prospectus or may sell or dispose of some or all of the shares other than pursuant to this prospectus. Because the selling stockholder may not sell or otherwise dispose of some or all of the shares covered by this prospectus and because there are currently no agreements, arrangements or understandings with respect to the sale or other disposition of any of the shares, we cannot estimate the number of shares that will be held by the selling stockholder after completion of the offering. However, for purposes of this table, we have assumed that all of the shares of Common Stock covered by this prospectus will be sold by the selling stockholder.

Selling Stockholder	Beneficial Ownership Prior to This Offering (1)	Shares Offered Hereby	Beneficial Ownership After Offering (1)	
			Shares	Percent
Alpine Partners (BVI), LP (2)	1,578,946	1,578,946	-	0.0%

(1) The information in the table is based on information supplied to us by the selling stockholder. The percentages of ownership are calculated based on 76,991,801 shares of Common Stock outstanding as of December 31, 2021. Beneficial ownership is determined in accordance with Section 13(d) of the Exchange Act, and generally includes shares over which the selling stockholder has voting or dispositive power, including any shares that the selling stockholder has the right to acquire within 60 days of the date of this prospectus. Beneficial ownership excludes shares underlying notes or warrants that would not be exercisable due to exercise limitations. Unless otherwise indicated, the selling stockholder has sole voting and dispositive control over the shares of Common Stock.

(2) The address for Alpine Partners (BVI), LP is 140 Broadway, 38th Floor, New York, NY 10005.

PLAN OF DISTRIBUTION

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

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the Selling Stockholder to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

Further, because our Common Stock is classified as a “penny stock”, broker-dealers who make a market in our Common Stock will be subject to additional sales practice requirements for selling our Common Stock to persons other than established customers and accredited investors. For instance, the broker-dealer must make a special suitability determination for the purchaser and receive the purchaser’s written agreement to the transaction prior to the sale.

The selling stockholder may also sell shares of Common Stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the selling stockholder may transfer the shares of Common Stock by other means not described in this prospectus.

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

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

Selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales, and therefore will be required to comply with the prospectus delivery requirements of the Securities Act, including Rule 172 thereunder. Additionally, if a selling stockholder and/or their broker-dealers or agents are deemed to be underwriters, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have also agreed to provide indemnification and contribution to the selling stockholder against certain civil liabilities, including liabilities under the Securities Act.

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

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the securities may not simultaneously engage in market making activities with respect to our Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of Common Stock by the selling stockholder or any other person. We will make copies of this prospectus available to the selling stockholder and have informed it of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

DESCRIPTION OF SECURITIES

The following description of our capital stock is a summary only and is qualified by reference to our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, which are included herewith as Exhibits 3.1 through 3.10, respectively.

Common Stock

We are authorized to issue up to 150,000,000 shares of Common Stock, $0.01 par value per share. As of December 31, 2021, there were 76,991,801 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 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.

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 and November 20, 2020, 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.

The principal objective of the Rights Agreement is to cause someone interested in acquiring us to negotiate with our Board 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 $8.54 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. Currently, there are no Series E preferred shares outstanding.

The rights may be redeemed upon approval of the Board at a redemption price of $0.01 per right. The Rights Agreement expires on November 20, 2023.

Classified Board; Director Nominations; Special Meetings

Our Board 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 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 or our chief executive officer. These provisions and the Board's 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. These provisions are also intended to discourage some tactics that may be used in proxy fights.

The following description of the Warrant is a summary only and is qualified by reference to the Warrant Agreement included herewith as Exhibit 10.90.

Warrant

The warrant is exercisable for up to 526,315 shares of Common Stock for a period of five years at an exercise price of $1.00 per share. The exercise price and number of shares issuable upon exercise of the Warrant are subject to adjustment in the evet of stock dividends and splits and certain Fundamental Transactions (as described in the Warrant Agreement). The Warrant Agreement provides that while the Warrant is exercisable, the Company keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of the Warrant, the number of shares of Common Stock that are initially issuable and deliverable upon the exercise of the Warrant (less the number of such shares so issued and delivered).

MARKET PRICE OF OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

Market Information

Since August 17, 2018, our Common Stock has been listed on the OTCQB, an over-the-counter market, under the ticker symbol “PRKR”. Over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down, or commission, and may not necessarily represent actual transactions.

Holders

As of January 7, 2022, we had approximately 88 holders of record and we believe there are approximately 7,200 beneficial holders of our common stock.

Dividends

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. The payment of cash dividends in the future will be dependent upon our revenue and earnings, if any, capital requirements and general financial condition. The payment of any dividends will be within the discretion of our board of directors.

Equity Plan Information

The following table gives information as of December 31, 2021 about shares of our common stock authorized for issuance under all of our equity compensation plans (in thousands, except for per share amounts):

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)		(c)
Equity compensation plans approved by security holders [1,3]	1,204	$0.94	82
Equity compensation plans not approved by security holders [2,3]	22,011	0.39	1,898
Total	23,215		1,980

1. Includes our 2008 Equity Incentive Plan and our 2011 Long-Term Incentive Equity Plan.

2. Includes our 2019 Long-Term Incentive Plan.

3. The types of awards that may be issued under each of these plans is discussed more fully in Note 14 to our consolidated financial statements included elsewhere in this prospectus.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of the Company's financial condition and results of operations should be read in conjunction with the Company's consolidated financial statements as of and for the years ended December 31, 2020 and 2019 and the condensed consolidated interim financial statements for the nine months ended September 30, 2021 and notes to those statements included elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. Please see "Special Note Regarding Forward-Looking Statements" and "Risk Factors" in this prospectus.

Executive Overview

We are in the business of innovating fundamental wireless technologies and products. We have designed and developed proprietary RF technologies and integrated circuits based on those technologies and we license our technologies to others for use in wireless communication 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 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 primarily consists of enforcement of our intellectual property rights through patent infringement litigation and licensing efforts. We currently have patent enforcement actions ongoing in various U.S. district courts against providers of mobile handsets, smart televisions and other WiFi products and, in certain cases, their chip suppliers for the infringement of a number of our RF patents. We have made significant investments in developing and protecting our technologies, the returns on which are dependent upon the generation of future revenues for realization.

In 2018, we restructured our operations to reduce operating expenses. As part of that restructuring, we made significant reductions in our investment in the development and marketing of a consumer distributed WiFi product line marketed under the brand name Milo®. Our cost reduction measures included the closure of our engineering design center in Lake Mary, Florida and a reduction in executive and management salaries. In early 2019, we ceased substantially all ongoing research and development efforts and, where applicable, repurposed resources to support our patent enforcement and product sales and support efforts. We ceased sales of our Milo products in the fourth quarter of 2019 and are currently focused exclusively on our patent enforcement litigation and licensing efforts.

We continue to aggressively pursue licensing opportunities with wireless communications companies that make, use or sell chipsets and/or products that incorporate RF. We believe there are a number of wireless 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 may include licensing rights. Our licensing efforts to date have required litigation in order to enforce and/or defend our intellectual property rights. Since 2011, we have been involved in patent infringement litigation against Qualcomm and others for the unauthorized use of our technology. Refer to Note 12 to our consolidated financial statements and Note 12 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus for a complete discussion of our legal proceedings. We have expended significant resources since 2011 and incurred significant debt for the enforcement and defense of our intellectual property rights.

Liquidity and Capital Resources

We have incurred significant losses from operations and negative cash flows in every year since inception, largely as a result of our significant investments in developing and protecting our intellectual property.

Years Ended December 31, 2020 and 2019

For the year ended December 31, 2020, we incurred a net loss of approximately $19.6 million and negative cash flows from operations of approximately $4.8 million. Our independent registered public accounting firm included in their audit report for the years ended December 31, 2020 and 2019 an explanatory paragraph expressing substantial doubt about our ability to continue as a going concern. See Note 2 to our consolidated financial statements included elsewhere in this prospectus for a discussion of our liquidity and our ability to continue as a going concern.

At December 31, 2020, we had a working capital deficit of approximately $3.8 million and an accumulated deficit of approximately $421.4 million. Our working capital deficit is primarily the result of approximately $4.1 million in accounts payable related to outstanding litigation fees and expenses. Our working capital improved by $1.7 million from 2019 to 2020, primarily as the result of the increase in our cash and cash equivalents from debt and equity financings. Our use of cash for operations increased 42%, from $3.4 million in 2019 to $4.8 million in 2020. This increase is primarily the result of increased legal expenses associated with our patent enforcement efforts. Our operations in 2020 were primarily funded through approximately $6.0 million in proceeds from debt and equity financings, as well as $1.6 million received from the exercise of warrants. Comparatively, we received net proceeds of approximately $3.1 million from debt financings in 2019. We used $1.3 million and $1.2 million in cash to repay outstanding debt obligations in 2020 and 2019, respectively. These debt repayments were primarily related to a secured note payable with Mintz which had an outstanding balance of $0.03 million at December 31, 2020 and was repaid in full in the first quarter of 2021.

At December 31, 2020, we had approximately $0.19 million in current debt obligations, including $0.07 million related to a Paycheck Protection Program loan, which was forgiven in June 2021, based on the program criteria. This represents a decrease of $1.3 million from our current debt obligations at December 31, 2019. The decrease in our current debt repayment obligations is primarily the result of $1.2 million in repayments made on the Mintz note in 2020.

We had cash and cash equivalents of approximately $1.6 million at December 31, 2020. We received an additional $5.6 million in proceeds from debt and equity financings and warrant and option exercises in the first quarter of 2021, of which $3.0 million was used to settle outstanding accounts and notes payable for litigation costs.

Nine Months Ended September 30, 2021 and 2020

For the nine months ended September 30, 2021, we incurred a net loss of approximately $9.0 million, and negative cash flows from operations of approximately $6.9 million. At September 30, 2021, we had cash and cash equivalents of approximately $0.8 million and an accumulated deficit of approximately $430.1 million. Additionally, a significant amount of future proceeds that we may receive from our patent enforcement and licensing programs will first be utilized to repay borrowings and legal fees and expenses under our contingent funding arrangements. These circumstances raise substantial doubt about our ability to continue to operate as a going concern for a period of one year following the issue date of our condensed consolidated interim financial statements. Note 2 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus includes a discussion regarding our liquidity and our ability to continue as a going concern.

We used cash for operations of approximately $6.9 million and $4.2 million for the nine months ended September 30, 2021 and 2020, respectively. The increase in cash used for operations from 2020 to 2021 is primarily due to the use of approximately $4.1 million in cash for the reduction of accounts payables and accrued expenses during the nine months ended September 30, 2021, as compared to a $1.3 million increase in accounts payable and accrued expenses during the nine months ended September 30, 2020. This increase in use of cash is somewhat offset by a reduction in cash-based operating costs from 2020 to 2021. For the nine months ended September 30, 2021, we received aggregate net proceeds from the sale of debt and equity securities, including the exercise of outstanding options and warrants, of approximately $6.1 million compared to approximately $5.5 million in proceeds received for the nine months ended September 30, 2020. We repaid approximately $0.07 million and $1.3 million, respectively in debt obligations during the nine months ended September 30, 2021 and 2020.

Significant portions of our litigation costs to date have been funded by contingent payment arrangements with legal counsel. Fee discounts offered by legal counsel in exchange for contingent payments upon successful outcome in our litigation are not recognized in expense until such time that the related proceeds on which the contingent fees are payable are considered probable. Contingent fees vary based on each firm's specific fee agreement. We currently have contingent fee arrangements in place for all of our active cases.

In addition to contingent fee arrangements with legal counsel, we have a contingent repayment obligation to Brickell that was recorded at its estimated fair value of $35.9 million at September 30, 2021. Brickell is entitled to a priority, prorated payment of up to 100% of proceeds received by us from funded patent-related actions up to a specified minimum return. Brickell's minimum return is determined as a multiple of the outstanding funded amount that increases over time. The estimated minimum return due to Brickell if repaid in full at September 30, 2021 is approximately $47.2 million, an increase of approximately $5.2 million, or 12.3%, from the minimum return that would have been due to Brickell as of December 31, 2020. In addition, in 2020 we incurred unsecured contingent payment obligations in connection with various financings. These unsecured contingent payment obligations are recorded at an aggregate estimated fair value of $5.7 million at September 30, 2021, with a maximum payment obligation of $10.8 million.

Although current working capital will not be used to repay our contingent arrangements, based on our current outstanding legal proceedings, funding arrangements and contingent payment arrangements, we estimate that up to 100% of our initial future proceeds will be used to repay contingent payment arrangements until Brickell's minimum return has been met. After repayment of Brickell's minimum return, we estimate that 45% to 65% of estimated future proceeds from current actions could be payable to others, depending on the proceeding and the nature, amount and timing of proceeds, among other factors.

Patent enforcement litigation is costly and time-consuming and the outcome is difficult to predict. We expect to continue to invest in the support of our patent enforcement and licensing programs. All proceeds from litigation during the nine months ended September 30, 2021, were used to pay out-of-pocket legal expenses incurred by our counsel. Furthermore, we expect that revenue generated from patent enforcement actions and/or technology licenses through at least the first half of 2022, if any, after deduction of payment obligations to third-party litigation funders, legal counsel, and other investors, will not be sufficient to cover our operating expenses. Therefore, our current capital resources are not sufficient to meet our short-term liquidity needs and we will be required to seek additional capital.

Our ability to meet both our short-term and long-term liquidity needs, including our debt repayment obligations, is dependent upon (i) our ability to successfully negotiate licensing agreements and/or settlements relating to the use of our technologies by others in excess of our contingent payment obligations to third-party litigation funders, legal counsel, and other investors; (ii) our ability to control operating costs, and (iii) our ability to raise additional capital from the sale of debt or equity securities or other financing arrangements. Failure to generate sufficient revenues, raise additional capital through debt or equity financings or contingent fee arrangements, and/or reduce operating costs will have a material adverse effect on our ability to meet our long-term liquidity needs and our ability to achieve our intended long-term business objectives.

Financial Condition

Intangible Assets

We consider our intellectual property, including patents, patent applications, trademarks, copyrights and trade secrets to be significant to our business. Our intangible assets are pledged as security for our secured contingent payment obligation with Brickell and our secured note payable with our litigation counsel. The net book value of our intangible assets was approximately $1.9 million and $2.2 million as of September 30, 2021 and December 31, 2020, respectively. These assets are amortized using the straight-line method over their estimated period of benefit, generally fifteen to twenty years. The decrease in the carrying value of our intangible assets is primarily the result of patent amortization expense recognized in 2021 as our portfolio matures. Management evaluates the recoverability of intangible assets periodically and takes into account events or circumstances that may warrant revised estimates of useful lives or that may indicate impairment exists. As part of our ongoing patent maintenance program, we may, from time to time, abandon a particular patent if we determine fees to maintain the patent exceed its expected recoverability. For the nine months ended September 30, 2021 and year ended December 31, 2020, we incurred losses of approximately $0.01 million and $0.3 million, respectively, for the write-off of specific patent assets. These losses are included in operating expenses in the accompanying consolidated statements of comprehensive loss.

Contingent Payment Obligations

We have secured and unsecured contingent payment obligations recorded at an aggregate estimated fair value of $41.7 million and $38.3 million as of September 30, 2021 and December 31, 2020, respectively. These repayment obligations are contingent upon receipt of proceeds from patent enforcement and other patent monetization actions. As a result, we have elected to account for these contingent payment obligations at their estimated fair values which are subject to significant estimates and assumptions as discussed in “Critical Accounting Policies” below. Refer to Note 10 to our consolidated financial statements and Note 11 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus for a discussion of the fair value measurement of our contingent payment obligation.

Our secured contingent payment obligation is payable to Brickell under a 2016 funding agreement, as amended from time to time. Brickell has a right to reimbursement and compensation from gross proceeds resulting from patent enforcement and other patent monetization actions on a priority basis. The amount of our obligation varies based on the magnitude, timing and nature of proceeds received by us.

In addition, in 2020 and 2021, we incurred unsecured contingent payment obligations in connection with various funding arrangements. The contingent payment obligations are payable from our share of patent-related proceeds after satisfaction of our obligation to Brickell and payment of contingent fees to legal counsel.

The $3.4 million increase in estimated fair value of our contingent payment obligations during the nine months ended September 30, 2021 is the result of $0.4 million in new unsecured payment obligations incurred and an $3.0 million increase in the estimated fair value of the contingent obligations.

Notes Payable

As of September 30, 2021, we had approximately $0.7 in notes payable consisting of an unsecured promissory note payable to Sterne, Kessler, Goldstein, & Fox, PLLC ("SKGF"), a related party. As of December 31, 2020, we had approximately $1.0 million in notes payable, including the SKGF note of approximately $0.8 million, a secured promissory note payable to Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. ("Mintz") of $0.03 million, and a loan from the Paycheck Protection Program ("PPP") of approximately $0.2 million. Failure to comply with the payment terms of each of these notes constitutes an event of default which, if uncured, will result in the entire unpaid principal balance of the note and any unpaid, accrued interest to become immediately due and payable. In addition, an event of default results in an increase in the interest rate under the SKGF and Mintz notes to a default rate of 12% per annum. We were in default on the payment provisions of the Mintz note since November 2019 and, accordingly, accrued interest at the default rate. In March 2021, we settled our outstanding obligations with Mintz and Mintz waived all past defaults on the note which has been paid in full. In addition, in April 2021 we applied for forgiveness of the PPP loan and the loan was forgiven in June 2021. Notes payable are discussed more fully in Note 10 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus.

Deferred Tax Assets and Related Valuation Allowance

Deferred tax assets and liabilities are recognized for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets when, based on available objective evidence, it is more likely than not that the benefit of such assets will not be realized. As of December 31, 2020, we had net deferred tax assets of approximately $94 million, primarily related to our NOL carryforwards, which were fully offset by a valuation allowance due to the uncertainty related to realization of these assets through future taxable income. In addition, our ability to benefit from our NOL and other tax credit carryforwards could be limited under Section 382 as more fully discussed in Note 11 to our consolidated financial statements included elsewhere in this prospectus.

Results of Operations for Each of the Three and Nine Months Ended September 30, 2021 and 2020

Revenues and Gross Margin

Licensing revenue was $0.14 million for the three and nine months ended September 30, 2021. We reported no licensing revenue for the three or nine-month periods ended September 30, 2020. We entered into patent licensing and settlement agreements with Buffalo, Inc. ("Buffalo") and Zyxel Communications Corporation ("Zyxel") in May 2021 and September 2021, respectively. We recognized revenue from these contracts during the three months ended September 30, 2021 when the parties performance obligations were met. The revenue from these agreements was fully offset against out-of-pocket expenses, included in selling, general and administrative expenses, incurred under our contingent fee agreements and therefore did not impact our cash flows. Although we do anticipate additional revenue to result from our licensing agreements and patent enforcement actions, the amount and timing is highly unpredictable and there can be no assurance that we will achieve our anticipated results.

Selling, General, and Administrative Expenses

Selling, general and administrative expenses consist primarily of litigation fees and expenses, personnel and related costs, including share-based compensation, for executive, Board, finance and accounting and technical support personnel for our patent enforcement program, and costs incurred for insurance and outside professional fees for accounting, legal and business consulting services.

Our selling, general and administrative expenses increased by approximately $0.6 million, or 40%, during the three months ended September 30, 2021 when compared to the same period in 2020. This is primarily the result of a $0.5 million increase in share-based compensation for the comparable periods.

Our selling, general and administrative expenses decreased by approximately $3.1 million, or 34%, during the nine months ended September 30, 2021 when compared to the same period in 2020. This decrease results, in part, from a number of one-time, noncash charges in 2020 including $1.8 million associated with an amendment to certain warrant agreements, $0.4 million from an amendment to our March 2020 equity transactions and $0.2 million for impairment of the right-of-use asset associated with our Lake Mary lease. In addition, our litigation fees and expenses decreased by approximately $2.3 million as a result of the stay in the Qualcomm case in Jacksonville, Florida. These decreases were partially offset by a $1.6 million increase in share-based compensation for the comparable periods.

The increase in our share-based compensation for both the three and nine-month periods ended September 30, 2021 is the result of share-based compensation expense attributed to nonqualified stock options awarded to executives, key employees and nonemployee directors in January 2021 as more fully discussed in Note 14 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021. As of September 30, 2021, we had $3.7 million of total unrecognized compensation cost related to all non-vested share-based compensation awards that is expected to be recognized over a period of approximately 1.25 years.

Change in Fair Value of Contingent Payment Obligations

We have elected to measure our secured and unsecured contingent payment obligations at fair value which is based on significant unobservable inputs. We estimated the fair value of our secured contingent payment obligations using a probability-weighted income approach based on the estimated present value of projected future cash outflows using a risk-adjusted discount rate. Increases or decreases in the significant unobservable inputs could result in significant increases or decreases in fair value. Generally, changes in fair value are a result of changes in estimated amounts and timing of projected future cash flows due to increases in funded amounts, passage of time, and changes in the probabilities based on the status of the funded actions.

For the nine months ended September 30, 2021, we recorded an aggregate increase in the fair value of our secured and unsecured contingent payment obligations of approximately $3.0 million, compared to an increase of approximately $3.5 million for the nine months ended September 30, 2020. The change in fair value for the nine months ended September 30, 2020 included a $1.4 million increase in the fair value of unsecured payment obligations resulting from a termination fee due on a failed litigation funding arrangement incurred in March 2020.

Results of Operations for Each of the Years Ended December 31, 2020 and 2019

Revenues and Gross Margins

We reported no licensing revenue for the years ended December 31, 2020 or 2019. Although we do anticipate licensing revenue and/or settlement gains to result from our licensing and patent enforcement actions, the amount and timing is highly unpredictable and there can be no assurance that we will achieve our anticipated results.

We reported no product revenue during the year ended December 31, 2020 and minimal product revenue for the year ended December 31, 2019, from the sales of our Milo-branded products. We discontinued sales of Milo products in the fourth quarter of 2019 and recognized an impairment charge for our remaining inventory, resulting in negative gross margins on our product sales.

Research and Development Expenses

Research and development expenses consist primarily of engineering and related management and support personnel costs; fees for outside engineering design services which we use from time to time to supplement our internal resources; depreciation expenses related to certain assets used in product development; prototype production and materials costs for both chips and end-user products; software licensing and support costs, which represent the annual licensing and support maintenance for engineering design and other software tools; and rent and other overhead costs for our engineering design facility. Personnel costs include share-based compensation which represents the grant date fair value of equity-based awards to our employees which is attributed to expense over the service period of the award. Subsequent to March 31, 2019, we halted substantially all research and development efforts and, where applicable, repurposed prior engineering resources to support our patent enforcement programs or our Milo sales and support.

The $0.3 million decrease in research and development expenses from 2019 to 2020 is primarily the result of $0.2 million in personnel and related costs being repurposed for selling, general and administrative purposes, including litigation support and Milo sales and support as well as a $0.1 million reduction in research and development personnel costs.

Selling, General, and Administrative Expenses

Selling, general and administrative expenses consist primarily of executive, director, sales and marketing, and finance and administrative personnel costs, including share-based compensation, costs incurred for advertising, insurance, shareholder relations and outside legal and professional services, including litigation expenses, and amortization and maintenance expenses related to our patent assets.

Our selling, general and administrative expenses were approximately $10.7 million for the year ended December 31, 2020, as compared to approximately $7.6 million for the year ended December 31, 2019, representing an increase of approximately $3.1 million or 41%. This increase is primarily due to the recognition of $2.2 million in noncash charges upon amendment of equity-related agreements. In addition, we had a $1.3 million increase in litigation expenses primarily related to preparation of the infringement case against Qualcomm and Apple in Florida in early 2020 and a $0.6 million increase in share-based compensation due to executive and Board equity awards granted in August 2019 and the first quarter of 2020. These increases were somewhat offset by a decrease of $0.3 million in board compensation expenses due to the reversal of prior board compensation expense upon the settlement of previously accrued board fees in exchange for equity based awards in 2020, a decrease of $0.2 million in rent and related overhead due to the down-sizing of our corporate headquarters in July 2019, and a decrease in depreciation and amortization of $0.3 million resulting from lower cost bases of fixed assets and patents following disposals during 2019 and 2020.

Change in Fair Value of Contingent Payment Obligations

We have elected to measure our secured and unsecured contingent payment obligations at fair value which is based on significant unobservable inputs. We estimated the fair value of our secured contingent payment obligations using a probability-weighted income approach based on the estimated present value of projected future cash outflows using a risk-adjusted discount rate. Increases or decreases in the significant unobservable inputs could result in significant increases or decreases in fair value.

For the year ended December 31, 2020, we recorded an increase in the fair value of our secured and unsecured contingent payment obligations of approximately $8.4 million. The change in fair value estimates are a result of changes in estimated amounts and timing of projected future cash flows primarily due to the passage of time and changes in the probabilities of future cash outflows based on the status of the funded actions. In addition, in 2020, increases in fair value resulted from the sharp decrease in the risk-free interest rate used in the calculation as a result of the Federal Reserve lowering rates to stimulate economic activity amidst the COVID-19 pandemic.

Critical Accounting Policies

We believe that the following are critical accounting policies and estimates that significantly impact the preparation of our consolidated financial statements:

Revenue
We have an active monitoring and enforcement program with respect to our intellectual property rights that includes seeking appropriate compensation from third parties that utilize or have utilized our intellectual property without a license. As a result, we may receive payments as part of a settlement or in the form of court-awarded damages for a patent infringement dispute. We recognize such payments as revenue in accordance with Accounting Standards Codification ("ASC") 606, "Revenue from Contracts with Customers."

Contingent Payment Obligations
We have accounted for our secured and unsecured contingent payment obligations as long-term debt. Our repayment obligations are contingent upon the receipt of proceeds from patent enforcement or other patent monetization actions. We have elected to measure our contingent payment obligations at their estimated fair values based on the variable and contingent nature of the repayment provisions. We have determined that the fair value of our secured and unsecured contingent payment obligations falls within Level 3 in the fair value hierarchy, which involves significant estimates and assumptions including projected future patent-related proceeds and the risk-adjusted rate for discounting future cash flows. Actual results could differ from the estimates made. Changes in fair value, including the component related to imputed interest, are included in the consolidated statements of comprehensive loss under the heading "Change in fair value of contingent payment obligations." Refer to Note 10 to our consolidated financial statements and Note 11 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus for a discussion of the significant estimates and assumptions used in estimating the fair value of our contingent payment obligations.

Accounting for Share-Based Compensation
We calculate the fair value of share-based equity awards to employees, including restricted stock, stock options and restricted stock units ("RSUs"), on the date of grant and recognize the calculated fair value as compensation expense over the requisite service periods of the related awards. The fair value of stock option awards is determined using the Black-Scholes option valuation model that requires the use of highly subjective assumptions and estimates including how long employees will retain their stock options before exercising them and the volatility of our common stock price over the expected life of the equity award. Changes in these subjective assumptions can materially affect the estimate of fair value of share-based compensation and consequently, the related amount recognized as expense in the consolidated statements of comprehensive loss.

New Accounting Pronouncements
In August 2020, the FASB issued ASU 2020-06 "Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity." This ASU simplifies accounting for convertible instruments by removing major separation models required under current U.S. GAAP. Consequently, more convertible debt instruments will be reported as a single liability instrument with no separate accounting for embedded conversion features. The ASU removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, which will permit more equity contracts to qualify for the exception. The ASU also simplifies the diluted earnings per share (EPS) calculation in certain areas. The ASU is effective for fiscal years beginning after December 15, 2021 for accelerated filers and for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, for smaller reporting companies. Early adoption is permitted for fiscal years beginning after December 15, 2020. The ASU provides for a modified retrospective method of adoption whereby the guidance is applied to transactions outstanding at the beginning of the fiscal year of adoption with the cumulative effect of the change being recorded as an adjustment to beginning retained earnings. We adopted ASU 2020-06 as of January 1, 2021 which resulted in an increase to our long-term debt of approximately $0.8 million, a decrease in additional paid-in-capital of approximately $1.1 million and an adjustment to our beginning retained deficit of $0.3 million resulting from the elimination of the previously recognized beneficial conversion feature as a debt discount.

Off-Balance Sheet Transactions

As of September 30, 2021, we had outstanding warrants to purchase 9.8 million shares of our common stock. The estimated grant date fair value of these warrants of approximately $2.8 million is included in shareholders' deficit in our condensed consolidated interim balance sheets as of September 30, 2021. The outstanding warrants have an average exercise price of $0.73 per share and a weighted average remaining life of approximately 3.2 years.

DESCRIPTION OF BUSINESS

We are in the business of innovating fundamental wireless technologies and products. We have designed and developed proprietary RF technologies and integrated circuits and license those technologies to others for use in wireless communication products.

We have designed and developed proprietary RF technologies and integrated circuits based on those technologies and we license our technologies to others for use in wireless communication products. We believe certain patents protecting our proprietary technologies have been broadly infringed by others and therefore the primary focus of our business plan is the enforcement of our intellectual property rights through patent infringement litigation and licensing efforts. We currently have patent enforcement actions ongoing in various U.S. district courts against mobile handset providers and providers of smart televisions and other WiFi products and, in certain cases, their chip suppliers for the infringement of several of our RF patents. We have made significant investments in developing and protecting our technologies, the returns on which are dependent upon the generation of future revenues for realization.

In 2018, we restructured our operations to reduce operating expenses in light of our limited capital resources. As part of that restructuring, we made significant reductions in our investment in the development and marketing of a consumer distributed WiFi product line marketed under the brand name Milo®. In early 2019, we ceased substantially all ongoing research and development efforts and, where applicable, repurposed resources to support our patent enforcement and product sales and support efforts. We ceased sales of our Milo products in the fourth quarter of 2019 and are currently focused exclusively on our patent enforcement litigation and licensing efforts.

We spent much of 2020 supporting our two patent infringement cases against Qualcomm and others that were scheduled for jury trials in Florida in 2020. In 2020, the jury trial scheduled in Jacksonville, Florida was stayed pending the outcome of the Qualcomm case in Orlando, Florida. As a result of the COVID-19 pandemic, the Orlando trial was rescheduled for mid-year 2021 and subsequently the trial was further delayed. Currently, we are awaiting the court's rulings on several pre-trial motions, following which the court has indicated it will set a trial schedule. In 2020, we filed a number of cases in Texas against alleged infringers of our patented technologies. We entered into patent license and settlement agreements with two of the Texas defendants, Buffalo and Zyxel, in 2021. We anticipate two or three jury trials in Texas in 2022 with the first scheduled against Intel in June 2022. See "Legal Proceedings" in Note 12 to our consolidated financial statements and Note 12 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus for a detailed description of our various patent enforcement actions.

A significant portion of our litigation costs have been funded under a secured contingent payment arrangement with Brickell, contingent arrangements with legal counsel, and various debt and equity financings. See "Liquidity and Capital Resources" included in Management's Discussion and Analysis Financial Condition and Results of Operations for a full discussion of our litigation funding arrangements and our equity and debt financings.

Products and Licenses

We currently have license agreements with Samsung, Buffalo and Zyxel for the use of our technologies. Each of these licenses was the result of a patent license and settlement agreement following initiation of patent infringement actions by us.

We produced and sold consumer WiFi products, under the tradename Milo, from 2017 to 2019. These products offered a cost-effective networking system to enhance WiFi connectivity by effectively distributing the WiFi signal from existing routers and modems throughout a broader coverage area. We marketed these products primarily to consumers through Amazon.com and other online outlets, including our own direct-to-consumer online retail site. We ceased sales of these WiFi products in 2019 following a reduction in operating costs.

RF Technologies

Our RF technologies enable highly accurate transmission and reception of RF carriers at low power, thereby enabling extended battery life, and certain size, cost, performance, and packaging advantages.
We believe the most significant hurdle to the licensing and/or sale of our technologies and related products is the widespread use of certain of our technologies in infringing products produced by companies with significantly greater financial, technical, sales, and marketing resources. 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.

Patents and Trademarks

We consider our intellectual property, including patents, patent applications, trademarks, and trade secrets to be significant to our business plan. 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, 2021, we had approximately 85 active U.S. and foreign patents related to our RF technologies. In addition, we have a number of recently expired patents that we believe continue to have significant economic value as a result of our ability to assert past damages in our patent enforcement actions. We estimate the economic lives of our patents to be the shorter of fifteen years from issuance or twenty years from the earliest application date. Our current portfolio of issued patents have expirations ranging from 2021 to 2036.

Employees

As of December 31, 2021, we had seven full-time employees and one part-time employee. We also outsource certain specialty services, such as information technology, and utilize contract staff and third-party consultants from time to time to supplement our workforce. Our employees are not represented by any collective bargaining agreements and we consider our employee relations to be satisfactory.

We have taken measures to protect our workforce in response to the COVID-19 pandemic, including optional remote worksites for all of our employees beginning in April 2020. Our management, with the oversight of our board of directors, monitors the hiring, retention and management of our employees.

Available Information and Access to Reports

We file annual reports on Forms 10-K, quarterly reports on Forms 10-Q, proxy statements and other reports, including any amendments thereto, electronically with the SEC. The SEC maintains an Internet site (http://www.sec.gov) where these reports may be obtained at no charge. We also make copies of these reports available, free of charge through our website (http://www.parkervision.com) via the link “SEC filings” as soon as practicable after filing or furnishing such materials with the SEC.

Properties

Until the expiration of our lease in October 2020, our headquarters were located in a 3,000 square foot leased facility in Jacksonville, Florida. Beginning in November 2020, we reverted to remote worksites for all of our employees in light of the pandemic. We believe a remote work environment is currently suitable for the conduct of our business. We have an additional 7,000 square foot leased facility in Lake Mary, Florida that was primarily for engineering design activities. We ceased use of the Lake Mary facility in 2018 and secured a sublease tenant in 2021 for the duration of the lease term through November 2022. Refer to Note 8 to our consolidated financial statements and Note 9 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus for information regarding our outstanding lease obligations.

Legal Proceedings

We are a party to a number of patent enforcement actions initiated by us against others for the infringement of our technologies, as well as proceedings brought by others against us in an attempt to invalidate certain of our patent claims. These patent-related proceedings are more fully described in Note 12 to our consolidated financial statements and Note 12 to our condensed consolidated interim financial statements for the nine months ended September 30, 2021 included elsewhere in this prospectus.

DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors

Our Board is divided into three classes with only one class of directors typically being elected in each year and each class serving a three-year term. Our current directors, including their backgrounds and qualifications are as follows**:**

Name	Age	Position with the Company
Frank N. Newman	79	Class II Director, Audit Committee Member
Jeffrey L. Parker	65	Class I Director, Chairman of the Board and Chief Executive Officer
Paul A. Rosenbaum	79	Class III Director, Audit Committee Chair
Robert G. Sterne	70	Class III Director

Frank N. Newman

Frank Newman has been a director of ours since December 2016 and a member of our audit committee since April 2020. Mr. Newman has been the chief executive officer and co-founder of PathGuard, Inc. (or its predecessors), a company offering hardware-based cybersecurity, since 2015. From 2011 until December 2018, Mr. Newman served as chairman of Promontory Financial Group China Ltd., an advisory group for financial institutions and corporations in China. From 2005 to 2010, he served as chairman and chief executive officer of Shenzhen Development Bank, a national bank in China. Prior to 2005, Mr. Newman served as chairman, president, and chief executive officer of Bankers Trust and chief financial officer of Bank of America and Wells Fargo Bank. Mr. Newman served as Deputy Secretary of the U.S. Treasury from 1994 to 1995 and as Under Secretary of Domestic Finance from 1993 to 1994. He has authored two books and several articles on economic matters, published in the U.S., mainland China, and Hong Kong. Mr. Newman has served as director of Aspirational Consumer Lifestyle Corp (NYSE: ASPL), a special purpose acquisition company, since September 2020. He also serves as audit committee chair and a member of the compensation committee for ASPL. Mr. Newman has previously served as a director for major public companies in the U.S., United Kingdom, and China, and as a member of the Board of Trustees of Carnegie Hall. He earned his BA, magna cum laude, in economics at Harvard. Mr. Newman brings a substantial knowledge of international banking and business relationships to the Board. His financial background adds an important expertise to the Board with regard to financing future business opportunities.

Jeffrey L. Parker

Jeffrey Parker has been the Chairman of our Board and our Chief Executive Officer since our inception in August 1989 and was our president from April 1993 to June 1998. From March 1983 to August 1989, Mr. Parker served as executive vice president for Parker Electronics, Inc., a joint venture partner with Carrier Corporation performing research, development, manufacturing, and sales and marketing for the heating, ventilation and air conditioning industry. Mr. Parker is a named inventor on 31 U.S. patents. Among other qualifications, as Chief Executive Officer, Mr. Parker has relevant insight into our operations, our industry, and related risks as well as experience bringing disruptive technologies to market.

Paul A. Rosenbaum

Paul A. Rosenbaum has been a director of ours since December 2016 and a member of our audit committee since September 2018. Mr. Rosenbaum has extensive experience as a director and executive officer for both public and private companies in a number of industries. Since 1994, Mr. Rosenbaum has served as chief executive of SWR Corporation, a privately-held corporation that designs, sells, and markets specialty industrial chemicals. In September 2017, Mr. Rosenbaum was appointed to the Board of Commissioners for the Oregon Liquor Control Commission and has served as chairman since March

2018. Since 2009, Mr. Rosenbaum has been a member of the Providence St. Vincent Medical Foundation Council of Trustees, and previously served as president of the Council. In addition, from September 2000 until June 2009, Mr. Rosenbaum served as chairman and chief executive officer of Rentrak Corporation ("Rentrak"), a Nasdaq publicly traded company that provides transactional media measurement and analytical services to the entertainment and media industry. From June 2009 until July 2011, Mr. Rosenbaum served in a non-executive capacity as chairman of Rentrack. From 2007 until 2016, Mr. Rosenbaum served on the Board of Commissioners for the Port of Portland, including as vice chairman from 2012 to 2016. Mr. Rosenbaum was chief partner in the Rosenbaum Law Center from 1978 to 2000 and served in the Michigan Legislature from 1972 to 1978, during which time he chaired the Michigan House Judiciary Committee, was legal counsel to the Speaker of the House of the state of Michigan and wrote and sponsored the Michigan Administrative Procedures Act. Additionally, Mr. Rosenbaum served on the National Conference of Commissioners on Uniform State Laws, as vice chairman of the Criminal Justice and Consumer Affairs Committee of the National Conference of State Legislatures, and on a committee of the Michigan Supreme Court responsible for reviewing local court rules. Among other qualifications, Mr. Rosenbaum has extensive experience as a director and executive officer of a publicly held corporation and has relevant insights into operations and our litigation strategies.

Robert G. Sterne
Robert Sterne has been a director of ours since September 2006 and also served as a director of ours from February 2000 to June 2003. Since 1978, Mr. Sterne has been a partner of the law firm of Sterne, Kessler, Goldstein & Fox PLLC, specializing in patent and other intellectual property law. Mr. Sterne provides legal services to us as one of our patent and intellectual property attorneys. Mr. Sterne has co-authored numerous publications related to patent litigation strategies. He has received multiple awards for contributions to intellectual property law including Law 360's 2016 Top 25 Icons of IP and the Financial Times 2015 Top 10 Legal Innovators in North America. Among other qualifications, Mr. Sterne has an in-depth knowledge of our intellectual property portfolio and patent strategies and is considered a leader in best practices and board responsibilities concerning intellectual property.

Director Independence
We follow the rules of Nasdaq in determining if a director is independent. The Board also consults with our counsel to ensure that the Board's determination is consistent with those rules and all relevant securities and other laws and regulations regarding the independence of directors. The Board has affirmatively determined that Messrs. Newman, Rosenbaum, and Sterne are independent directors.

Information About Our Executive Officers

Our current executive officers are as follows**:**

Name	Age	Position with the Company
Jeffrey Parker	65	Chairman of the Board and Chief Executive Officer ("CEO")
Cynthia French	55	Chief Financial Officer and Corporate Secretary ("CFO")

The background for Mr. Jeffrey Parker is included above under the heading "Directors".

Cynthia French (formerly Poehlman)
Cynthia French has been our chief financial officer since June 2004 and our corporate secretary since August 2007. From March 1994 to June 2004, Ms. French was our controller and our chief accounting officer. Ms. French has been a certified public accountant in the state of Florida since 1989.

Former Executive Officers
Messrs. David Sorrells and Gregory Rawlins both served as our Chief Technology Officers ("CTO") through March 2020, at which time, given our reduced scope of operations, in particular our research and development activities, our Board determined to eliminate the Chief Technology Officer role. Both Mr. Sorrells and Mr. Rawlins remain employed by us in technical support roles.

Family Relationships

There are no family relationships among our officers or directors.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following table summarizes the total compensation of each of our "named executive officers" as defined in Item 402(m) of Regulation S-K (the "Executives") for the fiscal years ended December 31, 2021 and 2020. Given the complexity of disclosure requirements concerning executive compensation, and in particular with respect to the standards of financial accounting and reporting related to equity compensation, there is a difference between the compensation that is reported in this table versus that which is actually paid to and received by the Executives. The amounts in the Summary Compensation Table that reflect the full grant date fair value of an equity award, do not necessarily correspond to the actual value that has been realized or will be realized in the future with respect to these awards.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)(2)	Option Awards ($)(2)	All Other ($)	Total ($)
Jeffrey Parker, CEO	2021	$ 260,000	$ -	$ -	$ 3,640,000	$ 24,000 [3]	$ 3,924,000
	2020	270,000 [1]	-	99,000	-	24,923 [3]	393,923
Cynthia French, CFO	2021	180,000	-	-	455,000	-	635,000
	2020	186,923 [1]	-	-	42,750	-	229,673
David Sorrells, Former CTO [4]	2020	176,150	-	49,500	-	-	225,650
Gregory Rawlins, Former CTO Heathrow [4]	2020	207,692	-	49,500	-	-	257,192

1. There were 27 biweekly pay periods in 2020 compared to 26 in 2021 resulting in the decrease in reported base salaries.
2. The amounts represented in columns (e) and (f) represents the full grant date fair value of equity awards in accordance with ASC 718. Refer to Note 14 to the consolidated financial statements for the year ended December 31, 2020 included elsewhere in this prospectus for the assumptions made in the valuation of equity awards.
3. Represents an automobile allowance in the amount of $24,000, paid biweekly. The additional amount in 2020 is the result of 27 pay periods in 2020 compared to 26 in 2021.
4. The CTO roles were eliminated in March 2020 by our Board.

In February 2020, our Board approved equity awards under our 2019 Long Term Incentive Plan (the "2019 Plan") including 300,000 RSUs to Mr. Parker, 150,000 RSUs to each of Messrs. Rawlins and Sorrells and 150,000 share options at an exercise price of $0.33 per share to Ms. French. These awards vest over five quarters through May 2021. These awards were, in part, in consideration of continuing voluntary salary reductions by our Executives.

In January 2021, the Board approved equity awards under the 2019 Plan including nonqualified stock options for the purchase of up to 8,000,000 shares at an exercise price of $0.54 per share to Mr. Parker and nonqualified stock options for the purchase of up to 1,000,000 shares at an exercise price of $0.54 to Ms. French. These options vest over eight equal quarterly increments commencing March 31, 2021 and expiring on January 11, 2026. These awards were awarded as long-term incentive to our executives and took into consideration the longevity of their tenure with us, the continuation of their base compensation at a 20% reduced pay rate since 2018 and in recognition of the key role each holds in the organization.

We do not have employment agreements with any of our Executives. We have non-compete arrangements in place with all of our employees, including our Executives, that impose post-termination restrictions on (i) employment or consultation with competing companies or customers, (ii) recruiting or hiring employees for a competing company, and (iii) soliciting or accepting business from our customers. We also have a tax-qualified defined contribution 401(k) plan for all of our employees, including our Executives. We did not make any employer contributions to the 401(k) plan in 2021 or 2020.

Outstanding Equity Awards at Fiscal Year End

The following table summarizes information concerning the outstanding equity awards, including unexercised options, unvested stock and equity incentive awards, as of December 31, 2021 for each of our Executives:

	Option Awards				Stock Awards	
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of shares or units of stock that have not vested (#)	Market Value of shares or units of stock that have not vested ($)
Name	(a)	(b)	(c)	(d)	(e)	(f)
Jeffrey Parker	20,000 [1]	-	1.98	8/15/2024		$
	2,680,000 [2]	-	0.17	8/7/2026		
	4,000,000 [3]	4,000,000 [3]	0.54	1/11/2026	-	-
Cynthia French	20,000 [1]	-	1.98	8/15/2024	-	-
	877,150 [2]	-	0.17	8/7/2026		
	150,000 [4]	-	0.33	2/9/2027		
	500,000 [3]	500,000 [3]	0.54	1/11/2026	-	-

[1] Options vested over four equal quarterly periods from August 31, 2017 to May 31, 2018.

[2] Options vested over eight equal quarterly periods from September 1, 2019 to June 1, 2021.

[3] Options vest over eight equal quarterly periods beginning March 31, 2021.

[4] Options vested 50% on grant date and the remaining 50% over four equal quarterly periods from May 9, 2020 to May 9, 2021.

Director Compensation

Since September 2018, the Board compensation program has consisted exclusively of equity-based compensation, generally awarded annually, in the form of nonqualified stock options, RSUs, or a combination thereof. Unvested director equity compensation awards are forfeited if the director resigns or is removed from the Board for cause prior to the vesting date. Nonqualified stock options generally expire seven year from grant date.

In February 2020, our non-employee directors were awarded, at their option, either 150,000 nonqualified stock options at an exercise price of $0.33 per share or an RSU for 150,000 shares. Messrs. Rosenbaum and Sterne opted to receive options, each with a grant-date fair value of approximately $43,000. Mr. Newman opted to receive a RSU with a grant date fair value of approximately $50,000. Each of the awards vest 50% upon grant with the remaining portion vesting in four equal quarterly installments from May 2020 through February 2021.

In addition, in February 2020, Mr. Sterne was awarded an immediately vested nonqualified stock option for the purchase of 100,000 shares at $0.33 per share, with an estimated grant-date fair value of approximately $29,000, as partial payment of accrued and unpaid fees for board and committee service prior to 2019. Mr. Sterne waived approximately $70,000 in additional accrued and unpaid fees.

In January 2021, each of our non-employee directors were awarded 380,000 nonqualified stock options at an exercise price of $0.54 per share. These options vest over eight equal quarterly increments commencing March 31, 2021 and expiring on January 11, 2026.

We reimburse our non-employee directors for their reasonable expenses incurred in attending meetings where applicable and we encourage participation in relevant educational programs for which we reimburse all or a portion of the costs incurred for these purposes.

Directors who are also our employees are not compensated for serving on our Board. Information regarding compensation otherwise received by our directors who are also named executive officers is provided under "Executive Compensation."

The following table summarizes the compensation of our non-employee directors for the year ended December 31, 2021.

Name	Stock Awards($)	Option Awards($) 1	Total ($)
(a)	(b)	(c)	(d)
Frank Newman [2]	$ -	$ 172,900	$ 172,900
Paul Rosenbaum [3]	-	172,900	172,900
Robert Sterne [4]	-	172,900	172,900

1. The amounts represented in column (c) represent the full grant date fair value of share-based awards in accordance with ASC 718. Refer to Note 14 of the consolidated financial statements included elsewhere in this prospectus for the assumptions made in the valuation of stock awards.

2. At December 31, 2021, Mr. Newman has an aggregate of 1,355,000 nonqualified stock options outstanding, of which 1,165,000 are exercisable.

3. At December 31, 2021, Mr. Rosenbaum has an aggregate of 1,505,000 nonqualified stock options outstanding, of which 1,315,000 are exercisable.

4. At December 31, 2021, Mr. Sterne has 1,651,735 nonqualified stock options outstanding, of which 1,461,735 are exercisable.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information as of December 31, 2021 with respect to the stock ownership of (i) those persons or groups who beneficially own more than 5% of our common stock, (ii) each of our directors, (iii) each of our executive officers, and (iv) all of our directors and executive officers as a group (based upon information furnished by those persons).

As of December 31, 2021, 76,991,801 shares of our Common Stock were issued and outstanding.

Name of Beneficial Owner	Amount and Nature of Beneficial Ownership		Percent of Class[1]
>5% HOLDERS (EXCLUDING EXECUTIVE OFFICERS AND DIRECTORS)			
GEM Partners, LP	8,073,403	2	9.99%
Thomas Staz Revocable Trust	4,017,169	3	5.22%
EXECUTIVE OFFICERS AND DIRECTORS			
Jeffrey Parker [10]	7,028,083	4	8.40%
Cynthia French [10]	1,572,343	5	2.00%
Frank Newman [10]	1,348,100	6	1.72%
Paul Rosenbaum [10]	1,989,567	7	2.53%
Robert Sterne [10]	1,510,000	8	1.92%
All directors and executive officers as a group (5 persons)	13,448,093	9	15.04%

1 Percentage is calculated based on all outstanding shares of common stock plus, for each person or group, any shares of common stock that the person or the group has the right to acquire within 60 days pursuant to options, warrants, conversion privileges or other rights. Unless otherwise indicated, each person or group has sole voting and dispositive power over all such shares of common stock.

2 GEM Investment Advisors, LLC ("GEM Advisors") is the general partner of GEM Partners LP ("GEM") and Flat Rock Partners LP ("FlatRock"). Mr. Daniel Lewis is the controlling person of GEM Advisors. GEM Advisors and Mr. Lewis have shared voting and dispositive power. Beneficial ownership includes (i) 4,899 shares held by FlatRock, (ii) 6,600 shares held by Mr. Lewis, (iii) 4,239,981 shares held by GEM, and (iv) 3,821,923 shares underlying convertible notes held by GEM, but excludes 5,505,000 shares underlying convertible notes held by GEM that are not convertible within 60 days due to exercise limitations. The principal business address of GEM Advisors, FlatRock, and Mr. Lewis is 100 State Street, Suite 2B, Teaneck, NJ 07666. Information derived from a Schedule 13G/A filed by GEM Advisors on March 9, 2021.

3 Thomas Staz is the trustee of the Thomas Staz Revocable Trust. The principal business address of the Thomas Staz Revocable Trust is 1221 Brickell Avenue, Suite 2660, Miami, Florida 33131. Information derived from a Schedule 13D filed by Thomas Staz Revocable Trust on April 7, 2021.

4 Includes 6,700,000 shares of common stock issuable upon currently exercisable options, 210,824 shares held by Mr. Parker directly, 117,259 shares held by Jeffrey Parker and Deborah Parker Joint Tenants in Common, over which Mr. Parker has shared voting and dispositive power. Excludes 4,000,000 shares of common stock issuable upon options that may become exercisable in the future.

5 Includes 1,547,150 shares of common stock issuable upon currently exercisable options and excludes 500,000 shares of common stock issuable upon options that may become exercisable in the future.

6 Includes 1,165,000 shares of common stock issuable upon currently exercisable options and excludes 190,000 shares of common stock issuable upon options that may become exercisable in the future.

7 Includes 1,315,000 shares of common stock issuable upon currently exercisable options and 250,000 shares of common stock issuable upon conversion of convertible notes. Excludes 190,000 shares of common stock issuable upon options that may become exercisable in the future.

8 Includes 1,461,735 shares of common stock issuable upon currently exercisable options and excludes 190,000 shares of common stock issuable upon options that may become exercisable in the future.

9 Includes 12,188,885 shares of common stock issuable upon currently exercisable options and 250,000 shares of common stock issuable upon conversion of convertible notes held by directors and officers and excludes 5,070,000 shares of common stock issuable upon options that may become exercisable in the future (see notes 4, 5, 6, 7 and 8 above).

10 The person's address is 4446-1A Hendricks Avenue, Suite 354, Jacksonville, Florida 32207.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

We paid approximately $11,000 and $22,000 in 2020 and 2019, respectively for patent-related legal services to SKGF, of which Robert Sterne, is a partner. In addition, we paid approximately $110,000 in 2020 for principal and interest on an unsecured note payable to SKGF. The note was issued in 2016 to convert outstanding unpaid legal fees to an unsecured promissory note. The note was amended multiple times in 2018 and 2019 to defer principal payments. The note, as amended, allows for interest at 4% per annum, monthly installments of $10,000 per month beginning January 2020, with a final balloon payment due on April 30, 2022. In 2021, the note was further amended to extend the final balloon payment date to April 30, 2023. At September 30, 2021, the outstanding balance of the note, including unpaid interest is approximately $736,000.

In January 2020, we issued 500,000 in unregistered shares of our Common Stock as an in-kind payment of approximately $0.08 million in outstanding amounts payable to Stacie Wilf, sister of Jeffrey Parker.

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 shares of our Common Stock constituting less than 1% of our outstanding shares of Common Stock.

EXPERTS

The consolidated financial statements as of December 31, 2020 and 2019 and for the years ended December 31, 2020 and 2019 included in this Prospectus and in the Registration Statement have been so included 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 consolidated financial statements) of MSL, P.A., an independent registered 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. Our Common Stock is traded on the OTCQB Market.

We have filed with the SEC a Registration Statement on Form S-1 relating to the Common Stock to be sold in this offering. The registration statement, including the attached exhibits and schedules, contains additional relevant information about us and our capital stock. This prospectus does not contain all of the information set forth in the Registration Statement and the exhibits and schedules thereto. For further information about us and our Common Stock, you should refer to the Registration Statement, including the exhibits and schedules thereto. Statements contained in this prospectus as to the contents of any contract or other document referred to are not necessarily complete and in each instance, if such contract or document is filed as an exhibit, reference is made to the copy of such contract or other document filed as an exhibit to the Registration Statement, each statement being qualified in all respects by such reference

INDEX TO FINANCIAL STATEMENTS

PARKERVISION, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)
(in thousands, except par value data)

	September 30, 2021	December 31, 2020
CURRENT ASSETS:		
Cash and cash equivalents	$ 760	$ 1,627
Prepaid expenses	707	599
Other current assets	18	8
Total current assets	1,485	2,234
Operating lease right-of-use assets	8	10
Intangible assets, net	1,887	2,170
Property, equipment and other assets, net	21	42
Total assets	$ 3,401	$ 4,456
CURRENT LIABILITIES:		
Accounts payable	$ 589	$ 4,318
Accrued expenses:		
Salaries and wages	58	19
Professional fees	103	128
Statutory court costs	-	251
Other accrued expenses	483	936
Related party note payable, current portion	103	100
Secured note payable, current portion	-	26
Unsecured notes payable	-	65
Operating lease liabilities, current portion	164	146
Total current liabilities	1,500	5,989
LONG-TERM LIABILITIES:		
Secured contingent payment obligation	35,940	33,057
Convertible notes	3,015	3,018
Related party note payable, net of current portion	633	703
Unsecured contingent payment obligations	5,747	5,222
Operating lease liabilities, net of current portion	34	159
Other long-term liabilities	1	129
Total long-term liabilities	45,370	42,288
Total liabilities	46,870	48,277
SHAREHOLDERS' DEFICIT:		
Common stock, $0.01 par value, 150,000 and 140,000 shares authorized, 74,743 and 58,591 shares issued and outstanding at September 30, 2021 and December 31, 2020, respectively	747	586
Additional paid-in capital	385,843	376,954
Accumulated deficit	(430,059)	(421,361)
Total shareholders' deficit	(43,469)	(43,821)
Total liabilities and shareholders' deficit	$ 3,401	$ 4,456

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

PARKERVISION, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(UNAUDITED)
(in thousands, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Licensing revenue	$ 144	$ -	$ 144	$ -
Cost of sales	(1)	-	(1)	-
Gross margin	143	-	143	-
Selling, general and administrative expenses	2,024	1,445	6,152	9,268
Total operating expenses	2,024	1,445	6,152	9,268
Other income	19	1	213	1
Interest expense	(70)	(119)	(185)	(420)
Change in fair value of contingent payment obligations	(172)	(105)	(2,996)	(3,487)
Total interest and other	(223)	(223)	(2,968)	(3,906)
Net loss	(2,104)	(1,668)	(8,977)	(13,174)
Other comprehensive loss, net of tax	-	-	-	-
Comprehensive loss	$ (2,104)	$ (1,668)	$ (8,977)	$ (13,174)
Basic and diluted net loss per common share	$ (0.03)	$ (0.03)	$ (0.13)	$ (0.29)
Weighted average common shares outstanding	73,868	50,530	69,869	44,772

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

PARKERVISION, INC.
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT
(UNAUDITED)
(in thousands)

	Three Months Ended September 30, 2021	Three Months Ended September 30, 2020	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020
Total shareholders' deficit, beginning balances	$ (42,949)	$ (38,334)	$ (43,821)	$ (33,097)
Common stock				
Beginning balances	727	491	586	341
Issuance of common stock and warrants in public and private offerings, net of issuance costs and initial fair value of contingent payment rights	-	15	62	97
Issuance of common stock upon exercise of options and warrants	6	10	58	35
Issuance of common stock and warrants for services	2	1	9	7
Issuance of common stock upon conversion and payment of interest-in-kind on convertible debt	12	2	30	10
Issuance of common stock upon conversion of short-term loans and payables	-	-	-	22
Share-based compensation, net of shares withheld for taxes	-	1	2	8
Ending balances	747	520	747	520
Additional paid-in capital				
Beginning balances	384,279	374,464	376,954	368,345
Cumulative effect of change in accounting principle	-	-	(1,126)	-
Issuance of common stock and warrants in public and private offerings, net of issuance costs and initial fair value of contingent payment rights	-	215	4,712	3,751
Issuance of common stock upon exercise of options and warrants	108	340	878	1,190
Issuance of common stock and warrants for services	208	25	829	257
Issuance of convertible debt with beneficial conversion feature	-	-	-	173
Issuance of common stock upon conversion and payment of interest-in-kind on convertible debt	502	87	1,029	340
Issuance of common stock upon conversion of short-term loans and payables	-	-	-	318
Share-based compensation, net of shares withheld for taxes	746	239	2,567	996
Ending balances	385,843	375,370	385,843	375,370
Accumulated deficit				
Beginning balances	(427,955)	(413,289)	(421,361)	(401,783)
Cumulative effect of change in accounting principle	-	-	279	-
Comprehensive loss for the period	(2,104)	(1,668)	(8,977)	(13,174)
Ending balances	(430,059)	(414,957)	(430,059)	(414,957)
Total shareholders' deficit, ending balances	$ (43,469)	$ (39,067)	$ (43,469)	$ (39,067)

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

PARKERVISION, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)
(in thousands)

	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (8,977)	$ (13,174)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	281	497
Share-based compensation	2,569	1,004
Noncash lease expense	2	60
Loss on changes in fair value of contingent payment obligations	2,996	3,487
Loss on disposal/impairment of equipment and intangible assets	25	413
Loan forgiveness	(194)	-
Noncash expense for amendment of equity-related agreements	-	2,211
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	624	192
Accounts payable and accrued expenses	(4,139)	1,302
Operating lease liabilities	(107)	(174)
Total adjustments	2,057	8,992
Net cash used in operating activities	(6,920)	(4,182)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(2)	(3)
Net cash used in investing activities	(2)	(3)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net proceeds from issuance of common stock, including contingent payment rights, in private offerings	5,186	3,057
Net proceeds from exercise of options and warrants	936	1,225
Net proceeds from debt financings	-	1,244
Principal payments on long-term debt	(67)	(1,251)
Net cash provided by financing activities	6,055	4,275
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(867)	90
CASH AND CASH EQUIVALENTS, beginning of period	1,627	57
CASH AND CASH EQUIVALENTS, end of period	$ 760	$ 147

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

1. Description of Business

ParkerVision, Inc. and its wholly-owned German subsidiary, ParkerVision GmbH (collectively "ParkerVision", "we" or the "Company"), is in the business of innovating fundamental wireless technologies and products.

We have designed and developed proprietary radio frequency ("RF") technologies and integrated circuits and license those technologies to others for use in wireless communication 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 of America ("U.S.") and certain foreign jurisdictions. We believe certain patents protecting our proprietary technologies have been broadly infringed by others, and therefore the primary focus of our business plan is the enforcement of our intellectual property rights through patent infringement litigation and licensing efforts. We currently have patent enforcement actions ongoing in various U.S. district courts against providers of mobile handsets, smart televisions and other WiFi products and, in certain cases, their chip suppliers for the infringement of a number of our RF patents. We have made significant investments in developing and protecting our technologies.

2. Liquidity and Going Concern

Our accompanying condensed consolidated financial statements were prepared assuming we would continue as a going concern, which contemplates that we will continue in operation for the foreseeable future and will be able to realize assets and settle liabilities and commitments in the normal course of business for a period of at least one year from the issuance date of these condensed consolidated financial statements. These condensed consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that could result should we be unable to continue as a going concern.

We have incurred significant losses from operations and negative cash flows from operations in every year since inception and have utilized the proceeds from the sales of debt and equity securities and contingent funding arrangements with third parties to fund our operations, including the cost of litigation. For the nine months ended September 30, 2021, we incurred a net loss of approximately $9.0 million and negative cash flows from operations of approximately $6.9 million. At September 30, 2021, we had cash and cash equivalents of approximately $0.8 million and an accumulated deficit of approximately $430.1 million. Additionally, a significant amount of future proceeds that we may receive from our patent enforcement and licensing programs will first be utilized to repay borrowings and legal fees and expenses under our contingent funding arrangements. These circumstances raise substantial doubt about our ability to continue to operate as a going concern for a period of one year following the issue date of these condensed consolidated financial statements.

For the nine months ended September 30, 2021, we received aggregate net proceeds from debt and equity financings of approximately $5.2 million and proceeds from the exercise of outstanding options and warrants of approximately $0.9 million. We used a significant portion of these proceeds to pay current obligations resulting in a reduction in our accounts payable and accrued expenses of approximately $4.1 million for the nine months ended September 30, 2021. Our current capital resources are not sufficient to meet our short-term liquidity needs and we will be required to seek additional capital.

Our ability to meet our liquidity needs for the next twelve months is dependent upon (i) our ability to successfully negotiate licensing agreements and/or settlements relating to the use of our technologies by others in excess of our contingent payment obligations, (ii) our ability to control operating costs, and/or (iii) our ability to obtain additional debt or equity financing, if needed. We expect that proceeds received by us from patent enforcement actions and technology licenses over the next twelve months may not be sufficient to cover our working capital requirements.

We expect to continue to invest in the support of our patent enforcement and licensing programs. The long-term continuation of our business plan is dependent upon the generation of sufficient revenues from our technologies and/or products to offset expenses and contingent payment obligations. In the event that we do not generate sufficient revenues, we will be required to obtain additional funding through public or private debt or equity financing or contingent fee arrangements and/or reduce operating costs. Failure to generate sufficient revenues, raise additional capital through debt or equity financings or contingent fee arrangements, and/or reduce operating costs will have a material adverse effect on our ability to meet our long-term liquidity needs and achieve our intended long-term business objectives.

3. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements for the period ended September 30, 2021 were prepared in accordance with generally accepted accounting principles ("GAAP") for interim financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Operating results for the three and nine months ended September 30, 2021, are not necessarily indicative of the results that may be expected for the year ending December 31, 2021, or future years. All normal and recurring adjustments which, in the opinion of management, are necessary for a fair statement of the consolidated financial condition and results of operations have been included.

The year-end condensed consolidated balance sheet data was derived from audited financial statements for the year ended December 31, 2020. Certain information and disclosures normally included in the notes to the annual financial statements prepared in accordance with GAAP have been omitted from these interim condensed consolidated financial statements. These interim condensed consolidated financial statements should be read in conjunction with our latest Annual Report on Form 10-K for the year ended December 31, 2020 ("2020 Annual Report").

The condensed consolidated financial statements include the accounts of ParkerVision, Inc. and its wholly-owned German subsidiary, ParkerVision GmbH, after elimination of all intercompany transactions and accounts.

4. Accounting Policies

There have been no changes in accounting policies from those stated in our 2020 Annual Report, other than as described below. We do not expect any newly effective accounting standards to have a material impact on our financial position, results of operations or cash flows when they become effective.

We adopted Accounting Standards Update ("ASU") 2020-06, "Accounting for Convertible Instruments and Contracts in an Entity's Own Equity" as of January 1, 2021. ASU 2020-06 simplifies accounting for convertible instruments, eliminating separation accounting for certain embedded conversion features. We used the modified retrospective method of adoption which allows for application of the guidance to transactions outstanding at the beginning of the fiscal year of adoption with the cumulative effect of the change being recorded as an adjustment to beginning retained earnings. Our adoption of ASU 2020-06 resulted in an increase to our long-term debt of approximately $0.8 million, a decrease in additional paid-in-capital of approximately $1.1 million, and an adjustment to our beginning accumulated deficit of

$0.3 million resulting from the elimination of the previously recognized beneficial conversion feature as a debt discount.

5. Revenue

We have an active monitoring and enforcement program with respect to our intellectual property rights that includes seeking appropriate compensation from third parties that utilize or have utilized our intellectual property without a license. As a result, we may receive payments as part of a settlement or in the form of court-awarded damages for a patent infringement dispute. We recognize such payments as revenue in accordance with Accounting Standards Codification ("ASC") 606, "Revenue from Contracts with Customers."

During the three and nine months ended September 30, 2021, we recognized approximately $0.14 million in revenue from licensing and settlement agreements with third parties for their use of our technologies. Our performance obligations were satisfied, and therefore revenue recognized, upon receipt of proceeds and subsequent dismissal of all patent enforcement actions between the parties.

6. Loss per Common Share

Basic loss per common share is determined based on the weighted-average number of common shares outstanding during each period. Diluted loss per common share is the same as basic loss per common share as all common share equivalents are excluded from the calculation, as their effect is anti-dilutive.

We have shares underlying outstanding options, warrants, unvested restricted stock units ("RSUs") and convertible notes that were excluded from the computation of diluted loss per share as their effect would have been anti-dilutive. These common share equivalents at September 30, 2021 and 2020 were as follows (in thousands):

	September 30,	
	2021	2020
Options outstanding	23,724	12,248
Warrants outstanding	9,819	13,850
Unvested RSUs	-	291
Shares underlying convertible notes	20,757	23,807
	54,300	50,196

7. Prepaid Expenses

Prepaid expenses consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Prepaid services	$ 640	$ 408
Prepaid bonds for German statutory costs	-	142
Prepaid insurance	32	21
Prepaid licenses, software tools and support	19	11
Other prepaid expenses	16	17
	$ 707	$ 599

Prepaid services at September 30, 2021 and December 31, 2020 include approximately $0.6 million and $0.1 million, respectively of consulting services paid in shares of stock or warrants to purchase shares of stock in the future.

8. Intangible Assets

Intangible assets consist of the following (in thousands):

	September 30, 2021	December 31, 2020
Patents and copyrights	$ 14,826	$ 14,948
Accumulated amortization	(12,939)	(12,778)
	$ 1,887	$ 2,170

9. Leases

During the nine months ended September 30, 2021, we entered into a sublease agreement related to our Lake Mary office space. The sublease is accounted for as an operating lease and is for the remaining term of our original lease, through November 2022. Rental income recognized of $0.02 million for the three and nine months ended September 30, 2021, is included in "Other income" in the accompanying condensed consolidated statements of comprehensive loss.

10. Debt

Notes Payable

Related Party Note Payable
We have an unsecured promissory note of approximately $0.7 million payable to Sterne, Kessler, Goldstein, & Fox, PLLC ("SKGF"), a related party, for outstanding unpaid fees for legal services. Subsequent to September 30, 2021, SKGF agreed to amend the note in order to extend the final balloon payment due under the note from April 2022 to April 2023. The SKGF note, as amended, will continue to accrue interest at a rate of 4% per annum, requires repayments of principal and interest at a rate of $10,000 per month and will extend the final balloon payment into April 2023. We are currently in compliance with all the terms of the note.

Secured Note Payable
Our secured note payable as of December 31, 2020 represented default interest accrued related to a note payable to Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C ("Mintz") for outstanding fees and expenses. Additionally, as of December 31, 2020, we had approximately $3.1 million in accounts payable to Mintz for outstanding fees and expenses. We also had approximately $3.6 million in disputed legal fees and expenses billed by Mintz that we treated as a loss contingency that was not probable as of December 31, 2020 and accordingly, for which we recognized no expense in the consolidated financial statements. On March 29, 2021, we entered into an agreement with Mintz to satisfy our outstanding obligations to Mintz. Under the terms of the agreement, (i) Mintz waived all past defaults on the note resulting in a reversal of previously accrued interest, (ii) we paid Mintz a lump-sum payment of $3.0 million in satisfaction of all outstanding obligations including our accounts payable to Mintz and all disputed and unrecorded billings, and (iii) Mintz agreed to a significant reduction in future success fees that might be payable to Mintz from patent-related proceeds.

Unsecured Notes Payable
Unsecured notes payable at December 31, 2020 represented a Paycheck Protection Program loan of approximately $0.2 million received in May 2020. The loan was eligible for forgiveness provided that (i) we used the loan proceeds exclusively for allowed costs including payroll, employee group health benefits, rent and utilities and (ii) employee and compensation levels were maintained during the coverage period. We applied for loan forgiveness in April 2021 and the loan was forgiven in June 2021. The forgiveness of the loan was recognized as income and is included in "Other income" in the accompanying condensed consolidated statements of comprehensive loss for the three and nine months ended September 30, 2021.

Convertible Notes

Our convertible notes represent 5-year promissory notes that are convertible, at the holders' option, into shares of our common stock at fixed conversion prices. Interest payments are made on a quarterly basis and are payable, at our option, subject to certain equity conditions, in either cash, shares of our common stock, or a combination thereof. To date, all interest payments on the convertible notes have been made in shares of our common stock. We have recognized the convertible notes as debt in our condensed consolidated financial statements. The fixed conversion prices of certain of the notes were below the market value of our common stock on the closing date resulting in the recognition of a beneficial conversion feature that was recorded as a discount on the convertible notes at the note inception date, with a corresponding increase to additional paid in capital. Upon our adoption of ASU 2020-06 on January 1, 2021, the beneficial conversion feature was eliminated, resulting in an increase of $0.8 million to convertible debt and a cumulative adjustment to beginning accumulated deficit of $0.3 million, representing the discount amortization recognized prior to adoption of the new standard (see Note 4).

We have the option to prepay the majority of the notes, subject to a premium on the outstanding principal prepayment amount of 25% prior to the two-year anniversary of the note issuance date, 20% prior to the three-year anniversary of the note issuance date, 15% prior to the four-year anniversary of the note issuance date, or 10% thereafter. The notes provide for events of default that include failure to pay principal or interest when due, breach of any of the representations, warranties, covenants or agreements made by us, events of liquidation or bankruptcy, and a change in control. In the event of default, the interest rate increases to 12% per annum and the outstanding principal balance of the notes plus all accrued interest due may be declared immediately payable by the holders of a majority of the then outstanding principal balance of the notes.

Convertible notes payable at September 30, 2021 and December 31, 2020 consist of the following (in thousands):

Description	Fixed Conversion Rate	Interest Rate	Maturity Date	Principal Outstanding as of September 30, 2021	Principal Outstanding as of December 31, 2020
Convertible notes dated September 10, 2018	$0.40	8.0%	September 7, 2023	$ 200	$ 600
Convertible note dated September 19, 2018	$0.57	8.0%	September 19, 2023	425	425
Convertible notes dated February/March 2019	$0.25	8.0%	February 28, 2024 to March 13, 2024	850	1,300
Convertible notes dated June/July 2019	$0.10	8.0%	June 7, 2024 to July 15, 2024	340	340
Convertible notes dated July 18, 2019	$0.08	7.5%	July 18, 2024	700	700
Convertible notes dated September 13, 2019	$0.10	8.0%	September 13, 2024	50	50
Convertible notes dated January 8, 2020	$0.13	8.0%	January 8, 2025	450	450
Total principal balance				3,015	3,865
Less Unamortized discount				-	847
				$ 3,015	$ 3,018

For the nine months ended September 30, 2021, convertible notes with a face value of $0.85 million were converted, at the option of the holders, into 2,800,000 shares of our common stock and we recognized interest expense of approximately $0.2 million related to the contractual interest which we elected to pay in shares of our common stock. For the nine months ended September 30, 2021, we issued approximately 215,000 shares of our common stock as interest-in-kind payments on our convertible notes.

At September 30, 2021, we estimate our convertible notes have an aggregate fair value of approximately $2.4 million and would be categorized within Level 2 of the fair value hierarchy.

Secured Contingent Payment Obligation

The following table provides a reconciliation of our secured contingent payment obligation, measured at estimated fair market value, for the nine months ended September 30, 2021 and the year ended December 31, 2020 (in thousands):

	Nine Months Ended September 30, 2021	Year Ended December 31, 2020
Secured contingent payment obligation, beginning of period	$ 33,057	$ 26,651
Change in fair value	2,883	6,406
Secured contingent payment obligation, end of period	$ 35,940	$ 33,057

Our secured contingent payment obligation represents the estimated fair value of our repayment obligation to Brickell Key Investments, LP ("Brickell") under a February 2016 funding agreement, as amended. Brickell is entitled to priority payments of 55% to 100% of proceeds received from all patent-related actions until such time that Brickell has been repaid its minimum return. The minimum return is determined as a multiple of the funded amount that increases over time. The estimated minimum return due to Brickell was approximately $47.2 million and $42.0 million as of September 30, 2021 and

December 31, 2020, respectively. In addition, Brickell is entitled to a pro rata portion of proceeds from specified legal actions to the extent aggregate proceeds from those actions exceed the minimum return. The range of potential proceeds payable to Brickell is discussed more fully in Note 11. As of September 30, 2021, we are in compliance with our obligations under this agreement.

We have elected to measure our secured contingent payment obligation at its estimated fair value based on probability-weighted estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods (see Note 11). The secured contingent payment obligation is remeasured to fair value at each reporting period with changes recorded in the condensed consolidated statements of comprehensive loss until the contingency is resolved.

Unsecured Contingent Payment Obligations

The following table provides a reconciliation of our unsecured contingent payment obligations, measured at estimated fair market value, for the nine months ended September 30, 2021 and the year ended December 31, 2020 (in thousands):

	Nine Months Ended September 30, 2021	Year Ended December 31, 2020
Unsecured contingent payment obligations, beginning of period	$ 5,222	$ -
Reclassification of other liabilities	-	1,003
Issuance of contingent payment rights	412	2,258
Change in fair value	113	1,961
Unsecured contingent payment obligations, end of period	$ 5,747	$ 5,222

Our unsecured contingent payment obligations represent amounts payable to others from future patent-related proceeds including (i) a termination fee due to a litigation funder and (ii) contingent payment rights issued to accredited investors in connection with equity financings ("CPRs"). We have elected to measure these unsecured contingent payment obligations at their estimated fair value based on probability-weighted estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods. The unsecured contingent payment obligations will be remeasured to fair value at each reporting period with changes recorded in the condensed consolidated statements of comprehensive loss until the contingency is resolved (see Note 11). During the nine months ended September 30, 2021, we received proceeds of $1.0 million from the sale of common stock with CPRs, of which approximately $0.4 million was allocated to the CPRs. Our aggregate maximum obligation under the unsecured contingent payment obligations is $10.8 million as of September 30, 2021.

11. Fair Value Measurements

The following tables summarize the fair value of our assets and liabilities measured at fair value on a recurring basis as of September 30, 2021 and December 31, 2020 (in thousands):

		Fair Value Measurements		
	Total Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
September 30, 2021:				
Liabilities:				
Secured contingent payment obligation	$ 35,940	$ -	$ -	$ 35,940
Unsecured contingent payment obligations	5,747	-	-	5,747

		Fair Value Measurements		
	Total Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2020:				
Liabilities:				
Secured contingent payment obligation	$ 33,057	$ -	$ -	$ 33,057
Unsecured contingent payment obligations	$ 5,222	$ -	$ -	$ 5,222

The fair values of our secured and unsecured contingent payment obligations were estimated using a probability-weighted income approach based on various cash flow scenarios as to the outcome of patent-related actions both in terms of timing and amount, discounted to present value using a risk-adjusted rate. We used a risk-adjusted discount rate of 14.41% at September 30, 2021, based on a risk-free rate of 0.41% as adjusted by 8% for credit risk and 6% for litigation inherent risk.

The following table provides quantitative information about the significant unobservable inputs used in the measurement of fair value for both the secured and unsecured contingent payment obligations at September 30, 2021, including the lowest and highest undiscounted payout scenarios as well as a weighted average payout scenario based on relative undiscounted fair value of each cash flow scenario.

	Secured Contingent Payment Obligation			Unsecured Contingent Payment Obligations		
Unobservable Inputs	Low	Weighted Average	High	Low	Weighted Average	High
Estimated undiscounted cash outflows (in millions)	$0.0	$50.2	$76.8	$0.0	$8.1	$10.8
Duration (in years)	0.3	2.5	3.3	1.3	2.5	3.3
Estimated probabilities	0%	21%	25%	25%	25%	25%

We evaluate the estimates and assumptions used in determining the fair value of our contingent payment obligations each reporting period and make any adjustments prospectively based on those evaluations. Changes in any of these Level 3 inputs could result in a significantly higher or lower fair value measurement.

12. Legal Proceedings

From time to time, we are subject to legal proceedings and claims which arise in the ordinary course of our business. These proceedings include patent enforcement actions initiated by us against others for the infringement of our technologies, as well as proceedings brought by others against us, including proceedings at the Patent Trial and Appeal Board of the U.S. Patent and Trademark Office ("PTAB").

The majority of our litigation, including our PTAB proceedings, is being paid for through contingency fee arrangements with our litigation counsel as well as third-party litigation financing. In general, litigation counsel is entitled to recoup on a priority basis, from litigation proceeds, any out-of-pocket expenses incurred. Following reimbursement of out-of-pocket expenses, litigation counsel is generally entitled to a percentage of remaining proceeds based on the terms of the specific arrangement between us, counsel and our third-party litigation funder.

We were liable for costs assessed on infringement and validity cases in Germany in which we did not prevail. A portion of this liability was covered by bonds posted in Germany. As of September 30, 2021, our bonds have been fully released and all outstanding statutory court costs have been satisfied in full. We have no remaining litigation or related liabilities in Germany.

ParkerVision v. Qualcomm (Middle District of Florida)
We have a patent infringement complaint pending in the Middle District of Florida against Qualcomm Incorporated and Qualcomm Atheros, Inc. (collectively "Qualcomm") seeking approximately $1.3 billion in damages for infringement of four of our patents (the "Qualcomm Action"). HTC Corporation and HTC America, Inc. (collectively "HTC") were also defendants in this case but we voluntarily dismissed our claims against HTC and HTC dismissed their related counter-claims against us in October 2020. Qualcomm has pending counterclaims against us for non-infringement and invalidity for all patents in the case. The case was filed in May 2014 and stayed in February 2016 pending decisions in other cases, including the appeal of a PTAB proceeding with regard to U.S. patent 6,091,940 ("the '940 Patent") asserted in this case. In March 2017, the PTAB ruled in our favor on three of the six petitions (the method claims), ruled in Qualcomm's favor on two of the six petitions (the apparatus claims) and

issued a split decision on the claims covered in the sixth petition. In September 2018, the Federal Circuit upheld the PTAB's decision with regard to the '940 Patent and, in January 2019, the court lifted the stay in this case. In July 2019, the court issued an order that granted our proposed selection of patent claims from four asserted patents, including the '940 Patent, and denied Qualcomm's request to limit the claims and patents. The court also agreed that we may elect to pursue accused products that were at issue at the time the case was stayed, as well as new products that were released by Qualcomm during the pendency of the stay. In September 2019, Qualcomm filed a motion for partial summary judgement in an attempt to exclude certain patents from the case, including the '940 Patent. The court denied this motion in January 2020. In April 2020, the court issued its claim construction order in which the court adopted our proposed construction for seven of the ten disputed terms and adopted slightly modified versions of our proposed construction for the remaining terms. Due to the impact of COVID-19, a number of the scheduled deadlines in this case were moved including the trial commencement date which was rescheduled from December 2020 to May 2021. We are seeking $1.3 billion in royalties owed to us by Qualcomm for its unauthorized use of our technology, based on a report submitted by our damages expert in this case in October 2020. Such amount excludes additional amounts requested by us for interest and enhanced damages for willful infringement. Ultimately, the amount of damages, if any, will be determined by a jury and the court. Discovery was expected to close in December 2020; however, the court allowed us to designate a substitute expert due to medical issues with one of our experts in the case. Accordingly, the close of discovery was delayed approximately one month until January 2021. As a result of these delays, the court rescheduled the trial commencement date from May 3, 2021 to July 6, 2021. In March 2021, the court further delayed the trial date citing backlog due to the pandemic, among other factors. A new trial date has not yet been set although the court indicated the case was unlikely to be tried before November or December 2021. Fact and expert discovery in this case are closed, expert reports have been submitted, and summary judgement and *Daubert* briefings have been completed by the parties. Joint pre-trial statements were submitted in May 2021. In March 2021, the court granted Qualcomm's motion to strike certain of our 2020 infringement contentions. We filed a motion to clarify the court's order and in July 2021, based on the court's response to our motion to clarify, we filed a joint motion for entry of a judgement of non-infringement of our Patent No. 7,865,177 ("the '177 Patent"), subject to appeal. A number of outstanding motions are pending decisions by the court.

ParkerVision v. Apple and Qualcomm (Middle District of Florida)
In December 2015, we filed a patent infringement complaint in the Middle District of Florida 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., Samsung Telecommunications America LLC, and Samsung Semiconductor, Inc. (collectively "Samsung"), and Qualcomm alleging infringement of four of our patents. In February 2016, the district court proceedings were stayed pending resolution of a corresponding case filed at the International Trade Commission ("ITC"). In July 2016, we entered into a patent license and settlement agreement with Samsung and, as a result, Samsung was dismissed from the district court action. In March 2017, we filed a motion to terminate the ITC proceedings and a corresponding motion to lift the stay in the district court case. This motion was granted in May 2017. In July 2017, we filed a motion to dismiss LG from the district court case and re-filed our claims against LG in the District of New Jersey (see ParkerVision v. LG below). Also in July 2017, Qualcomm filed a motion to change venue to the Southern District of California, and Apple filed a motion to dismiss for improper venue. In March 2018, the district court ruled against the Qualcomm and Apple motions. The parties also filed a joint motion in March 2018 to eliminate three of the four patents in the case in order to expedite proceedings leaving our U.S. patent 9,118,528 as the only remaining patent in this case. A claim construction hearing was held on August 31, 2018. In July 2019, the court issued its claim construction order in which the court adopted our proposed claim construction for two of the six terms and the "plain and ordinary meaning" on the remaining terms. In addition, the court denied a motion filed by Apple for summary judgment. Fact discovery has closed in this case and a jury trial was scheduled to begin in August

2020. In March 2020, as a result of the impact of COVID-19, the parties filed a motion requesting an extension of certain deadlines in the case. In April 2020, the court stayed this proceeding pending the outcome of the Qualcomm Action.

ParkerVision v. LG (District of New Jersey)
In July 2017, we filed a patent infringement complaint in the District of New Jersey against LG for the alleged infringement of the same four patents previously asserted against LG in Florida (see ParkerVision v. Apple and Qualcomm above). We elected to dismiss the case in Florida and re-file in New Jersey as a result of a Supreme Court ruling regarding proper venue. In March 2018, the court stayed this case pending a final decision in ParkerVision v. Apple and Qualcomm in the Middle District of Florida. As part of this stay, LG has agreed to be bound by the final claim construction decision in that case.

ParkerVision v. Intel (Western District of Texas)
In February 2020, we filed a patent infringement complaint in the Western District of Texas against Intel Corporation ("Intel") alleging infringement of eight of our patents. The complaint was amended in May 2020 to add two additional patents. In June 2020, we requested that one of the patents be dropped from this case and filed a second case in the Western District of Texas that included this dismissed patent (see *ParkerVision v. Intel II* below). Intel's response to our complaint was filed in June 2020 denying infringement and claiming invalidity of the patents. Intel has also filed a motion to transfer venue which was denied by the court. The court issued its claim construction ruling in January 2021 in which the majority of the claims were decided in our favor. The case was scheduled for trial beginning February 7, 2022. In April 2021, we filed an amended complaint to include additional Intel chips and products, including Wi-Fi devices to the complaint. The court suggested that, given the number of patents at issue, the case would be separated into two trials and, as a result of the added products, the first trial date will be scheduled in June 2022. Based on discussions with the court, we anticipate the second trial date will be scheduled to begin several months following the first trial.

ParkerVision v. Intel II (Western District of Texas)
In June 2020, to reduce the number of claims in *ParkerVision v. Intel*, we filed a second patent infringement complaint in the Western District of Texas against Intel that included one patent that we voluntarily dismissed from the original case. In July 2020, we amended our complaint adding two more patents to the case. In May 2021, we further amended our complaint to include additional Intel chips and products, including Wi-Fi devices. Two claim construction hearings were held and in July 2021, the court issued its claim construction order in which the majority of the claim terms were construed in our favor. Based on communications with the Court, the parties submitted a case schedule setting forth a final pretrial conference for October 2022, however this date may change dependent upon the timing of the second trial in the Intel I case discussed above.

Intel v. ParkerVision (PTAB)
Intel filed petitions for *Inter Partes Review* ("IPR") against U.S. patent 7,539,474 ("the '474 Patent"), U.S. patent 7,110,444 ("the '444 Patent") and U.S. patent 8,190,108 ("the '108 Patent"), all of which are patents asserted in our infringement cases against Intel. In January 2021, the PTAB issued its decision to institute IPR proceedings for the '444 Patent and the '474 Patent. An oral hearing was held on November 1, 2021 and final decisions from the PTAB on the '474 Patent and the '444 Patent are expected by late January 2022.

In July 2021, the PTAB issued its decision to institute IPR proceedings for the '108 Patent. We filed our response to this petition in October 2021 and an oral hearing is scheduled for April 2022. A final decision from the PTAB with respect to the '108 Patent is expected by July 2022.

Additional Patent Infringement Cases
ParkerVision filed a number of additional patent cases in the Western District of Texas in September and October 2020 including cases against (i) TCL Industries Holdings Co., Ltd, a Chinese company, TCL Electronics Holdings Ltd., Shenzhen TCL New Technology Co., Ltd, TCL King Electrical Appliances (Huizhou) Co., Ltd., TCL Moka Int'l Ltd. and TCL Moka Manufacturing S.A. DE C.V. (collectively "TCL"), (ii) Hisense Co., Ltd. and Hisense Visual Technology Co., Ltd (collectively "Hisense"), a Chinese company, (iii) Buffalo Inc., a Japanese company ("Buffalo") and (iv) Zyxel Communications Corporation, a Chinese multinational electronics company headquartered in Taiwan, ("Zyxel"). Each case alleges infringement of the same ten patents by products that incorporate modules containing certain Wi-Fi chips manufactured by Realtek and/or MediaTek. Each of the defendants have filed responses denying infringement and claiming invalidity of the patents, among other defenses.

In September 2021, we dismissed the cases against Buffalo and Zyxel following satisfaction of the parties' obligations under settlement and license agreements entered into in May 2021 and September 2021, respectively. The court held a Markman hearing on October 27, 2021 for the remaining defendants, Hisense and TCL, and issued its claim construction recommendations on October 29, 2021, in which nearly all of the claim terms were decided in our favor. The Hisense and TCL cases are expected to have a trial date in December 2022.

In May 2021, we also filed a patent infringement case against LG Electronics, a South Korean company, in the Western District of Texas alleging infringement of the same ten patents.

TCL, et. al. v. ParkerVision (PTAB)
In May 2021, TCL, along with Hisense, filed petitions for *Inter Partes Review* ("IPR") against U.S. patent 7,292,835 ("the '835 Patent") and the '444 Patent, both of which are asserted in the infringement cases against these parties in the Western District of Texas. An institution decision is expected from the PTAB in late November 2021.

13. Stock Authorization and Issuance

Stock Authorization

On September 28, 2021, our shareholders approved an amendment to our amended and restated articles of incorporation to increase our authorized common shares from 140 million to 150 million.

Stock and Warrant Issuances – Equity Based Financings

Private Placements with Accredited Investors
In January 2021, we entered into securities purchase agreements with accredited investors for the sale of an aggregate of 2,976,430 shares of our common stock at a price of $0.35 per share for aggregate proceeds of $1.0 million. The securities purchase agreements include CPRs. Approximately $0.4 million of the proceeds were allocated to unsecured contingent payment obligations based on the initial fair value estimate of the CPRs (see Note 10). The shares were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217).

In March 2021, we entered into securities purchase agreements with accredited investors for the sale of 3,230,942 shares of our common stock and 1,619,289 warrants at a price of $1.29 per common share for aggregate proceeds of approximately $4.2 million. The warrants have an exercise price of $1.75 per share and expire in March 2026. The shares, including the shares underlying the warrants, were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217).

We used $3.0 million of the proceeds from this transaction to satisfy our obligations to Mintz (see Note 10).

Stock Issuances – Payment for Services

In January 2021, we amended our business consulting and retention agreement with Chelsea Investor Relations to increase the compensation for services over the remaining term and to extend the term of the agreement through February 2024. As consideration for the amended agreement, we issued 500,000 shares of unregistered common stock in exchange for a nonrefundable retainer for services valued at approximately $0.33 million. The value of the stock issued is being recognized as consulting expense over the term of the agreement. The shares were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217).

In January 2021, we also issued 50,000 shares of our unregistered common stock, valued at approximately $0.03 million, as compensation for three months of shareholder awareness services provided by a third party. In April 2021, we issued this third party an additional 50,000 shares of our unregistered common stock, valued at approximately $0.07 million as compensation for services over the remaining term of the agreement. In June 2021, we issued an additional 100,000 shares of our unregistered common stock, valued at approximately $0.12 million, to this same third-party as a retainer for services over a one-year term through May 31, 2022. The value of the shares issued will be recognized as consulting expense over the term of the agreement.

In April 2021, we issued 35,000 shares of our unregistered common stock to a consultant for services over a six-month term valued at approximately $0.04 million. The value of the shares issued will be recognized as consulting expense over the term of the agreement.

In addition, from time to time, we issue restricted stock awards under our approved equity plans to third party consultants as share-based compensation. See "Non-Employee Compensation" in Note 14.

Common Stock Warrants

As of September 30, 2021, we had outstanding warrants for the purchase of up to 9.8 million shares of our common stock. The estimated grant date fair value of these warrants of $2.8 million is included in additional paid-in capital in our condensed consolidated balance sheets. As of September 30, 2021, our outstanding warrants have an average exercise price of $0.73 per share and a weighted average remaining life of approximately 3.2 years.

14. Share-Based Compensation

There has been no material change in the assumptions used to compute the fair value of our equity awards, nor in the method used to account for share-based compensation from those stated in our 2020 Annual Report.

For the three and nine months ended September 30, 2021, we recognized share-based compensation expense of approximately $0.75 million and $2.57 million, respectively. Share-based compensation is included in selling, general and administrative expenses in the accompanying condensed, consolidated statements of comprehensive loss.

As of September 30, 2021, there was $3.7 million of total unrecognized compensation cost related to all non-vested share-based compensation awards. The cost is expected to be recognized over a weighted-average remaining life of approximately 1.25 years.

During the nine months ended September 30, 2021, our board of directors ("Board") amended our 2019 Long-Term Incentive Plan ("the 2019 Plan") to increase the number of shares of common stock reserved for issuance under the 2019 Plan from 12 million to 27 million shares. The Board also approved awards under the 2019 Plan of 11.9 million nonqualified stock options to executives and other key employees and an aggregate of 1.1 million nonqualified stock options to non-employee directors. The options are exercisable at $0.54 per share, vest in eight equal quarterly installments commencing March 31, 2021, and expire on January 11, 2026.

Non-Employee Compensation
On March 9, 2021, we granted approximately 32,000 shares under our 2019 Plan to a consultant for business communications services over a 1-year term valued at approximately $0.05 million. On August 10, 2021, we granted 150,000 shares under our 2019 Plan to a consultant for services over a 1-year term valued at approximately $0.2 million. The value of the shares issued will be recognized as consulting expense over the terms of the agreements.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of ParkerVision, Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of ParkerVision, Inc. (the "Company") and its subsidiary as of December 31, 2020 and 2019, and the related consolidated statements of comprehensive loss, shareholders' deficit and cash flows for each of the years in the two-year period ended December 31, 2020, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company and its subsidiary as of December 31, 2020 and 2019, and the results of their operations and their cash flows for each of the years in the two-year period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As a part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Emphasis of Matter Regarding Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has suffered recurring losses from operations and has a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.

Critical Audit Matters

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

Estimation of fair value of contingent payment obligations

As disclosed in Note 1 of the Company's consolidated financial statements, the Company accounts for their secured and unsecured contingent payment obligations as long-term debt. Their payment obligations are contingent upon the receipt of proceeds from patent enforcement and/or patent monetization actions. The Company has elected to measure their contingent payment obligations at their estimated fair values. The Company recorded the fair value of their contingent payment obligations at approximately $38,279,000 as of December 31, 2020.

Auditing management's estimate of the fair value of their contingent payment obligations involved subjective evaluation and high degree of auditor judgement due to significant assumptions involved in estimating the receipt of proceeds from patent enforcement and/or patent monetization actions.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. We obtained an understanding and evaluated the design of internal controls that address the risks of material misstatement relating to recording the contingent payment obligations at fair value. We tested the accuracy and completeness of the underlying data used in calculating the fair value. We evaluated management's ability to accurately estimate the assumptions used to develop the fair value of the contingent payment obligations. We also involved an independent legal firm to assist in evaluating the reasonableness of the assumptions of future litigation outcomes used by the Company in estimating the receipt of proceeds from patent enforcement and/or patent monetization actions.

/s/ MSL, P.A.

We have served as the Company's auditor since 2019.

Fort Lauderdale, Florida
March 31, 2021

PARKERVISION, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)
(in thousands, except par value data)

		2020		2019
CURRENT ASSETS:				
Cash and cash equivalents	$	1,627	$	57
Prepaid expenses		599		505
Other current assets		8		117
Total current assets		2,234		679
Property and equipment, net		30		70
Intangible assets, net		2,170		2,878
Operating lease right-of-use assets		10		283
Other assets, net		12		16
Total assets	$	4,456	$	3,926
CURRENT LIABILITIES:				
Accounts payable	$	4,318	$	2,328
Accrued expenses:				
Salaries and wages		19		78
Professional fees		128		499
Statutory court costs		251		369
Other accrued expenses		936		1,081
Related party note payable, current portion		100		86
Secured note payable, current portion		26		1,222
Unsecured notes payable		65		225
Operating lease liabilities, current portion		146		250
Total current liabilities		5,989		6,138
LONG-TERM LIABILITIES:				
Secured contingent payment obligation		33,057		26,651
Unsecured contingent payment obligations		5,222		-
Convertible notes, net		3,018		2,733
Related party note payable, net of current portion		703		793
Operating lease liabilities, net of current portion		159		305
Other long-term liabilities		129		403
Total long-term liabilities		42,288		30,885
Total liabilities		48,277		37,023
COMMITMENTS AND CONTINGENCIES				
SHAREHOLDERS' DEFICIT:				
Common stock, $.01 par value, 140,000 and 110,000 shares authorized, 58,591 and 34,097 issued and outstanding at December 31, 2020 and 2019, respectively		586		341
Additional paid-in capital		376,954		368,345
Accumulated deficit		(421,361)		(401,783)
Total shareholders' deficit		(43,821)		(33,097)
Total liabilities and shareholders' deficit	$	4,456	$	3,926

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

PARKERVISION, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019
(in thousands, except per share amounts)

	2020	2019
Product revenue	$ -	$ 74
Cost of sales - product	-	73
Loss on impairment of inventory	-	6
Gross margin	-	(5)
Research and development expenses	-	334
Selling, general, and administrative expenses	10,664	7,602
Total operating expenses	10,664	7,936
Interest and other income	-	3
Interest and other expense	(547)	(421)
Change in fair value of contingent payment obligations	(8,367)	(1,094)
Total interest and other	(8,914)	(1,512)
Net loss before income tax	(19,578)	(9,453)
Income tax expense	-	-
Net loss	(19,578)	(9,453)
Other comprehensive income, net of tax	-	-
Comprehensive loss	$ (19,578)	$ (9,453)
Basic and diluted net loss per common share	$ (0.42)	$ (0.30)
Weighted average common shares outstanding	47,019	31,461

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

PARKERVISION, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT
FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019
(in thousands)

	Common Stock, Par Value	Additional Paid-in Capital	Accumulated Deficit	Total Shareholders' Deficit
Balance as of December 31, 2018	$ 287	366,695	(392,292)	(25,310)
Cumulative effect of change in accounting principle	-	-	(38)	(38)
Issuance of common stock upon exercise of warrants	29	-	-	29
Issuance of common stock and warrants for services	6	234	-	240
Issuance of convertible debt with beneficial conversion feature	-	550	-	550
Issuance of common stock upon conversion and payment of interest in kind on convertible debt	19	277	-	296
Share-based compensation, net of shares withheld for taxes	-	589	-	589
Net loss for the year	-	-	(9,453)	(9,453)
Balance as of December 31, 2019	341	368,345	(401,783)	(33,097)
Issuance of common stock and warrants in private offerings, net of issuance costs	148	4,618		4,766
Issuance of common stock upon exercise of warrants	45	1,530	-	1,575
Issuance of common stock and warrants for services	7	297	-	304
Issuance of convertible debt with beneficial conversion feature	-	173	-	173
Issuance of common stock upon conversion and payment of interest in kind on convertible debt	15	437	-	452
Issuance of common stock upon conversion of short-term loans and payables	22	318	-	340
Share-based compensation, net of shares withheld for taxes	8	1,236	-	1,244
Net loss for the year	-	-	(19,578)	(19,578)
Balance as of December 31, 2020	$ 586	$ 376,954	$ (421,361)	$ (43,821)

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

PARKERVISION, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019
(in thousands)

	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (19,578)	$ (9,453)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	632	835
Share-based compensation	1,244	589
Noncash lease expense	61	280
Change in fair value of contingent payment obligation	8,367	1,094
Loss on disposal/impairment of equipment and other assets	487	412
Noncash expense for amendment of equity-related agreements	2,211	-
Inventory impairment charges	-	6
Changes in operating assets and liabilities:		
Accounts receivable	-	2
Finished goods inventories	-	81
Prepaid expenses and other assets	292	221
Accounts payable and accrued expenses	1,757	2,790
Operating lease liabilities	(250)	(230)
Total adjustments	14,801	6,080
Net cash used in operating activities	(4,777)	(3,373)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from sale of property and equipment	2	30
Purchases of property and equipment	(3)	(5)
Payments for patent costs and other intangible assets	-	(18)
Net cash (used in)/provided by investing activities	(1)	7
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net proceeds from issuance of common stock and contingent payment rights in private offerings	4,801	-
Net proceeds from exercise of warrants	1,575	29
Net proceeds from debt financings	1,244	3,068
Debt repayments	(1,272)	(1,200)
Principal payments on finance lease obligation	-	(1)
Net cash provided by financing activities	6,348	1,896
NET CHANGE IN CASH AND CASH EQUIVALENTS	1,570	(1,470)
CASH AND CASH EQUIVALENTS, beginning of year	57	1,527
CASH AND CASH EQUIVALENTS, end of year	$ 1,627	$ 57
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid for interest	$ 61	$ 4
Cash paid for income taxes	$ -	$ -

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

1. SIGNIFICANT ACCOUNTING POLICIES

ParkerVision, Inc. and its wholly-owned German subsidiary, ParkerVision GmbH (collectively "ParkerVision", "we" or the "Company") is in the business of innovating fundamental wireless hardware technologies and products. We have determined that our business currently operates under a single operating and reportable segment.

We have designed and developed proprietary radio frequency ("RF") technologies and integrated circuits for use in wireless communication 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 of America ("U.S.") and certain foreign jurisdictions. We believe certain patents protecting our proprietary technologies have been broadly infringed by others, and therefore the primary focus of our business plan is the enforcement of our intellectual property rights through patent infringement litigation and licensing efforts. We currently have patent enforcement actions ongoing in various U.S. district courts against providers of mobile handsets, smart televisions and other WiFi products and, in certain cases, their chip suppliers for the infringement of a number of our RF patents. We have made significant investments in developing and protecting our technologies, the returns on which are dependent upon the generation of future revenues for realization.

In 2018, we restructured our operations to reduce operating expenses. As part of that restructuring, we made significant reductions in our investment in the development and marketing of a consumer distributed WiFi product line marketed under the brand name Milo®. In early 2019, we ceased substantially all ongoing research and development efforts and, where applicable, repurposed resources to support our patent enforcement and product sales and support efforts. We ceased sales of our Milo products in the fourth quarter of 2019 and are currently focused exclusively on our patent enforcement litigation and licensing efforts.

Basis of Presentation
Our consolidated financial statements are prepared in accordance with generally accepted accounting principles in the U.S. ("GAAP"). Certain reclassifications have been made to prior period amounts to conform to the current period presentation. The consolidated financial statements include the accounts of ParkerVision, Inc. and our wholly-owned German subsidiary, ParkerVision GmbH, after elimination of all intercompany transactions and accounts.

Use of Estimates in the Preparation of Financial Statements
The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. The more significant estimates made by us include projected future cash flows and risk-adjusted discount rates for estimating the fair value of our contingent payment obligations, the volatility and estimated lives of share-based awards used in the estimate of the fair market value of share-based compensation, the assessment of recoverability of long-lived assets, the amortization periods for intangible and long-lived assets, and the valuation allowance for deferred taxes. Actual results could differ from the estimates made. We periodically evaluate estimates used in the preparation of the financial statements for continued reasonableness. Appropriate adjustments, if any, to the estimates used are made prospectively based upon such periodic evaluation.

Cash and Cash Equivalents
We consider cash and cash equivalents to include cash on hand, interest-bearing deposits, overnight repurchase agreements and investments with original maturities of three months or less when purchased.

Inventory
Inventory is stated at the lower of actual cost, as determined under the first-in, first-out method, or estimated net realizable value. We review our inventory for estimated obsolescence or unmarketable inventory and write down inventory for the difference between cost and estimated market value based upon assumptions about future demand. Future demand is affected by market conditions, technological obsolescence, new products and strategic plans, each of which is subject to change. Due to the decision to discontinue Milo product sales in the fourth quarter of 2019, a full reserve was recorded against the remaining inventory on hand at December 31, 2019. All remaining inventory was disposed of during the year ended December 31, 2020.

Property and Equipment
Property and equipment are stated at cost, less accumulated depreciation. Depreciation is determined using the straight-line method over the following estimated useful lives:

Manufacturing and office equipment	5-7 years
Leasehold improvements	Shorter of useful life or remaining life of lease
Furniture and fixtures	7 years
Computer equipment and software	3-5 years

The cost and accumulated depreciation of assets sold or retired are removed from their respective accounts, and any resulting net gain or loss is recognized in the accompanying consolidated statements of comprehensive loss. The carrying value of long-lived assets is reviewed on a regular basis for the existence of facts, both internally and externally, that may suggest impairment. Recoverability of assets to be held and used is measured by comparing the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the assets exceeds its estimated undiscounted future net cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the assets.

Intangible Assets
We capitalize outside legal costs and agency filing fees incurred in connection with securing the rights to our intellectual property. Patents, copyrights and other intangible assets are amortized using the straight-line method over their estimated period of benefit. We estimate the economic lives of our patents and copyrights to be fifteen to twenty years. Management evaluates the recoverability of intangible assets periodically and takes into account events or circumstances that may warrant revised estimates of useful lives or that may indicate impairment exists. As part of our ongoing patent maintenance program, we will, from time to time, abandon a particular patent if we determine fees to maintain the patent exceed its expected recoverability. The cost and accumulated amortization of abandoned intangible assets are removed from their respective accounts, and any resulting net loss is recognized in selling, general and administrative expenses in the accompanying consolidated statements of comprehensive loss.

Contingent Payment Obligations
We have accounted for our secured and unsecured contingent payment obligations as long-term debt in accordance with Accounting Standards Codification ("ASC") 470-10-25, "Sales of Future Revenues or Various other Measures of Income." Our payment obligations are contingent upon the receipt of proceeds from patent enforcement and/or patent monetization actions. We have elected to measure our contingent payment obligations at their estimated fair values in accordance with ASC 825, "Financial Instruments" based on the variable and contingent nature of the repayment provisions. We have determined that the fair

value of our secured and unsecured contingent payment obligations falls within Level 3 in the fair value hierarchy, which involves significant estimates, and assumptions including projected future patent-related proceeds and the risk-adjusted rate for discounting future cash flows (see Note 10). Actual results could differ from the estimates made. Changes in fair value, including the component related to imputed interest, are included in the accompanying consolidated statements of comprehensive loss under the heading "Change in fair value of contingent payment obligations."

Leases

We adopted ASC 842, "Leases" as of January 1, 2019 which requires the recognition of lease right-of-use ("ROU") assets and lease liabilities on our consolidated balance sheets for finance and operating leases with initial lease terms of more than 12 months. We elected to use the effective date as the initial application date. ASC 842 provides a number of practical expedients in transition and we elected the package of practical expedients which permits us not to reassess under the new standard our prior conclusions about lease identification, lease classification and treatment of initial direct costs. The adoption of this new standard resulted in the recognition of operating lease ROU assets and operating lease liabilities of approximately \$0.56 million and \$0.60 million, respectively, primarily related to our facilities leases. Refer to Note 8 for additional disclosures related to our leases.

At inception of a lease, we determine if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. Some of our lease arrangements contain lease components (e.g. minimum rent payments) and non-lease components (e.g. services). For certain equipment leases, we account for lease and non-lease components separately based on a relative fair market value basis. For all other leases, we account for the lease and non-lease components (e.g. common area maintenance) on a combined basis.

For operating leases with terms greater than 12 months, we record the ROU asset and lease obligation at the present value of lease payments over the term using the implicit interest rate, when readily available, or our incremental borrowing rate for collateralized debt based on information available at the lease commencement date. Certain of our leases include rental escalation clauses, renewal options and/or termination options that are factored into our determination of lease payments when it is reasonably certain that the option will be exercised. We do not recognize ROU assets and lease liabilities for leases with terms at inception of twelve months or less.

Finance leases are included in property and equipment and other accrued expenses on the consolidated balance sheets. Finance leases are recorded as an asset and an obligation at an amount equal to the present value of the minimum lease payments during the lease term. Amortization expense and interest expense associated with finance leases are included in selling, general, and administrative expense and interest expense, respectively, on the consolidated statements of comprehensive loss.

Convertible Debt

We have issued debt that is convertible, at the holder's option, into shares of our common stock at fixed conversion prices. Certain of the convertible notes were issued with conversion prices that were below market value of our common stock on the closing date resulting in a beneficial conversion feature which we recorded to equity with a corresponding discount to the debt. The discount is amortized over the life of the notes as interest expense.

In August 2020, the Financial Accounting Standards Board issued ASU 2020-06 "Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity." This ASU simplifies accounting for convertible instruments by removing major separation models required under current U.S. GAAP. Consequently, more convertible debt instruments will be reported as a single liability instrument with no separate accounting for embedded conversion features. The ASU removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, which will permit more equity contracts to qualify for the exception. The ASU also simplifies the diluted earnings per share (EPS) calculation in certain areas. The ASU is effective for fiscal years beginning after December 15, 2021 for accelerated filers and for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, for smaller reporting companies. Early adoption is permitted for fiscal years beginning after December 15, 2020. The ASU provides for a modified retrospective method of adoption whereby the guidance is applied to transactions outstanding at the beginning of the fiscal year of adoption with the cumulative effect of the change being recorded as an adjustment to beginning retained earnings.

We plan to adopt ASU 2020-06, using the modified retrospective method, as of January 1, 2021. Adoption of ASU 2020-06 will result in an increase to our long-term debt of approximately $0.8 million, a decrease in additional paid-in-capital of approximately $1.1 million, and an adjustment to our beginning retained deficit of $0.3 million resulting from the elimination of the previously recognized beneficial conversion feature as a debt discount.

Revenue Recognition

We account for revenue under ASC 606, "Revenue from Contracts with Customers" which implements a common revenue standard that clarifies the principles for recognizing revenue. This revenue recognition model provides a five-step analysis in determining when and how revenue is recognized.

We expect to derive future revenue from licensing of our intellectual property and settlements from patent infringement disputes. The timing of revenue recognition and the amount of revenue recognized depends upon a variety of factors, including the specific terms of each arrangement and the nature of our deliverables and obligations. In general, we recognize revenue when the performance obligations to our customers have been met. The consideration received from patent license and settlement agreements is allocated to the various elements of the arrangement to the extent the revenue recognition differs between the elements of the arrangement. Elements related to past and future royalties as well as elements related to settlement will be recorded as revenue in our consolidated statements of comprehensive loss when our performance obligations related to each element have been met.

For the year ended December 31, 2019, we recognized revenue from the sale of products. For product sales, the performance obligation is generally met at the time product is delivered to the customer. Estimated product returns are deducted from revenue and recorded as a liability. Revenue from the sale of our products includes shipping and handling charged to the customer. Product revenue is recorded net of sales tax collected from customers, discounts, and actual and estimated future returns.

Research and Development Expenses

Research and development costs are expensed as incurred and include salaries and benefits for employees engaged in research and development activities, costs paid to third party contractors, prototype expenses, an allocated portion of facilities costs, maintenance costs for software development tools, and depreciation.

Accounting for Share-Based Compensation

We have various share-based compensation programs which provide for equity awards including stock options, restricted stock units ("RSUs") and restricted stock awards ("RSAs"). We calculate the fair value of employee share-based equity awards on the date of grant and recognize the calculated fair value as compensation expense over the requisite service periods of the related awards. We estimate the fair value of stock option awards using the Black-Scholes option valuation model. This valuation model requires the use of highly subjective assumptions and estimates including how long employees will retain their stock options before exercising them and the volatility of our common stock price over the expected life of the equity award. Such estimates, and the basis for our conclusions regarding such estimates, are outlined in detail in Note 14. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by persons who receive equity awards. We account for forfeitures of share-based awards as they occur.

As of January 1, 2019, we adopted ASU 2018-07, "Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting." The amendments in this update simplify the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. At the time of adoption, we did not have any awards to nonemployees that would require reassessment and therefore the adoption of ASU 2018-07 did not impact our consolidated financial statements.

Income Taxes
The provision for income taxes is based on loss before taxes as reported in the accompanying consolidated statements of comprehensive loss. Deferred tax assets and liabilities are recognized for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets when, based on available objective evidence, it is more likely than not that the benefit of such assets will not be realized. Our deferred tax assets exclude unrecognized tax benefits which do not meet a more-likely-than-not threshold for financial statement recognition for tax positions taken or expected to be taken in a tax return.

As of January 1, 2019, we adopted ASU 2018-02, “Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.” The amendments in this update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. We have no stranded tax effects included in our other comprehensive loss and therefore the adoption of ASU 2018-02 did not impact our consolidated financial statements.

Loss per Common Share
Basic loss per common share is determined based on the weighted-average number of common shares outstanding during each year. Diluted loss per common share is the same as basic loss per common share as all potential common shares are excluded from the calculation, as their effect is anti-dilutive.

The number of shares underlying outstanding options, warrants, unvested RSUs, and convertible notes at December 31, 2020 and 2019 were as follows (in thousands):

	2020	2019
Options outstanding	12,240	11,410
Warrants outstanding	12,850	12,150
Unvested RSUs	187	-
Shares underlying convertible notes	23,557	20,846
	48,834	44,406

These potential shares were excluded from the computation of diluted loss per share as their effect would have been anti-dilutive.

2. LIQUIDITY AND GOING CONCERN

The accompanying consolidated financial statements as of and for the year ended December 31, 2020 were prepared assuming we will continue as a going concern, which contemplates that we will continue in operation and will be able to realize our assets and settle our liabilities and commitments in the normal course of business for a period of at least one year from the issuance date of these consolidated financial statements. These consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that could result should we be unable to continue as a going concern.

We have incurred significant losses from operations and negative cash flows in every year since inception and have utilized the proceeds from the sales of our equity and equity-linked securities and our contingent funding arrangements with third-parties to fund our operations, including our litigation costs. For the year ended December 31, 2020, we incurred a net loss of approximately $19.6 million and negative cash flows from operations of approximately $4.8 million. At December 31, 2020, we had a working capital deficit of approximately $3.8 million and an accumulated deficit of approximately $421.4 million. These circumstances raise substantial doubt about our ability to continue to operate as a going concern for a period of one year after the issuance date of these consolidated financial statements.

We had cash and cash equivalents of approximately $1.6 million at December 31, 2020. We received an additional $5.6 million in proceeds from debt and equity financings and warrant and option exercises in the first quarter of 2021, of which $3.0 million was used to settle outstanding accounts and notes payable for litigation costs (see Note 17). Our remaining capital resources will be used to fund our current obligations and ongoing operating costs; however these resources may not be sufficient to meet our liquidity needs for the next twelve months and we may be required to seek additional capital.

Our business plan is currently focused solely on our patent enforcement and technology licensing objectives. The timing and amount of proceeds from our patent enforcement actions are difficult to predict and there can be no assurance we will receive any proceeds from these enforcement actions.

Our ability to meet our liquidity needs for the twelve months after the issuance date of these financial statements is dependent upon one or more of (i) our ability to successfully negotiate licensing agreements and/or settlements relating to the use of our technologies by others in excess of our contingent payment obligations and (ii) our ability to raise additional capital from the sale of debt or equity securities or other financing arrangements. We anticipate that we will continue to invest in patent protection, licensing, and enforcement of our wireless technologies. We expect that revenue generated from patent enforcement actions, and technology licenses over the twelve months after the issuance date of these financial statements, if any, after deduction of payment obligations to our third-party litigation funder and legal counsel, may not be sufficient to cover our operating expenses. In the event we do not generate revenues, or other patent-asset proceeds, sufficient to cover our operational costs and contingent repayment obligation, we will be required to raise additional working capital through the sale of equity securities or other financing arrangements.

The long-term continuation of our business plan is dependent upon our ability to secure sufficient financing to support our business, and our ability to generate revenues and/or patent-related proceeds sufficient to offset expenses and meet our contingent payment obligation and other long-term debt repayment obligations. Failure to generate sufficient revenues, raise additional capital through debt or equity financings, and/or reduce operating costs could have a material adverse effect on our ability to meet our short and long-term liquidity needs and achieve our intended long-term business objectives.

3. INVENTORIES

As of December 31, 2019, we had $0.55 million in finished goods inventories that were fully offset by an inventory reserve. All of our remaining inventories were disposed of in 2020.

The following table provides a reconciliation of our inventory reserves for the years ended December 31, 2020 and 2019, respectively (in thousands):

	2020	2019
Inventory reserves at beginning of year	$ 550	$ 982
Impairment charges	-	6
Write down of impaired inventories	-	(438)
Disposal of inventory	(550)	-
Inventory reserves at end of year	$ -	$ 550

4. PREPAID EXPENSES

Prepaid expenses consisted of the following at December 31, 2020 and 2019 (in thousands):

	2020	2019
Prepaid services	$ 408	$ 221
Prepaid bonds for German statutory costs	142	188
Prepaid insurance	21	62
Prepaid licenses, software tools and support	11	17
Other prepaid expenses	17	17
	$ 599	$ 505

5. PROPERTY AND EQUIPMENT, NET

Property and equipment, at cost, consisted of the following at December 31, 2020 and 2019 (in thousands):

	2020	2019
Equipment and software	$ 218	$ 260
Leasehold improvements	19	33
Furniture and fixtures	30	43
	267	336
Less accumulated depreciation	(237)	(266)
	$ 30	$ 70

Depreciation expense related to property and equipment was approximately $0.03 million and $0.04 million in 2020 and 2019, respectively.

In connection with the relocation of our corporate headquarters in July 2019 and October 2020, we disposed of a number of assets that were no longer in use. For the years ended December 31, 2020 and

2019, we recorded a loss on disposal of fixed assets of approximately $0.02 million and $0.01 million, respectively.

In connection with the closure of our Lake Mary facility in 2018, we reclassified equipment with a net book value of approximately $0.07 million to assets held for sale. We contracted with a third party for the consignment sale of these assets and completed sales for several assets in 2019. For the year ended December 31, 2019, we recognized a net loss of approximately $0.04 million on the sale and/or impairment of assets held for sale. The gains and losses on the sale or impairment of held for sale assets is included in selling, general and administrative expenses in the accompanying statements of comprehensive loss.

6. INTANGIBLE ASSETS

Intangible assets consisted of the following at December 31, 2020 and 2019 (in thousands):

	2020	2019
Patents and copyrights	$ 14,948	$ 16,612
Less accumulated amortization	(12,778)	(13,734)
	$ 2,170	$ 2,878

Amortization expense for each of the years ended December 31, 2020 and 2019 was approximately $0.4 million and $0.6 million, respectively. For the years ended December 31, 2020 and 2019, we recorded losses on the disposal of intangible assets of approximately $0.3 million and $0.4 million, respectively.

Future estimated amortization expense for intangible assets that have remaining unamortized amounts as of December 31, 2020 is as follows (in thousands):

2021	$ 358
2022	321
2023	283
2024	270
2025	231
2026 and thereafter	707
Total	$ 2,170

7. ACCRUED LIABILITIES

Other accrued expenses consisted of the following at December 31, 2020 and 2019 (in thousands):

	2020	2019
Advances	$ 882	$ 500
Board compensation	-	413
Other accrued expenses	54	168
	$ 936	$ 1,081

Advances include amounts received from litigation counsel as advanced reimbursement of out-of-pocket expenses expected to be incurred by us and, at December 31, 2020, includes approximately $0.4 million received from investors for the purchase of equity securities in a January 2021 transaction (see Note 17). Board compensation of $0.4 million at December 31, 2019 represents accrued and unpaid board fees from prior periods. In 2020, current and prior board members agreed to accept share-based compensation awards with an aggregate grant-date fair value of approximately $0.1 million as partial payment for the outstanding fees and waived the remaining unpaid fees.

8. LEASES

We lease our office and other facilities and certain office equipment under long-term, non-cancelable operating and finance leases. No new finance or operating leases commenced during the years ended December 31, 2020 or 2019. During the year ended December 31, 2020, we recognized an impairment loss of approximately $0.2 million on the ROU asset related to our Lake Mary office lease. We ceased use of this facility in 2018 as part of a restructuring of our operations. The value of our ROU asset included estimated future sublease income. Due to a number of factors, including the high vacancy rate of the building in which the space is located and the current COVID-19 environment, we determined securing a sublease for the space would be unlikely. The impairment loss recognized in 2020 represented the remaining carrying value of the asset and is included in selling, general, and administrative expenses in our consolidated statements of comprehensive loss.

Lease expense for operating leases is generally recognized on a straight-line basis over the lease term and is included in operating expenses on the consolidated statement of comprehensive loss. We recognized operating lease costs of $0.1 million and $0.4 million for the years ended December 31, 2020 and 2019, respectively.

Supplemental Cash Flow Information

The following table summarizes the supplemental cash flow information related to leases, including the ROU assets recognized upon adoption of the new lease standard (in thousands):

	Year Ended December 31, 2020	Year Ended December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 315	$ 314
Operating cash flows from finance leases	-	-
Financing cash flows from finance leases	-	1
Non-cash activity		
Right-of-use assets obtained in exchange for operating lease liabilities	-	563
Assets obtained in exchange for finance lease liabilities	-	-

Other Information

The table below summarizes other supplemental information related to leases:

	December 31, 2020	December 31, 2019
Weighted-average remaining lease term (in years):		
Operating leases	1.7	2.7
Finance leases	-	0.3
Weighted average discount rate		
Operating leases [(1)]	12.1%	12.0%
Finance leases	-	8.7%

(1) Upon adoption of the new lease standard, discount rates used for existing leases were established at January 1, 2019.

Undiscounted Cash Flows

The future maturities of lease liabilities consist of the following as of December 31, 2020 (in thousands):

	Operating Leases	Finance Leases
2021	$ 175	$ -
2022	166	-
2023	4	-
Thereafter	-	-
Total undiscounted lease payments	345	-
Less: imputed interest	(40)	-
Present value of lease liabilities	305	-
Less: current obligations under leases	(146)	-
Long-term lease obligations	$ 159	$ -

9. LONG-TERM DEBT

Notes Payable

Note Payable to a Related Party
We have an unsecured promissory note payable of $0.8 million to Sterne, Kessler, Goldstein, & Fox, PLLC ("SKGF"), a related party (see Note 15), for outstanding unpaid fees for legal services. The note, as amended, accrues interest at 4% per annum and provides for monthly payments of principal and interest of $10,000 with a final balloon payment of approximately $0.68 million due at the maturity date of April 30, 2022. We are currently in compliance with all the terms of the note, as amended. For the years ended December 31, 2020 and 2019, we recognized interest expense of approximately $0.03 million and $0.04 million, respectively, related to this note.

Unsecured Notes Payable
Unsecured notes payable at December 31, 2020 represents the current portion of our Paycheck Protection Program loan, as described more fully below. Unsecured notes payable at December 31, 2019 represents the outstanding principal balance of unsecured short-term promissory notes with accredited investors. The short-term promissory notes, as amended, accrued interest at a rate of 20% per annum. During

the year ended December 31, 2020, we issued an aggregate of 1,740,426 shares of our common stock as an in-kind repayment of the $0.23 million in outstanding principal and $0.04 million of accrued interest on these short-term notes. For the years ended December 31, 2020 and 2019, we recognized interest expense of approximately $0.01 million and $0.03 million, respectively, related to these short-term notes.

Paycheck Protection Program Loan
In May 2020, we received approximately $0.2 million in proceeds from an approved loan under the Paycheck Protection Program. Interest accrues on the outstanding principal balance at a rate of 1%, computed on a simple interest basis. The loan principal and accrued interest are expected to be eligible for forgiveness in accordance with the loan provisions. Payments of principal and interest are deferred until the date a decision on an application for forgiveness is made. If no application is submitted, we will be required to make monthly repayments of approximately $8,000 per month commencing May 1, 2021 and the loan will mature on May 3, 2022, at which time any unpaid principal and accrued interest will be due and payable. We began the application process for loan forgiveness in March 2021. The estimated current and noncurrent portions of this loan are included in the captions "Unsecured notes payable" and "Other long-term liabilities" in the consolidated balance sheet as of December 31, 2020.
Other long-term liabilities at December 31, 2019 represents an advance payment from a potential litigation funder. This liability was reclassified as an unsecured contingent payment obligation in 2020 (see "unsecured contingent payment obligation" below).

Secured Note Payable
We have a note payable to Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. ("Mintz") for outstanding, unpaid attorney's fees and costs associated with our patent enforcement program. The Mintz note is non-interest bearing, except in the event of a default, and is secured by certain of our U.S. and foreign patents. The note, at Mintz's option, accelerates and becomes immediately due and payable in the case of standard events of default and/or in the event of a sale or other transfer of substantially all of our assets or a transfer of more than 50% of our capital stock in one or a series of transactions or through a merger or other similar transaction.

We were in default on the payment terms of the note at December 31, 2019, and accordingly, we accrued interest at the default rate of 12% per annum. During the year ended December 31, 2020, we repaid $1.2 million of outstanding principal and interest on the Mintz note, leaving an outstanding balance of accrued default interest, at December 31, 2020 of approximately $0.03 million. In March 2021, we settled our outstanding obligations with Mintz (see Note 17) and Mintz waived all past defaults on the note which has been paid in full.

At December 31, 2020, the aggregate maturities of our notes payable are as follows (in thousands):

2021	$	191
2022		832
Total	$	1,023

The estimated fair value of our notes payable at December 31, 2020 is approximately $0.9 million based on a risk-adjusted discount rate.

Convertible Notes

Our convertible notes represent five-year promissory notes that are convertible, at the holders' option, into shares of our common stock at fixed conversion prices. Interest payments are made on a quarterly basis and are payable, at our option and subject to certain equity conditions, in either cash, shares of our common stock, or a combination thereof. To date, all interest payments on the convertible notes have been made in shares of our common stock. We have recognized the convertible notes as debt in our consolidated financial statements. The fixed conversion prices of certain of the notes were below the market value of our common stock on the closing date resulting in the recognition of a beneficial conversion feature that is recorded as a discount on the convertible notes with a corresponding increase to additional paid in capital.

Convertible notes payable at December 31, 2020 and 2019, consist of the following (in thousands):

Description	Fixed Conversion Rate	Effective Interest Rate [1]	Maturity Date	December 31, 2020	December 31, 2019
Convertible notes dated September 10, 2018	$0.40	23.4%	September 7, 2023	$ 600	$ 700
Convertible notes dated September 19, 2018	$0.57	10.2%	September 19, 2023	425	425
Convertible notes dated February/March 2019	$0.25	8.0%	February 28, 2024 to March 13, 2024	1,300	1,300
Convertible notes dated June/July 2019	$0.10	8.0%	June 7, 2024 to July 15, 2024	340	390
Convertible notes dated July 18, 2019	$0.08	46.1%	July 18, 2024	700	700
Convertible notes dated September 13, 2019	$0.10	25.9%	September 13, 2024	50	50
Convertible notes dated January 8, 2020	$0.13	20.3%	January 8, 2025	450	-
Total principal balance				3,865	3,565
Less unamortized discount				847	832
				$ 3,018	$ 2,733

[1] The effective interest rate differs from the stated rate of interest on the notes as a result of beneficial conversion features recognized as discounts on the debt.

The notes bear interest at a stated rate of 8% per annum, except for the July 18, 2019 notes which bear interest at a stated rate of 7.5% per annum. We have the option to prepay the majority of the notes any time following the one-year anniversary of the issuance of the notes, subject to a premium on the outstanding principal prepayment amount of 25% prior to the two-year anniversary of the note issuance date, 20% prior to the three-year anniversary of the note issuance date, 15% prior to the four-year anniversary of the note issuance date, or 10% thereafter. The notes provide for events of default that include failure to pay principal or interest when due, breach of any of the representations, warranties, covenants or agreements made by us, events of liquidation or bankruptcy, and a change in control. In the event of default, the interest rate increases to 12% per annum and the outstanding principal balance of the notes plus all accrued interest due may be declared immediately payable by the holders of a majority of the then outstanding principal balance of the notes.

For the years ended December 31, 2020 and 2019, we sold five-year convertible promissory notes with an aggregate face value of $0.45 million and $2.44 million, respectively and recorded debt discounts in an amount equal to the beneficial conversion features on these notes of approximately $0.17 million and $0.55 million, respectively. For the year ended December 31, 2020, convertible notes with a face value of $0.15 million were converted by the holders into 750,000 shares of our common stock at an average conversion price of $0.20. For the year ended December 31, 2019, convertible notes with a face value of $0.1 million were converted by the holders into 250,000 shares of our common stock at a fixed conversion price of $0.40. At the holders' option, subject to ownership limitations, the convertible notes outstanding at December 31, 2020 could be converted into an aggregate of approximately 23.6 million shares of our common stock based on the fixed conversion prices.

For the years ended December 31, 2020 and 2019, we recognized interest expense of approximately $0.47 million and $0.32 million, respectively, including approximately $0.17 million and $0.12 million, respectively, related to amortization of the discount and $0.3 million and $0.2 million, respectively, related to the contractual interest which we elected to pay in shares of our common stock. For the years ended December 31, 2020 and 2019, we issued approximately 710,000 and 1,600,000 shares of our common stock, respectively, as interest-in-kind payments on our convertible notes. The unamortized discount on the convertible notes will be eliminated upon our adoption of ASU 2020-06 as of January 1, 2021 (see Note 1).

All of the shares underlying our convertible notes, including shares reserved for future in-kind interest payments on the notes, have been registered for resale.

Secured Contingent Payment Obligation

The following table provides a reconciliation of our secured contingent payment obligation measured at estimated fair market value for the years ended December 31, 2020 and 2019, respectively (in thousands).

	2020	2019
Secured contingent payment obligation, beginning of year	$ 26,651	$ 25,557
Change in fair value	6,406	1,094
Secured contingent payment obligation, end of year	$ 33,057	$ 26,651

Our secured contingent payment obligation represents the estimated fair value of our repayment obligation to Brickell Key Investments, LP ("Brickell") under a February 2016 funding agreement, as amended from time to time (the "CPIA"). To date, we have received aggregate proceeds of $18 million in exchange for Brickell's right to reimbursement and compensation from gross proceeds resulting from patent enforcement and other patent monetization actions. No proceeds were received from Brickell in 2019 or 2020. To date, we have repaid an aggregate of $3.3 million under the CPIA from patent license and settlement proceeds.

Brickell is entitled to priority payment of 55% to 100% of proceeds received from all patent-related actions until such time that Brickell has been paid its minimum return. The minimum return is determined as a multiple of the funded amount that increases over time. The estimated minimum return due to Brickell was approximately $42 million and $39 million as of December 31, 2020 and 2019, respectively. In addition, Brickell is entitled to a pro rata portion of proceeds from specified legal actions to the extent aggregate proceeds from those actions exceed the minimum return.

Brickell holds a senior security interest in the majority of our assets until such time as the specified minimum return is paid, in which case, the security interest will be released except with respect to the patents and proceeds related to specific legal actions. The security interest is enforceable by Brickell in the event that we are in default under the agreement which would occur if (i) we fail, after notice, to pay proceeds to Brickell, (ii) we become insolvent or insolvency proceedings are commenced (and not subsequently discharged) with respect to us, (iii) our creditors commence actions against us (which are not subsequently discharged) that affect our material assets, (iv) we, without Brickell's consent, incur indebtedness other than immaterial ordinary course indebtedness, or (v) there is an uncured non-compliance of our obligations or misrepresentations under the agreement. As of December 31, 2020, we are in compliance with our obligations under this agreement.

In addition, in the event of a change in control of the Company, Brickell has the right to be paid its return as defined under the CPIA based on the transaction price for the change in control event.

We have elected to measure our secured contingent payment obligation at its estimated fair value based on probability-weighted estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods (see Note 10). The secured contingent payment obligation is remeasured to fair value at each reporting period with changes recorded in the consolidated statements of comprehensive loss until the contingency is resolved.

Unsecured Contingent Payment Obligations

The following table provides a reconciliation of our unsecured contingent payment obligations, measured at estimated fair market value, for the years ended December 31, 2020 and 2019, respectively (in thousands):

	2020	2019
Unsecured contingent payment obligations, beginning of period	$ -	$ -
Reclassification of other liabilities	1,003	-
Issuance of contingent payment rights	2,258	-
Change in fair value	1,961	-
Unsecured contingent payment obligations, end of period	$ 5,222	$ -

Our unsecured contingent payment obligations represent amounts payable to others from future patent-related proceeds including (i) a termination fee due to a litigation funder ("Termination Fee") and (ii) contingent payment rights ("CPRs") issued to accredited investors primarily in connection with equity financings. We have elected to measure these unsecured contingent payment obligations at their estimated fair value based on probability-weighted estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods. The unsecured contingent payment obligations will be remeasured to fair value at each reporting period with changes recorded in the consolidated statements of comprehensive loss until the contingency is resolved (see Note 10).

The Termination Fee is a result of advances received under a letter agreement with a third-party funder of $0.4 million in 2019 and $0.6 million in 2020. Based on the terms of the letter agreement, if a final funding arrangement was not executed by March 31, 2020, we would be obligated to pay, from future patent-related proceeds, an aggregate termination payment equal to five times the advances received, or approximately $5.0 million. We did not consummate a funding agreement and accordingly the advances, which were initially recorded in other long-term liabilities, were reclassified to unsecured contingent payment obligations at March 31, 2020, when the Termination Fee obligation was incurred. As of December 31, 2020, the estimated fair value of unsecured contingent payment obligations related to the Termination Fee is $2.7 million.

The CPRs represent the estimated fair value of rights provided to accredited investors who purchased shares of our common stock and the fair value of a right issued to a third-party in connection with a service agreement during the year ended December 31, 2020 (see Note 13). During the year ended December 31, 2020, we received aggregate proceeds of $3.8 million from the sale of common stock with contingent payment rights, of which approximately $1.8 million was allocated to the CPRs. In addition, on May 1, 2020, we amended certain March 2020 equity purchase agreements with accredited investors for the purchase of $0.9 million in common stock to add CPRs. This amendment resulted in a charge to expense of $0.4 million for the initial estimated fair value of the CPRs. The terms of the CPRs provide that we will pay each investor an allocated portion of our net proceeds from patent-related actions, after taking into account fees and expenses payable to law firms representing us and amounts payable to Brickell. The investors' allocated portion of net proceeds will be determined by multiplying the net proceeds recovered by us (up to $10 million) by the quotient of such investors' subscription amount divided by $10 million, up to an amount equal to each investor's subscription amount, or an aggregate of $4.7 million. As of December 31, 2020, the estimated fair value of our unsecured contingent payment obligations related to the CPRs is $2.5 million.

10. FAIR VALUE MEASUREMENTS

ASC 820, "Fair Value Measurements" establishes a fair value hierarchy that prioritizes the inputs to valuation methods used to measure fair value. The three levels of the fair value hierarchy are as follows:

- Level 1: Quoted prices for identical assets or liabilities in active markets which we can access
- Level 2: Observable inputs other than those described in Level 1
- Level 3: Unobservable inputs

The following table summarizes financial assets and financial liabilities carried at fair value and measured on a recurring basis as of December 31, 2020 and 2019, segregated by classification within the fair value hierarchy (in thousands):

		Fair Value Measurements		
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2020:				
Liabilities:				
Secured contingent payment obligation	$ 33,057	$ -	$ -	$ 33,057
Unsecured contingent payment obligations	5,222	-	-	5,222
December 31, 2019:				
Liabilities:				
Secured contingent payment obligation	26,651	-	-	26,651

For the years ended December 31, 2020 and 2019, respectively, we had no transfers of assets or liabilities between the levels of the hierarchy.

The fair values of our secured and unsecured contingent payment obligations were estimated using a probability-weighted income approach based on various cash flow scenarios as to the outcome of patent-related actions both in terms of timing and amount, discounted to present value using a risk-adjusted rate. We used a risk-adjusted discount rate of 14.15% at December 31, 2020, based on a risk-free rate of 0.15% as adjusted by 8% for credit risk and 6% for litigation inherent risk.

The following table provides quantitative information about the significant unobservable inputs used in the measurement of fair value for both the secured and unsecured contingent payment obligations at December 31, 2020, including the lowest and highest undiscounted payout scenarios as well as a weighted average payout scenario based on relative undiscounted fair value of each cash flow scenario.

	Secured Contingent Payment Obligation			Unsecured Contingent Payment Obligations		
Unobservable Inputs	Low	Weighted Average	High	Low	Weighted Average	High
Estimated undiscounted cash outflows (in millions)	$ 0.0	$ 46.1	$ 70.2	$ 0.0	$ 7.3	$ 9.7
Duration (in years)	1.0	2.5	3.5	1.0	2.5	3.5
Estimated probabilities	5%	23%	25%	25%	25%	25%

We evaluate the estimates and assumptions used in determining the fair value of our contingent payment obligations each reporting period and make any adjustments prospectively based on those evaluations. Changes in any of these Level 3 inputs could result in a significantly higher or lower fair value measurement

11. INCOME TAXES AND TAX STATUS

Our net losses before income taxes for the years ended December 31, 2020 and 2019 are from domestic operations as well as losses from our wholly-owned German subsidiary. We elected to treat our German subsidiary as a disregarded entity for purposes of income taxes and accordingly, the losses from our German subsidiary have been included in our operating results.

No current or deferred tax provision or benefit was recorded in 2020 or 2019 as a result of current losses and fully deferred tax valuation allowances for all periods. We have recorded a valuation allowance to state our deferred tax assets at their estimated net realizable value due to the uncertainty related to realization of these assets through future taxable income.

A reconciliation between the provision for income taxes and the expected tax benefit using the federal statutory rate of 21% for each of the years ended December 31, 2020 and 2019, respectively are as follows (in thousands):

	2020	2019
Tax benefit at statutory rate	$ (4,111)	$ (1,985)
State tax benefit	(842)	(407)
Increase in valuation allowance	4,307	2,341
Other	646	51
	$ -	$ -

Our deferred tax assets and liabilities relate to the following sources and differences between financial accounting and the tax bases of our assets and liabilities at December 31, 2020 and 2019 (in thousands):

	2020	2019
Gross deferred tax assets:		
Net operating loss carry-forward	$ 80,848	$ 83,865
Research and development credit carry-forward	6,603	7,608
Stock compensation	122	(28)
Patents and other	1,466	1,479
Contingent payment obligations	5,235	3,119
Inventories	-	139
Fixed assets	54	3
Accrued liabilities	64	200
Lease liabilities	77	142
Other	-	3
	94,469	96,530
Less valuation allowance	(94,245)	(96,320)
	224	210
Gross deferred tax liabilities:		
Convertible debt	(224)	(210)
	(224)	(210)
Net deferred tax asset	$ -	$ -

Approximately $0.2 million, net of tax effect, of unrecognized tax benefit related to the beneficial conversion feature of convertible debt would be recorded as an adjustment to contributed capital rather than a decrease in earnings, if recognized.

At December 31, 2020, we had cumulative net operating loss ("NOL") carry-forwards for income tax purposes of $323.2 million, of which $294.1 million is subject to expiration in varying amounts from 2021 to 2037. At December 31, 2020, we also had research and development tax credit carryforwards of $6.6 million, which expire in varying amounts from 2021 through 2038.

Our ability to benefit from the tax credit carry-forwards could be limited under certain provisions of the Internal Revenue Code if there are ownership changes of more than 50%, as defined by Section 382 of the Internal Revenue Code of 1986 ("Section 382"). Under Section 382, an ownership change may limit the amount of NOL, capital loss and R&D credit carry-forwards that can be used annually to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50 percentage points over a three-year period. We conduct a study annually of our ownership changes. Based on the results of our studies, we have determined that we do not have any ownership changes on or prior to December 31, 2020 which would result in limitations of our NOL, capital loss or R&D credit carry-forwards under Section 382.

Uncertain Tax Positions

We file income tax returns in the U.S. federal jurisdiction, various state jurisdictions, and Germany. We have identified our Federal and Florida tax returns as our only major jurisdictions, as defined. The periods subject to examination for those returns are the 2001 through 2020 tax years. The following table provides a reconciliation of our unrecognized tax benefits due to uncertain tax positions for the years ended December 31, 2020 and 2019, respectively (in thousands):

	2020	2019
Unrecognized tax benefits – beginning of year	$ 927	$ 927
Unrecognized tax benefits – end of year	$ 927	$ 927

Future changes in the unrecognized tax benefit will have no impact on the effective tax rate so long as we maintain a full valuation allowance.

Our policy is that we recognize interest and penalties accrued on any unrecognized tax benefits as a component of our income tax expense. We do not have any accrued interest or penalties associated with any unrecognized tax benefits. For the years ended December 31, 2020 and 2019, we did not incur any income tax-related interest income, expense or penalties.

12. COMMITMENTS AND CONTINGENCIES

Legal Proceedings

From time to time, we are subject to legal proceedings and claims which arise in the ordinary course of our business. These proceedings include patent enforcement actions initiated by us against others for the infringement of our technologies, as well as proceedings brought by others against us at the Patent Trial and Appeal Board of the U.S. Patent and Trademark Office ("PTAB") and in the Federal Patent Court in Germany in an attempt to invalidate certain of our patent claims.

We had several patent enforcement actions in Germany in which we did not prevail. Germany has a "loser pay" system whereby the non-prevailing party is responsible for statutory attorney fees and costs. All of our German actions were concluded in 2019. We have recorded an estimated loss for statutory attorney fees and costs in current liabilities under the heading "statutory court costs" in the consolidated balance sheets. As of December 31, 2020 and 2019, we have accrued an aggregate of $0.25 million and $0.37 million, respectively, for our concluded cases in Germany. We also have a bond posted in Germany that upon release will satisfy $0.14 million of these accrued costs. The bond is recorded in prepaid expenses (see Note 4).

ParkerVision v. Qualcomm (Middle District of Florida)

We have a patent infringement complaint pending in the Middle District of Florida against Qualcomm and Qualcomm Atheros, Inc. (collectively "Qualcomm") seeking approximately $1.3 billion in damages for infringement of four of our patents (the "Qualcomm Action"). HTC Corporation and HTC America, Inc. (collectively "HTC") were also defendants in this case but we voluntarily dismissed our claims against HTC and HTC dismissed their related counter-claims against us in October 2020. Qualcomm has pending counterclaims against us for non-infringement and invalidity for all patents in the case. The case was filed in May 2014 and stayed in February 2016 pending decisions in other cases, including the appeal of a PTAB proceeding with regard to U.S. patent 6,091,940 ("the '940 Patent") asserted in this case. In March 2017, the PTAB ruled in our favor on three of the six petitions (the method claims), ruled in Qualcomm's favor on two of the six petitions (the apparatus claims) and issued a split decision on the claims covered in the sixth petition. In September 2018, the Federal Circuit upheld the PTAB's decision with regard to the '940 Patent and, in January 2019, the court lifted the stay in this case. In July 2019, the court issued an order that granted our proposed selection of patent claims from four asserted patents, including the '940 Patent, and denied Qualcomm's request to limit the claims and patents. The court also agreed that we may elect to pursue accused products that were at issue at the time the case was stayed, as well as new products that were released by Qualcomm during the pendency of the stay. In September 2019, Qualcomm filed a motion for partial summary judgement in an attempt to exclude certain patents from the case, including the '940 Patent. The court denied this motion in January 2020. In April 2020, the court issued its claim construction order in which the court adopted our proposed construction for seven of the ten disputed terms and adopted slightly modified versions of our proposed construction for the remaining terms. Due to the impact of COVID-19, a number of the scheduled deadlines in this case were moved including the trial commencement date which was rescheduled from December 2020 to May 2021. We are seeking $1.3 billion in royalties owed to us by Qualcomm for its unauthorized use of our technology, based on a report submitted by our damages expert in this case in October 2020. Such amount excludes additional amounts requested by us for interest and enhanced damages for willful infringement. Ultimately, the amount of damages, if any, will be determined by the court. Discovery was expected to close in December 2020; however, the court allowed us to designate a substitute expert due to medical issues with one of our experts in the case. Accordingly, the close of discovery was delayed until January 2021. As a result of these delays, the court rescheduled the trial commencement date from May 3, 2021 to July 6, 2021. Fact and expert discovery in this case are closed, expert reports have been submitted, and summary judgement and *Daubert* briefings have been completed by the parties. In March 2021, the court granted Qualcomm's motion to strike certain of our 2020 infringement contentions. A number of outstanding motions are pending decisions by the court. On March 26, 2021, the court further delayed the trial date citing backlog due to the pandemic, among other factors. A new trial date has not yet been set although the court indicated the case was unlikely to be tried before November or December 2021. We are represented in this case on a full contingency fee basis.

ParkerVision v. Apple and Qualcomm (Middle District of Florida)
In December 2015, we filed a patent infringement complaint in the Middle District of Florida against Apple, LG, Samsung and Qualcomm alleging infringement of four of our patents. In February 2016, the district court proceedings were stayed pending resolution of a corresponding case filed at the International Trade Commission ("ITC"). In July 2016, we entered into a patent license and settlement agreement with Samsung and, as a result, Samsung was dismissed from the district court action. In March 2017, we filed a motion to terminate the ITC proceedings and a corresponding motion to lift the stay in the district court case. This motion was granted in May 2017. In July 2017, we filed a motion to dismiss LG from the district court case and re-filed our claims against LG in the District of New Jersey (see ParkerVision v. LG below). Also in July 2017, Qualcomm filed a motion to change venue to the Southern District of California, and Apple filed a motion to dismiss for improper venue. In March 2018, the district court ruled against the Qualcomm and Apple motions. The parties also filed a joint motion in March 2018 to eliminate three of the four patents in the case in order to expedite proceedings leaving our U.S. patent 9,118,528 as the only remaining patent in this case. A claim construction hearing was held on August 31, 2018. In July 2019, the court issued its claim construction order in which the court adopted our proposed claim construction for two of the six terms and the "plain and ordinary meaning" on the remaining terms. In addition, the court denied a motion filed by Apple for summary judgment. Fact discovery has closed in this case and a jury trial was scheduled to begin in August 2020. In March 2020, as a result of the impact of COVID-19, the parties filed a motion requesting an extension of certain deadlines in the case. In April 2020, the court stayed this proceeding pending the outcome of the Qualcomm Action. We are represented in this case on a limited success fee basis.

ParkerVision v. LG (District of New Jersey)
In July 2017, we filed a patent infringement complaint in the District of New Jersey against LG for the alleged infringement of the same patents previously asserted against LG in the Middle District of Florida (see *ParkerVision v. Apple and Qualcomm* above). We elected to dismiss the case in the Middle District of Florida and re-file in New Jersey as a result of a Supreme Court ruling regarding proper venue. In March 2018, the court stayed this case pending a final decision in *ParkerVision v. Apple and Qualcomm*

in the Middle District of Florida. As part of this stay, LG has agreed to be bound by the final claim construction decision in that case. We are represented in this case on a limited success fee basis.

ParkerVision v. Intel (Western District of Texas)
In February 2020, we filed a patent infringement complaint in the Western District of Texas against Intel alleging infringement of eight of our patents. The complaint was amended in May 2020 to add two additional patents. In June 2020, we requested that one of the patents be dropped from this case and filed a second case in the Western District of Texas that included this dismissed patent (see *ParkerVision v. Intel II* below). Intel's response to our complaint was filed in June 2020 denying infringement and claiming invalidity of the patents. Intel also filed a motion to transfer venue which the court denied in January 2021. The court issued its claim construction ruling in January 2021 in which the majority of the claims were decided in our favor. The case is scheduled for trial beginning February 7, 2022. We are represented in this case on a full contingency fee basis.

Intel v. ParkerVision (PTAB)
Intel filed petitions for *Inter Partes Review* (IPR) against U.S. patent 7,539,474 ("the '474 Patent"), U.S. patent 7,110,444 ("the '444 Patent") and U.S. patent 8,190,108 ("the '108 patent"), all of which are patents asserted in *ParkerVision v. Intel*. In January 2021, the PTAB issued its decision to institute IPR proceeding for the '444 Patent and the '474 Patent. Our response to the instituted IPRs is due in April 2021. The PTAB has not yet issued a decision for the '108 Patent.

ParkerVision v. Intel II (Western District of Texas)
In June 2020, to reduce the number of claims in *ParkerVision v. Intel*, we filed a second patent infringement complaint in the Western District of Texas against Intel that included a single patent that we voluntarily dismissed from the original case. In July 2020, we amended our complaint adding two more patents to the case. The claim construction hearing is expected to be scheduled after May 2021 and the case is currently scheduled for trial beginning March 17, 2022. We are represented in this case on a full contingency fee basis.

ParkerVision filed a number of additional patent cases in the Western District of Texas including cases against (i) TCL Industries Holdings Co., Ltd, a Chinese company, TCL Electronics Holdings Ltd., Shenzhen TCL New Technology Co., Ltd, TCL King Electrical Appliances (Huizhou) Co., Ltd., TCL Moka Int'l Ltd. and TCL Moka Manufacturing S.A. DE C.V. (collectively "TCL"), (ii) Hisense Co., Ltd. and Hisense Visual Technology Co., Ltd (collectively "Hisense"), a Chinese company, (iii) Buffalo Inc., a Japanese company ("Buffalo")and (iv) Zyxel Communications Corporation, a Chinese multinational electronics company headquartered in Taiwan, ("Zyxel"). Each case alleges infringement of the same ten patents by products that incorporate modules containing certain Wi-Fi chips manufactured by Realtek and/or MediaTek. Each of the defendants have filed responses denying infringement and claiming invalidity of the patents, among other defenses. We are represented in each of these cases on a full contingency fee basis.

13. STOCK AUTHORIZATION AND ISSUANCE

Preferred Stock
We have 15 million shares of preferred stock authorized for issuance at the direction of our board of directors (the "Board"). On November 17, 2005, our Board designated 0.1 million shares of authorized preferred stock as the Series E Preferred Stock in conjunction with its adoption of a Shareholder Protection Rights Agreement. As of December 31, 2020, we had no outstanding preferred stock.

Common Stock
We have 140 million shares of common stock authorized for issuance as of December 31, 2020. Our shareholders approved amendments to our articles of incorporation in November 2019 increasing the number of our authorized shares of common stock from 75 million to 110 million shares and in July 2020 increasing the number of our authorized shares of common stock from 110 million to 140 million shares.

As of December 31, 2020, we have 25.3 million shares reserved for issuance under outstanding warrants, options, and RSUs and 23.6 million shares reserved for issuance upon conversion of our outstanding convertible notes. In addition, we have 0.2 million shares reserved for future issuance under equity compensation plans and 7.5 million shares reserved for the payment of interest in-kind on our convertible notes.

Stock and Warrant Issuances – Equity Based Financings
During the year ended December 31, 2019, we did not issue any stock or warrants in financing transactions. The following table presents a summary of completed equity-based financing transactions for the year ended December 31, 2020 (in thousands, except for per share amounts):

Date	Transaction	# of Common Shares/ Units Sold	Average Price per Share/Unit	# of Warrants Issued (in 000's)	Average Exercise Price per Warrant		Net Proceeds (1)
January 2020	Private placement of common stock	1,335	$0.13	-	-	$	177
February 2020	Warrant amendment	-	-	5,000	$0.74	$	-
March 2020	Private placement of common stock, amended to add CPR	2,571	$0.35	-	-	$	900
April 2020 to December 2020	Private placement of common stock with CPRs	10,858	$0.35	-	-	$	3,724

(1)After deduction of applicable offering costs.

Private Placements
In January 2020, we entered into securities purchase agreements with accredited investors for an aggregate of 1,169,232 shares of our common stock at a price of $0.13 per share and 166,667 shares of our common stock at $0.15 per share for aggregate proceeds of approximately $0.2 million.

In March 2020, we entered into securities purchase agreements with accredited investors for an aggregate of 2,571,432 shares of our common stock at a price of $0.35 per share for aggregate proceeds of $0.9 million. The securities purchase agreements for the March 2020 transactions were amended on May 1, 2020, in order to add a contingent payment right whereby we will pay each investor an allocated portion of our share of proceeds from patent-related actions, after taking into account fees and expenses payable to law firms representing the Company and amounts payable to Brickell, up to an amount equal to the investors' aggregate subscription amount, or $0.9 million (see "unsecured contingent payment obligations" in Note 9). The shares were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762).

From April to December 2020, we entered into securities purchase agreements with accredited investors for an aggregate of 10,857,876 shares of our common stock at a price of $0.35 per share for aggregate proceeds of $3.8 million. The securities purchase agreements include contingent payment rights. Approximately $1.8 million of the proceeds were allocated to unsecured contingent payment obligations based on the initial fair value estimate of the CPRs (see Note 9). The shares sold from April to August, totaling 5,871,584 shares, were registered for resale on a registration statement that was declared effective on September 2, 2020 (File No. 333-248242).

For the shares sold subsequent to August 2020, we entered into registration rights agreements with the investors pursuant to which we will register the shares. We have committed to file the registration statement by April 15, 2021 and to cause the registration statement to become effective by June 30, 2021. The registration rights agreements provide for liquidated damages upon the occurrence of certain events including failure by us to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or approximately $0.1 million.

Warrant Amendment

On February 28, 2020, we entered into a warrant amendment agreement (the "Warrant Amendment Agreement") with Aspire Capital Fund, LLC ("Aspire"), with respect to warrants issued in July and September 2018 (the "2018 Warrants") that are exercisable, collectively, into 5,000,000 shares of our common stock. The Warrant Amendment Agreement provided for a reduction in the exercise price for the 2018 Warrants from $0.74 to $0.35 per share and the issuance of a new warrant for the purchase of 5,000,000 shares of our common stock at an exercise price of $0.74 per share ("New Aspire Warrant"). The New Aspire Warrant expires February 28, 2025 and is subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and upon any distributions of assets to our stockholders. The New Aspire Warrant contains provisions that prohibit exercise if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of common stock outstanding immediately after giving effect to such exercise. The holder of the New Aspire Warrant may increase (up to 19.99%) or decrease this percentage by providing at least 61 days' prior notice to the Company. In the event of certain corporate transactions, the holder of the New Aspire Warrant will be entitled to receive, upon exercise of such New Aspire Warrant, the kind and amount of securities, cash or other property that the holder would have received had they exercised the New Aspire Warrant immediately prior to such transaction. The New Aspire Warrant does not contain voting rights or any of the other rights or privileges as a holder of our common stock.

We recognized $1.78 million of non-cash warrant expense in connection with the Warrant Amendment Agreement based on the difference between the Black-Scholes value of the warrants immediately before and after the amendment. The Warrant Amendment Agreement added a call provision to the 2018 Warrants whereby we may, after December 31, 2020, call for cancellation of all or any portion of the 2018 Warrants for which an exercise notice has not yet been received, in exchange for consideration equal to $0.001 per warrant share and subject to certain conditions. All other terms of the 2018 Warrants remained unchanged, including the original expiration dates of July and September 2023. The shares underlying the New Aspire Warrant were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762). The shares underlying the 2018 Warrants are currently registered for resale pursuant to a registration statement on Form S-1 (File No. 333-226738).

In connection with the Warrant Amendment Agreement, Aspire exercised 1,430,000 shares of the 2018 Warrants for aggregate proceeds to us of $0.5 million. An additional 3,070,000 shares of the 2018 Warrants were exercised during the year ended December 31, 2020 for aggregate additional proceeds to us of approximately $1.1 million. We did not exercise the call provision and the Aspire exercised the remaining 2018 Warrants in January 2021 (see Note 17).

Stock and Warrant Issuances – Payment for Services
On February 10, 2020, we entered into a business consulting and retention agreement with Chelsea Investor Relations ("Chelsea") to provide business advisory services to us. As consideration for services to be provided under the 24-month term of the consulting agreement, we issued 500,000 shares of unregistered common stock in exchange for a nonrefundable retainer for services valued at approximately $0.15 million. The value of the stock issued is being recognized as consulting expense over the term of the agreement. The shares were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762). The agreement was amended in January 2021 (see Note 17).

On March 16, 2020, we entered into an agreement with Tailwinds Research Group LLC ("Tailwinds") to provide digital marketing services to us. As consideration for services to be provided under the twelve-month term of the agreement, we issued warrants for the purchase up to 200,000 shares of our common stock with an exercise price of $1.00 per share in exchange for a nonrefundable retainer for services, valued using the Black-Scholes method, at approximately $0.06 million. The value of the warrants is being recognized as expense over the term of the agreement. The Tailwinds warrants are exercisable immediately after issuance, expire March 16, 2023, and are subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock. The shares underlying the warrant were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762).

On June 8, 2020, we entered into an agreement with a third party to provide media advisory services. As consideration for services provided under the term of the agreement, which extended through December 31, 2020, we issued 30,000 shares of unregistered common stock for a nonrefundable retainer for services valued at approximately $0.01 million. The value of the stock issued was recognized as a consulting expense over the term of the agreement. We are not obligated to register the shares for resale.

On October 30, 2020, we entered into a consulting services agreement with a third-party to provide shareholder relations services. As consideration for services provided under the twelve-month term of the agreement, we issued 70,000 shares of unregistered common stock for a non-refundable retainer for services valued at approximately $0.02 million. The agreement included a CPR to receive up to $0.02 million from patent-related proceeds. The CPR was recorded as debt at its estimated fair value of approximately $0.1 million (see "unsecured contingent payment obligations" in Note 9).

During the year ended December 31, 2020, we issued an aggregate of 100,000 shares of our unregistered common stock, valued at approximately $0.05 million, as compensation for shareholder awareness services provided by a third party. The agreement provides for future issuances of 50,000 shares for up to two successive three-month periods over the term of the agreement, unless the services are terminated in accordance with the agreement. In January 2021, we issued 50,000 shares valued at approximately $0.03 million as the third quarterly payment under this agreement.

Common Stock Warrants
As of December 31, 2020 and 2019, we had outstanding warrants for the purchase of up to 12.9 million shares and 12.2 million shares of our common stock, respectively. The estimated grant date fair value of these warrants of $1.7 million and $1.3 million at December 31, 2020 and 2019, respectively, is included in shareholders' deficit in our consolidated balance sheets. As of December 31, 2020, our outstanding warrants have an average exercise price of $0.45 per share and a weighted average remaining life of approximately three years.

Shareholder Protection Rights Agreement

On November 20, 2020, we adopted a second amendment to our Shareholder Protection Rights Agreement ("Rights Agreement") dated November 21, 2005, as amended. The amendment extends the expiration date of the Rights Agreement from November 20, 2020 to November 20, 2023 and decreases the exercise price of the rights from $14.50 to $8.54.

The Rights Agreement provided for the issuance, on November 29, 2005, as a dividend, rights to acquire fractional shares of Series E Preferred Stock. We did not assign any value to the dividend, as the value of these rights is not believed to be objectively determinable. The principal objective of the Rights Agreement is to cause someone interested in acquiring us to negotiate with our Board rather than launch an unsolicited or hostile bid. The Rights Agreement subjects a potential acquirer to substantial voting and economic dilution. Each share of common stock issued by ParkerVision will include an attached right.

The rights initially are not exercisable and trade with the common stock of ParkerVision. In the future, the rights may become exchangeable for shares of Series E 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 us more costly to the potential acquirer. The rights may separate from the common stock following the acquisition of 15% or more of the outstanding shares of common stock by an acquiring person. Upon separation, the holder of the rights may exercise their right at an exercise price of $8.54 per right (the "Exercise Price"), subject to adjustment and payable in cash. Upon payment of the Exercise Price, the holder of the right 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 Rights Agreement also has a flip over provision allowing 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, at 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 ten-thousandth of a share of Series E Preferred Stock for each share of common stock. The Series E Preferred Stock, if and when issued, will have quarterly cumulative dividend rights payable when and as declared by the Board, liquidation, dissolution and winding up preferences, voting rights and will rank junior to other securities of ParkerVision unless otherwise determined by the Board. The rights may be redeemed upon approval of the Board at a redemption price of $0.01. As of December 31, 2020, there are no Series E preferred shares outstanding.

14. SHARE-BASED COMPENSATION

The following table presents share-based compensation expense included in our consolidated statements of comprehensive loss for the years ended December 31, 2020 and 2019, respectively (in thousands):

	2020	2019
Research and development expense	$ -	$ 5
Selling, general, and administrative expense	1,244	584
Total share-based compensation expense	$ 1,244	$ 589

We did not capitalize any expense related to share-based payments. As of December 31, 2020, there was $0.36 million of total unrecognized compensation cost related to all non-vested share-based compensation awards. That cost is expected to be recognized over a weighted-average period of approximately 0.5 years.

Stock Incentive Plans

2019 Long-Term Incentive Equity Plan

We adopted a long-term incentive equity plan in August 2019 that provides for the grant of stock-based awards to employees, officers, directors and consultants, not to exceed 12.0 million shares of common stock (the "2019 Plan"). The 2019 Plan provides for benefits in the form of nonqualified stock options, stock appreciation rights, restricted stock awards, and other stock based awards. Forfeited and expired options under the 2019 Plan become available for reissuance. The plan provides that non-employee directors may not be granted awards that exceed the lesser of 1.0 million shares or $175,000 in value, calculated based on grant-date fair value. At December 31, 2020, 155,000 shares of common stock were available for future grants under the 2019 Plan. The 2019 Plan was amended in January 2021 (see Note 17).

2011 Long-Term Incentive Equity Plan

We adopted a long-term incentive equity plan in September 2011 that, as amended in 2014, 2016 and 2017, provides for the grant of stock-based awards to employees, officers, directors and consultants, not to exceed 3.0 million shares of common stock (the "2011 Plan"). The 2011 Plan provides for benefits in the form of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, and other stock based awards. Forfeited and expired options under the 2011 Plan become available for reissuance. The plan provides that no participant may be granted awards in excess of 150,000 shares in any calendar year. At December 31, 2020, 25,627 shares of common stock were available for future grants under the 2011 Plan.

2008 Equity Incentive Plan

We adopted an equity incentive plan in August 2008 (the "2008 Plan"). The 2008 Plan provides for the grant of stock-based awards to employees (excluding named executives), directors and consultants, not to exceed 50,000 shares of common stock. The 2008 Plan provides for benefits in the form of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, and other stock based awards. Forfeited and expired options under the 2008 Plan become available for reissuance. The plan provides that no participant may be granted awards in excess of 5,000 shares in any calendar year. At December 31, 2020, 20,473 shares of common stock were available for future grants under the 2008 Plan.

Restricted Stock Awards

RSAs are issued as executive and employee incentive compensation and as payment for services to others. The value of the award is based on the closing price of our common stock on the date of grant. RSAs are generally immediately vested.

Restricted Stock Units

RSUs are issued as incentive compensation to executives, employees, and non-employee directors. Each RSU represents a right to one share of our common stock, upon vesting. The RSUs are not entitled to voting rights or dividends, if any, until vested. RSUs generally vest over a one to three year period for employee awards and a one year period for non-employee director awards. The fair value of RSUs is generally based on the closing price of our common stock on the date of grant and is amortized to share-based compensation expense over the estimated life of the award, generally the vesting period.

RSAs and RSUs

The following table presents a summary of RSA and RSU activity under the 2000, 2008, 2011, and 2019 Plans (collectively, the "Stock Plans") as of December 31, 2020 (shares in thousands):

	Non-vested Shares	
	Shares	Weighted-Average Grant Date Fair Value
Non-vested at beginning of year	-	$ -
Granted	1,016	0.31
Vested	(829)	0.31
Forfeited	-	-
Non-vested at end of year	187	$ 0.33

The total fair value of RSAs and RSUs vested under the Stock Plans for the year ended December 31, 2020 was approximately $0.3 million.

Stock Options

Stock options are issued as incentive compensation to executives, employees and non-employee directors. Stock options are generally granted with exercise prices at or above fair market value of the underlying shares at the date of grant. The fair value of options granted is estimated using the Black-Scholes option pricing model. Generally, fair value is determined as of the grant date. Options for employees, including executives and non-employee directors, are generally granted under the Stock Plans.

The following table presents a summary of option activity under the Stock Plans for the year ended December 31, 2020 (shares in thousands):

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value ($)
Outstanding at beginning of year	11,410	$ 0.33		
Granted	843	0.31		
Exercised	-	-		
Forfeited/Expired	(13)	38.86		
Outstanding at end of year	12,240	0.28	5.5 years	$ 3,401
Vested at end of year	9,490	$ 0.31	5.5 years	$ 2,578

The weighted average per share fair value of options granted during the years ended December 31, 2020 and 2019 was $0.27 and $0.14, respectively. The total fair value of option shares vested was $0.9 million and $0.5 million for the year ended December 31, 2020 and 2019, respectively.

The fair value of option grants under the Stock Plans for the years ended December 31, 2020 and 2019, respectively, was estimated using the Black-Scholes option-pricing model with the following assumptions:

	Year ended December 31,	
	2020	2019
Expected option term [1]	5 years	5 years
Expected volatility factor [2]	127.4% to 135.3%	119.1%
Risk-free interest rate [3]	0.33% to 1.63%	1.6%
Expected annual dividend yield	0%	0%

[1] The expected term was generally determined based on historical activity for grants with similar terms and for similar groups of employees and represents the period of time that options are expected to be outstanding. For employee options, groups of employees with similar historical exercise behavior are considered separately for valuation purposes.

[2] The stock volatility for each grant is measured using the weighted average of historical daily price changes of our common stock over the most recent period equal to the expected option life of the grant.

[3] The risk-free interest rate for periods equal to the expected term of the share option is based on the U.S. Treasury yield curve in effect at the measurement date.

Options by Price Range
The options outstanding at December 31, 2020 under all plans have exercise price ranges, weighted average contractual lives, and weighted average exercise prices as follows (weighted average lives in years and shares in thousands):

	Options Outstanding			Options Vested		
Range of Exercise Prices	Number Outstanding at December 31, 2020	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Life	Number Exercisable at December 31, 2020	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Life
$0.171 - $0.33	11,318	$ 0.18	5.6	8,624	$ 0.18	5.6
$0.50 - $0.60	513	0.59	5.0	457	0.60	4.8
$1.98 - $2.13	381	2.02	3.4	381	2.02	3.4
$13.80	28	13.80	0.5	28	13.80	0.5
	12,240	$ 0.28	5.5	9,490	$ 0.31	5.5

Upon exercise of options under all plans, we issue new shares of our common stock. For shares issued upon exercise of equity awards granted under the Stock Plans, the shares of common stock are registered. For shares issued upon exercise of non-plan awards, the shares are not registered unless they have been subsequently registered by us on a registration statement. We had no option exercises for the years ended December 31, 2020 or 2019.

15. RELATED PARTY TRANSACTIONS

We paid approximately $0.01 million and $0.02 million in 2020 and 2019, respectively, for patent-related legal services to SKGF, of which Robert Sterne, one of our directors since September 2006, is a partner. In addition, we paid approximately $0.1 million in 2020 for principal and interest on the SKGF Note (refer to “Note Payable to a Related Party” included Note 9). No payments were made in 2019 on the

SKGF Note. The SKGF Note has an outstanding balance, including accrued interest, of approximately $0.8 million at December 31, 2020.

In January 2020, we issued 500,000 in unregistered shares of our common stock as an in-kind payment of approximately $0.08 million in outstanding amounts payable to Stacie Wilf, sister to Jeffrey Parker.

16. CONCENTRATIONS OF CREDIT RISK

Financial instruments that potentially subject us to a concentration of credit risk principally consist of cash and cash equivalents. Cash and cash equivalents are primarily held in bank accounts and overnight investments. At times our cash balances on deposit with banks may exceed the balance insured by the F.D.I.C.

17. SUBSEQUENT EVENTS

Equity and Debt Financings

In January 2021, we consummated the sale, on a private placement basis, of 2,976,430 shares of our common stock at a price of $0.35 per share to accredited investors for aggregate proceeds of approximately $1.0 million. The securities purchase agreements include contingent payment rights identical to the CPRs issued in 2020 (see "unsecured contingent payment obligations" at Note 9). Approximately $0.4 million in proceeds for this transaction was received as of December 31, 2020 and recorded as an accrued liability until the consummation of the transaction (see Note 7). We entered into registration rights agreements with the investors pursuant to which we will register the shares. We have committed to file the registration statement by April 15, 2021 and to cause the registration statement to become effective by June 30, 2021. The registration rights agreements provide for liquidated damages upon the occurrence of certain events including failure by us to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or approximately $0.06 million.

In March 2021, we consummated the sale, on a private placement basis of 3,230,942 shares of our common stock and 1,619,289 warrants at a price of $1.29 per common share to accredited investors for aggregate proceeds of approximately $4.2 million. The warrants have an exercise price of $1.75 per share and expire in March 2026. We entered into registration rights agreements with the investors pursuant to which we will register the shares. We have committed to file the registration statement within 30 days and to cause the registration statement to become effective within 90 days. The registration rights agreements provide for liquidated damages upon the occurrence of certain events including failure by us to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or approximately $0.25 million. The majority of the proceeds from this transaction were used to satisfy our obligations to Mintz (see "Mintz Agreement" below).

Share Based Compensation Arrangements

On January 11, 2021, the Board amended the 2019 Long-Term Incentive Plan to increase the number of shares of common stock reserved for issuance under the 2019 Plan from 12 million to 27 million shares.

The Board also approved grants, under the 2019 Plan, of two-year options, with an exercise price of $0.54 per share, vesting in 8 equal quarterly installments commencing on March 31, 2021 and expiring on January 11, 2026. The grants under the 2019 Plan included an option to purchase 8,000,000 shares granted to Jeffrey Parker, an option to purchase 1,000,000 shares granted to Cynthia French, an option to purchase 380,000 shares to each of the three non-employee directors, and options to purchase an aggregate of 2,900,000 shares granted to other key employees.

On January 25, 2021, we amended our business consulting and retention agreement with Chelsea to increase the compensation for services over the remaining term and to extend the term of the agreement through February 2024. As consideration for the amended agreement, we issued 500,000 shares of unregistered common stock in exchange for a nonrefundable retainer for services valued at approximately $0.33 million. The value of the stock issued is being recognized as consulting expense over the term of the agreement.

On March 9, 2021, we granted approximately 32,000 shares under our 2019 Long-Term Incentive Plan to a consultant for business communications services over a one-year term valued at approximately $0.05 million.

Warrant and Option Exercises
During the three months ended March 31, 2021, we received aggregate proceeds of $0. 4 million from the exercise of outstanding options and warrants at an average exercise price of $0.16 per share.

Mintz Agreement
As of December 31, 2020, we had approximately $3.1 million in accounts payable to Mintz and an outstanding balance of approximately $0.03 million on a secured note payable to Mintz for legal fees and expenses. In addition, we had approximately $3.6 million in disputed legal fees and expenses billed by Mintz that we treated as a loss contingency that was not probable as of December 31, 2020 and 2019 and accordingly, for which we recognized no expense in the consolidated financial statements. In March 2021, we entered into an agreement with Mintz to satisfy our outstanding obligations and reduce any future contingency fees payable to Mintz. On March 29, 2021, we paid Mintz a lump-sum payment of $3.0 million in satisfaction of our outstanding obligations to Mintz including the Mintz note, our accounts payable to Mintz, and all disputed and unrecorded billings. Mintz waived all past defaults on the Mintz note and agreed to a significant reduction in future success fees payable to Mintz from patent-related proceeds.

Legal Proceedings
On March 26, 2021, the district court in the Middle District of Florida, Orlando Division, issued an order that, among other things, postponed our trial date in *ParkerVision v. Qualcomm* citing backlog due to the pandemic as a factor. A new trial date has not yet been set but is unlikely to be scheduled prior to November or December 2021 according to the court.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

SEC registration fee	$137
Legal fees and expenses	10,000
Accounting fees and expenses	10,000
Filing fees and miscellaneous	5,000
Total	$25,137

Item 14. Indemnification of Directors and Officers.

The laws of the State of Florida permit the indemnification of directors, employees, officers and agents of Florida corporations. Our articles of incorporation and bylaws provide that we shall indemnify to the fullest extent permitted by Florida law any person whom we may indemnify under that law.

The provisions of Florida law that authorize indemnification do not eliminate the duty of care of a director. In appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief will remain available. In addition, each director will continue to be subject to liability for (a) violations of criminal laws, unless the director has reasonable cause to believe that his conduct was lawful or had no reasonable cause to believe his conduct was unlawful, (b) deriving an improper personal benefit from a transaction, (c) voting for or assenting to an unlawful distribution and (d) willful misconduct or conscious disregard for our best interests in a proceeding by or in our right to procure a judgment in its favor or in a proceeding by or in the right of a shareholder. The statute does not affect a director's responsibilities under any other law, such as the federal securities laws.

We have entered into indemnification and reimbursement agreements with each of our directors.

The effect of the foregoing is to require us to indemnify our officers and directors for any claim arising against such persons in their official capacities if such person acted in good faith and in a manner that he or she reasonably believed to be in or not contrary to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

We have directors and officer’s insurance which includes insurance for claims against these persons brought under securities laws.

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

Item 15. Recent Sales of Unregistered Securities

The information contained in the prospectus under the headings "The Private Placement" is incorporated herein by reference.

Convertible Notes

From September 2018 to January 2020, we sold convertible notes to accredited investors that are convertible, at the holders' option, into shares of our Common Stock at fixed conversion prices including (i) September 10, 2018 sale of notes with $0.40 per share fixed conversion price for aggregate proceeds of $900,000, (ii) September 19, 2018 sale of notes with a $0.57 per share fixed conversion price for aggregate proceeds of $425,000, (iii) February and March 2019 sale of notes with a fixed conversion price of $0.25 per share for aggregate proceeds of $1.3 million, (iv) June and July 2019 sale of notes with a fixed conversion price of $0.10 per share for aggregate proceeds of $390,000, (v) July 18, 2019 notes with a fixed conversion price of $0.08 per share for aggregate proceeds of $700,000, (vi) September 2019 sale of a note with a fixed conversion price of $0.10 per share for proceeds of $50,000, and January 8, 2020 notes with a fixed conversion price of $0.13 per share for aggregate proceeds of $450,000 (collectively, the "Notes").

The Notes mature five years from the date of issuance, with the exception of the January 2020 notes which have a maturity date that will automatically extend in one-year increments after the initial five-year maturity date, for an aggregate of up to ten years unless the holder, at the holder's sole option, revokes the automatic extension. The Notes all bear interest at a stated rate of 8.0% per annum, except (i) the July 18, 2019 notes, which bear interest at a stated rate of 7.5% per annum, and (ii) the January 8, 2020 notes, which bear interest at 8.0% for the first five years and 2.0% thereafter if the maturity date is extended beyond five years. Interest is payable quarterly, and we may elect, subject to certain equity conditions, to pay interest in cash, shares of our Common Stock ("Repayment Shares"), or a combination thereof. In an event of default, the interest rate increases to 12% per annum and the outstanding principal balance of the Notes plus all accrued interest due may be declared immediately payable by the holders of a majority of the then outstanding principal balance of the Notes.

The number of Repayment Shares is determined by dividing the interest payment amount by the closing price of our Common Stock on the trading day prior to the interest payment date, which may be less than the stated conversion price of the Notes. We may only elect to issue Repayment Shares if (i) no event of default has occurred or is occurring, (ii) the holder has not been issued greater than 14.99% of our then outstanding shares, inclusive of the Repayment Shares being issued, unless expressly waived by the Board, (iii) the Repayment Shares are registered on an effective Registration Statement or otherwise subject to an exemption therefrom, and (iv) our shares are listed or quoted on a market or exchange which includes the OTCQB, the OTCQX or the "Pink Sheets" published by the OTC Market Groups.

With the exception of the July 18, 2019 notes and the January 8, 2020 notes which have no prepayment option, we have the option to prepay the then outstanding principal amount of the Notes, along with any accrued interest ("Prepayment Amount") any time following the one-year anniversary of the issuance date, upon at least thirty (30) days' written notice to the holder ("Prepayment Notice"). The holder will have the right, upon written notice within twenty (20) business days of receipt of the Prepayment Notice, to convert all or a portion of the Prepayment Amount into shares of our Common Stock at the fixed conversion price. Any Prepayment Amount in cash will include a premium of 25% prior to the two-year anniversary of the Notes issuance date, 20% prior to the three-year anniversary of the Notes issuance date, 15% prior to the four-year anniversary of the Notes issuance date, or 10% thereafter.

Under the terms of the Notes, no holder shall have the right to convert the notes to the extent that, after giving effect to such conversion, the holder would beneficially own in excess of 4.99% (the “Maximum Percentage”) of the number of shares of Common Stock outstanding immediately after giving effect to the conversion. Upon written notice to us, a holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99%. One of the note holders, GEM Partners, LP, has increased its maximum percentage to 9.99%.

The Notes were offered and sold on a private placement basis in reliance on Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder.

The shares underlying the September 2018 notes, including shares reserved for in-kind interest payments on the notes, were registered for resale on a registration statement that was declared effective on November 13, 2018 (File No. 333-228184). The shares underlying the February and March 2019 notes, including shares reserved for in-kind interest payments on the notes, were registered for resale on a registration statement that was declared effective on April 19, 2019 (File No. 333-230888). The shares underlying the June and July 2019 notes, including shares reserved for in-kind interest payments on the notes, were registered for resale on a registration statement that was declared effective on September 3, 2019 (File No. 333-233390). The shares underlying the September 2019 and January 2020 notes, including shares reserved for in-kind interest payments on the notes, were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762).

To date, notes with an aggregate principal balance of $1.3 million were converted, at the option of the holder, into shares of our common stock.

Sale of Common Stock

In January 2020, we sold an aggregate of (i) 1,169,232 shares of our Common Stock at a purchase price of $0.13 per share and (ii) 166,667 shares of our Common Stock at a purchase price of $0.15 per share in private placement transactions with accredited investors for aggregate proceeds of approximately $177,000. In March 2020, we sold an aggregate of 2,571,432 shares of our Common Stock at a purchase price of $0.35 per share in a private placement transaction with accredited investors for aggregate proceeds of approximately $900,000. The shares from the January and March transactions were registered on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762).

The securities purchase agreements for the March 2020 transaction were amended on May 1, 2020 in order to add a contingent payment right whereby we will pay each investor an allocated portion of our share of proceeds from patent-related actions after taking into account fees and expenses payable to law firms representing us and amounts payable to Brickell, up to an amount equal to the investors’ aggregate subscription amount, or $0.9 million.

From April 2020 through January 2021, we sold an aggregate of 13,834,306 shares of our Common Stock at a price of $0.35 per share for proceeds of $4,842,000. The investors in each of these transactions received a contingent payment right (“CPR”) whereby we will pay each investor an allocated portion of our future net proceeds from our patent claims, after taking into account fees and expenses payable to law firms representing us and amounts payable to our litigation financer. Each investor’s allocated portion of such net proceeds will be determined by multiplying (i) the net proceeds recovered by us, up to $10 million by (ii) the quotient of such investor’s subscription amount divided by $10 million, up to an amount equal to each investor’s subscription amount, or an aggregate of approximately $4.84 million. The shares sold from April 2020 to August 2020 were registered for resale on a registration statement that was declared effective on September 2, 2020 (File No. 333-248242). The shares sold subsequent to

August 2020 through January 2021 were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217).

Sale of Common Stock and Warrants

On March 29, 2021, we entered into securities purchase agreements with accredited investors for the sale of an aggregate of 3,230,942 shares of our Common Stock and 1,615,475 Warrants at a price of $1.29 per share of Common Stock for proceeds of approximately $4.17 million (the "March 2021 PIPE"). Partner Capital Group ("PCG") acted as a nonexclusive marketing and consulting representative with respect to the sale of Common Stock and Warrants sold in the March 2021 PIPE. We paid PCG an aggregate of $9,840 and issued PCG's designees an aggregate of 3,814 Warrants as consideration for services.

The Warrants are immediately exercisable at an exercise price of $1.75 per share, expire March 29, 2026 and are subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our Common Stock and also upon any distributions of assets to our stockholders. The Warrants contain provisions that prohibit exercise if the holder, together with its affiliates, would beneficially own in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to such exercise. The holder of the Warrants may increase (up to 14.99%) or decrease this percentage by providing at least 61 days' prior notice to the Company. In the event of certain corporate transactions, the holder of the Warrants will be entitled to receive, upon exercise of such Warrants, the kind and amount of securities, cash or other property that the holder would have received had they exercised the Warrants immediately prior to such transaction. The Warrants do not contain voting rights or any of the other rights or privileges as a holder of our Common Stock. The shares were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217).

Repayment of Outstanding Obligations

On January 9, 2020, we issued 214,000 shares of our Common stock as repayment in-kind of approximately $28,000 in principal and interest, pursuant to a promissory note with Mark Fisher dated June 7, 2019, as amended (the "Fisher Note"). The Fisher Note was an unsecured, short-term note with an original maturity at the early of ninety (90) days following the issuance date or upon our receipt of additional litigation financing and an interest rate of 18% per annum. In September 2019, the Fisher Note was amended to extend the maturity date to December 2019 and increase the interest rate to 20% per annum.

On January 15, 2020, we issued 500,000 shares of our Common Stock as repayment of approximately $75,000 in outstanding accounts payable to Stacie Wilf, a related party. The amounts were payable as a result of funds advanced by Ms. Wilf for sales support and advertising costs for our Milo product in 2019.

On February 28, 2020, we issued 1,526,426 shares of our Common Stock as repayment in-kind of approximately $237,000 in principal and accrued interest pursuant to a promissory note with the Thomas Staz Revocable Trust dated May 15, 2019, as amended (the "Staz Note"). The Staz Note was an unsecured, short-term note with an original maturity at the early of ninety (90) days following the issuance date or upon our receipt of additional litigation financing and an interest rate of 18% per annum. In August 2019, the Staz Note was amended to extend the maturity date to September 2019 and increase the interest rate to 20% per annum. In September 2019, the Staz Note was further amended to extend the maturity date to December 2019. The Staz Note was repaid in Common Stock at an average conversion price of approximately $0.16 per share.

The shares were all registered on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762).

Consulting Agreements

On June 7, 2019, we entered into a consulting agreement with Mark Fisher ("Fisher") to act as special advisor to our chief executive officer with regard to our future business strategies. As consideration for services to be provided under the six-month term of the consulting agreement, we issued 625,000 shares of unregistered Common Stock in exchange for a nonrefundable retainer for services over the six-month term of the agreement valued at approximately $60,000. Such shares of Common Stock were offered and sold on a private placement basis in reliance on Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder.

On July 22, 2019, we entered into a consulting agreement with Park Consultants LLC to act as special advisor to our chief executive officer with regard to our future business strategies. As consideration for services to be provided under the eighteen-month term of the consulting agreement, we issued a warrant to purchase up to 1,800,000 shares of our Common Stock with an exercise price of $0.10 per share (the "Park Consulting Warrant") in exchange for a nonrefundable retainer for services. The Park Consulting Warrant became exercisable immediately after issuance and expires five years following the issuance date. The Park Consulting Warrant was offered and sold on a private placement basis in reliance on Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder.

The shares underlying the Park Consulting Warrant and the Fisher shares were registered on a registration statement that was declared effective on September 3, 2019 (File No. 333-233390).

On February 10, 2020, we entered into a business consulting and retention agreement with Chelsea Investor Relations ("Chelsea") to provide business advisory services to us. As consideration for services to be provided under the 24-month term of the consulting agreement, we issued 500,000 shares of unregistered Common Stock in exchange for a nonrefundable retainer for services valued at approximately $150,000.

On March 16, 2020, we entered into an agreement with Tailwinds Research Group LLC ("Tailwinds") to provide digital marketing services to us. As consideration for services to be provided under the twelve-month term of the agreement, we issued warrants for the purchase up to 200,000 shares of our Common Stock with an exercise price of $1.00 per share (the "Tailwinds Warrant"). The Tailwinds Warrant is exercisable immediately after issuance, expires March 16, 2023, and is subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our Common Stock. The Tailwinds Warrant was offered and sold on a private placement basis in reliance on Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder.

The shares underlying the Tailwinds Warrant and the Chelsea agreement were registered on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762).

In May 2020, we entered into an agreement with Intro-Act to provide research and shareholder relations services. As consideration for services under the agreement, we issued 50,000 shares of unregistered common stock on July 14, 2020, October 30, 2020, January 12, 2021 and April 6, 2021 with an aggregate value of $138,000. In June 2021, we extended our agreement with Intro-Act and issued 100,000 shares of unregistered common stock valued at approximately $122,000 as consideration for services to be provided over the twelve-month term of the agreement. We are not obligated to register the shares for resale.

On June 8, 2020, we entered into a consulting and retention agreement with Tony Vignieri to provide media advisory services. As consideration for services provided under the term of the agreement, which extend through December 31, 2020, we issued 30,000 shares of our unregistered Common Stock for a non-refundable retainer for services valued at approximately $13,800.

On October 30, 2020, we entered into a consulting services agreement with a third-party to provide shareholder relations services. As consideration for services provided under the twelve-month term of the agreement, we issued 70,000 shares of unregistered common stock for a non-refundable retainer for services valued at approximately $24,000. The agreement included a CPR to receive up to $24,500 million from patent-related proceeds. In April 2021, we extended the term of this agreement by six months and issued 35,000 shares of unregistered common stock as a non-refundable retainer for services value at approximately $40,000. We are not obligated to register the shares for resale.

On January 25, 2021, we amended our business consulting and retention agreement with Chelsea Investor Relations ("Chelsea amendment") to increase the compensation for services over the remaining term and to extend the term of the agreement through February 2024. As consideration for the amended agreement, we issued 500,000 shares of unregistered Common Stock in exchange for a nonrefundable retainer for services valued at approximately $325,000.

The shares underlying the Vignieri agreement and the Chelsea amendment were registered on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217).

Warrants

On February 28, 2020, we entered into a warrant amendment agreement (the "Warrant Amendment Agreement") with Aspire Capital Fund, LLC ("Aspire"), with respect to warrants issued in July and September 2018 (the "2018 Warrants") that are exercisable, collectively, into 5,000,000 shares of our Common Stock. The Warrant Amendment Agreement provided for a reduction in the exercise price for the 2018 Warrants from $0.74 to $0.35 per share and the issuance of a new warrant for the purchase of 5,000,000 shares of our Common Stock at an exercise price of $0.74 per share ("New Aspire Warrant"). The New Aspire Warrant expires February 28, 2025 and is subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our Common Stock and also upon any distributions of assets to our stockholders. The New Aspire Warrant contains provisions that prohibit exercise if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to such exercise. The holder of the New Aspire Warrant may increase (up to 19.99%) or decrease this percentage by providing at least 61 days' prior notice to the Company. In the event of certain corporate transactions, the holder of the New Aspire Warrant will be entitled to receive, upon exercise of such New Aspire Warrant, the kind and amount of securities, cash or other property that the holder would have received had they exercised the New Aspire Warrant immediately prior to such transaction. The New Aspire Warrant does not contain voting rights or any of the other rights or privileges as a holder of our Common Stock.

The shares underlying the 2018 Warrants are currently registered pursuant to a registration statement on Form S-1 (File No. 333-226738). The Warrant Amendment Agreement added a call provision to the 2018 Warrants whereby we may, after December 31, 2020, call for cancellation of all or any portion of the 2018 Warrants for which an exercise notice has not yet been received, in exchange for consideration equal to $0.001 per warrant share and subject to certain conditions, including the continued existence of an effective registration statement for the underlying shares of Common Stock and the availability of sufficient authorized shares to allow for the exercise of the 2018 Warrants. All other terms of the 2018 Warrants remained unchanged, including the original expiration dates of July and September 2023. In connection with the Warrant Amendment Agreement, Aspire exercised 1,430,000 shares of the 2018 Warrants for aggregate proceeds to us of $500,500. We did not exercise the call provision and the 2018 Warrants were fully exercised as of January 2021. The shares underlying the New Aspire Warrant were registered on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762).

Item 16. Exhibits and Financial Statements

(a) A list of the exhibits required by Item 601 of Regulation S-K to be filed as part of this registration statement is set forth in the Exhibit Index on page II-10.

(b) Financial statement schedules:

None.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

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

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

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

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

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

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

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

(i)

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

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(ii) Each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

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

(h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

Exhibit Number	Description
3.1	Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed March 29, 2016)
3.2	Amended and Restated Bylaws (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed August 14, 2007)
3.3	Articles of Amendment to Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed August 18, 2016)
3.4	Articles of Amendment to Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed July 13, 2017)
3.5	Articles of Amendment to the Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.5 of Form S-1 filed August 9, 2018)
3.6	Articles of Amendment to the Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed October 30, 2018)
3.7	Articles of Amendment to the Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed November 15, 2019)
3.8	Articles of Amendment to the Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed September 4, 2020)
3.9	Articles of Amendment to the Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 of Current Report on Form 8-K filed September 30, 2021)
3.10	Certificate of Designations of the Preferences, Limitations and Relative Rights of Series E Preferred Stock, dated November 21, 2005 (incorporated by reference from Exhibit 4.02 of Current Report on Form 8-K filed November 22, 2005)
4.1	Form of common stock certificate (incorporated by reference from Exhibit 4.1 of Annual Report on Form 10-K for the year ended December 31, 2015)
4.2	Shareholder Protection Rights Agreement between the Registrant and American Stock Transfer & Trust Company, as Rights Agent (incorporated by reference from Exhibit 4.01 of Form 8-K filed November 22, 2005)
4.3	First Amendment to Shareholder Protection Rights Agreement dated as of November 20, 2015 between the Registrant and American Stock Transfer & Trust Company, as Rights Agent (incorporated by reference from Exhibit 4.1 of Form 8-K filed November 23, 2015)
4.5	Second Amendment to Shareholder Protection Rights Agreement dated as of November 20, 2020 between the Registrant and American Stock Transfer and Trust Company, as Rights Agent (incorporated by reference from Exhibit 4.1 of Form 8-K filed November 20, 2020)
4.6	Form of Rights Certificate pursuant to Second Amendment to Shareholder Protection Rights Agreement dated November 20, 2020 (incorporated by reference from Exhibit 4.2 of Form 8-K filed November 23, 2020)
5.1	Opinion of Graubard Miller *
10.1	Form of 2002 Indemnification Agreement for Directors and Officers (incorporated by reference from Exhibit 10.1 of Quarterly Report on Form 10-Q for the period ended September 30, 2002, filed November 14, 2002) **
10.2	Standard Form of Employee Option Agreement (incorporated by reference from Exhibit 10.1 of Form 8-K filed January 13, 2021)
10.3	2008 Equity Incentive Plan (Non-Named Executives), as amended (incorporated by reference from Exhibit 4.1 of Form S-8 filed October 24, 2008) **
10.4	2011 Long-Term Incentive Equity Plan, as amended and restated (incorporated by reference from Exhibit 10.1 of Form 8-K filed July 13, 2017)**

10.5	Claims Proceeds Investment Agreement between Registrant and Brickell Key Investments LP (incorporated by reference from Exhibit 10.2 of Quarterly Report on Form 10-Q filed May 16, 2016)
10.6	Amendment to Claims Proceeds Investment Agreement between Registrant and Brickell Key Investments LP (incorporated by reference from Exhibit 10.1 of Quarterly Report on Form 10-Q filed August 15, 2016)
10.7	Warrant Agreement between Registrant and Brickell Key Investments LP dated May 26, 2016 (incorporated by reference from Exhibit 10.2 of Quarterly Report on Form 10-Q filed August 15, 2016)
10.8	Amendment to Claims Proceeds Investment Agreement between Registrant and Brickell Key Investments LP dated December 28, 2017 (incorporated by reference from Exhibit 10.11 of Annual Report on Form 10-K filed March 29, 2018)
10.9	Amendment to Claims Proceeds Investment Agreement between Registrant and Brickell Key Investments LP dated April 26, 2018 (incorporated by reference from Exhibit 10.21 of Registration Statement on Form S-1 filed August 9, 2018)
10.10	Notice of Exercise of Rights Under Claims Proceeds Investment Agreement between Registrant and Brickell Key Investments LP dated December 20, 2018 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K/A filed December 28, 2018)
10.11	Warrant Agreement between Registrant and Brickell Key Investments LP (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed December 21, 2018)
10.12	Settlement and Patent License Agreement between Registrant and Samsung Electronics Co., Ltd. dated July 15, 2016 (incorporated by reference from Exhibit 10.1 of Quarterly Report on Form 10-Q filed November 14, 2016)
10.13	Securities Purchase Agreement between Registrant and Aspire Capital Fund LLC dated July 26, 2018 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed July 30, 2018)
10.14	Form of Warrant Agreement between Registrant and Aspire Capital Fund LLC (incorporated by reference from Exhibit 4.1 of Current Report on Form 8-K filed July 30, 2018)
10.15	Securities Purchase Agreement between Registrant and Holders of Convertible Notes dated September 10, 2018 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed September 11, 2018)
10.16	Form of Convertible Promissory Note dated September 10, 2018 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed September 11, 2018)
10.17	List of Holders of Convertible Notes dated September 10, 2018 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed September 11, 2018)
10.18	Patent Security Agreement Between Registrant and Mintz Levin Cohn Ferris Glovsky and Popeo, P.C. (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed September 14, 2018)
10.19	Secured Promissory Note Between Registrant and Mintz Levin Cohn Ferris Glovsky and Popeo, P.C. (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed September 19, 2018)
10.20	Securities Purchase Agreement between Registrant and Holders of Convertible Notes dated September 18, 2018 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed September 18, 2018)
10.21	Form of Convertible Promissory Note dated September 18, 2018 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed September 19, 2018)
10.22	Securities Purchase Agreement between Registrant and Holders of Convertible Notes dated February 25, 2019 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed March 4, 2019)
10.23	Form of Convertible Promissory Note dated February 28, 2019 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed March 4, 2019)

10.24	List of Holders of Convertible Notes dated February 28, 2019 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed March 4, 2019)
10.25	Securities Purchase Agreement between Registrant and Holders of Convertible Notes dated March 13, 2019 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed March 14, 2019)
10.26	Form of Convertible Promissory Note dated March 13, 2019 (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed March 14, 2019)
10.27	List of Holders of Convertible Notes dated March 13, 2019 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed March 14, 2019)
10.28	Securities Purchase Agreement between Registrant and Mark Fisher dated June 7, 2019 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed June 13, 2019)
10.29	Secured Note Agreement dated June 7, 2019 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed June 13, 2019)
10.30	Security Agreement dated June 7, 2019 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed June 13, 2019)
10.31	Form of Securities Purchase Agreement between Registrant and Holders of Convertible Notes dated June 19, 2019 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed June 25, 2019)
10.32	Form of Convertible Promissory Note dated June 19, 2019 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed June 25, 2019)
10.33	List of Holders of Convertible Notes dated June 19, 2019 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed June 25, 2019)
10.34	Warrant agreement dated July 22, 2019 (incorporated by reference from exhibit 4.1 of Current Report on Form 8-K filed July 23, 2019)
10.35	Form of Securities Purchase Agreement between Registrant and Holders of Convertible Notes dated July 18, 2019 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed July 23, 2019)
10.36	Form of Convertible Promissory Note dated July 18, 2019 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed July 23, 2019)
10.37	List of Holders of Convertible Notes dated July 18, 2019 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed July 23, 2019)
10.38	Consulting Agreement dated July 22, 2019 (incorporated by reference from Exhibit 10.5 of Current Report on Form 8-K filed July 23, 2019)
10.39	2019 Long-term Incentive Plan dated August 9, 2019, as amended (incorporated by reference from Exhibit 10.39 of Annual Report on 10-K filed March 31, 2021) **
10.40	Form of Securities Purchase Agreement between Registrant and Holders of Convertible Notes dated January 8, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed January 10, 2020)
10.41	Form of Convertible Promissory Note dated January 8, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed January 10, 2020)
10.42	Form of Registration Rights Agreement between Registrant and Holders of Convertible Notes dated January 8, 2020 (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed January 10, 2020)
10.43	List of Holders of Convertible Notes dated January 8, 2020 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed January 10, 2020)
10.44	Form of Subscription Agreement between Registrant and Accredited Investors dated January 9, 2020 (incorporated by reference from Exhibit 10.5 of Current Report on Form 8-K filed January 10, 2020)
10.45	Form of Registration Rights Agreement between Registrant and Accredited Investors dated January 9, 2020 (incorporated by reference from Exhibit 10.6 of Current Report on Form 8-K filed January 10, 2020)

10.46	List of Accredited Investors dated January 9, 2020 (incorporated by reference from Exhibit 10.7 of Current Report on Form 8-K filed January 10, 2020)
10.47	Subscription Agreement between Registrant and an Accredited Investor dated January 20, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed January 21, 2020)
10.48	Registration Rights Agreement between Registrant and an Accredited Investor dated January 20, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed January 21, 2020)
10.49	Warrant Amendment Agreement between Registrant and Aspire Capital Fund, LLC dated February 28, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed March 5, 2020)
10.50	Warrant Agreement between Registrant and Aspire Capital Fund, LLC dated February 28, 2020 (incorporated by reference from Exhibit 4.1 of Current Report on Form 8-K filed March 5, 2020)
10.51	Form of Subscription Agreement between Registrant and Accredited Investors dated March 5, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed March 5, 2020)
10.52	Form of Registration Rights Agreement between Registrant and Accredited Investors dated March 5, 2020 (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed March 5, 2020)
10.53	Form of Subscription Agreement between Registrant and Accredited Investors dated March 13, 2020 (incorporated by reference from Exhibit 10.72 of Annual Report on Form 10-K filed April 14, 2020)
10.54	Form of Registration Rights Agreement between Registrant and Accredited Investors dated March 13, 2020 (incorporated by reference from Exhibit 10.73 of Annual Report on Form 10-K filed April 14, 2020)
10.55	List of Accredited Investors to March 5, 2020 and March 13, 2020 Subscription Agreements (incorporated by reference from Exhibit 10.74 of Annual Report on Form 10-K filed April 14, 2020)
10.56	Form of Subscription Agreement between Registrant and Accredited Investors dated April 29, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed May 5, 2020)
10.57	Form of Registration Rights Agreement between Registrant and Accredited Investors dated April 29, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed May 5, 2020)
10.58	List of Accredited Investors to April 29, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed May 5, 2020)
10.59	Amendment to Subscription Agreement between Registrant and Accredited Investors dated May 1, 2020 (incorporated by reference from Exhibit 10.4 of Current Report on Form 8-K filed May 5, 2020)
10.60	Form of Subscription Agreement between Registrant and Accredited Investors dated May 22, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed May 29, 2020)
10.61	Form of Registration Rights Agreement between Registrant and Accredited Investors dated May 22, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed May 29, 2020)
10.62	List of Accredited Investors to May 22, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed May 29, 2020)
10.63	Form of Subscription Agreement between Registrant and Accredited Investors dated June 8, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed June 12, 2020)

10.64	Form of Registration Rights Agreement between Registrant and Accredited Investors dated June 8, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed June 12, 2020)
10.65	List of Accredited Investors to June 8, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed June 12, 2020)
10.66	Form of Subscription Agreement between Registrant and Accredited Investors dated June 29, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed July 6, 2020)
10.67	Form of Registration Rights Agreement between Registrant and Accredited Investors dated June 29, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed July 6, 2020)
10.68	List of Accredited Investors to June 29, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed July 6, 2020)
10.69	Form of Subscription Agreement between Registrant and Accredited Investors dated August 19, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed August 21, 2020)
10.70	Form of Registration Rights Agreement between Registrant and Accredited Investors dated August 19, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed August 21, 2020)
10.71	List of Accredited Investors to August 19, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed August 21, 2020)
10.72	Form of Subscription Agreement between Registrant and Accredited Investors dated November 17, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed November 23, 2020)
10.73	Form of Registration Rights Agreement between Registrant and Accredited Investors dated November 17, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed November 23, 2020)
10.74	List of Accredited Investors to November 17, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed November 23, 2020)
10.75	Form of Subscription Agreement between Registrant and Accredited Investors dated December 11, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed November 23, 2020)
10.76	Form of Registration Rights Agreement between Registrant and Accredited Investors dated December 11, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed November 23, 2020)
10.77	List of Accredited Investors to December 11, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed December 14, 2020)
10.78	Form of Subscription Agreement between Registrant and Accredited Investors dated December 21, 2020 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed November 23, 2020)
10.79	Form of Registration Rights Agreement between Registrant and Accredited Investors dated December 21, 2020 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed November 23, 2020)
10.80	List of Accredited Investors to December 21, 2020 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed December 23, 2020)
10.81	Form of Subscription Agreement between Registrant and Accredited Investors dated January 5, 2021 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed November 23, 2020)
10.82	Form of Registration Rights Agreement between Registrant and Accredited Investors dated January 5, 2021 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed November 23, 2020)

10.83	List of Accredited Investors to January 5, 2021 Subscription Agreement (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed January 5, 2021)
10.84	Form of Subscription Agreement between Registrant and Accredited Investors dated March 29, 2021 (incorporated by reference from Exhibit 10.84 of Annual Report on form 10-K filed March 31, 2021)
10.85	Form of Registration Rights Agreement between Registrant and Accredited Investors dated March 29, 2021 (incorporated by reference from Exhibit 10.85 of Annual Report on form 10-K filed March 31, 2021)
10.86	Form of Warrant Agreement between Registrant and Accredited Investors dated March 29, 2021 (incorporated by reference from Exhibit 10.86 of Annual Report on form 10-K filed March 31, 2021)
10.87	List of Accredited Investors to March 29, 2021 Subscription Agreement (incorporated by reference from Exhibit 10.87 of Annual Report on form 10-K filed March 31, 2021)
10.88	Form of Securities Purchase Agreement between Registrant and Accredited Investor dated December 14, 2021 (incorporated by reference from Exhibit 10.1 of Current Report on Form 8-K filed December 16, 2021)
10.89	Form of Registration Rights Agreement between Registrant and Accredited Investor dated December 14, 2021 (incorporated by reference from Exhibit 10.2 of Current Report on Form 8-K filed December 16, 2021)
10.90	Form of Warrant Agreement between Registrant and Accredited Investor dated December 14, 2021 (incorporated by reference from Exhibit 10.3 of Current Report on Form 8-K filed December 16, 2021)
21.1	Schedule of Subsidiaries (incorporated by reference from Exhibit 21.1 of Annual Report on Form 10-K filed March 29, 2018)
23.1	Consent of MSL, P.A.*
23.2	Consent of Graubard Miller (included in Exhibit 5.1)
24.1	Power of Attorney (included in signature page hereto)

101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase*
101.DEF	XBRL Taxonomy Extension Definition Linkbase*
101.LAB	XBRL Taxonomy Extension Label Linkbase*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase*

* Filed herewith
** Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Jacksonville, State of Florida on this 13th day of January 2022.

PARKERVISION, INC.

By: /s/Jeffrey Parker
Jeffrey Parker, Chief Executive Officer and Chairman of the Board

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jeffrey L. Parker and Cynthia L. Poehlman, and each of them, with full power to act without the other, such person's true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him and in his name, place and stead, in any and all capacities, to sign this registration statement, any and all amendments thereto (including post-effective amendments), and any amendments thereto and to file the same, with exhibits and schedules thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing necessary or desirable to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
By: /s/ Jeffrey L. Parker Jeffrey L. Parker	Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	January 13, 2022
By: /s/ Cynthia L. French Cynthia L. French	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	January 13, 2022
By: /s/ Frank N. Newman Frank N. Newman	Director	January 13, 2022
By: /s/ Paul A. Rosenbaum Paul A. Rosenbaum	Director	January 13, 2022
By: /s/ Robert G. Sterne Robert G. Sterne	Director	January 13, 2022

Exhibit 5.1

Graubard Miller

The Chrysler Building
405 Lexington Avenue
New York, N.Y. 10174-1901
(212) 818-8800

January 13, 2022

ParkerVision, Inc.
4446-1A Hendricks Avenue, Suite 354
Jacksonville, Florida 32207

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

Reference is made to the Registration Statement on Form S-1 (the "Registration Statement") filed by ParkerVision, Inc. (the "Company"), a Florida corporation, under the Securities Act of 1933, as amended (the "Securities Act"), with respect to an aggregate of 1,578,946 shares ("Shares") of common stock, par value $0.01 per share ("Common Stock"), to be offered for resale by the selling stockholder named therein (the "Selling Stockholder"), which Shares were issued or are issuable to the Selling Stockholder as follows: (i) 1,052,631 shares of Common Stock and (ii) 526,315 shares of Common Stock underlying warrants ("Warrants"), pursuant to a securities purchase agreement dated December 14, 2021 (the "SPA").

We have examined such documents and considered such legal matters as we have deemed necessary and relevant as the basis for the opinion set forth below. With respect to such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as reproduced or certified copies, and the authenticity of the originals of those latter documents. As to questions of fact material to this opinion, we have, to the extent deemed appropriate, relied upon certain representations of certain officers and employees of the Company.

Based upon the foregoing, it is our opinion that:

1. The Shares issued by the Company to the Selling Stockholder pursuant to the SPA were duly authorized and legally issued, and are fully paid and non-assessable.

2. The Shares issuable pursuant to the Warrants have been duly authorized and, when issued in accordance with the terms of the Warrants, against payment therefor, will be legally issued, fully paid and non-assessable.

In giving this opinion, we have assumed that all certificates for the Shares have been, or will be, duly executed on behalf of the Company by the duly authorized Company officers and/or

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the Company's transfer agent and registered by the Company's registrar, if necessary, and conform, or will conform, except as to denominations, to specimens which we have examined.

We are opining solely on applicable statutory provisions of Florida corporate law, including the rules and regulations underlying those provisions, all applicable provisions of the Florida Constitution and all applicable judicial and regulatory determinations.

We hereby consent to the use of this opinion as an exhibit to the Registration Statement, to the use of our name as your counsel, and to all references made to us in the Registration Statement and in the prospectus forming a part thereof. In giving this consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act, or the rules and regulations promulgated thereunder.

Very truly yours,

/s/ Graubard Miller

MSL
CPAs & ADVISORS

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

ParkerVision, Inc.
Jacksonville, Florida

We hereby consent to the use in this Registration Statement on Form S-1 of ParkerVision, Inc. (the "Company") of our report dated March 31, 2021, relating to the consolidated financial statements of the Company as of December 31, 2020 and 2019 and for the years then ended, which appears in this Registration Statement. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ MSL, P.A.
Fort Lauderdale, Florida
January 13, 2022

Document And Entity Information	9 Months Ended Sep. 30, 2021
Document And Entity Information [Abstract]	
Document Type	S-1
Document Period End Date	Sep. 30, 2021
Entity Registrant Name	PARKERVISION, INC.
Entity Central Index Key	0000914139
Entity Incorporation, State or Country Code	FL
Entity Tax Identification Number	59-2971472
Entity Address, Address Line One	4446-1A Hendricks Avenue
Entity Address, Address Line Two	Suite 354
Entity Address, City or Town	Jacksonville
Entity Address, State or Province	FL
Entity Address, Postal Zip Code	32207
City Area Code	904
Local Phone Number	732-6100
Entity Filer Category	Non-accelerated Filer
Entity Small Business	true
Entity Emerging Growth Company	false
Amendment Flag	false

Condensed Consolidated Balance Sheets - USD ($) $ in Thousands	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
CURRENT ASSETS:			
Cash and cash equivalents	$ 760	$ 1,627	$ 57
Prepaid expenses	707	599	505
Other current assets	18	8	117
Total current assets	1,485	2,234	679
Operating lease right-of-use assets	8	10	283
Intangible assets, net	1,887	2,170	2,878
Property and equipment, net		30	70
Property, equipment and other assets, net	21	42	
Other assets, net		12	16
Total assets	3,401	4,456	3,926
CURRENT LIABILITIES:			
Accounts payable	589	4,318	2,328
Accrued expenses:			
Salaries and wages	58	19	78
Professional fees	103	128	499
Statutory court costs		251	369
Other accrued expenses	483	936	1,081
Related party note payable, current portion	103	100	86
Secured note payable, current portion		26	1,222
Unsecured notes payable		65	225
Operating lease liabilities, current portion	164	146	250
Total current liabilities	1,500	5,989	6,138
LONG-TERM LIABILITES:			
Secured contingent payment obligation	35,940	33,057	26,651
Convertible notes	3,015	3,018	2,733
Related party note payable, net of current portion	633	703	793
Unsecured contingent payment obligations	5,747	5,222	
Operating lease liabilities, net of current portion	34	159	305
Other long-term liabilities	1	129	403
Total long-term liabilities	45,370	42,288	30,885
Total liabilities	46,870	48,277	37,023
COMMITMENTS AND CONTINGENCIES			
SHAREHOLDERS' DEFICIT:			
Common stock	747	586	341
Additional paid-in capital	385,843	376,954	368,345
Accumulated deficit	(430,059)	(421,361)	(401,783)
Total shareholders' deficit	(43,469)	(43,821)	(33,097)
Total liabilities and shareholders' deficit	$ 3,401	$ 4,456	$ 3,926

Condensed Consolidated Balance Sheets (Parenthetical) - $ / shares	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Condensed Consolidated Balance Sheets [Abstract]			
Common stock, par value	$ 0.01	$ 0.01	$ 0.01
Common stock, shares authorized	150,000,000	140,000,000	110,000,000
Common stock, shares issued	74,743,000	58,591,000	34,097,000
Common stock, shares outstanding	74,743,000	58,591,000	34,097,000

Condensed Consolidated Statements Of Comprehensive Loss - USD ($) $ in Thousands	3 Months Ended		9 Months Ended		12 Months Ended	
	Sep. 30, 2021	Sep. 30, 2020	Sep. 30, 2021	Sep. 30, 2020	Dec. 31, 2020	Dec. 31, 2019
Licensing revenue	$ 144		$ 144			
Cost of sales	1		1			
Loss on impairment of inventory						$ 6
Gross margin	143		143			(5)
Research and development expenses						334
Selling, general and administrative expenses	2,024	$ 1,445	6,152	$ 9,268	10,664	7,602
Total operating expenses	2,024	1,445	6,152	9,268	10,664	7,936
Other income	19	1	213	1		3
Interest expense	(70)	(119)	(185)	(420)	(547)	(421)
Change in fair value of contingent payment obligations	(172)	(105)	(2,996)	(3,487)	(8,367)	(1,094)
Total interest and other	(223)	(223)	(2,968)	(3,906)	(8,914)	(1,512)
Net loss before income tax					(19,578)	(9,453)
Income tax expense						
Net loss	(2,104)	(1,668)	(8,977)	(13,174)	(19,578)	(9,453)
Other comprehensive loss, net of tax						
Comprehensive loss	$ (2,104)	$ (1,668)	$ (8,977)	$ (13,174)	$ (19,578)	$ (9,453)
Basic and diluted net loss per common share	$ (0.03)	$ (0.03)	$ (0.13)	$ (0.29)	$ (0.42)	$ (0.30)
Weighted average common shares outstanding	73,868,000	50,530,000	69,869,000	44,772,000	47,019	31,461
Product [Member]						
Licensing revenue						$ 74
Cost of sales						$ 73

Condensed Consolidated Statements Of Shareholders' Deficit - USD ($) $ in Thousands	Common Stock [Member] Long-term Debt [Member]	Common Stock [Member] Short-term Debt [Member]	Common Stock [Member] Convertible Debt [Member]	Common Stock [Member]	Additional Paid-in Capital [Member] Long-term Debt [Member]	Additional Paid-in Capital [Member] Short-term Debt [Member]	Additional Paid-in Capital [Member] Convertible Debt [Member]	Additional Paid-in Capital [Member] Cumulative Effect, Period of Adoption, Adjustment [Member]	Additional Paid-in Capital [Member]	Accumulated Deficit [Member] Cumulative Effect, Period of Adoption, Adjustment [Member]	Accumulated Deficit [Member]	Long-term Debt [Member]	Short-term Debt [Member]	Cumulative Effect, Period of Adoption, Adjustment [Member]	Total
Balance, value at Dec. 31, 2018				$ 287					$ 366,695	$ (38)	$ (392,292)			$ (38)	$ (25,310)
Issuance of common stock upon exercise of options and warrants				29											29
Issuance of common stock and warrants for services				6					234						240
Issuance of convertible debt with beneficial conversion feature									550						550
Issuance of common stock upon conversion	$ 19				$ 277							$ 296			
Share-based compensation, net of shares withheld for taxes									589						589
Comprehensive loss for the period											(9,453)				(9,453)
Balance, value at Dec. 31, 2019				341					368,345		(401,783)				(33,097)
Issuance of common stock and warrants in private offerings, net of issuance costs and initial fair value of contingent payment rights				97					3,751						
Issuance of common stock upon exercise of options and warrants				35					1,190						
Issuance of common stock and warrants for services				7					257						
Issuance of convertible debt with beneficial conversion feature		$ 22	$ 10			$ 318	$ 340		173						
Share-based compensation, net of shares withheld for taxes				8					996						
Comprehensive loss for the period											(13,174)				(13,174)
Balance, value at Sep. 30, 2020				520					375,370		(414,957)				(39,067)
Balance, value at Dec. 31, 2019				341					368,345		(401,783)				(33,097)
Issuance of common stock and warrants in private offerings, net of issuance costs and initial fair value of contingent payment rights				148					4,618						4,766
Issuance of common stock upon exercise of options and warrants				45					1,530						1,575
Issuance of common stock and warrants for services				7					297						304
Issuance of convertible debt with beneficial conversion feature									173						173
Issuance of common stock upon conversion	$ 15	$ 22			$ 437	$ 318						$ 452	$ 340		
Share-based compensation, net of shares withheld for taxes				8					1,236						1,244
Comprehensive loss for the period											(19,578)				(19,578)
Balance, value at Dec. 31, 2020				586					376,954		(421,361)				(43,821)
Balance, value at Jun. 30, 2020				491					374,464		(413,289)				(38,334)
Issuance of common stock and warrants in private offerings, net of issuance costs and initial fair value of contingent payment rights				15					215						
Issuance of common stock upon exercise of options and warrants				10					340						
Issuance of common stock and warrants for services				1					25						
Issuance of convertible debt with beneficial conversion feature			2				87								
Share-based compensation, net of shares withheld for taxes				1					239						

Comprehensive loss for the period							(1,668)	(1,668)
Balance, value at Sep. 30, 2020		520			375,370		(414,957)	(39,067)
Balance, value at Dec. 31, 2020		586			376,954		(421,361)	(43,821)
Issuance of common stock and warrants in private offerings, net of issuance costs and initial fair value of contingent payment rights		62			4,712			
Issuance of common stock upon exercise of options and warrants		58			878			
Issuance of common stock and warrants for services		9			829			
Issuance of convertible debt with beneficial conversion feature	30		1,029					
Share-based compensation, net of shares withheld for taxes		2			2,567			
Comprehensive loss for the period							(8,977)	(8,977)
Balance, value at Sep. 30, 2021		747		$ (1,126)	385,843	279	(430,059)	(43,469)
Balance, value at Jun. 30, 2021		727			384,279		(427,955)	(42,949)
Issuance of common stock upon exercise of options and warrants		6			108			
Issuance of common stock and warrants for services		2			208			
Issuance of convertible debt with beneficial conversion feature	$ 12		$ 502					
Share-based compensation, net of shares withheld for taxes					746			
Comprehensive loss for the period							(2,104)	(2,104)
Balance, value at Sep. 30, 2021		$ 747		$ (1,126)	$ 385,843	$ 279	$ (430,059)	$ (43,469)

Condensed Consolidated Statements Of Cash Flows - USD ($) $ in Thousands	9 Months Ended		12 Months Ended	
	Sep. 30, 2021	Sep. 30, 2020	Dec. 31, 2020	Dec. 31, 2019
CASH FLOWS FROM OPERATING ACTIVITIES:				
Net loss	$ (8,977)	$ (13,174)	$ (19,578)	$ (9,453)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	281	497	632	835
Share-based compensation	2,569	1,004	1,244	589
Noncash lease expense	2	60	61	280
Change in fair value of contingent payment obligation			8,367	1,094
Loss on changes in fair value of contingent payment obligations	2,996	3,487		
Loss on disposal/impairment of equipment and intangible assets	25	413	487	412
Loan forgiveness	(194)			
Noncash expense for amendment of equity-related agreements		2,211	2,211	
Inventory impairment charges				6
Changes in operating assets and liabilities:				
Accounts receivable				2
Finished goods inventories				81
Prepaid expenses and other assets	624	192	292	221
Accounts payable and accrued expenses	(4,139)	1,302	1,757	2,790
Operating lease liabilities	(107)	(174)	(250)	(230)
Total adjustments	2,057	8,992	14,801	6,080
Net cash used in operating activities	(6,920)	(4,182)	(4,777)	(3,373)
CASH FLOWS FROM INVESTING ACTIVITIES:				
Proceeds from sale of property and equipment			2	30
Purchases of property and equipment	(2)	(3)	(3)	(5)
Payments for patent costs and other intangible assets				(18)
Net cash used in investing activities	(2)	(3)	(1)	7
CASH FLOWS FROM FINANCING ACTIVITIES:				
Net proceeds from issuance of common stock, including contingent payment rights in private offerings	5,186	3,057	4,801	
Net proceeds from exercise of options and warrants	936	1,225	1,575	29
Net proceeds from debt financings		1,244	1,244	3,068
Debt repayments			(1,272)	(1,200)
Principal payments on long-term debt	(67)	(1,251)		(1)
Net cash provided by financing activities	6,055	4,275	6,348	1,896
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(867)	90	1,570	(1,470)
CASH AND CASH EQUIVALENTS, beginning of period	1,627	57	57	1,527
CASH AND CASH EQUIVALENTS, end of period	$ 760	$ 147	1,627	57
SUPPLEMENTAL CASH FLOW INFORMATION:				

Cash paid for interest	61	4
Cash paid for income taxes		

Description Of Business	9 Months Ended Sep. 30, 2021
Description Of Business [Abstract]	
Description Of Business	1. Description of Business ParkerVision, Inc. and its wholly-owned German subsidiary, ParkerVision GmbH (collectively "ParkerVision", "we" or the "Company"), is in the business of innovating fundamental wireless technologies and products. We have designed and developed proprietary radio frequency ("RF") technologies and integrated circuits and license those technologies to others for use in wireless communication 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 of America ("U.S.") and certain foreign jurisdictions. We believe certain patents protecting our proprietary technologies have been broadly infringed by others, and therefore the primary focus of our business plan is the enforcement of our intellectual property rights through patent infringement litigation and licensing efforts. We currently have patent enforcement actions ongoing in various U.S. district courts against providers of mobile handsets, smart televisions and other WiFi products and, in certain cases, their chip suppliers for the infringement of a number of our RF patents. We have made significant investments in developing and protecting our technologies.

Accounting Policies	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Accounting Policies [Abstract]		
Accounting Policies	4. Accounting Policies There have been no changes in accounting policies from those stated in our 2020 Annual Report, other than as described below. We do not expect any newly effective accounting standards to have a material impact on our financial position, results of operations or cash flows when they become effective. We adopted Accounting Standards Update ("ASU") 2020-06, "Accounting for Convertible Instruments and Contracts in an Entity's Own Equity"	1. SIGNIFICANT ACCOUNTING POLICIES ParkerVision, Inc. and its wholly-owned German subsidiary, ParkerVision GmbH (collectively "ParkerVision", "we" or the "Company") is in the business of innovating fundamental wireless hardware technologies and products. We have determined that our business currently operates under a single operating and reportable segment. We have designed and developed proprietary radio frequency ("RF") technologies and integrated circuits for use in wireless communication 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 of America ("U.S.") and certain foreign jurisdictions. We believe certain patents protecting our proprietary technologies have been broadly infringed by others, and therefore the primary focus of our business plan is the enforcement of our intellectual property rights through patent infringement litigation and licensing efforts. We currently have patent enforcement actions ongoing in various U.S. district courts against providers of mobile handsets, smart televisions and other WiFi products and, in certain cases, their chip suppliers for the infringement of a number of our RF patents. We have made significant investments in developing and protecting our technologies, the returns on which are dependent upon the generation of future revenues for realization. In 2018, we restructured our operations to reduce operating expenses. As part of that restructuring, we made significant reductions in our investment in the development and marketing of a consumer distributed WiFi product line marketed under the brand name Milo®. In early 2019, we ceased substantially all ongoing research and development efforts and, where applicable, repurposed resources to support our patent enforcement and product sales and support efforts. We ceased sales of our Milo products in the fourth quarter of 2019 and are currently focused exclusively on our patent enforcement litigation and licensing efforts. Basis of PresentationOur consolidated financial statements are prepared in accordance with generally accepted accounting principles in the U.S. ("GAAP"). Certain reclassifications have been made to prior period amounts to conform to the current period presentation. The consolidated financial statements include the accounts of ParkerVision, Inc. and our wholly-owned German subsidiary, ParkerVision GmbH, after elimination of all intercompany transactions and accounts. Use of Estimates in the Preparation of Financial Statements The

as of January 1, 2021. ASU 2020-06 simplifies accounting for convertible instruments, eliminating separation accounting for certain embedded conversion features. We used the modified retrospective method of adoption which allows for application of the guidance to transactions outstanding at the beginning of the fiscal year of adoption with the cumulative effect of the change being recorded as an adjustment to beginning retained earnings. Our adoption of ASU 2020-06 resulted in an increase to our long-term debt of approximately $0.8 million, a decrease in

preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. The more significant estimates made by us include projected future cash flows and risk-adjusted discount rates for estimating the fair value of our contingent payment obligations, the volatility and estimated lives of share-based awards used in the estimate of the fair market value of share-based compensation, the assessment of recoverability of long-lived assets, the amortization periods for intangible and long-lived assets, and the valuation allowance for deferred taxes. Actual results could differ from the estimates made. We periodically evaluate estimates used in the preparation of the financial statements for continued reasonableness. Appropriate adjustments, if any, to the estimates used are made prospectively based upon such periodic evaluation.Cash and Cash EquivalentsWe consider cash and cash equivalents to include cash on hand, interest-bearing deposits, overnight repurchase agreements and investments with original maturities of three months or less when purchased. InventoryInventory is stated at the lower of actual cost, as determined under the first-in, first-out method, or estimated net realizable value. We review our inventory for estimated obsolescence or unmarketable inventory and write down inventory for the difference between cost and estimated market value based upon assumptions about future demand. Future demand is affected by market conditions, technological obsolescence, new products and strategic plans, each of which is subject to change. Due to the decision to discontinue Milo product sales in the fourth quarter of 2019, a full reserve was recorded against the remaining inventory on hand at December 31, 2019. All remaining inventory was disposed of during the year ended December 31, 2020. Property and EquipmentProperty and equipment are stated at cost, less accumulated depreciation. Depreciation is determined using the straight-line method over the following estimated useful lives: Manufacturing and office equipment5-7 yearsLeasehold improvementsShorter of useful life or remaining life of leaseFurniture and fixtures7 yearsComputer equipment and software3-5 years The cost and accumulated depreciation of assets sold or retired are removed from their respective accounts, and any resulting net gain or loss is recognized in the accompanying consolidated statements of comprehensive loss. The carrying value of long-lived assets is reviewed on a regular basis for the existence of facts, both internally and externally, that may suggest impairment. Recoverability of assets to be held and used is measured by comparing the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the assets exceeds its estimated undiscounted future net cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the assets. Intangible AssetsWe capitalize outside legal costs and agency filing fees incurred in connection with securing the rights to our intellectual property. Patents, copyrights and other intangible assets are amortized using the straight-line method over their estimated period of benefit. We estimate the economic lives of our patents and copyrights to be fifteen to twenty years. Management evaluates the recoverability of intangible assets periodically and takes into account events or circumstances that may warrant revised estimates of useful lives or that may indicate impairment exists. As part of our ongoing patent maintenance program, we will, from time to time, abandon a particular patent if we determine fees to maintain the patent exceed its expected recoverability. The cost and accumulated amortization of abandoned intangible assets are removed from their respective accounts, and any resulting net loss is recognized in selling, general and administrative expenses in the accompanying consolidated statements of comprehensive loss. Contingent Payment ObligationsWe have accounted for our secured and unsecured contingent payment obligations as long-term debt in accordance with Accounting Standards Codification ("ASC") 470-10-25, "Sales of Future Revenues or Various other Measures of Income." Our payment obligations are contingent upon the receipt of proceeds from patent enforcement and/or patent monetization actions. We have elected to measure our contingent payment obligations at their estimated fair values in accordance with ASC 825, "Financial Instruments" based on the variable and contingent nature of the repayment provisions. We have determined that the fair value of our secured and unsecured contingent payment obligations falls within Level 3 in the fair value hierarchy, which involves significant estimates, and assumptions including projected future patent-related proceeds and the risk-adjusted rate for discounting future cash flows (see Note 10). Actual results could differ from the estimates made. Changes in fair value, including the component related to imputed interest, are included in the accompanying consolidated statements of comprehensive loss under the heading "Change in fair value of contingent payment obligations." LeasesWe adopted ASC 842, "Leases" as of January 1, 2019 which requires the recognition of lease right-of-use ("ROU") assets and lease liabilities on our consolidated balance sheets for finance and operating leases with initial lease terms of more than 12 months. We elected to use the effective date as the initial application date. ASC 842 provides a number of practical expedients in transition and we elected the package of practical expedients which permits us not to reassess under the new standard our prior conclusions about lease identification, lease classification and treatment of initial direct costs. The adoption of this new standard resulted in the

additional paid-in-capital of approximately $1.1 million, and an adjustment to our beginning accumulated deficit of $0.3 million resulting from the elimination of the previously recognized beneficial conversion feature as a debt discount.

recognition of operating lease ROU assets and operating lease liabilities of approximately $0.56 million and $0.60 million, respectively, primarily related to our facilities leases. Refer to Note 8 for additional disclosures related to our leases. At inception of a lease, we determine if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. Some of our lease arrangements contain lease components (e.g. minimum rent payments) and non-lease components (e.g. services). For certain equipment leases, we account for lease and non-lease components separately based on a relative fair market value basis. For all other leases, we account for the lease and non-lease components (e.g. common area maintenance) on a combined basis. For operating leases with terms greater than 12 months, we record the ROU asset and lease obligation at the present value of lease payments over the term using the implicit interest rate, when readily available, or our incremental borrowing rate for collateralized debt based on information available at the lease commencement date. Certain of our leases include rental escalation clauses, renewal options and/or termination options that are factored into our determination of lease payments when it is reasonably certain that the option will be exercised. We do not recognize ROU assets and lease liabilities for leases with terms at inception of twelve months or less. Finance leases are included in property and equipment and other accrued expenses on the consolidated balance sheets. Finance leases are recorded as an asset and an obligation at an amount equal to the present value of the minimum lease payments during the lease term. Amortization expense and interest expense associated with finance leases are included in selling, general, and administrative expense and interest expense, respectively, on the consolidated statements of comprehensive loss. Convertible DebtWe have issued debt that is convertible, at the holder's option, into shares of our common stock at fixed conversion prices. Certain of the convertible notes were issued with conversion prices that were below market value of our common stock on the closing date resulting in a beneficial conversion feature which we recorded to equity with a corresponding discount to the debt. The discount is amortized over the life of the notes as interest expense. In August 2020, the Financial Accounting Standards Board issued ASU 2020-06 "Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity." This ASU simplifies accounting for convertible instruments by removing major separation models required under current U.S. GAAP. Consequently, more convertible debt instruments will be reported as a single liability instrument with no separate accounting for embedded conversion features. The ASU removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, which will permit more equity contracts to qualify for the exception. The ASU also simplifies the diluted earnings per share (EPS) calculation in certain areas. The ASU is effective for fiscal years beginning after December 15, 2021 for accelerated filers and for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, for smaller reporting companies. Early adoption is permitted for fiscal years beginning after December 15, 2020. The ASU provides for a modified retrospective method of adoption whereby the guidance is applied to transactions outstanding at the beginning of the fiscal year of adoption with the cumulative effect of the change being recorded as an adjustment to beginning retained earnings. We plan to adopt ASU 2020-06, using the modified retrospective method, as of January 1, 2021. Adoption of ASU 2020-06 will result in an increase to our long-term debt of approximately $0.8 million, a decrease in additional paid-in-capital of approximately $1.1 million, and an adjustment to our beginning retained deficit of $0.3 million resulting from the elimination of the previously recognized beneficial conversion feature as a debt discount. Revenue RecognitionWe account for revenue under ASC 606, “Revenue from Contracts with Customers” which implements a common revenue standard that clarifies the principles for recognizing revenue. This revenue recognition model provides a five-step analysis in determining when and how revenue is recognized. We expect to derive future revenue from licensing of our intellectual property and settlements from patent infringement disputes. The timing of revenue recognition and the amount of revenue recognized depends upon a variety of factors, including the specific terms of each arrangement and the nature of our deliverables and obligations. In general, we recognize revenue when the performance obligations to our customers have been met. The consideration received from patent license and settlement agreements is allocated to the various elements of the arrangement to the extent the revenue recognition differs between the elements of the arrangement. Elements related to past and future royalties as well as elements related to settlement will be recorded as revenue in our consolidated statements of comprehensive loss when our performance obligations related to each element have been met. For the year ended December 31, 2019, we recognized revenue from the sale of products. For product sales, the performance obligation is generally met at the time product is delivered to the customer. Estimated product returns are deducted from revenue and recorded as a liability. Revenue from the sale of our products includes shipping and handling charged to the customer. Product revenue is recorded net of sales tax collected from customers, discounts, and actual and estimated future returns. Research and Development ExpensesResearch and development costs are expensed as incurred and include salaries and benefits for employees engaged in research and development activities, costs paid to third party contractors, prototype expenses, an allocated portion of facilities costs, maintenance costs for software development tools, and depreciation. Accounting for Share-Based CompensationWe have various share-based compensation programs which provide for equity awards including stock options, restricted stock units ("RSUs") and restricted stock awards ("RSAs"). We calculate the fair value of employee share-based equity awards on the date of grant and recognize the calculated fair value as compensation expense over the requisite service periods of the related awards. We estimate the fair value of stock option awards using the Black-Scholes option valuation model. This valuation model requires the use of highly subjective assumptions and estimates including how long employees will retain their stock options before exercising them and the volatility of our common stock price over the expected life of the equity award. Such estimates, and the basis for our conclusions regarding such estimates, are outlined in detail in Note 14. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by persons who receive equity awards. We account for forfeitures of share-based awards as they occur. As of January 1, 2019, we adopted ASU 2018-07, "Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting." The amendments in this update simplify the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. At the time of adoption, we did not have any awards to nonemployees that would require reassessment and therefore the adoption of ASU 2018-07 did not impact our consolidated financial statements. Income TaxesThe provision for income taxes is based on loss before taxes as reported in the accompanying consolidated statements of comprehensive loss. Deferred tax assets and liabilities are recognized for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets when, based on available objective evidence, it is more likely than not that the benefit of such assets will not be realized. Our deferred tax assets exclude unrecognized tax benefits which do not meet a more-likely-than-not threshold for financial statement recognition for tax positions taken or expected to be taken in a tax return. As of January 1, 2019, we adopted ASU 2018-02, "Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." The amendments in this update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. We have no stranded tax effects included in our other comprehensive loss and therefore the adoption of ASU 2018-02 did not impact our consolidated financial statements. Loss per Common ShareBasic loss per common share is determined based on the weighted-average number of common shares outstanding during each year. Diluted loss per common share is the same as basic loss per common share as all potential common shares are excluded from the calculation, as their effect is anti-dilutive. The number of shares underlying outstanding options, warrants, unvested RSUs, and convertible notes at December 31, 2020 and 2019 were as follows (in thousands): 2020 2019Options outstanding 12,240 11,410Warrants outstanding 12,850 12,150Unvested RSUs 187 -Shares underlying convertible notes 23,557 20,846 48,834 44,406 These potential shares were excluded from the computation of diluted loss per share as their effect would have been anti-dilutive.

Liquidity And Going Concern	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Liquidity And Going Concern [Abstract]		
Liquidity And Going Concern	2. Liquidity and Going Concern Our accompanying condensed consolidated financial statements were prepared assuming we would continue as a going concern, which contemplates that we will continue in operation for the foreseeable future and will be able to realize assets and settle liabilities and commitments in the normal course of business for a period of at least one year from the issuance date of these condensed consolidated financial statements. These condensed consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that could result should we be unable to continue as a going concern. We have incurred significant losses from operations and negative cash flows from operations in every year since inception and have utilized the proceeds from the sales of debt and equity securities and contingent funding arrangements with third parties to fund our operations, including the cost of litigation. For the nine months ended September 30, 2021, we incurred a net loss of approximately $9.0 million and negative cash flows from operations of approximately $6.9 million. At September 30, 2021, we had cash and cash equivalents of approximately $0.8 million and an accumulated deficit of approximately $430.1 million. Additionally, a significant amount of future proceeds that we may receive from our patent enforcement and licensing programs	2. LIQUIDITY AND GOING CONCERN The accompanying consolidated financial statements as of and for the year ended December 31, 2020 were prepared assuming we will continue as a going concern, which contemplates that we will continue in operation and will be able to realize our assets and settle our liabilities and commitments in the normal course of business for a period of at least one year from the issuance date of these consolidated financial statements. These consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that could result should we be unable to continue as a going concern. We have incurred significant losses from operations and negative cash flows in every year since inception and have utilized the proceeds from the sales of our equity and equity-linked securities and our contingent funding arrangements with third-parties to fund our operations, including our litigation costs. For the year ended December 31, 2020, we incurred a net loss of approximately $19.6 million and negative cash flows from operations of approximately $4.8 million. At December 31, 2020, we had a working capital deficit of approximately $3.8 million and an accumulated deficit of approximately $421.4 million. These circumstances raise substantial doubt about our ability to continue to operate as a going concern for a period of one year after the issuance date of these consolidated financial statements. We had cash and cash equivalents of approximately $1.6 million at December 31, 2020. We received an additional $5.6

will first be utilized to repay borrowings and legal fees and expenses under our contingent funding arrangements. These circumstances raise substantial doubt about our ability to continue to operate as a going concern for a period of one year following the issue date of these condensed consolidated financial statements. For the nine months ended September 30, 2021, we received aggregate net proceeds from debt and equity financings of approximately $5.2 million and proceeds from the exercise of outstanding options and warrants of approximately $0.9 million. We used a significant portion of these proceeds to pay current obligations resulting in a reduction in our accounts payable and accrued expenses of approximately $4.1 million for the nine months ended September 30, 2021. Our current capital resources are not sufficient to meet our short-term liquidity needs and we will be required to seek additional capital. Our ability to meet our liquidity needs for the next twelve months is dependent upon (i) our ability to successfully negotiate licensing agreements and/or settlements relating to the use of our technologies by others in excess of our contingent payment obligations, (ii) our ability to control operating costs, and/or (iii) our ability to obtain additional debt or equity financing, if needed. We expect that proceeds received by us from patent enforcement actions and technology licenses over the next twelve months may not be sufficient to cover our working capital requirements. We expect to continue to invest in the support of our patent enforcement and licensing programs. The long-term continuation of our business plan is dependent upon the generation of sufficient revenues from million in proceeds from debt and equity financings and warrant and option exercises in the first quarter of 2021, of which $3.0 million was used to settle outstanding accounts and notes payable for litigation costs (see Note 17). Our remaining capital resources will be used to fund our current obligations and ongoing operating costs; however these resources may not be sufficient to meet our liquidity needs for the next twelve months and we may be required to seek additional capital. Our business plan is currently focused solely on our patent enforcement and technology licensing objectives. The timing and amount of proceeds from our patent enforcement actions are difficult to predict and there can be no assurance we will receive any proceeds from these enforcement actions. Our ability to meet our liquidity needs for the twelve months after the issuance date of these financial statements is dependent upon one or more of (i) our ability to successfully negotiate licensing agreements and/or settlements relating to the use of our technologies by others in excess of our contingent payment obligations and (ii) our ability to raise additional capital from the sale of debt or equity securities or other financing arrangements. We anticipate that we will continue to invest in patent protection, licensing, and enforcement of our wireless technologies. We expect that revenue generated from patent enforcement actions, and technology licenses over the twelve months after the issuance date of these financial statements, if any, after deduction of payment obligations to our third-party litigation funder and legal counsel, may not be sufficient to cover our operating expenses. In the event we do not generate revenues, or other patent-asset proceeds, sufficient to cover our operational costs and contingent repayment obligation, we will be required to raise additional working capital through the sale of equity securities or other financing arrangements. The long-term our technologies and/or products to offset expenses and contingent payment obligations. In the event that we do not generate sufficient revenues, we will be required to obtain additional funding through public or private debt or equity financing or contingent fee arrangements and/or reduce operating costs. Failure to generate sufficient revenues, raise additional capital through debt or equity financings or contingent fee arrangements, and/or reduce operating costs will have a material adverse effect on our ability to meet our long-term liquidity needs and achieve our intended long-term business objectives.

continuation of our business plan is dependent upon our ability to secure sufficient financing to support our business, and our ability to generate revenues and/or patent-related proceeds sufficient to offset expenses and meet our contingent payment obligation and other long-term debt repayment obligations. Failure to generate sufficient revenues, raise additional capital through debt or equity financings, and/or reduce operating costs could have a material adverse effect on our ability to meet our short and long-term liquidity needs and achieve our intended long-term business objectives.

Basis Of Presentation	9 Months Ended Sep. 30, 2021
Basis Of Presentation [Abstract]	
Basis Of Presentation	3. Basis of Presentation The accompanying unaudited condensed consolidated financial statements for the period ended September 30, 2021 were prepared in accordance with generally accepted accounting principles (“GAAP”) for interim financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Operating results for the three and nine months ended September 30, 2021, are not necessarily indicative of the results that may be expected for the year ending December 31, 2021, or future years. All normal and recurring adjustments which, in the opinion of management, are necessary for a fair statement of the consolidated financial condition and results of operations have been included. The year-end condensed consolidated balance sheet data was derived from audited financial statements for the year ended December 31, 2020. Certain information and disclosures normally included in the notes to the annual financial statements prepared in accordance with GAAP have been omitted from these interim condensed consolidated financial statements. These interim condensed consolidated financial statements should be read in conjunction with our latest Annual Report on Form 10-K for the year ended December 31, 2020 (“2020 Annual Report”). The condensed consolidated financial statements include the accounts of ParkerVision, Inc. and its wholly-owned German subsidiary, ParkerVision GmbH, after elimination of all intercompany transactions and accounts.

Revenue	9 Months Ended Sep. 30, 2021
Revenue [Abstract]	
Revenue	5. Revenue We have an active monitoring and enforcement program with respect to our intellectual property rights that includes seeking appropriate compensation from third parties that utilize or have utilized our intellectual property without a license. As a result, we may receive payments as part of a settlement or in the form of court-awarded damages for a patent infringement dispute. We recognize such payments as revenue in accordance with Accounting Standards Codification (“ASC”) 606, “Revenue from Contracts with Customers.” During the three and nine months ended September 30, 2021, we recognized approximately $0.14 million in revenue from licensing and settlement agreements with third parties for their use of our technologies. Our performance obligations were satisfied, and therefore revenue recognized, upon receipt of proceeds and subsequent dismissal of all patent enforcement actions between the parties.

Loss Per Common Share	9 Months Ended Sep. 30, 2021
Loss Per Common Share [Abstract]	
Loss Per Common Share	6. Loss per Common Share Basic loss per common share is determined based on the weighted-average number of common shares outstanding during each period. Diluted loss per common share is the same as basic loss per common share as all common share equivalents are excluded from the calculation, as their effect is anti-dilutive. We have shares underlying outstanding options, warrants, unvested restricted stock units ("RSUs") and convertible notes that were excluded from the computation of diluted loss per share as their effect would have been anti-dilutive. These common share equivalents at September 30, 2021 and 2020 were as follows (in thousands): September 30, 2021 2020Options outstanding 23,724 12,248Warrants outstanding 9,819 13,850Unvested RSUs - 291Shares underlying convertible notes 20,757 23,807 54,300 50,196

Inventories	12 Months Ended Dec. 31, 2020
Inventories [Abstract]	
Inventories	3. INVENTORIES As of December 31, 2019, we had $0.55 million in finished goods inventories that were fully offset by an inventory reserve. All of our remaining inventories were disposed of in 2020. The following table provides a reconciliation of our inventory reserves for the years ended December 31, 2020 and 2019, respectively (in thousands): 2020 2019Inventory reserves at beginning of year $ 550 $ 982 Impairment charges - 6 Write down of impaired inventories - (438)Disposal of inventory (550) -Inventory reserves at end of year $ - $ 550

Prepaid Expenses	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Prepaid Expenses [Abstract]		
Prepaid Expenses	7. Prepaid Expenses Prepaid expenses consist of the following (in thousands): September 30, December 31, 2021 2020Prepaid services $ 640 $ 408Prepaid bonds for German statutory costs - 142Prepaid insurance 32 21Prepaid licenses, software tools and support 19 11Other prepaid expenses 16 17 $ 707 $ 599 Prepaid services at September 30, 2021 and December 31, 2020 include approximately $0.6 million and $0.1 million, respectively of consulting services paid in shares of stock or warrants to purchase shares of stock in the future.	4. PREPAID EXPENSES Prepaid expenses consisted of the following at December 31, 2020 and 2019 (in thousands): 2020 2019Prepaid services$ 408 $ 221Prepaid bonds for German statutory costs 142 188Prepaid insurance 21 62Prepaid licenses, software tools and support 11 17Other prepaid expenses 17 17 $ 599 $ 505

Property And Equipment, Net	12 Months Ended Dec. 31, 2020
Property And Equipment, Net [Abstract]	
Property And Equipment, Net	5. PROPERTY AND EQUIPMENT, NET Property and equipment, at cost, consisted of the following at December 31, 2020 and 2019 (in thousands): 2020 2019Equipment and software$ 218 $ 260Leasehold improvements 19 33Furniture and fixtures 30 43 267 336Less accumulated depreciation (237) (266) $ 30 $ 70 Depreciation expense related to property and equipment was approximately $0.03 million and $0.04 million in 2020 and 2019, respectively. In connection with the relocation of our corporate headquarters in July 2019 and October 2020, we disposed of a number of assets that were no longer in use. For the years ended December 31, 2020 and 2019, we recorded a loss on disposal of fixed assets of approximately $0.02 million and $0.01 million, respectively. In connection with the closure of our Lake Mary facility in 2018, we reclassified equipment with a net book value of approximately $0.07 million to assets held for sale. We contracted with a third party for the consignment sale of these assets and completed sales for several assets in 2019. For the year ended December 31, 2019, we recognized a net loss of approximately $0.04 million on the sale and/or impairment of assets held for sale. The gains and losses on the sale or impairment of held for sale assets is included in selling, general and administrative expenses in the accompanying statements of comprehensive loss.

Intangible Assets	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Intangible Assets [Abstract]		
Intangible Assets	8. Intangible Assets Intangible assets consist of the following (in thousands): September 30, December 31, 2021 2020Patents and copyrights $ 14,826 $ 14,948Accumulated amortization (12,939) (12,778) $ 1,887 $ 2,170	6. INTANGIBLE ASSETS Intangible assets consisted of the following at December 31, 2020 and 2019 (in thousands): 2020 2019 Patents and copyrights$ 14,948 $ 16,612Less accumulated amortization (12,778) (13,734) $ 2,170 $ 2,878 Amortization expense for each of the years ended December 31, 2020 and 2019 was approximately $0.4 million and $0.6 million, respectively. For the years ended December 31, 2020 and 2019, we recorded losses on the disposal of intangible assets of approximately $0.3 million and $0.4 million, respectively. Future estimated amortization expense for intangible assets that have remaining unamortized amounts as of December 31, 2020 is as follows (in thousands): 2021$ 3582022 3212023 2832024 2702025 2312026 and thereafter 707Total$ 2,170

Accrued Liabilities	12 Months Ended Dec. 31, 2020
Accrued Liabilities [Abstract]	
Accrued Liabilities	7. ACCRUED LIABILITIES Other accrued expenses consisted of the following at December 31, 2020 and 2019 (in thousands): 2020 2019Advances$ 882 $ 500Board compensation - 413 Other accrued expenses 54 168 $ 936 $ 1,081 Advances include amounts received from litigation counsel as advanced reimbursement of out-of-pocket expenses expected to be incurred by us and, at December 31, 2020, includes approximately $0.4 million received from investors for the purchase of equity securities in a January 2021 transaction (see Note 17). Board compensation of $0.4 million at December 31, 2019 represents accrued and unpaid board fees from prior periods. In 2020, current and prior board members agreed to accept share-based compensation awards with an aggregate grant-date fair value of approximately $0.1 million as partial payment for the outstanding fees and waived the remaining unpaid fees.

Leases	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Leases [Abstract]		
Leases		8. LEASES We lease our office and other facilities and certain office equipment under long-term, non-cancelable operating and finance leases. No new finance or operating leases commenced during the years ended December 31, 2020 or 2019. During the year ended December 31, 2020, we recognized an impairment loss of approximately $0.2 million on the ROU asset related to our Lake Mary office lease. We ceased use of this facility in 2018 as part of a restructuring of our operations. The value of our ROU asset included estimated future sublease income. Due to a number of factors, including the high vacancy rate of the building in which the space is located and the current COVID-19 environment, we determined securing a sublease for the space would be unlikely. The impairment loss recognized in 2020 represented the remaining carrying value of the asset and is included in selling, general, and administrative expenses in our consolidated statements of comprehensive loss. Lease expense for operating leases is generally recognized on a straight-line basis over the lease term and is included in operating expenses on the consolidated statement of comprehensive loss. We recognized operating lease costs of $0.1 million and $0.4 million for the years ended December 31, 2020 and 2019, respectively. Supplemental Cash Flow Information The following table summarizes the supplemental cash flow information related to leases, including the ROU assets recognized upon adoption of the new lease standard (in thousands): Year Ended Year Ended December 31, December 31, 2020 2019Cash paid for amounts included in the measurement of lease liabilities: Operating cash flows from operating leases $ 315 $ 314 Operating cash flows from finance leases - - Financing cash flows from finance leases - 1 Non-cash activity Right-of-use assets obtained in exchange for operating lease liabilities - 563Assets obtained in exchange for finance lease liabilities - - Other Information The table below summarizes other supplemental information related to leases: December 31, December 31, 2020 2019Weighted-average remaining lease term (in years): Operating leases 1.7 2.7 Finance leases - 0.3 Weighted average discount rate Operating leases (1) 12.1% 12.0% Finance leases - 8.7% (1)Upon adoption of the new lease standard, discount rates used for existing leases were established at January 1, 2019. Undiscounted Cash Flows The future maturities of lease liabilities consist of the following as of December 31, 2020 (in thousands): Operating Leases Finance Leases2021 $ 175 $ -2022 166 -2023 4 -Thereafter - -Total undiscounted lease payments 345 -Less: imputed interest (40) -

Present value of lease liabilities 305 -Less: current obligations under leases (146) -Long-term lease obligations $ 159 $ -

Leases	9. Leases During the nine months ended September 30, 2021, we entered into a sublease agreement related to our Lake Mary office space. The sublease is accounted for as an operating lease and is for the remaining term of our original lease, through November 2022. Rental income recognized of $0.02 million for the three and nine months ended September 30, 2021, is included in "Other income" in the accompanying condensed consolidated statements of comprehensive loss.

Debt	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Debt [Abstract]		
Debt	10. Debt Notes Payable Related Party Note PayableWe have an unsecured promissory note of approximately $0.7 million payable to Sterne, Kessler, Goldstein, & Fox, PLLC (“SKGF”), a related party, for outstanding unpaid fees for legal services. Subsequent to September 30, 2021, SKGF agreed to amend the note in order to extend the final balloon payment due under the note from April 2022 to April 2023. The SKGF note, as amended, will continue to accrue interest at a rate of 4% per annum, requires repayments of principal and interest at a rate of $10,000 per month and will extend the final balloon payment into April 2023. We are currently in compliance with all the terms of the note. Secured Note PayableOur secured note payable as of December 31, 2020 represented default interest accrued related to a note payable to Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C (“Mintz”) for outstanding fees and expenses. Additionally, as of December 31, 2020, we had approximately $3.1 million in accounts payable to Mintz for outstanding fees and expenses. We also had approximately $3.6 million in disputed legal fees and expenses billed by Mintz that we treated as a loss contingency that was not	9. LONG-TERM DEBT Notes Payable Note Payable to a Related PartyWe have an unsecured promissory note payable of $0.8 million to Sterne, Kessler, Goldstein, & Fox, PLLC (“SKGF”), a related party (see Note 15), for outstanding unpaid fees for legal services. The note, as amended, accrues interest at 4% per annum and provides for monthly payments of principal and interest of $10,000 with a final balloon payment of approximately $0.68 million due at the maturity date of April 30, 2022. We are currently in compliance with all the terms of the note, as amended. For the years ended December 31, 2020 and 2019, we recognized interest expense of approximately $0.03 million and $0.04 million, respectively, related to this note. Unsecured Notes Payable Unsecured notes payable at December 31, 2020 represents the current portion of our Paycheck Protection Program loan, as described more fully below. Unsecured notes payable at December 31, 2019 represents the outstanding principal balance of unsecured short-term promissory notes with accredited investors. The short-term promissory notes, as amended, accrued interest at a rate of 20% per annum. During the year ended December 31, 2020, we issued an aggregate of 1,740,426 shares of our common stock as an in-kind repayment of the $0.23 million in outstanding principal and $0.04 million of accrued interest on these short-term notes. For the years ended December 31, 2020 and 2019, we recognized interest expense of approximately $0.01 million and $0.03 million, respectively, related to these short-term notes. Paycheck Protection Program LoanIn May 2020, we received approximately $0.2 million in proceeds from an approved loan under the Paycheck Protection Program. Interest accrues on the outstanding principal balance at a rate of 1%, computed on a simple interest basis. The loan principal and accrued interest are expected to be eligible for forgiveness in accordance with the loan provisions. Payments of principal and

probable as of December 31, 2020 and accordingly, for which we recognized no expense in the consolidated financial statements. On March 29, 2021, we entered into an agreement with Mintz to satisfy our outstanding obligations to Mintz. Under the terms of the agreement, (i) Mintz waived all past defaults on the note resulting in a reversal of previously accrued interest, (ii) we paid Mintz a lump-sum payment of $3.0 million in satisfaction of all outstanding obligations including our accounts payable to Mintz and all disputed and unrecorded billings, and (iii) Mintz agreed to a significant reduction in future success fees that might be payable to Mintz from patent-related proceeds. Unsecured Notes PayableUnsecured notes payable at December 31, 2020 represented a Paycheck Protection Program loan of approximately $0.2 million received in May 2020. The loan was eligible for forgiveness provided that (i) we used the loan proceeds exclusively for allowed costs including payroll, employee group health benefits, rent and utilities and (ii) employee and compensation levels were maintained during the coverage period. We applied for loan forgiveness in April 2021 and the loan was forgiven in June 2021. The forgiveness of the loan was recognized as income and is included in "Other income" in the accompanying condensed consolidated statements of interest are deferred until the date a decision on an application for forgiveness is made. If no application is submitted, we will be required to make monthly repayments of approximately $8,000 per month commencing May 1, 2021 and the loan will mature on May 3, 2022, at which time any unpaid principal and accrued interest will be due and payable. We began the application process for loan forgiveness in March 2021. The estimated current and noncurrent portions of this loan are included in the captions "Unsecured notes payable" and "Other long-term liabilities" in the consolidated balance sheet as of December 31, 2020. Other long-term liabilities at December 31, 2019 represents an advance payment from a potential litigation funder. This liability was reclassified as an unsecured contingent payment obligation in 2020 (see "unsecured contingent payment obligation" below). Secured Note PayableWe have a note payable to Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. ("Mintz") for outstanding, unpaid attorney's fees and costs associated with our patent enforcement program. The Mintz note is non-interest bearing, except in the event of a default, and is secured by certain of our U.S. and foreign patents. The note, at Mintz's option, accelerates and becomes immediately due and payable in the case of standard events of default and/or in the event of a sale or other transfer of substantially all of our assets or a transfer of more than 50% of our capital stock in one or a series of transactions or through a merger or other similar transaction.We were in default on the payment terms of the note at December 31, 2019, and accordingly, we accrued interest at the default rate of 12% per annum. During the year ended December 31, 2020, we repaid $1.2 million of outstanding principal and interest on the Mintz note, leaving an outstanding balance of accrued default interest, at December 31, 2020 of approximately $0.03 million. In March 2021, we settled our outstanding obligations with Mintz (see Note 17) and Mintz waived all past defaults on the note which has been paid in full. At December 31, 2020, the aggregate maturities of our notes payable are as follows (in thousands): 2021$ 191 2022 832 Total$ 1,023 The estimated comprehensive loss for the three and nine months ended September 30, 2021. Convertible Notes Our convertible notes represent 5-year promissory notes that are convertible, at the holders' option, into shares of our common stock at fixed conversion prices. Interest payments are made on a quarterly basis and are payable, at our option, subject to certain equity conditions, in either cash, shares of our common stock, or a combination thereof. To date, all interest payments on the convertible notes have been made in shares of our common stock. We have recognized the convertible notes as debt in our condensed consolidated financial statements. The fixed conversion prices of certain of the notes were below the market value of our common stock on the closing date resulting in the recognition of a beneficial conversion feature that was recorded as a discount on the convertible notes at the note inception date, with a corresponding increase to additional paid in capital. Upon our adoption of ASU 2020-06 on January 1, 2021, the beneficial conversion feature was eliminated, resulting in an increase of $0.8 million to convertible debt and a cumulative adjustment to beginning accumulated deficit of $0.3 million, representing the discount amortization recognized prior to adoption of the new standard (see Note 4). We have the option to prepay the majority of the notes,

fair value of our notes payable at December 31, 2020 is approximately $0.9 million based on a risk-adjusted discount rate. Convertible Notes Our convertible notes represent five-year promissory notes that are convertible, at the holders' option, into shares of our common stock at fixed conversion prices. Interest payments are made on a quarterly basis and are payable, at our option and subject to certain equity conditions, in either cash, shares of our common stock, or a combination thereof. To date, all interest payments on the convertible notes have been made in shares of our common stock. We have recognized the convertible notes as debt in our consolidated financial statements. The fixed conversion prices of certain of the notes were below the market value of our common stock on the closing date resulting in the recognition of a beneficial conversion feature that is recorded as a discount on the convertible notes with a corresponding increase to additional paid in capital. Convertible notes payable at December 31, 2020 and 2019, consist of the following (in thousands): Fixed Effective Conversion Interest December 31,Description Rate Rate 1 Maturity Date 2020 2019Convertible notes dated September 10, 2018 $0.40 23.4% September 7, 2023 $ 600 $ 700 Convertible notes dated September 19, 2018 $0.57 10.2% September 19, 2023 425 425 Convertible notes dated February/ March 2019 $0.25 8.0% February 28, 2024 to March 13, 2024 1,300 1,300 Convertible notes dated June/July 2019 $0.10 8.0% June 7, 2024 to July 15, 2024 340 390 Convertible notes dated July 18, 2019 $0.08 46.1% July 18, 2024 700 700 Convertible notes dated September 13, 2019 $0.10 25.9% September 13, 2024 50 50 Convertible notes dated January 8, 2020 $0.13 20.3% January 8, 2025 450 -Total principal balance 3,865 3,565 Less unamortized discount 847 832 $ 3,018 $ 2,733 1 The effective interest rate differs from the stated rate of interest on the notes as a result of beneficial conversion features recognized as discounts on the debt. The notes bear interest at a stated rate of 8% per annum, except for the July 18, 2019 notes which bear interest at a stated rate of 7.5% per annum. We have the option to prepay the majority of the notes any time following the one-year subject to a premium on the outstanding principal prepayment amount of 25% prior to the two-year anniversary of the note issuance date, 20% prior to the three-year anniversary of the note issuance date, 15% prior to the four-year anniversary of the note issuance date, or 10% thereafter. The notes provide for events of default that include failure to pay principal or interest when due, breach of any of the representations, warranties, covenants or agreements made by us, events of liquidation or bankruptcy, and a change in control. In the event of default, the interest rate increases to 12% per annum and the outstanding principal balance of the notes plus all accrued interest due may be declared immediately payable by the holders of a majority of the then outstanding principal balance of the notes. Convertible notes payable at September 30, 2021 and December 31, 2020 consist of the following (in thousands): Fixed Principal Outstanding as of Conversion Interest September 30, December 31,Description Rate Rate Maturity Date 2021 2020Convertible notes dated September 10, 2018 $0.40 8.0% September 7, 2023 $ 200 $ 600Convertible note dated September 19, 2018 $0.57 8.0% September 19, 2023 425 425Convertible notes dated February/March 2019 $0.25 8.0% February 28, 2024 to March 13, 2024 850 1,300Convertible notes dated

anniversary of the issuance of the notes, subject to a premium on the outstanding principal prepayment amount of 25% prior to the two-year anniversary of the note issuance date, 20% prior to the three-year anniversary of the note issuance date, 15% prior to the four-year anniversary of the note issuance date, or 10% thereafter. The notes provide for events of default that include failure to pay principal or interest when due, breach of any of the representations, warranties, covenants or agreements made by us, events of liquidation or bankruptcy, and a change in control. In the event of default, the interest rate increases to 12% per annum and the outstanding principal balance of the notes plus all accrued interest due may be declared immediately payable by the holders of a majority of the then outstanding principal balance of the notes. For the years ended December 31, 2020 and 2019, we sold five-year convertible promissory notes with an aggregate face value of $0.45 million and $2.44 million, respectively and recorded debt discounts in an amount equal to the beneficial conversion features on these notes of approximately $0.17 million and $0.55 million, respectively. For the year ended December 31, 2020, convertible notes with a face value of $0.15 million were converted by the holders into 750,000 shares of our common stock at an average conversion price of $0.20. For the year ended December 31, 2019, convertible notes with a face value of $0.1 million were converted by the holders into 250,000 shares of our common stock at a fixed conversion price of $0.40. At the holders' option, subject to ownership limitations, the convertible notes outstanding at December 31, 2020 could be converted into an aggregate of approximately 23.6 million shares of our common stock based on the fixed conversion prices. For the years ended December 31, 2020 and 2019, we recognized interest expense of approximately $0.47 million and $0.32 million, respectively, including approximately $0.17 million and $0.12 million, respectively, related to amortization of the discount and $0.3 million and $0.2 million, respectively, related to the contractual interest which we elected to pay in shares of our common stock. For the years ended December 31, 2020 and 2019, we issued

June/July 2019 $0.10 8.0% June 7, 2024 to July 15, 2024 340 340Convertible notes dated July 18, 2019 $0.08 7.5% July 18, 2024 700 700Convertible notes dated September 13, 2019 $0.10 8.0% September 13, 2024 50 50Convertible notes dated January 8, 2020 $0.13 8.0% January 8, 2025 450 450Total principal balance 3,015 3,865Less Unamortized discount - 847 $ 3,015 $ 3,018 For the nine months ended September 30, 2021, convertible notes with a face value of $0.85 million were converted, at the option of the holders, into 2,800,000 shares of our common stock and we recognized interest expense of approximately $0.2 million related to the contractual interest which we elected to pay in shares of our common stock. For the nine months ended September 30, 2021, we issued approximately 215,000 shares of our common stock as interest-in-kind payments on our convertible notes. At September 30, 2021, we estimate our convertible notes have an aggregate fair value of approximately $2.4 million and would be categorized within Level 2 of the fair value hierarchy. Secured Contingent Payment Obligation The following table provides a reconciliation of our secured contingent payment obligation, measured at estimated fair market value, for the nine months ended September 30, 2021 and the year ended December 31, 2020 (in thousands): Nine Months approximately 710,000 and 1,600,000 shares of our common stock, respectively, as interest-in-kind payments on our convertible notes. The unamortized discount on the convertible notes will be eliminated upon our adoption of ASU 2020-06 as of January 1, 2021 (see Note 1). All of the shares underlying our convertible notes, including shares reserved for future in-kind interest payments on the notes, have been registered for resale. Secured Contingent Payment Obligation The following table provides a reconciliation of our secured contingent payment obligation measured at estimated fair market value for the years ended December 31, 2020 and 2019, respectively (in thousands). 2020 2019Secured contingent payment obligation, beginning of year $ 26,651 $ 25,557 Change in fair value 6,406 1,094 Secured contingent payment obligation, end of year $ 33,057 $ 26,651 Our secured contingent payment obligation represents the estimated fair value of our repayment obligation to Brickell Key Investments, LP ("Brickell") under a February 2016 funding agreement, as amended from time to time (the "CPIA"). To date, we have received aggregate proceeds of $18 million in exchange for Brickell's right to reimbursement and compensation from gross proceeds resulting from patent enforcement and other patent monetization actions. No proceeds were received from Brickell in 2019 or 2020. To date, we have repaid an aggregate of $3.3 million under the CPIA from patent license and settlement proceeds. Brickell is entitled to priority payment of 55% to 100% of proceeds received from all patent-related actions until such time that Brickell has been paid its minimum return. The minimum return is determined as a multiple of the funded amount that increases over time. The estimated minimum return due to Brickell was approximately $42 million and $39 million as of December 31, 2020 and 2019, respectively. In addition, Brickell is entitled to a pro rata portion of proceeds from specified legal actions to the extent aggregate proceeds from those actions exceed the minimum return. Brickell holds a senior security interest in the majority of our assets until such time as the specified minimum return is paid, in which case, the security interest will be released except with

EndedSeptember 30, 2021 Year EndedDecember 31, 2020Secured contingent payment obligation, beginning of period $ 33,057 $ 26,651Change in fair value 2,883 6,406Secured contingent payment obligation, end of period $ 35,940 $ 33,057 Our secured contingent payment obligation represents the estimated fair value of our repayment obligation to Brickell Key Investments, LP ("Brickell") under a February 2016 funding agreement, as amended. Brickell is entitled to priority payments of 55% to 100% of proceeds received from all patent-related actions until such time that Brickell has been repaid its minimum return. The minimum return is determined as a multiple of the funded amount that increases over time. The estimated minimum return due to Brickell was approximately $47.2 million and $42.0 million as of September 30, 2021 and December 31, 2020, respectively. In addition, Brickell is entitled to a pro rata portion of proceeds from specified legal actions to the extent aggregate proceeds from those actions exceed the minimum return. The range of potential proceeds payable to Brickell is discussed more fully in Note 11. As of September 30, 2021, we are in compliance with our obligations under this agreement. We have elected to measure our secured contingent payment obligation at its estimated fair value based on probability-weighted respect to the patents and proceeds related to specific legal actions. The security interest is enforceable by Brickell in the event that we are in default under the agreement which would occur if (i) we fail, after notice, to pay proceeds to Brickell, (ii) we become insolvent or insolvency proceedings are commenced (and not subsequently discharged) with respect to us, (iii) our creditors commence actions against us (which are not subsequently discharged) that affect our material assets, (iv) we, without Brickell's consent, incur indebtedness other than immaterial ordinary course indebtedness, or (v) there is an uncured non-compliance of our obligations or misrepresentations under the agreement. As of December 31, 2020, we are in compliance with our obligations under this agreement. In addition, in the event of a change in control of the Company, Brickell has the right to be paid its return as defined under the CPIA based on the transaction price for the change in control event. We have elected to measure our secured contingent payment obligation at its estimated fair value based on probability-weighted estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods (see Note 10). The secured contingent payment obligation is remeasured to fair value at each reporting period with changes recorded in the consolidated statements of comprehensive loss until the contingency is resolved. Unsecured Contingent Payment Obligations The following table provides a reconciliation of our unsecured contingent payment obligations, measured at estimated fair market value, for the years ended December 31, 2020 and 2019, respectively (in thousands): 2020 2019Unsecured contingent payment obligations, beginning of period $ - $ - Reclassification of other liabilities 1,003 - Issuance of contingent payment rights 2,258 - Change in fair value 1,961 -Unsecured contingent payment obligations, end of period $ 5,222 $ - Our unsecured contingent payment obligations represent amounts payable to others from future patent-related proceeds including (i) a termination fee due to a litigation funder ("Termination Fee") and (ii) contingent payment rights ("CPRs") issued to accredited investors estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods (see Note 11). The secured contingent payment obligation is remeasured to fair value at each reporting period with changes recorded in the condensed consolidated statements of comprehensive loss until the contingency is resolved. Unsecured Contingent Payment Obligations The following table provides a reconciliation of our unsecured contingent payment obligations, measured at estimated fair market value, for the nine months ended September 30, 2021 and the year ended December 31, 2020 (in thousands): Nine Months EndedSeptember 30, 2021 Year EndedDecember 31, 2020Unsecured contingent payment obligations, beginning of period $ 5,222 $ - Reclassification of other liabilities - 1,003Issuance of contingent payment rights 412 2,258Change in fair value 113 1,961Unsecured contingent payment obligations, end of period $ 5,747 $ 5,222 Our unsecured contingent payment obligations represent amounts payable to others from future patent-related proceeds including (i) a termination fee due to a litigation funder and (ii) contingent payment rights issued to accredited investors in connection with equity financings ("CPRs"). We have elected to measure these unsecured contingent payment obligations at their estimated primarily in connection with equity financings. We have elected to measure these unsecured contingent payment obligations at their estimated fair value based on probability-weighted estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods. The unsecured contingent payment obligations will be remeasured to fair value at each reporting period with changes recorded in the consolidated statements of comprehensive loss until the contingency is resolved (see Note 10).The Termination Fee is a result of advances received under a letter agreement with a third-party funder of $0.4 million in 2019 and $0.6 million in 2020. Based on the terms of the letter agreement, if a final funding arrangement was not executed by March 31, 2020, we would be obligated to pay, from future patent-related proceeds, an aggregate termination payment equal to five times the advances received, or approximately $5.0 million. We did not consummate a funding agreement and accordingly the advances, which were initially recorded in other long-term liabilities, were reclassified to unsecured contingent payment obligations at March 31, 2020, when the Termination Fee obligation was incurred. As of December 31, 2020, the estimated fair value of unsecured contingent payment obligations related to the Termination Fee is $2.7 million.The CPRs represent the estimated fair value of rights provided to accredited investors who purchased shares of our common stock and the fair value of a right issued to a third-party in connection with a service agreement during the year ended December 31, 2020 (see Note 13). During the year ended December 31, 2020, we received aggregate proceeds of $3.8 million from the sale of common stock with contingent payment rights, of which approximately $1.8 million was allocated to the CPRs. In addition, on May 1, 2020, we amended certain March 2020 equity purchase agreements with accredited investors for the purchase of $0.9 million in common stock to add CPRs. This amendment resulted in a charge to expense of $0.4 million for the initial estimated fair value of the CPRs. The terms of the CPRs provide that we will pay each investor an fair value based on probability-weighted estimated cash outflows, discounted back to present value using a discount rate determined in accordance with accepted valuation methods. The unsecured contingent payment obligations will be remeasured to fair value at each reporting period with changes recorded in the condensed consolidated statements of comprehensive loss until the contingency is resolved (see Note 11). During the nine months ended September 30, 2021, we received proceeds of $1.0 million from the sale of common stock with CPRs, of which approximately $0.4 million was allocated to the CPRs. Our aggregate maximum obligation under the unsecured contingent payment obligations is $10.8 million as of September 30, 2021.

allocated portion of our net proceeds from patent-related actions, after taking into account fees and expenses payable to law firms representing us and amounts payable to Brickell. The investors' allocated portion of net proceeds will be determined by multiplying the net proceeds recovered by us (up to $10 million) by the quotient of such investors' subscription amount divided by $10 million, up to an amount equal to each investor's subscription amount, or an aggregate of $4.7 million. As of December 31, 2020, the estimated fair value of our unsecured contingent payment obligations related to the CPRs is $2.5 million.

Fair Value Measurements	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Fair Value Measurements [Abstract]		
Fair Value Measurements	11. Fair Value Measurements The following tables summarize the fair value of our assets and liabilities measured at fair value on a recurring basis as of September 30, 2021 and December 31, 2020 (in thousands): Fair Value Measurements Total Fair Value QuotedPricesin ActiveMarkets(Level 1) SignificantOtherObservableInputs(Level 2) SignificantUnobservableInputs(Level 3)September 30, 2021: Liabilities: Secured contingent payment obligation $ 35,940 $ - $ - $ 35,940Unsecured contingent payment obligations 5,747 - - 5,747 Fair Value Measurements Total Fair Value QuotedPricesin ActiveMarkets(Level 1) SignificantOtherObservableInputs(Level 2) SignificantUnobservableInputs(Level 3)December 31, 2020: Liabilities: Secured contingent payment obligation $ 33,057 $ - $ - $ 33,057Unsecured contingent payment obligations $ 5,222 $ - $ - $ 5,222 The fair values of our secured and unsecured contingent payment obligations were estimated using a probability-weighted income approach based on various cash flow scenarios as to the outcome of patent-related actions both in terms of timing and amount, discounted to present value using a risk-adjusted rate. We used a risk-adjusted discount rate of 14.41% at September 30, 2021, based on a risk-free rate of 0.41% as adjusted by 8% for credit risk and 6% for litigation inherent risk. The following table provides quantitative information about the significant unobservable inputs used in the measurement of fair value for both the secured and unsecured contingent payment obligations at September 30,	10. FAIR VALUE MEASUREMENTS ASC 820, "Fair Value Measurements" establishes a fair value hierarchy that prioritizes the inputs to valuation methods used to measure fair value. The three levels of the fair value hierarchy are as follows: •Level 1: Quoted prices for identical assets or liabilities in active markets which we can access•Level 2: Observable inputs other than those described in Level 1•Level 3: Unobservable inputs The following table summarizes financial assets and financial liabilities carried at fair value and measured on a recurring basis as of December 31, 2020 and 2019, segregated by classification within the fair value hierarchy (in thousands): Fair Value Measurements Total Quoted Prices inActive Markets(Level 1) Significant OtherObservableInputs (Level 2) SignificantUnobservableInputs (Level 3)December 31, 2020: Liabilities: Secured contingent payment obligation$ 33,057 $ - $ - $ 33,057Unsecured contingent payment obligations 5,222 - - 5,222 December 31, 2019: Liabilities: Secured contingent payment obligation 26,651 - - 26,651 For the years ended December 31, 2020 and 2019, respectively, we had no transfers of assets or liabilities between the levels of the hierarchy. The fair values of our secured and unsecured contingent payment obligations were estimated using a probability-weighted income approach based on various cash flow scenarios as to the outcome of patent-related actions both in terms of timing and amount, discounted to present value using a risk-adjusted rate. We used a risk-adjusted discount rate

2021, including the lowest and highest undiscounted payout scenarios as well as a weighted average payout scenario based on relative undiscounted fair value of each cash flow scenario. Secured Contingent Payment Obligation Unsecured Contingent Payment ObligationsUnobservable Inputs Low Weighted Average High Low Weighted Average High Estimated undiscounted cash outflows (in millions) $0.0 $50.2 $76.8 $0.0 $8.1 $10.8Duration (in years) 0.3 2.5 3.3 1.3 2.5 3.3Estimated probabilities 0% 21% 25% 25% 25% 25% We evaluate the estimates and assumptions used in determining the fair value of our contingent payment obligations each reporting period and make any adjustments prospectively based on those evaluations. Changes in any of these Level 3 inputs could result in a significantly higher or lower fair value measurement.

of 14.15% at December 31, 2020, based on a risk-free rate of 0.15% as adjusted by 8% for credit risk and 6% for litigation inherent risk. The following table provides quantitative information about the significant unobservable inputs used in the measurement of fair value for both the secured and unsecured contingent payment obligations at December 31, 2020, including the lowest and highest undiscounted payout scenarios as well as a weighted average payout scenario based on relative undiscounted fair value of each cash flow scenario. Secured Contingent Payment Obligation Unsecured Contingent Payment ObligationsUnobservable Inputs Low Weighted Average High Low Weighted Average High Estimated undiscounted cash outflows (in millions) $0.0 $46.1 $70.2 $0.0 $7.3 $9.7Duration (in years) 1.0 2.5 3.5 1.0 2.5 3.5Estimated probabilities 5% 23% 25% 25% 25% 25% We evaluate the estimates and assumptions used in determining the fair value of our contingent payment obligations each reporting period and make any adjustments prospectively based on those evaluations. Changes in any of these Level 3 inputs could result in a significantly higher or lower fair value measurement

Legal Proceedings	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Legal Proceedings [Abstract]		
Legal Proceedings	12. Legal Proceedings From time to time, we are subject to legal proceedings and claims which arise in the ordinary course of our business. These proceedings include patent enforcement actions initiated by us against others for the infringement of our technologies, as well as proceedings brought by others against us, including proceedings at the Patent Trial and Appeal Board of the U.S. Patent and Trademark Office ("PTAB"). The majority of our litigation, including our PTAB proceedings, is being paid for through contingency fee arrangements with our litigation counsel as well as third-party litigation financing. In general, litigation counsel is entitled to recoup on a priority basis, from litigation proceeds, any out-of-pocket expenses incurred. Following reimbursement of out-of-pocket expenses, litigation counsel is generally entitled to a percentage of remaining proceeds based on the terms of the specific arrangement between us, counsel and our third-party litigation funder. We were liable for costs assessed on infringement and validity cases in Germany in which we did not prevail. A portion of this liability was covered by bonds posted in Germany. As of September 30, 2021, our bonds have been fully released and all outstanding statutory court costs have been satisfied in full. We have no remaining litigation or related liabilities in Germany. ParkerVision v. Qualcomm (Middle District of Florida)We have a patent infringement complaint pending in the Middle District of Florida against Qualcomm Incorporated and Qualcomm Atheros, Inc. (collectively "Qualcomm") seeking approximately $1.3 billion in damages for infringement of four of our patents (the "Qualcomm Action"). HTC Corporation and HTC America, Inc. (collectively "HTC") were also defendants in this case but we voluntarily dismissed our claims against HTC and HTC dismissed their related counter-claims against us in October 2020. Qualcomm has pending counterclaims against us for non-infringement and invalidity for all patents in the case. The case was filed in May 2014 and stayed in February 2016 pending decisions in other	12. COMMITMENTS AND CONTINGENCIES Legal ProceedingsFrom time to time, we are subject to legal proceedings and claims which arise in the ordinary course of our business. These proceedings include patent enforcement actions initiated by us against others for the infringement of our technologies, as well as proceedings brought by others against us at the Patent Trial and Appeal Board of the U.S. Patent and Trademark Office ("PTAB") and in the Federal Patent Court in Germany in an attempt to invalidate certain of our patent claims. We had several patent enforcement actions in Germany in which we did not prevail. Germany has a "loser pay" system whereby the non-prevailing party is responsible for statutory attorney fees and costs. All of our German actions were concluded in 2019. We have recorded an estimated loss for statutory attorney fees and costs in current liabilities under the heading "statutory court costs" in the consolidated balance sheets. As of December 31, 2020 and 2019, we have accrued an aggregate of $0.25 million and $0.37 million, respectively, for our concluded cases in Germany. We also have a bond posted in Germany that upon release will satisfy $0.14 million of these accrued costs. The bond is recorded in prepaid expenses (see Note 4). ParkerVision v. Qualcomm (Middle District of Florida)We have a patent infringement complaint pending in the Middle District of Florida against Qualcomm and Qualcomm Atheros, Inc. (collectively "Qualcomm") seeking approximately $1.3 billion in damages for infringement of four of our

cases, including the appeal of a PTAB proceeding with regard to U.S. patent 6,091,940 ("the '940 Patent") asserted in this case. In March 2017, the PTAB ruled in our favor on three of the six petitions (the method claims), ruled in Qualcomm's favor on two of the six petitions (the apparatus claims) and issued a split decision on the claims covered in the sixth petition. In September 2018, the Federal Circuit upheld the PTAB's decision with regard to the '940 Patent and, in January 2019, the court lifted the stay in this case. In July 2019, the court issued an order that granted our proposed selection of patent claims from four asserted patents, including the '940 Patent, and denied Qualcomm's request to limit the claims and patents. The court also agreed that we may elect to pursue accused products that were at issue at the time the case was stayed, as well as new products that were released by Qualcomm during the pendency of the stay. In September 2019, Qualcomm filed a motion for partial summary judgement in an attempt to exclude certain patents from the case, including the '940 Patent. The court denied this motion in January 2020. In April 2020, the court issued its claim construction order in which the court adopted our proposed construction for seven of the ten disputed terms and adopted slightly modified versions of our proposed construction for the remaining terms. Due to the impact of COVID-19, a number of the scheduled deadlines in this case were moved including the trial commencement date which was rescheduled from December 2020 to May 2021. We are seeking $1.3 billion in royalties owed to us by Qualcomm for its unauthorized use of our technology, based on a report submitted by our damages expert in this case in October 2020. Such amount excludes additional amounts requested by us for interest and enhanced damages for willful infringement. Ultimately, the amount of damages, if any, will be determined by a jury and the court. Discovery was expected to close in December 2020; however, the court allowed us to designate a substitute expert due to medical issues with one of our experts in the case. Accordingly, the close of discovery was delayed approximately one month until January 2021. As a result of these delays, the court

patents (the "Qualcomm Action"). HTC Corporation and HTC America, Inc. (collectively "HTC") were also defendants in this case but we voluntarily dismissed our claims against HTC and HTC dismissed their related counter-claims against us in October 2020. Qualcomm has pending counterclaims against us for non-infringement and invalidity for all patents in the case. The case was filed in May 2014 and stayed in February 2016 pending decisions in other cases, including the appeal of a PTAB proceeding with regard to U.S. patent 6,091,940 ("the '940 Patent") asserted in this case. In March 2017, the PTAB ruled in our favor on three of the six petitions (the method claims), ruled in Qualcomm's favor on two of the six petitions (the apparatus claims) and issued a split decision on the claims covered in the sixth petition. In September 2018, the Federal Circuit upheld the PTAB's decision with regard to the '940 Patent and, in January 2019, the court lifted the stay in this case. In July 2019, the court issued an order that granted our proposed selection of patent claims from four asserted patents, including the '940 Patent, and denied Qualcomm's request to limit the claims and patents. The court also agreed that we may elect to pursue accused products that were at issue at the time the case was stayed, as well as new products that were released by Qualcomm during the pendency of the stay. In September 2019, Qualcomm filed a motion for partial summary judgement in an attempt to exclude certain patents from the case, including the '940 Patent. The court denied this motion in January 2020. In April 2020, the court issued its claim construction order in which the court adopted our proposed construction for seven of rescheduled the trial commencement date from May 3, 2021 to July 6, 2021. In March 2021, the court further delayed the trial date citing backlog due to the pandemic, among other factors. A new trial date has not yet been set although the court indicated the case was unlikely to be tried before November or December 2021. Fact and expert discovery in this case are closed, expert reports have been submitted, and summary judgement and Daubert briefings have been completed by the parties. Joint pre-trial statements were submitted in May 2021. In March 2021, the court granted Qualcomm's motion to strike certain of our 2020 infringement contentions. We filed a motion to clarify the court's order and in July 2021, based on the court's response to our motion to clarify, we filed a joint motion for entry of a judgement of non-infringement of our Patent No. 7,865,177 ("the '177 Patent"), subject to appeal. A number of outstanding motions are pending decisions by the court. ParkerVision v. Apple and Qualcomm (Middle District of Florida)In December 2015, we filed a patent infringement complaint in the Middle District of Florida 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., Samsung Telecommunications America LLC, and Samsung Semiconductor, Inc. (collectively "Samsung"), and Qualcomm alleging infringement of four of our patents. In February 2016, the district court proceedings were stayed pending resolution of a corresponding case filed at the International Trade Commission ("ITC"). In July 2016, we entered into a patent license and settlement agreement with Samsung and, as a result, Samsung was dismissed from the district court action. In March 2017, we filed a motion to terminate the ITC proceedings and a corresponding motion to lift the stay in the district court case. This motion was granted in May 2017. In July 2017, we filed a motion to dismiss LG from the district court case and re-filed our claims against LG in the District of New Jersey (see ParkerVision v. LG below). Also in July 2017, Qualcomm filed a motion to change venue to the Southern District of California, and Apple filed a motion the ten disputed terms and adopted slightly modified versions of our proposed construction for the remaining terms. Due to the impact of COVID-19, a number of the scheduled deadlines in this case were moved including the trial commencement date which was rescheduled from December 2020 to May 2021. We are seeking $1.3 billion in royalties owed to us by Qualcomm for its unauthorized use of our technology, based on a report submitted by our damages expert in this case in October 2020. Such amount excludes additional amounts requested by us for interest and enhanced damages for willful infringement. Ultimately, the amount of damages, if any, will be determined by the court. Discovery was expected to close in December 2020; however, the court allowed us to designate a substitute expert due to medical issues with one of our experts in the case. Accordingly, the close of discovery was delayed until January 2021. As a result of these delays, the court rescheduled the trial commencement date from May 3, 2021 to July 6, 2021. Fact and expert discovery in this case are closed, expert reports have been submitted, and summary judgement and Daubert briefings have been completed by the parties. In March 2021, the court granted Qualcomm's motion to strike certain of our 2020 infringement contentions. A number of outstanding motions are pending decisions by the court. On March 26, 2021, the court further delayed the trial date citing backlog due to the pandemic, among other factors. A new trial date has not yet been set although the court indicated the case was unlikely to be tried before November or December 2021. We are represented in this case on a full contingency fee basis. ParkerVision to dismiss for improper venue. In March 2018, the district court ruled against the Qualcomm and Apple motions. The parties also filed a joint motion in March 2018 to eliminate three of the four patents in the case in order to expedite proceedings leaving our U.S. patent 9,118,528 as the only remaining patent in this case. A claim construction hearing was held on August 31, 2018. In July 2019, the court issued its claim construction order in which the court adopted our proposed claim construction for two of the six terms and the "plain and ordinary meaning" on the remaining terms. In addition, the court denied a motion filed by Apple for summary judgment. Fact discovery has closed in this case and a jury trial was scheduled to begin in August 2020. In March 2020, as a result of the impact of COVID-19, the parties filed a motion requesting an extension of certain deadlines in the case. In April 2020, the court stayed this proceeding pending the outcome of the Qualcomm Action. ParkerVision v. LG (District of New Jersey)In July 2017, we filed a patent infringement complaint in the District of New Jersey against LG for the alleged infringement of the same four patents previously asserted against LG in Florida (see ParkerVision v. Apple and Qualcomm above). We elected to dismiss the case in Florida and re-file in New Jersey as a result of a Supreme Court ruling regarding proper venue. In March 2018, the court stayed this case pending a final decision in ParkerVision v. Apple and Qualcomm in the Middle District of Florida. As part of this stay, LG has agreed to be bound by the final claim construction decision in that case. ParkerVision v. Intel (Western District of Texas)In February 2020, we filed a patent infringement complaint in the Western District of Texas against Intel Corporation ("Intel") alleging infringement of eight of our patents. The complaint was amended in May 2020 to add two additional patents. In June 2020, we requested that one of the patents be dropped from this case and filed a second case in the Western District of Texas that included this dismissed patent (see ParkerVision v. Intel II below). Intel's response to our complaint was filed in June 2020 denying infringement and claiming invalidity of the patents. Intel has also filed a motion to transfer venue which was denied by the court. The court issued its claim

v. Apple and Qualcomm (Middle District of Florida)In December 2015, we filed a patent infringement complaint in the Middle District of Florida against Apple, LG, Samsung and Qualcomm alleging infringement of four of our patents. In February 2016, the district court proceedings were stayed pending resolution of a corresponding case filed at the International Trade Commission ("ITC"). In July 2016, we entered into a patent license and settlement agreement with Samsung and, as a result, Samsung was dismissed from the district court action. In March 2017, we filed a motion to terminate the ITC proceedings and a corresponding motion to lift the stay in the district court case. This motion was granted in May 2017. In July 2017, we filed a motion to dismiss LG from the district court case and re-filed our claims against LG in the District of New Jersey (see ParkerVision v. LG below). Also in July 2017, Qualcomm filed a motion to change venue to the Southern District of California, and Apple filed a motion to dismiss for improper venue. In March 2018, the district court ruled against the Qualcomm and Apple motions. The parties also filed a joint motion in March 2018 to eliminate three of the four patents in the case in order to expedite proceedings leaving our U.S. patent 9,118,528 as the only remaining patent in this case. A claim construction hearing was held on August 31, 2018. In July 2019, the court issued its claim construction order in which the court adopted our proposed claim construction for two of the six terms and the "plain and ordinary meaning" on the remaining terms. In addition, the court denied a motion filed by Apple for summary judgment. Fact discovery has closed in this case and

construction ruling in January 2021 in which the majority of the claims were decided in our favor. The case was scheduled for trial beginning February 7, 2022. In April 2021, we filed an amended complaint to include additional Intel chips and products, including Wi-Fi devices to the complaint. The court suggested that, given the number of patents at issue, the case would be separated into two trials and, as a result of the added products, the first trial date will be scheduled in June 2022. Based on discussions with the court, we anticipate the second trial date will be scheduled to begin several months following the first trial. ParkerVision v. Intel II (Western District of Texas)In June 2020, to reduce the number of claims in ParkerVision v. Intel, we filed a second patent infringement complaint in the Western District of Texas against Intel that included one patent that we voluntarily dismissed from the original case. In July 2020, we amended our complaint adding two more patents to the case. In May 2021, we further amended our complaint to include additional Intel chips and products, including Wi-Fi devices. Two claim construction hearings were held and in July 2021, the court issued its claim construction order in which the majority of the claim terms were construed in our favor. Based on communications with the Court, the parties submitted a case schedule setting forth a final pretrial conference for October 2022, however this date may change dependent upon the timing of the second trial in the Intel I case discussed above. Intel v. ParkerVision (PTAB)Intel filed petitions for Inter Partes Review ("IPR") against U.S. patent 7,539,474 ("the '474 Patent"), U.S. patent 7,110,444 ("the '444 Patent") and U.S. patent 8,190,108 ("the '108 Patent"), all of which are patents asserted in our infringement cases against Intel. In January 2021, the PTAB issued its decision to institute IPR proceedings for the '444 Patent and the '474 Patent. An oral hearing was held on November 1, 2021 and final decisions from the PTAB on the '474 Patent and the '444 Patent are expected by late January 2022. In July 2021, the PTAB issued its decision to institute IPR proceedings for the '108 Patent. We filed our response to this petition in October 2021 and an oral hearing is scheduled for April 2022. A final decision from the PTAB with respect to the '108 Patent is expected by a jury trial was scheduled to begin in August 2020. In March 2020, as a result of the impact of COVID-19, the parties filed a motion requesting an extension of certain deadlines in the case. In April 2020, the court stayed this proceeding pending the outcome of the Qualcomm Action. We are represented in this case on a limited success fee basis. ParkerVision v. LG (District of New Jersey)In July 2017, we filed a patent infringement complaint in the District of New Jersey against LG for the alleged infringement of the same patents previously asserted against LG in the Middle District of Florida (see ParkerVision v. Apple and Qualcomm above). We elected to dismiss the case in the Middle District of Florida and re-file in New Jersey as a result of a Supreme Court ruling regarding proper venue. In March 2018, the court stayed this case pending a final decision in ParkerVision v. Apple and Qualcomm in the Middle District of Florida. As part of this stay, LG has agreed to be bound by the final claim construction decision in that case. We are represented in this case on a limited success fee basis. ParkerVision v. Intel (Western District of Texas)In February 2020, we filed a patent infringement complaint in the Western District of Texas against Intel alleging infringement of eight of our patents. The complaint was amended in May 2020 to add two additional patents. In June 2020, we requested that one of the patents be dropped from this case and filed a second case in the Western District of Texas that included this dismissed patent (see ParkerVision v. Intel II below). Intel's response to our complaint was filed in June 2020 denying infringement and claiming invalidity of the patents. Intel also filed a motion to transfer venue

July 2022. Additional Patent Infringement CasesParkerVision filed a number of additional patent cases in the Western District of Texas in September and October 2020 including cases against (i) TCL Industries Holdings Co., Ltd, a Chinese company, TCL Electronics Holdings Ltd., Shenzhen TCL New Technology Co., Ltd, TCL King Electrical Appliances (Huizhou) Co., Ltd., TCL Moka Int'l Ltd. and TCL Moka Manufacturing S.A. DE C.V. (collectively "TCL"), (ii) Hisense Co., Ltd. and Hisense Visual Technology Co., Ltd (collectively "Hisense"), a Chinese company, (iii) Buffalo Inc., a Japanese company ("Buffalo") and (iv) Zyxel Communications Corporation, a Chinese multinational electronics company headquartered in Taiwan, ("Zyxel"). Each case alleges infringement of the same ten patents by products that incorporate modules containing certain Wi-Fi chips manufactured by Realtek and/or MediaTek. Each of the defendants have filed responses denying infringement and claiming invalidity of the patents, among other defenses. In September 2021, we dismissed the cases against Buffalo and Zyxel following satisfaction of the parties' obligations under settlement and license agreements entered into in May 2021 and September 2021, respectively. The court held a Markman hearing on October 27, 2021 for the remaining defendants, Hisense and TCL, and issued its claim construction recommendations on October 29, 2021, in which nearly all of the claim terms were decided in our favor. The Hisense and TCL cases are expected to have a trial date in December 2022. In May 2021, we also filed a patent infringement case against LG Electronics, a South Korean company, in the Western District of Texas alleging infringement of the same ten patents. TCL, et. al. v. ParkerVision (PTAB)In May 2021, TCL, along with Hisense, filed petitions for Inter Partes Review ("IPR") against U.S. patent 7,292,835 ("the '835 Patent") and the '444 Patent, both of which are asserted in the infringement cases against these parties in the Western District of Texas. An institution decision is expected from the PTAB in late November 2021.

which the court denied in January 2021. The court issued its claim construction ruling in January 2021 in which the majority of the claims were decided in our favor. The case is scheduled for trial beginning February 7, 2022. We are represented in this case on a full contingency fee basis. Intel v. ParkerVision (PTAB)Intel filed petitions for Inter Partes Review (IPR) against U.S. patent 7,539,474 ("the '474 Patent"), U.S. patent 7,110,444 ("the '444 Patent") and U.S. patent 8,190,108 ("the '108 patent"), all of which are patents asserted in ParkerVision v. Intel. In January 2021, the PTAB issued its decision to institute IPR proceeding for the '444 Patent and the '474 Patent. Our response to the instituted IPRs is due in April 2021. The PTAB has not yet issued a decision for the '108 Patent.ParkerVision v. Intel II (Western District of Texas)In June 2020, to reduce the number of claims in ParkerVision v. Intel, we filed a second patent infringement complaint in the Western District of Texas against Intel that included a single patent that we voluntarily dismissed from the original case. In July 2020, we amended our complaint adding two more patents to the case. The claim construction hearing is expected to be scheduled after May 2021 and the case is currently scheduled for trial beginning March 17, 2022. We are represented in this case on a full contingency fee basis.ParkerVision filed a number of additional patent cases in the Western District of Texas including cases against (i) TCL Industries Holdings Co., Ltd, a Chinese company, TCL Electronics Holdings Ltd., Shenzhen TCL New Technology Co., Ltd, TCL King Electrical Appliances (Huizhou) Co., Ltd., TCL Moka Int'l Ltd. and TCL

Moka Manufacturing S.A. DE C.V. (collectively “TCL”), (ii) Hisense Co., Ltd. and Hisense Visual Technology Co., Ltd (collectively “Hisense”), a Chinese company, (iii) Buffalo Inc., a Japanese company (“Buffalo”)and (iv) Zyxel Communications Corporation, a Chinese multinational electronics company headquartered in Taiwan, (“Zyxel”). Each case alleges infringement of the same ten patents by products that incorporate modules containing certain Wi-Fi chips manufactured by Realtek and/or MediaTek. Each of the defendants have filed responses denying infringement and claiming invalidity of the patents, among other defenses. We are represented in each of these cases on a full contingency fee basis.

Income Taxes And Tax Status	12 Months Ended Dec. 31, 2020
Income Taxes And Tax Status [Abstract]	
Income Taxes And Tax Status	11. INCOME TAXES AND TAX STATUS Our net losses before income taxes for the years ended December 31, 2020 and 2019 are from domestic operations as well as losses from our wholly-owned German subsidiary. We elected to treat our German subsidiary as a disregarded entity for purposes of income taxes and accordingly, the losses from our German subsidiary have been included in our operating results. No current or deferred tax provision or benefit was recorded in 2020 or 2019 as a result of current losses and fully deferred tax valuation allowances for all periods. We have recorded a valuation allowance to state our deferred tax assets at their estimated net realizable value due to the uncertainty related to realization of these assets through future taxable income. A reconciliation between the provision for income taxes and the expected tax benefit using the federal statutory rate of 21% for each of the years ended December 31, 2020 and 2019, respectively are as follows (in thousands): 2020 2019Tax benefit at statutory rate$ (4,111) $ (1,985)State tax benefit (842) (407)Increase in valuation allowance 4,307 2,341Other 646 51 $ - $ - Our deferred tax assets and liabilities relate to the following sources and differences between financial accounting and the tax bases of our assets and liabilities at December 31, 2020 and 2019 (in thousands): 2020 2019Gross deferred tax assets: Net operating loss carry-forward$ 80,848 $ 83,865Research and development credit carry-forward 6,603 7,608Stock compensation 122 (28)Patents and other 1,466 1,479Contingent payment obligations 5,235 3,119Inventories - 139Fixed assets 54 3Accrued liabilities 64 200Lease liabilities 77 142Other - 3 94,469 96,530Less valuation allowance (94,245) (96,320) 224 210Gross deferred tax liabilities: Convertible debt (224) (210) (224) (210)Net deferred tax asset$ - $ - Approximately $0.2 million, net of tax effect, of unrecognized tax benefit related to the beneficial conversion feature of convertible debt would be recorded as an adjustment to contributed capital rather than a decrease in earnings, if recognized. At December 31, 2020, we had cumulative net operating loss (“NOL”) carry-forwards for income tax purposes of $323.2 million, of which $294.1 million is subject to expiration in varying amounts from 2021 to 2037. At December 31, 2020, we also had research and development tax credit carryforwards of $6.6 million, which expire in varying amounts from 2021 through 2038. Our ability to benefit from the tax credit carry-forwards could be limited under certain provisions of the Internal Revenue Code if there are ownership changes of more than 50%, as defined by Section 382 of the Internal Revenue Code of 1986 (“Section 382”). Under Section 382, an ownership change may limit the amount of NOL, capital loss and R&D credit carry-forwards that can be used annually to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50 percentage points over a three-year period. We conduct a study annually of our ownership changes. Based on the results of our studies, we have determined that we do not have any

ownership changes on or prior to December 31, 2020 which would result in limitations of our NOL, capital loss or R&D credit carry-forwards under Section 382. Uncertain Tax PositionsWe file income tax returns in the U.S. federal jurisdiction, various state jurisdictions, and Germany. We have identified our Federal and Florida tax returns as our only major jurisdictions, as defined. The periods subject to examination for those returns are the 2001 through 2020 tax years. The following table provides a reconciliation of our unrecognized tax benefits due to uncertain tax positions for the years ended December 31, 2020 and 2019, respectively (in thousands): 2020 2019Unrecognized tax benefits – beginning of year$ 927 $ 927 Unrecognized tax benefits – end of year$ 927 $ 927 Future changes in the unrecognized tax benefit will have no impact on the effective tax rate so long as we maintain a full valuation allowance. Our policy is that we recognize interest and penalties accrued on any unrecognized tax benefits as a component of our income tax expense. We do not have any accrued interest or penalties associated with any unrecognized tax benefits. For the years ended December 31, 2020 and 2019, we did not incur any income tax-related interest income, expense or penalties.

Stock Authorization and Issuance	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Stock Authorization and Issuance [Abstract]		
Stock Authorization and Issuance	13. Stock Authorization and Issuance Stock Authorization On September 28, 2021, our shareholders approved an amendment to our amended and restated articles of incorporation to increase our authorized common shares from 140 million to 150 million. Stock and Warrant Issuances – Equity Based Financings Private Placements with Accredited InvestorsIn January 2021, we entered into securities purchase agreements with accredited investors for the sale of an aggregate of 2,976,430 shares of our common stock at a price of $0.35 per share for aggregate proceeds of $1.0 million. The securities purchase agreements include CPRs. Approximately $0.4 million of the proceeds were allocated to unsecured contingent payment obligations	13. STOCK AUTHORIZATION AND ISSUANCE Preferred StockWe have 15 million shares of preferred stock authorized for issuance at the direction of our board of directors (the "Board"). On November 17, 2005, our Board designated 0.1 million shares of authorized preferred stock as the Series E Preferred Stock in conjunction with its adoption of a Shareholder Protection Rights Agreement. As of December 31, 2020, we had no outstanding preferred stock. Common Stock We have 140 million shares of common stock authorized for issuance as of December 31, 2020. Our shareholders approved amendments to our articles of incorporation in November 2019 increasing the number of our authorized shares of common stock from 75 million to 110 million shares and in July 2020 increasing the number of our authorized shares of common stock from 110 million to 140 million shares. As of December 31, 2020, we have 25.3 million shares reserved for issuance under outstanding warrants, options, and RSUs and 23.6 million shares reserved for issuance upon conversion of our outstanding convertible notes. In addition, we have 0.2 million shares reserved for future issuance under equity compensation plans and 7.5 million shares reserved for the payment of interest in-kind on our convertible notes. Stock and Warrant Issuances – Equity Based FinancingsDuring the year ended December 31, 2019, we did not issue any stock or warrants in financing transactions. The following table presents a summary of completed equity-based financing transactions for the year ended December 31, 2020 (in thousands, except for per share amounts): DateTransaction # of Common Shares/ Units Sold Average Price per Share/Unit # of Warrants Issued(in 000's) Average Exercise Price per Warrant Net Proceeds (1)January 2020Private placement of common stock 1,335 $0.13 - - $ 177February 2020Warrant amendment - - 5,000 $0.74 $ -March 2020Private placement of common stock, amended to add CPR 2,571 $0.35 - - $ 900April 2020 to December 2020Private placement of common stock with CPRs 10,858 $0.35 - - $ 3,724 (1)After deduction of applicable offering costs. Private Placements In January 2020, we entered into securities purchase agreements with accredited investors for an aggregate of 1,169,232 shares of our common stock at a price of $0.13 per share and 166,667 shares of our common stock at $0.15 per share

based on the initial fair value estimate of the CPRs (see Note 10). The shares were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217). In March 2021, we entered into securities purchase agreements with accredited investors for the sale of 3,230,942 shares of our common stock and 1,619,289 warrants at a price of $1.29 per common share for aggregate proceeds of approximately $4.2 million. The warrants have an exercise price of $1.75 per share and expire in March 2026. The shares, including the shares underlying the warrants, were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217). We used $3.0 million of the proceeds from this transaction to satisfy our obligations to Mintz (see Note 10). Stock Issuances – Payment for Services In January 2021, we amended our business consulting

for aggregate proceeds of approximately $0.2 million. In March 2020, we entered into securities purchase agreements with accredited investors for an aggregate of 2,571,432 shares of our common stock at a price of $0.35 per share for aggregate proceeds of $0.9 million. The securities purchase agreements for the March 2020 transactions were amended on May 1, 2020, in order to add a contingent payment right whereby we will pay each investor an allocated portion of our share of proceeds from patent-related actions, after taking into account fees and expenses payable to law firms representing the Company and amounts payable to Brickell, up to an amount equal to the investors' aggregate subscription amount, or $0.9 million (see "unsecured contingent payment obligations" in Note 9). The shares were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762). From April to December 2020, we entered into securities purchase agreements with accredited investors for an aggregate of 10,857,876 shares of our common stock at a price of $0.35 per share for aggregate proceeds of $3.8 million. The securities purchase agreements include contingent payment rights. Approximately $1.8 million of the proceeds were allocated to unsecured contingent payment obligations based on the initial fair value estimate of the CPRs (see Note 9). The shares sold from April to August, totaling 5,871,584 shares, were registered for resale on a registration statement that was declared effective on September 2, 2020 (File No. 333-248242). For the shares sold subsequent to August 2020, we entered into registration rights agreements with the investors pursuant to which we will register the shares. We have committed to file the registration statement by April 15, 2021 and to cause the registration statement to become effective by June 30, 2021. The registration rights agreements provide for liquidated damages upon the occurrence of certain events including failure by us to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or approximately $0.1 million. Warrant Amendment On February 28, 2020, we entered into a warrant amendment agreement (the "Warrant Amendment Agreement") with Aspire Capital Fund, LLC ("Aspire"), with respect to warrants issued in July and September 2018 (the "2018 Warrants") that are exercisable, collectively, into 5,000,000 shares of our common stock. The Warrant and retention agreement with Chelsea Investor Relations to increase the compensation for services over the remaining term and to extend the term of the agreement through February 2024. As consideration for the amended agreement, we issued 500,000 shares of unregistered common stock in exchange for a nonrefundable retainer for services valued at approximately $0.33 million. The value of the stock issued is being recognized as consulting expense over the term of the agreement. The shares were registered for resale on a registration statement that was declared effective on April 26, 2021 (File No. 333-255217). In January 2021, we also issued 50,000 shares of our unregistered common stock, valued at approximately $0.03 million, as compensation for three months of shareholder awareness services provided by a third party. In April 2021,

Amendment Agreement provided for a reduction in the exercise price for the 2018 Warrants from $0.74 to $0.35 per share and the issuance of a new warrant for the purchase of 5,000,000 shares of our common stock at an exercise price of $0.74 per share ("New Aspire Warrant"). The New Aspire Warrant expires February 28, 2025 and is subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and upon any distributions of assets to our stockholders. The New Aspire Warrant contains provisions that prohibit exercise if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of common stock outstanding immediately after giving effect to such exercise. The holder of the New Aspire Warrant may increase (up to 19.99%) or decrease this percentage by providing at least 61 days' prior notice to the Company. In the event of certain corporate transactions, the holder of the New Aspire Warrant will be entitled to receive, upon exercise of such New Aspire Warrant, the kind and amount of securities, cash or other property that the holder would have received had they exercised the New Aspire Warrant immediately prior to such transaction. The New Aspire Warrant does not contain voting rights or any of the other rights or privileges as a holder of our common stock.We recognized $1.78 million of non-cash warrant expense in connection with the Warrant Amendment Agreement based on the difference between the Black-Scholes value of the warrants immediately before and after the amendment. The Warrant Amendment Agreement added a call provision to the 2018 Warrants whereby we may, after December 31, 2020, call for cancellation of all or any portion of the 2018 Warrants for which an exercise notice has not yet been received, in exchange for consideration equal to $0.001 per warrant share and subject to certain conditions. All other terms of the 2018 Warrants remained unchanged, including the original expiration dates of July and September 2023. The shares underlying the New Aspire Warrant were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762). The shares underlying the 2018 Warrants are currently registered for resale pursuant to a registration statement on Form S-1 (File No. 333-226738). In connection with the Warrant Amendment Agreement, Aspire exercised 1,430,000 shares of the 2018 Warrants for aggregate proceeds to us of $0.5 million. An additional 3,070,000 shares of the 2018 Warrants were exercised during the year ended December 31, 2020 for we issued this third party an additional 50,000 shares of our unregistered common stock, valued at approximately $0.07 million as compensation for services over the remaining term of the agreement. In June 2021, we issued an additional 100,000 shares of our unregistered common stock, valued at approximately $0.12 million, to this same third-party as a retainer for services over a one-year term through May 31, 2022. The value of the shares issued will be recognized as consulting expense over the term of the agreement. In April 2021, we issued 35,000 shares of our unregistered common stock to a consultant for services over a six-month term valued at approximately $0.04 million. The value of the shares issued will be recognized as consulting expense over the term of the agreement. In addition, from time to time, we issue restricted stock awards under our approved equity plans to third party

aggregate additional proceeds to us of approximately $1.1 million. We did not exercise the call provision and the Aspire exercised the remaining 2018 Warrants in January 2021 (see Note 17). Stock and Warrant Issuances – Payment for ServicesOn February 10, 2020, we entered into a business consulting and retention agreement with Chelsea Investor Relations ("Chelsea") to provide business advisory services to us. As consideration for services to be provided under the 24-month term of the consulting agreement, we issued 500,000 shares of unregistered common stock in exchange for a nonrefundable retainer for services valued at approximately $0.15 million. The value of the stock issued is being recognized as consulting expense over the term of the agreement. The shares were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762). The agreement was amended in January 2021 (see Note 17). On March 16, 2020, we entered into an agreement with Tailwinds Research Group LLC ("Tailwinds") to provide digital marketing services to us. As consideration for services to be provided under the twelve-month term of the agreement, we issued warrants for the purchase up to 200,000 shares of our common stock with an exercise price of $1.00 per share in exchange for a nonrefundable retainer for services, valued using the Black-Scholes method, at approximately $0.06 million. The value of the warrants is being recognized as expense over the term of the agreement. The Tailwinds warrants are exercisable immediately after issuance, expire March 16, 2023, and are subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock. The shares underlying the warrant were registered for resale on a registration statement that was declared effective on April 28, 2020 (File No. 333-237762). On June 8, 2020, we entered into an agreement with a third party to provide media advisory services. As consideration for services provided under the term of the agreement, which extended through December 31, 2020, we issued 30,000 shares of unregistered common stock for a nonrefundable retainer for services valued at approximately $0.01 million. The value of the stock issued was recognized as a consulting expense over the term of the agreement. We are not obligated to register the shares for resale. On October 30, 2020, we entered into a consulting services agreement with a third-party to provide shareholder relations services. As consideration for services provided under the twelve-month consultants as share-based compensation. See “Non-Employee Compensation” in Note 14. Common Stock Warrants As of September 30, 2021, we had outstanding warrants for the purchase of up to 9.8 million shares of our common stock. The estimated grant date fair value of these warrants of $2.8 million is included in additional paid-in capital in our condensed consolidated balance sheets. As of September 30, 2021, our outstanding warrants have an average exercise price of $0.73 per share and a weighted average remaining life of approximately 3.2 years.

term of the agreement, we issued 70,000 shares of unregistered common stock for a non-refundable retainer for services valued at approximately $0.02 million. The agreement included a CPR to receive up to $0.02 million from patent-related proceeds. The CPR was recorded as debt at its estimated fair value of approximately $0.1 million (see “unsecured contingent payment obligations” in Note 9). During the year ended December 31, 2020, we issued an aggregate of 100,000 shares of our unregistered common stock, valued at approximately $0.05 million, as compensation for shareholder awareness services provided by a third party. The agreement provides for future issuances of 50,000 shares for up to two successive three-month periods over the term of the agreement, unless the services are terminated in accordance with the agreement. In January 2021, we issued 50,000 shares valued at approximately $0.03 million as the third quarterly payment under this agreement. Common Stock WarrantsAs of December 31, 2020 and 2019, we had outstanding warrants for the purchase of up to 12.9 million shares and 12.2 million shares of our common stock, respectively. The estimated grant date fair value of these warrants of $1.7 million and $1.3 million at December 31, 2020 and 2019, respectively, is included in shareholders’ deficit in our consolidated balance sheets. As of December 31, 2020, our outstanding warrants have an average exercise price of $0.45 per share and a weighted average remaining life of approximately three years. Shareholder Protection Rights AgreementOn November 20, 2020, we adopted a second amendment to our Shareholder Protection Rights Agreement (“Rights Agreement”) dated November 21, 2005, as amended. The amendment extends the expiration date of the Rights Agreement from November 20, 2020 to November 20, 2023 and decreases the exercise price of the rights from $14.50 to $8.54. The Rights Agreement provided for the issuance, on November 29, 2005, as a dividend, rights to acquire fractional shares of Series E Preferred Stock. We did not assign any value to the dividend, as the value of these rights is not believed to be objectively determinable. The principal objective of the Rights Agreement is to cause someone interested in acquiring us to negotiate with our Board rather than launch an unsolicited or hostile bid. The Rights Agreement subjects a potential acquirer to substantial voting and economic dilution. Each share of common stock issued by ParkerVision will include an attached right. The rights initially are not exercisable and trade with the common stock of ParkerVision. In the future, the rights may become exchangeable for shares of Series E 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 us more costly to the potential acquirer. The rights may separate from the common stock following the acquisition of 15% or more of the outstanding shares of common stock by an acquiring person. Upon separation, the holder of the rights may exercise their right at an exercise price of $8.54 per right (the “Exercise Price”), subject to adjustment and payable in cash. Upon payment of the Exercise Price, the holder of the right 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 Rights Agreement also has a flip over provision allowing 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, at 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 ten-thousandth of a share of Series E Preferred Stock for each share of common stock. The Series E Preferred Stock, if and when issued, will have quarterly cumulative dividend rights payable when and as declared by the Board, liquidation, dissolution and winding up preferences, voting rights and will rank junior to other securities of ParkerVision unless otherwise determined by the Board. The rights may be redeemed upon approval of the Board at a redemption price of $0.01. As of December 31, 2020, there are no Series E preferred shares outstanding.

Share-Based Compensation	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Share-Based Compensation [Abstract]		
Share-Based Compensation	14. Share-Based Compensation There has been no material change in the assumptions used to compute the fair value of our equity awards, nor in the method used to account for share-based compensation from those stated in our 2020 Annual Report. For the three and nine months ended September 30, 2021, we recognized share-based compensation expense of approximately $0.75 million and $2.57 million, respectively. Share-based compensation is included in selling, general and administrative expenses in the accompanying condensed, consolidated statements of comprehensive loss. As of September 30, 2021, there was $3.7 million of total unrecognized compensation cost related to all non-vested share-based compensation awards. The cost is expected to be recognized over a weighted-average remaining life of approximately 1.25 years. During the nine months ended September 30, 2021, our board of directors ("Board") amended our 2019 Long-Term Incentive Plan ("the 2019 Plan") to increase the number of shares of common stock reserved for issuance under the 2019	14. SHARE-BASED COMPENSATION The following table presents share-based compensation expense included in our consolidated statements of comprehensive loss for the years ended December 31, 2020 and 2019, respectively (in thousands): 2020 2019Research and development expense$ - $ 5 Selling, general, and administrative expense 1,244 584 Total share-based compensation expense$ 1,244 $ 589 We did not capitalize any expense related to share-based payments. As of December 31, 2020, there was $0.36 million of total unrecognized compensation cost related to all non-vested share-based compensation awards. That cost is expected to be recognized over a weighted-average period of approximately 0.5 years. Stock Incentive Plans2019 Long-Term Incentive Equity PlanWe adopted a long-term incentive equity plan in August 2019 that provides for the grant of stock-based awards to employees, officers, directors and consultants, not to exceed 12.0 million shares of common stock (the "2019 Plan"). The 2019 Plan provides for benefits in the form of nonqualified stock options, stock appreciation rights, restricted stock awards, and other stock based awards. Forfeited and expired options under the 2019 Plan become available for reissuance. The plan provides that non-employee directors may not be granted awards that exceed the lesser of 1.0 million shares or $175,000 in value, calculated based on grant-date fair value. At December 31, 2020, 155,000 shares of common stock were available for future grants under the 2019 Plan. The 2019 Plan was amended in January 2021 (see Note 17). 2011 Long-Term Incentive Equity PlanWe adopted a long-term incentive equity plan in September 2011 that, as amended in 2014, 2016 and 2017, provides for the grant of stock-based awards to employees, officers, directors and consultants, not to exceed 3.0 million shares of common stock (the "2011 Plan"). The 2011 Plan provides for benefits in the form of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, and other stock based awards. Forfeited and expired

Plan from 12 million to 27 million shares. The Board also approved awards under the 2019 Plan of 11.9 million nonqualified stock options to executives and other key employees and an aggregate of 1.1 million nonqualified stock options to non-employee directors. The options are exercisable at $0.54 per share, vest in eight equal quarterly installments commencing March 31, 2021, and expire on January 11, 2026. Non-Employee CompensationOn March 9, 2021, we granted approximately 32,000 shares under our 2019 Plan to a consultant for business communications services over a 1-year term valued at approximately $0.05 million. On August 10, 2021, we granted 150,000 shares under our 2019 Plan to a consultant for services over a 1-year term valued at approximately $0.2 million. The value of the shares issued will be recognized as consulting expense over the terms of the agreements.

options under the 2011 Plan become available for reissuance. The plan provides that no participant may be granted awards in excess of 150,000 shares in any calendar year. At December 31, 2020, 25,627 shares of common stock were available for future grants under the 2011 Plan. 2008 Equity Incentive PlanWe adopted an equity incentive plan in August 2008 (the "2008 Plan"). The 2008 Plan provides for the grant of stock-based awards to employees (excluding named executives), directors and consultants, not to exceed 50,000 shares of common stock. The 2008 Plan provides for benefits in the form of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, and other stock based awards. Forfeited and expired options under the 2008 Plan become available for reissuance. The plan provides that no participant may be granted awards in excess of 5,000 shares in any calendar year. At December 31, 2020, 20,473 shares of common stock were available for future grants under the 2008 Plan. Restricted Stock AwardsRSAs are issued as executive and employee incentive compensation and as payment for services to others. The value of the award is based on the closing price of our common stock on the date of grant. RSAs are generally immediately vested. Restricted Stock UnitsRSUs are issued as incentive compensation to executives, employees, and non-employee directors. Each RSU represents a right to one share of our common stock, upon vesting. The RSUs are not entitled to voting rights or dividends, if any, until vested. RSUs generally vest over a one to three year period for employee awards and a one year period for non-employee director awards. The fair value of RSUs is generally based on the closing price of our common stock on the date of grant and is amortized to share-based compensation expense over the estimated life of the award, generally the vesting period. RSAs and RSUs The following table presents a summary of RSA and RSU activity under the 2000, 2008, 2011, and 2019 Plans (collectively, the "Stock Plans") as of December 31, 2020 (shares in thousands): Non-vested Shares Shares Weighted-AverageGrant Date Fair ValueNon-vested at beginning of year - $ -Granted 1,016 0.31 Vested (829) 0.31 Forfeited - -Non-vested at end of year 187 $ 0.33 The total fair value of RSAs and RSUs vested under the Stock Plans for the year ended

December 31, 2020 was approximately $0.3 million. Stock OptionsStock options are issued as incentive compensation to executives, employees and non-employee directors. Stock options are generally granted with exercise prices at or above fair market value of the underlying shares at the date of grant. The fair value of options granted is estimated using the Black-Scholes option pricing model. Generally, fair value is determined as of the grant date. Options for employees, including executives and non-employee directors, are generally granted under the Stock Plans. The following table presents a summary of option activity under the Stock Plans for the year ended December 31, 2020 (shares in thousands): Shares Weighted-AverageExercise Price Weighted-AverageRemainingContractual Term AggregateIntrinsicValue ($)Outstanding at beginning of year 11,410 $ 0.33 Granted 843 0.31 Exercised - - Forfeited/Expired (13) 38.86 Outstanding at end of year 12,240 0.28 5.5 years $ 3,401Vested at end of year 9,490 $ 0.31 5.5 years $ 2,578 The weighted average per share fair value of options granted during the years ended December 31, 2020 and 2019 was $0.27 and $0.14, respectively. The total fair value of option shares vested was $0.9 million and $0.5 million for the year ended December 31, 2020 and 2019, respectively. The fair value of option grants under the Stock Plans for the years ended December 31, 2020 and 2019, respectively, was estimated using the Black-Scholes option-pricing model with the following assumptions: Year ended December 31, 2020 2019Expected option term 15 years 5 yearsExpected volatility factor 2127.4% to 135.3% 119.1%Risk-free interest rate 30.33% to 1.63% 1.6%Expected annual dividend yield0% 0% 1 The expected term was generally determined based on historical activity for grants with similar terms and for similar groups of employees and represents the period of time that options are expected to be outstanding. For employee options, groups of employees with similar historical exercise behavior are considered separately for valuation purposes. 2 The stock volatility for each grant is measured using the weighted average of historical daily price changes of our common stock over the most recent period equal to the expected option life of the grant.3 The risk-free interest rate for periods equal to the expected term of the share option is based on the U.S. Treasury yield curve in effect at the measurement date. Options by Price RangeThe options outstanding at December 31, 2020 under all plans have exercise price ranges, weighted average contractual lives, and weighted average exercise prices as follows (weighted average lives in years and shares in thousands): Options Outstanding Options VestedRange of Exercise Prices Number Outstanding at December 31, 2020 Wtd. Avg. Exercise Price Wtd. Avg. Remaining Contractual Life Number Exercisable at December 31, 2020 Wtd. Avg. Exercise Price Wtd. Avg. Remaining Contractual Life$0.171 - $0.33 11,318 $ 0.18 5.6 8,624 $ 0.18 5.6$0.50 - $0.60 513 0.59 5.0 457 0.60 4.8$1.98 - $2.13 381 2.02 3.4 381 2.02 3.4$13.80 28 13.80 0.5 28 13.80 0.5 12,240 $ 0.28 5.5 9,490 $ 0.31 5.5 Upon exercise of options under all plans, we issue new shares of our common stock. For shares issued upon exercise of equity awards granted under the Stock Plans, the shares of common stock are registered. For shares issued upon exercise of non-plan awards, the shares are not registered unless they have been subsequently registered by us on a registration statement. We had no option exercises for the years ended December 31, 2020 or 2019.

Related Party Transactions	12 Months Ended Dec. 31, 2020
Related Party Transactions [Abstract]	
Related Party Transactions	15. RELATED PARTY TRANSACTIONS We paid approximately $0.01 million and $0.02 million in 2020 and 2019, respectively, for patent-related legal services to SKGF, of which Robert Sterne, one of our directors since September 2006, is a partner. In addition, we paid approximately $0.1 million in 2020 for principal and interest on the SKGF Note (refer to “Note Payable to a Related Party” included Note 9). No payments were made in 2019 on the SKGF Note. The SKGF Note has an outstanding balance, including accrued interest, of approximately $0.8 million at December 31, 2020. In January 2020, we issued 500,000 in unregistered shares of our common stock as an in-kind payment of approximately $0.08 million in outstanding amounts payable to Stacie Wilf, sister to Jeffrey Parker.

Concentrations Of Credit Risk	12 Months Ended Dec. 31, 2020
Concentrations Of Credit Risk [Abstract]	
Concentrations Of Credit Risk	16. CONCENTRATIONS OF CREDIT RISK Financial instruments that potentially subject us to a concentration of credit risk principally consist of cash and cash equivalents. Cash and cash equivalents are primarily held in bank accounts and overnight investments. At times our cash balances on deposit with banks may exceed the balance insured by the F.D.I.C.

Subsequent Events	12 Months Ended Dec. 31, 2020
Subsequent Events [Abstract]	
Subsequent Events	17. SUBSEQUENT EVENTS Equity and Debt FinancingsIn January 2021, we consummated the sale, on a private placement basis, of 2,976,430 shares of our common stock at a price of $0.35 per share to accredited investors for aggregate proceeds of approximately $1.0 million. The securities purchase agreements include contingent payment rights identical to the CPRs issued in 2020 (see “unsecured contingent payment obligations” at Note 9). Approximately $0.4 million in proceeds for this transaction was received as of December 31, 2020 and recorded as an accrued liability until the consummation of the transaction (see Note 7). We entered into registration rights agreements with the investors pursuant to which we will register the shares. We have committed to file the registration statement by April 15, 2021 and to cause the registration statement to become effective by June 30, 2021. The registration rights agreements provide for liquidated damages upon the occurrence of certain events including failure by us to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or approximately $0.06 million. In March 2021, we consummated the sale, on a private placement basis of 3,230,942 shares of our common stock and 1,619,289 warrants at a price of $1.29 per common share to accredited investors for aggregate proceeds of approximately $4.2 million. The warrants have an exercise price of $1.75 per share and expire in March 2026. We entered into registration rights agreements with the investors pursuant to which we will register the shares. We have committed to file the registration statement within 30 days and to cause the registration statement to become effective within 90 days. The registration rights agreements provide for liquidated damages upon the occurrence of certain events including failure by us to file the registration statement or cause it to become effective by the deadlines set forth above. The amount of the liquidated damages is 1.0% of the aggregate subscription upon the occurrence of the event, and monthly thereafter, up to a maximum of 6%, or approximately $0.25 million. The majority of the proceeds from this transaction were used to satisfy our obligations to Mintz (see “Mintz Agreement” below). Share Based Compensation ArrangementsOn January 11, 2021, the Board amended the 2019 Long-Term Incentive Plan to increase the number of shares of common stock reserved for issuance under the 2019 Plan from 12 million to 27 million shares. The Board also approved grants, under the 2019 Plan, of two-year options, with an exercise price of $0.54 per share, vesting in 8 equal quarterly installments commencing on March 31, 2021 and expiring on January 11, 2026. The grants under the 2019 Plan included an option to purchase 8,000,000 shares granted to Jeffrey Parker, an option to purchase 1,000,000 shares granted to Cynthia French, an option to purchase 380,000 shares to each of the three non-employee directors, and options to purchase an aggregate of 2,900,000 shares granted to other key employees. On January 25, 2021, we amended our business consulting and retention agreement with Chelsea to increase the compensation

for services over the remaining term and to extend the term of the agreement through February 2024. As consideration for the amended agreement, we issued 500,000 shares of unregistered common stock in exchange for a nonrefundable retainer for services valued at approximately $0.33 million. The value of the stock issued is being recognized as consulting expense over the term of the agreement. On March 9, 2021, we granted approximately 32,000 shares under our 2019 Long-Term Incentive Plan to a consultant for business communications services over a one-year term valued at approximately $0.05 million. Warrant and Option ExercisesDuring the three months ended March 31, 2021, we received aggregate proceeds of $0. 4 million from the exercise of outstanding options and warrants at an average exercise price of $0.16 per share. Mintz AgreementAs of December 31, 2020, we had approximately $3.1 million in accounts payable to Mintz and an outstanding balance of approximately $0.03 million on a secured note payable to Mintz for legal fees and expenses. In addition, we had approximately $3.6 million in disputed legal fees and expenses billed by Mintz that we treated as a loss contingency that was not probable as of December 31, 2020 and 2019 and accordingly, for which we recognized no expense in the consolidated financial statements. In March 2021, we entered into an agreement with Mintz to satisfy our outstanding obligations and reduce any future contingency fees payable to Mintz. On March 29, 2021, we paid Mintz a lump-sum payment of $3.0 million in satisfaction of our outstanding obligations to Mintz including the Mintz note, our accounts payable to Mintz, and all disputed and unrecorded billings. Mintz waived all past defaults on the Mintz note and agreed to a significant reduction in future success fees payable to Mintz from patent-related proceeds. Legal ProceedingsOn March 26, 2021, the district court in the Middle District of Florida, Orlando Division, issued an order that, among other things, postponed our trial date in ParkerVision v. Qualcomm citing backlog due to the pandemic as a factor. A new trial date has not yet been set but is unlikely to be scheduled prior to November or December 2021 according to the court.

Accounting Policies (Policy)	12 Months Ended Dec. 31, 2020
Accounting Policies [Abstract]	
Basis of Presentation	Basis of PresentationOur consolidated financial statements are prepared in accordance with generally accepted accounting principles in the U.S. ("GAAP"). Certain reclassifications have been made to prior period amounts to conform to the current period presentation. The consolidated financial statements include the accounts of ParkerVision, Inc. and our wholly-owned German subsidiary, ParkerVision GmbH, after elimination of all intercompany transactions and accounts.
Use of Estimates in the Preparation of Financial Statements	Use of Estimates in the Preparation of Financial Statements The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. The more significant estimates made by us include projected future cash flows and risk-adjusted discount rates for estimating the fair value of our contingent payment obligations, the volatility and estimated lives of share-based awards used in the estimate of the fair market value of share-based compensation, the assessment of recoverability of long-lived assets, the amortization periods for intangible and long-lived assets, and the valuation allowance for deferred taxes. Actual results could differ from the estimates made. We periodically evaluate estimates used in the preparation of the financial statements for continued reasonableness. Appropriate adjustments, if any, to the estimates used are made prospectively based upon such periodic evaluation.
Cash and Cash Equivalents	Cash and Cash EquivalentsWe consider cash and cash equivalents to include cash on hand, interest-bearing deposits, overnight repurchase agreements and investments with original maturities of three months or less when purchased.
Inventory	InventoryInventory is stated at the lower of actual cost, as determined under the first-in, first-out method, or estimated net realizable value. We review our inventory for estimated obsolescence or unmarketable inventory and write down inventory for the difference between cost and estimated market value based upon assumptions about future demand. Future demand is affected by market conditions, technological obsolescence, new products and strategic plans, each of which is subject to change. Due to the decision to discontinue Milo product sales in the fourth quarter of 2019, a full reserve was recorded against the remaining inventory on hand at December 31, 2019. All remaining inventory was disposed of during the year ended December 31, 2020.
Property and Equipment	Property and EquipmentProperty and equipment are stated at cost, less accumulated depreciation. Depreciation is determined using the straight-line method over the following estimated useful lives: Manufacturing and office equipment5-7 yearsLeasehold improvementsShorter of useful life or remaining life of leaseFurniture and fixtures7 yearsComputer equipment and software3-5 years The cost and accumulated depreciation of assets sold or retired are removed from their respective accounts, and any resulting net gain or loss is recognized in the accompanying consolidated statements of comprehensive loss. The carrying value of long-lived assets is reviewed on a regular basis for the

existence of facts, both internally and externally, that may suggest impairment. Recoverability of assets to be held and used is measured by comparing the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the assets exceeds its estimated undiscounted future net cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the assets.

Intangible Assets	Intangible AssetsWe capitalize outside legal costs and agency filing fees incurred in connection with securing the rights to our intellectual property. Patents, copyrights and other intangible assets are amortized using the straight-line method over their estimated period of benefit. We estimate the economic lives of our patents and copyrights to be fifteen to twenty years. Management evaluates the recoverability of intangible assets periodically and takes into account events or circumstances that may warrant revised estimates of useful lives or that may indicate impairment exists. As part of our ongoing patent maintenance program, we will, from time to time, abandon a particular patent if we determine fees to maintain the patent exceed its expected recoverability. The cost and accumulated amortization of abandoned intangible assets are removed from their respective accounts, and any resulting net loss is recognized in selling, general and administrative expenses in the accompanying consolidated statements of comprehensive loss.
Contingent Payment Obligations	Contingent Payment ObligationsWe have accounted for our secured and unsecured contingent payment obligations as long-term debt in accordance with Accounting Standards Codification ("ASC") 470-10-25, "Sales of Future Revenues or Various other Measures of Income." Our payment obligations are contingent upon the receipt of proceeds from patent enforcement and/or patent monetization actions. We have elected to measure our contingent payment obligations at their estimated fair values in accordance with ASC 825, "Financial Instruments" based on the variable and contingent nature of the repayment provisions. We have determined that the fair value of our secured and unsecured contingent payment obligations falls within Level 3 in the fair value hierarchy, which involves significant estimates, and assumptions including projected future patent-related proceeds and the risk-adjusted rate for discounting future cash flows (see Note 10). Actual results could differ from the estimates made. Changes in fair value, including the component related to imputed interest, are included in the accompanying consolidated statements of comprehensive loss under the heading "Change in fair value of contingent payment obligations."
Leases	LeasesWe adopted ASC 842, "Leases" as of January 1, 2019 which requires the recognition of lease right-of-use ("ROU") assets and lease liabilities on our consolidated balance sheets for finance and operating leases with initial lease terms of more than 12 months. We elected to use the effective date as the initial application date. ASC 842 provides a number of practical expedients in transition and we elected the package of practical expedients which permits us not to reassess under the new standard our prior conclusions about lease identification, lease classification and treatment of initial direct costs. The adoption of this new standard resulted in the recognition of operating lease ROU assets and operating lease liabilities of approximately \$0.56 million and \$0.60 million, respectively, primarily related to our facilities leases. Refer to Note 8 for additional disclosures

related to our leases. At inception of a lease, we determine if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. Some of our lease arrangements contain lease components (e.g. minimum rent payments) and non-lease components (e.g. services). For certain equipment leases, we account for lease and non-lease components separately based on a relative fair market value basis. For all other leases, we account for the lease and non-lease components (e.g. common area maintenance) on a combined basis. For operating leases with terms greater than 12 months, we record the ROU asset and lease obligation at the present value of lease payments over the term using the implicit interest rate, when readily available, or our incremental borrowing rate for collateralized debt based on information available at the lease commencement date. Certain of our leases include rental escalation clauses, renewal options and/or termination options that are factored into our determination of lease payments when it is reasonably certain that the option will be exercised. We do not recognize ROU assets and lease liabilities for leases with terms at inception of twelve months or less. Finance leases are included in property and equipment and other accrued expenses on the consolidated balance sheets. Finance leases are recorded as an asset and an obligation at an amount equal to the present value of the minimum lease payments during the lease term. Amortization expense and interest expense associated with finance leases are included in selling, general, and administrative expense and interest expense, respectively, on the consolidated statements of comprehensive loss.

Convertible Debt	Convertible DebtWe have issued debt that is convertible, at the holder’s option, into shares of our common stock at fixed conversion prices. Certain of the convertible notes were issued with conversion prices that were below market value of our common stock on the closing date resulting in a beneficial conversion feature which we recorded to equity with a corresponding discount to the debt. The discount is amortized over the life of the notes as interest expense. In August 2020, the Financial Accounting Standards Board issued ASU 2020-06 "Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity." This ASU simplifies accounting for convertible instruments by removing major separation models required under current U.S. GAAP. Consequently, more convertible debt instruments will be reported as a single liability instrument with no separate accounting for embedded conversion features. The ASU removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, which will permit more equity contracts to qualify for the exception. The ASU also simplifies the diluted earnings per share (EPS) calculation in certain areas. The ASU is effective for fiscal years beginning after December 15, 2021 for accelerated filers and for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, for smaller reporting companies. Early adoption is permitted for fiscal years beginning after December 15, 2020. The ASU provides for a modified retrospective method of adoption whereby the guidance is applied to transactions outstanding at the beginning of the fiscal year of adoption with the cumulative effect of the change being recorded as an adjustment to beginning retained earnings. We plan to adopt ASU 2020-06, using

the modified retrospective method, as of January 1, 2021. Adoption of ASU 2020-06 will result in an increase to our long-term debt of approximately $0.8 million, a decrease in additional paid-in-capital of approximately $1.1 million, and an adjustment to our beginning retained deficit of $0.3 million resulting from the elimination of the previously recognized beneficial conversion feature as a debt discount.

Revenue Recognition

Revenue RecognitionWe account for revenue under ASC 606, “Revenue from Contracts with Customers” which implements a common revenue standard that clarifies the principles for recognizing revenue. This revenue recognition model provides a five-step analysis in determining when and how revenue is recognized. We expect to derive future revenue from licensing of our intellectual property and settlements from patent infringement disputes. The timing of revenue recognition and the amount of revenue recognized depends upon a variety of factors, including the specific terms of each arrangement and the nature of our deliverables and obligations. In general, we recognize revenue when the performance obligations to our customers have been met. The consideration received from patent license and settlement agreements is allocated to the various elements of the arrangement to the extent the revenue recognition differs between the elements of the arrangement. Elements related to past and future royalties as well as elements related to settlement will be recorded as revenue in our consolidated statements of comprehensive loss when our performance obligations related to each element have been met. For the year ended December 31, 2019, we recognized revenue from the sale of products. For product sales, the performance obligation is generally met at the time product is delivered to the customer. Estimated product returns are deducted from revenue and recorded as a liability. Revenue from the sale of our products includes shipping and handling charged to the customer. Product revenue is recorded net of sales tax collected from customers, discounts, and actual and estimated future returns.

Research and Development Expenses

Research and Development ExpensesResearch and development costs are expensed as incurred and include salaries and benefits for employees engaged in research and development activities, costs paid to third party contractors, prototype expenses, an allocated portion of facilities costs, maintenance costs for software development tools, and depreciation.

Accounting for Share-Based Compensation

Accounting for Share-Based CompensationWe have various share-based compensation programs which provide for equity awards including stock options, restricted stock units (“RSUs”) and restricted stock awards (“RSAs”). We calculate the fair value of employee share-based equity awards on the date of grant and recognize the calculated fair value as compensation expense over the requisite service periods of the related awards. We estimate the fair value of stock option awards using the Black-Scholes option valuation model. This valuation model requires the use of highly subjective assumptions and estimates including how long employees will retain their stock options before exercising them and the volatility of our common stock price over the expected life of the equity award. Such estimates, and the basis for our conclusions regarding such estimates, are outlined in detail in Note 14. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by persons who receive equity awards. We account for forfeitures of share-based awards as they occur. As of January 1, 2019, we adopted ASU 2018-07, "Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting." The amendments in this update simplify the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. At the time of adoption, we did not have any awards to nonemployees that would require reassessment and therefore the adoption of ASU 2018-07 did not impact our consolidated financial statements.

Income Taxes	Income TaxesThe provision for income taxes is based on loss before taxes as reported in the accompanying consolidated statements of comprehensive loss. Deferred tax assets and liabilities are recognized for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets when, based on available objective evidence, it is more likely than not that the benefit of such assets will not be realized. Our deferred tax assets exclude unrecognized tax benefits which do not meet a more-likely-than-not threshold for financial statement recognition for tax positions taken or expected to be taken in a tax return. As of January 1, 2019, we adopted ASU 2018-02, “Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.” The amendments in this update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. We have no stranded tax effects included in our other comprehensive loss and therefore the adoption of ASU 2018-02 did not impact our consolidated financial statements.
Loss per Common Share	Loss per Common ShareBasic loss per common share is determined based on the weighted-average number of common shares outstanding during each year. Diluted loss per common share is the same as basic loss per common share as all potential common shares are excluded from the calculation, as their effect is anti-dilutive. The number of shares underlying outstanding options, warrants, unvested RSUs, and convertible notes at December 31, 2020 and 2019 were as follows (in thousands): 2020 2019Options outstanding 12,240 11,410Warrants outstanding 12,850 12,150Unvested RSUs 187 -Shares underlying convertible notes 23,557 20,846 48,834 44,406 These potential shares were excluded from the computation of diluted loss per share as their effect would have been anti-dilutive.

Accounting Policies (Tables)	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Accounting Policies [Abstract]		
Schedule Of Property And Equipment Useful Lives		Manufacturing and office equipment5-7 yearsLeasehold improvementsShorter of useful life or remaining life of leaseFurniture and fixtures7 yearsComputer equipment and software3-5 years
Summary Of Anti-Dilutive Shares	September 30, 2021 2020Options outstanding 23,724 12,248Warrants outstanding 9,819 13,850Unvested RSUs - 291Shares underlying convertible notes 20,757 23,807 54,300 50,196	2020 2019Options outstanding 12,240 11,410Warrants outstanding 12,850 12,150Unvested RSUs 187 -Shares underlying convertible notes 23,557 20,846 48,834 44,406

Loss Per Common Share (Tables)	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Loss Per Common Share [Abstract]		
Summary Of Anti-Dilutive Shares	September 30, 2021 2020Options outstanding 23,724 12,248Warrants outstanding 9,819 13,850Unvested RSUs - 291Shares underlying convertible notes 20,757 23,807 54,300 50,196	2020 2019Options outstanding 12,240 11,410Warrants outstanding 12,850 12,150Unvested RSUs 187 -Shares underlying convertible notes 23,557 20,846 48,834 44,406

Inventories (Tables)	12 Months Ended Dec. 31, 2020
Inventories [Abstract]	
Schedule Of Inventory Reserves	2020 2019Inventory reserves at beginning of year $ 550 $ 982 Impairment charges - 6 Write down of impaired inventories - (438)Disposal of inventory (550) -Inventory reserves at end of year $ - $ 550

Prepaid Expenses (Tables)	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Prepaid Expenses [Abstract]		
Schedule Of Prepaid Expenses	September 30, December 31, 2021 2020Prepaid services $ 640 $ 408Prepaid bonds for German statutory costs - 142Prepaid insurance 32 21Prepaid licenses, software tools and support 19 11Other prepaid expenses 16 17 $ 707 $ 599	2020 2019Prepaid services$ 408 $ 221Prepaid bonds for German statutory costs 142 188Prepaid insurance 21 62Prepaid licenses, software tools and support 11 17Other prepaid expenses 17 17 $ 599 $ 505

Property And Equipment, Net (Tables)	12 Months Ended Dec. 31, 2020
Property And Equipment, Net [Abstract]	
Schedule Of Property And Equipment, Net	2020 2019Equipment and software$ 218 $ 260Leasehold improvements 19 33Furniture and fixtures 30 43 267 336Less accumulated depreciation (237) (266) $ 30 $ 70

Intangible Assets (Tables)	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Intangible Assets [Abstract]		
Schedule Of Intangible Assets	September 30, December 31, 2021 2020Patents and copyrights $ 14,826 $ 14,948Accumulated amortization (12,939) (12,778) $ 1,887 $ 2,170	2020 2019 Patents and copyrights$ 14,948 $ 16,612Less accumulated amortization (12,778) (13,734) $ 2,170 $ 2,878
Schedule Of Future Amortization Expense		2021$ 3582022 3212023 2832024 2702025 2312026 and thereafter 707Total$ 2,170

Accrued Liabilities (Tables)	12 Months Ended Dec. 31, 2020
Accrued Liabilities [Abstract]	
Other Accrued Expenses	2020 2019Advances$ 882 $ 500Board compensation - 413 Other accrued expenses 54 168 $ 936 $ 1,081

Leases (Tables)	12 Months Ended Dec. 31, 2020
Leases [Abstract]	
Supplemental Cash Flow Information	Year Ended Year Ended December 31, December 31, 2020 2019Cash paid for amounts included in the measurement of lease liabilities: Operating cash flows from operating leases $ 315 $ 314 Operating cash flows from finance leases - - Financing cash flows from finance leases - 1 Non-cash activity Right-of-use assets obtained in exchange for operating lease liabilities - 563Assets obtained in exchange for finance lease liabilities - -
Supplemental Information	December 31, December 31, 2020 2019Weighted-average remaining lease term (in years): Operating leases 1.7 2.7 Finance leases - 0.3 Weighted average discount rate Operating leases (1) 12.1% 12.0% Finance leases - 8.7% (1)Upon adoption of the new lease standard, discount rates used for existing leases were established at January 1, 2019.
Future Maturities of Lease Liabilities	Operating Leases Finance Leases2021 $ 175 $ -2022 166 -2023 4 -Thereafter - -Total undiscounted lease payments 345 -Less: imputed interest (40) -Present value of lease liabilities 305 -Less: current obligations under leases (146) -Long-term lease obligations $ 159 $ -

Debt (Tables)	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Debt Instrument [Line Items]		
Schedule Of Notes Payable	Fixed Principal Outstanding as of Conversion Interest September 30, December 31,Description Rate Rate Maturity Date 2021 2020Convertible notes dated September 10, 2018 $0.40 8.0% September 7, 2023 $ 200 $ 600Convertible note dated September 19, 2018 $0.57 8.0% September 19, 2023 425 425Convertible notes dated February/March 2019 $0.25 8.0% February 28, 2024 to March 13, 2024 850 1,300Convertible notes dated June/ July 2019 $0.10 8.0% June 7, 2024 to July 15, 2024 340 340Convertible notes dated July 18, 2019 $0.08 7.5% July 18, 2024 700 700Convertible notes dated September 13, 2019 $0.10 8.0% September 13, 2024 50 50Convertible notes dated January 8, 2020 $0.13 8.0% January 8, 2025 450 450Total principal balance 3,015 3,865Less Unamortized discount - 847 $ 3,015 $ 3,018	
Summary Of Aggregate Maturities		2021$ 191 2022 832 Total$ 1,023
Schedule Of Convertible Notes Payable		Fixed Effective Conversion Interest December 31,Description Rate Rate 1 Maturity Date 2020 2019Convertible notes dated September 10, 2018 $0.40 23.4% September 7, 2023 $ 600 $ 700 Convertible notes dated September 19, 2018 $0.57 10.2% September 19, 2023 425 425 Convertible notes dated February/March 2019 $0.25 8.0% February 28, 2024 to March 13, 2024 1,300 1,300 Convertible notes dated June/July 2019 $0.10 8.0% June 7, 2024 to July 15, 2024 340 390 Convertible notes dated July 18, 2019 $0.08 46.1% July 18, 2024 700 700 Convertible notes dated September 13, 2019 $0.10 25.9% September 13, 2024 50 50 Convertible notes dated January 8, 2020 $0.13 20.3% January 8,

		2025 450 -Total principal balance 3,865 3,565 Less unamortized discount 847 832 $ 3,018 $ 2,733
Secured Debt [Member]		
Debt Instrument [Line Items]		
Reconciliation Of Secured And Unsecured Contingent Obligation At Fair Value	Nine Months EndedSeptember 30, 2021 Year EndedDecember 31, 2020Secured contingent payment obligation, beginning of period $ 33,057 $ 26,651Change in fair value 2,883 6,406Secured contingent payment obligation, end of period $ 35,940 $ 33,057	2020 2019Secured contingent payment obligation, beginning of year $ 26,651 $ 25,557 Change in fair value 6,406 1,094 Secured contingent payment obligation, end of year $ 33,057 $ 26,651
Unsecured Debt [Member]		
Debt Instrument [Line Items]		
Reconciliation Of Secured And Unsecured Contingent Obligation At Fair Value	Nine Months EndedSeptember 30, 2021 Year EndedDecember 31, 2020Unsecured contingent payment obligations, beginning of period $ 5,222 $ -Reclassification of other liabilities - 1,003Issuance of contingent payment rights 412 2,258Change in fair value 113 1,961Unsecured contingent payment obligations, end of period $ 5,747 $ 5,222	2020 2019Unsecured contingent payment obligations, beginning of period $ - $ -Reclassification of other liabilities 1,003 -Issuance of contingent payment rights 2,258 -Change in fair value 1,961 -Unsecured contingent payment obligations, end of period $ 5,222 $ -

Fair Value Measurements (Tables)	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Fair Value Measurements [Abstract]		
Schedule Of Assets And Liabilities Measured At Fair Value On A Recurring Basis	Fair Value Measurements Total Fair Value QuotedPricesin ActiveMarkets(Level 1) SignificantOtherObservableInputs(Level 2) SignificantUnobservableInputs(Level 3)September 30, 2021: Liabilities: Secured contingent payment obligation $ 35,940 $ - $ - $ 35,940Unsecured contingent payment obligations 5,747 - - 5,747 Fair Value Measurements Total Fair Value QuotedPricesin ActiveMarkets(Level 1) SignificantOtherObservableInputs(Level 2) SignificantUnobservableInputs(Level 3)December 31, 2020: Liabilities: Secured contingent payment obligation $ 33,057 $ - $ - $ 33,057Unsecured contingent payment obligations $ 5,222 $ - $ - $ 5,222	Fair Value Measurements Total Quoted Prices inActive Markets(Level 1) Significant OtherObservableInputs (Level 2) SignificantUnobservableInputs (Level 3)December 31, 2020: Liabilities: Secured contingent payment obligation$ 33,057 $ - $ - $ 33,057Unsecured contingent payment obligations 5,222 - - 5,222 December 31, 2019: Liabilities: Secured contingent payment obligation 26,651 - - 26,651
Quantitative Information	Secured Contingent Payment Obligation Unsecured Contingent Payment ObligationsUnobservable Inputs Low Weighted Average High Low Weighted Average High Estimated undiscounted cash outflows (in millions) $0.0 $50.2 $76.8 $0.0 $8.1 $10.8Duration (in years) 0.3 2.5 3.3 1.3 2.5 3.3Estimated probabilities 0% 21% 25% 25% 25% 25%	Secured Contingent Payment Obligation Unsecured Contingent Payment ObligationsUnobservable Inputs Low Weighted Average High Low Weighted Average High Estimated undiscounted cash outflows (in millions) $0.0 $46.1 $70.2 $0.0 $7.3 $9.7Duration (in years) 1.0 2.5 3.5 1.0 2.5 3.5Estimated probabilities 5% 23% 25% 25% 25% 25%

Income Taxes And Tax Status (Tables)	12 Months Ended Dec. 31, 2020
Income Taxes And Tax Status [Abstract]	
Schedule Of Effective Income Tax Rate Reconciliation	2020 2019Tax benefit at statutory rate$ (4,111) $ (1,985)State tax benefit (842) (407)Increase in valuation allowance 4,307 2,341Other 646 51 $ - $ -
Schedule Of Deferred Tax Assets And Liabilities	2020 2019Gross deferred tax assets: Net operating loss carry-forward$ 80,848 $ 83,865Research and development credit carry-forward 6,603 7,608Stock compensation 122 (28)Patents and other 1,466 1,479Contingent payment obligations 5,235 3,119Inventories - 139Fixed assets 54 3Accrued liabilities 64 200Lease liabilities 77 142Other - 3 94,469 96,530Less valuation allowance (94,245) (96,320) 224 210Gross deferred tax liabilities: Convertible debt (224) (210) (224) (210)Net deferred tax asset$ - $ -
Schedule Of Unrecognized Tax Benefits Roll Forward	2020 2019Unrecognized tax benefits – beginning of year$ 927 $ 927 Unrecognized tax benefits – end of year$ 927 $ 927

Stock Authorization And Issuance (Tables)	12 Months Ended Dec. 31, 2020
Stock Authorization and Issuance [Abstract]	
Summary Of Equity Offerings	DateTransaction # of Common Shares/ Units Sold Average Price per Share/Unit # of Warrants Issued(in 000's) Average Exercise Price per Warrant Net Proceeds (1)January 2020Private placement of common stock 1,335 $0.13 - - $ 177February 2020Warrant amendment - - 5,000 $0.74 $ -March 2020Private placement of common stock, amended to add CPR 2,571 $0.35 - - $ 900April 2020 to December 2020Private placement of common stock with CPRs 10,858 $0.35 - - $ 3,724 (1)After deduction of applicable offering costs.

Share-Based Compensation (Tables)	12 Months Ended Dec. 31, 2020
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]	
Schedule Of Share-Based Compensation Expense Included In Statements Of Operations	2020 2019Research and development expense$ - $ 5 Selling, general, and administrative expense 1,244 584 Total share-based compensation expense$ 1,244 $ 589
Stock Options [Member]	
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]	
Summary Of Options Activity	Shares Weighted-AverageExercise Price Weighted-AverageRemainingContractual Term AggregateIntrinsicValue ($)Outstanding at beginning of year 11,410 $ 0.33 Granted 843 0.31 Exercised - - Forfeited/Expired (13) 38.86 Outstanding at end of year 12,240 0.28 5.5 years $ 3,401Vested at end of year 9,490 $ 0.31 5.5 years $ 2,578
Summary Of Valuation Assumptions	Year ended December 31, 2020 2019Expected option term 15 years 5 yearsExpected volatility factor 2127.4% to 135.3% 119.1%Risk-free interest rate 30.33% to 1.63% 1.6%Expected annual dividend yield0% 0% 1 The expected term was generally determined based on historical activity for grants with similar terms and for similar groups of employees and represents the period of time that options are expected to be outstanding. For employee options, groups of employees with similar historical exercise behavior are considered separately for valuation purposes. 2 The stock volatility for each grant is measured using the weighted average of historical daily price changes of our common stock over the most recent period equal to the expected option life of the grant.3 The risk-free interest rate for periods equal to the expected term of the share option is based on the U.S. Treasury yield curve in effect at the measurement date.
Summary Of Options And Warrants By Exercise Price Range	Options Outstanding Options VestedRange of Exercise Prices Number Outstanding at December 31, 2020 Wtd. Avg. Exercise Price Wtd. Avg. Remaining Contractual Life Number Exercisable at December 31, 2020 Wtd. Avg. Exercise Price Wtd. Avg. Remaining Contractual Life$0.171 - $0.33 11,318 $ 0.18 5.6 8,624 $ 0.18 5.6$0.50 - $0.60 513 0.59 5.0 457 0.60 4.8$1.98 - $2.13 381 2.02 3.4 381 2.02 3.4$13.80 28 13.80 0.5 28 13.80 0.5 12,240 $ 0.28 5.5 9,490 $ 0.31 5.5
Restricted Stock Award And Restricted Stock Unit [Member]	
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]	

Summary Of Restricted Stock Activity

Non-vested Shares Shares Weighted-AverageGrant Date Fair ValueNon-vested at beginning of year - $ -Granted 1,016 0.31 Vested (829) 0.31 Forfeited - -Non-vested at end of year 187 $ 0.33

Accounting Policies (Narrative) (Details) $ in Thousands	12 Months Ended Dec. 31, 2020 USD ($) segment	Sep. 30, 2021 USD ($)	Dec. 31, 2019 USD ($)
Significant Accounting Policies [Line Items]			
Operating segments | segment	1		
Reportable segments | segment	1		
Operating Lease, Liability	$ 40		
Long-term Debt	1,023		
Accumulated deficit	(421,361)	$ (430,059)	$ (401,783)
Operating Lease, Right-of-Use Asset	10	$ 8	283
Accounting Standards Update 2016-02 [Member]			
Significant Accounting Policies [Line Items]			
Operating Lease, Liability			600
Operating Lease, Right-of-Use Asset			$ 560
Accounting Standards Update 2020-06 [Member]			
Significant Accounting Policies [Line Items]			
Long-term Debt	800		
Accumulated deficit	(300)		
Additional Paid in Capital	$ (1,100)		
Licenses [Member] | Minimum [Member]			
Significant Accounting Policies [Line Items]			
Intangible assets, useful life	15 years		
Licenses [Member] | Maximum [Member]			
Significant Accounting Policies [Line Items]			
Intangible assets, useful life	20 years		

Accounting Policies (Schedule Of Property And Equipment Useful Lives) (Details)	12 Months Ended
	Dec. 31, 2020
Leasehold Improvements [Member]	
Property, Plant and Equipment [Line Items]	
Useful life	Shorter of useful life or remaining life of lease
Furniture And Fixtures [Member]	
Property, Plant and Equipment [Line Items]	
Useful life	7 years
Minimum [Member] | Manufacturing And Office Equipment [Member]	
Property, Plant and Equipment [Line Items]	
Useful life	5 years
Minimum [Member] | Computer Equipment And Software [Member]	
Property, Plant and Equipment [Line Items]	
Useful life	3 years
Maximum [Member] | Manufacturing And Office Equipment [Member]	
Property, Plant and Equipment [Line Items]	
Useful life	7 years
Maximum [Member] | Computer Equipment And Software [Member]	
Property, Plant and Equipment [Line Items]	
Useful life	5 years

Accounting Policies (Summary Of Anti-Dilutive Shares) (Details) - shares shares in Thousands	9 Months Ended		12 Months Ended	
	Sep. 30, 2021	Sep. 30, 2020	Dec. 31, 2020	Dec. 31, 2019
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares	54,300	50,196	48,834	44,406
Stock Options [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares	23,724	12,248	12,240	11,410
Warrants Outstanding [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares	9,819	13,850	12,850	12,150
Restricted Stock Units (RSUs) [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares		291	187	
Convertible Debt Securities [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares	20,757	23,807	23,557	20,846

Liquidity And Going Concern (Details) - USD ($) $ in Thousands	3 Months Ended			9 Months Ended		12 Months Ended	
	Sep. 30, 2021	Mar. 31, 2021	Sep. 30, 2020	Sep. 30, 2021	Sep. 30, 2020	Dec. 31, 2020	Dec. 31, 2019
Liquidity And Working Capital [Line Items]							
Net loss	$ (2,104)		$ (1,668)	$ (8,977)	$ (13,174)	$ (19,578)	$ (9,453)
Net cash used in operating activities				(6,920)	$ (4,182)	(4,777)	(3,373)
Accumulated deficit	(430,059)			(430,059)		(421,361)	(401,783)
Working capital						3,800	
Cash and cash equivalents	$ 760			760		$ 1,627	$ 57
Proceeds from sale of debt and equity securities				5,200			
Repayment of debt and accrued expenses				4,100			
Net Proceeds				$ 900			
Subsequent Event [Member]							
Liquidity And Working Capital [Line Items]							
Payment to settle outstanding accounts and notes payable for litigation costs		$ 3,000					
Proceeds from debt and equity securities and warrant and option exercises		$ 5,600					

Revenue (Details) - USD ($) $ in Thousands	3 Months Ended Sep. 30, 2021	9 Months Ended Sep. 30, 2021
Revenue [Abstract]		
Contract with Customer, Liability, Revenue Recognized	$ 140	$ 140

Loss Per Common Share (Details) - shares shares in Thousands	9 Months Ended		12 Months Ended	
	Sep. 30, 2021	Sep. 30, 2020	Dec. 31, 2020	Dec. 31, 2019
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares excluded from the computation of diluted loss per share	54,300	50,196	48,834	44,406
Stock Options [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares excluded from the computation of diluted loss per share	23,724	12,248	12,240	11,410
Warrants Outstanding [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares excluded from the computation of diluted loss per share	9,819	13,850	12,850	12,150
Restricted Stock Units (RSUs) [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares excluded from the computation of diluted loss per share		291	187	
Convertible Debt Securities [Member]				
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]				
Shares excluded from the computation of diluted loss per share	20,757	23,807	23,557	20,846

Inventories (Narrative) (Details) - USD ($) $ in Thousands	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Inventories [Abstract]			
Inventory Valuation Reserves		$ 550	$ 982

Inventories (Schedule Of Inventory Reserves) (Details) - USD ($) $ in Thousands	12 Months Ended	
	Dec. 31, 2020	Dec. 31, 2019
Inventories [Abstract]		
Inventory reserves at beginning of year	$ 550	$ 982
Impairment charges		6
Write down of impaired inventories		(438)
Disposal of inventory	(550)	
Inventory reserves at end of year		$ 550

Prepaid Expenses (Narrative) (Details) - USD ($) $ in Millions	9 Months Ended	12 Months Ended
	Sep. 30, 2021	Dec. 31, 2020
Prepaid Expenses [Abstract]		
Consulting services	$ 0.6	$ 0.1

Prepaid Expenses (Schedule Of Prepaid Expenses) (Details) - USD ($) $ in Thousands	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Prepaid Expenses [Abstract]			
Prepaid services	$ 640	$ 408	$ 221
Prepaid bonds for German statutory costs		142	188
Prepaid insurance	32	21	62
Prepaid licenses, software tools and support	19	11	17
Other prepaid expenses	16	17	17
Prepaid expenses	$ 707	$ 599	$ 505

Property And Equipment, Net (Narrative) (Details) - USD ($) $ in Thousands	12 Months Ended		
	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Property, Plant and Equipment [Line Items]			
Assets held for sale			$ (70)
Gain (loss) on sale of assets held for sale and impairment		$ (40)	
Corporate Headquarters [Member]			
Property, Plant and Equipment [Line Items]			
Gain (loss) on sale of assets held for sale	$ (20)	10	
Property And Equipment [Member]			
Property, Plant and Equipment [Line Items]			
Depreciation expense	$ 30	$ 40	

Property And Equipment, Net (Schedule Of Property And Equipment, Net) (Details) - USD ($) $ in Thousands	Dec. 31, 2020	Dec. 31, 2019
Property, Plant and Equipment [Line Items]		
Property and equipment	$ 267	$ 336
Less accumulated depreciation	(237)	(266)
Property, Plant and Equipment, Net, Total	30	70
Computer Equipment And Software [Member]		
Property, Plant and Equipment [Line Items]		
Property and equipment	218	260
Leasehold Improvements [Member]		
Property, Plant and Equipment [Line Items]		
Property and equipment	19	33
Furniture And Fixtures [Member]		
Property, Plant and Equipment [Line Items]		
Property and equipment	$ 30	$ 43

Intangible Assets (Narrative) (Details) - USD ($) $ in Millions	12 Months Ended	
	Dec. 31, 2020	Dec. 31, 2019
Intangible Assets [Abstract]		
Amortization expense	$ 0.4	$ 0.6
Loss on disposal	$ (0.3)	$ (0.4)

Intangible Assets (Schedule Of Intangible Assets) (Details) - USD ($) $ in Thousands	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Intangible Assets [Abstract]			
Patents and copyrights	$ 14,826	$ 14,948	$ 16,612
Accumulated amortization	(12,939)	(12,778)	(13,734)
Total	$ 1,887	$ 2,170	$ 2,878

Intangible Assets (Schedule Of Future Amortization Expense) (Details) - USD ($) $ in Thousands	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Intangible Assets [Abstract]			
2021		$ 358	
2022		321	
2023		283	
2024		270	
2025		231	
2026 and thereafter		707	
Total	$ 1,887	$ 2,170	$ 2,878

Accrued Liabilities (Narrative) (Details) - USD ($) $ in Thousands	Dec. 31, 2020	Dec. 31, 2019
Accrued Liabilities [Abstract]		
Amount Received From Investors	$ 400	
Board compensation		$ 413
Aggregate grant-date fair value	$ 100	

Accrued Liabilities (Other Accrued Expenses) (Details) - USD ($) $ in Thousands	Dec. 31, 2020	Dec. 31, 2019
Accrued Liabilities [Abstract]		
Advances	$ 882	$ 500
Board compensation		413
Other accrued expenses	54	168
Accrued Liabilities	$ 936	$ 1,081

Leases (Narrative) (Details) - USD ($) $ in Thousands	9 Months Ended	12 Months Ended	
	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Property Subject to or Available for Operating Lease [Line Items]			
Operating lease cost		$ 100	$ 400
Lease liability		40	
Operating Lease, Lease Income, Lease Payments	$ 20		
Corporate Office [Member] | Lake Mary Florida [Member]			
Property Subject to or Available for Operating Lease [Line Items]			
Impairment loss		$ 200	

Leases (Supplemental Cash Flow Information) (Details) - USD ($) $ in Thousands	12 Months Ended	
	Dec. 31, 2020	Dec. 31, 2019
Leases [Abstract]		
Operating cash flows from operating leases	$ 315	$ 314
Operating cash flows from finance leases		
Financing cash flows from finance leases		1
Right-of-use assets obtained in exchange for operating lease liabilities		563
Assets obtained in exchange for finance lease liabilities		

Leases (Supplemental Information) (Details)	Dec. 31, 2020	Dec. 31, 2019
Leases [Abstract]		
Operating Lease, Weighted Average Remaining Lease Term	1 year 8 months 12 days	2 years 8 months 12 days
Finance Lease, Weighted Average Remaining Lease Term		3 months 18 days
Operating Lease, Weighted Average Discount Rate, Percent	12.10%	12.00%
Finance Lease, Weighted Average Discount Rate, Percent		8.70%

Leases (Future Maturities of Lease Liabilities) (Details) - USD ($) $ in Thousands	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Lessee, Operating Lease, Liability, Payment, Due [Abstract]			
2021		$ 175	
2022		166	
2023		4	
Total undiscounted lease payments		345	
Less: imputed interest		(40)	
Present value of lease liabilities		305	
Less: current obligations under leases	$ (164)	(146)	$ (250)
Long-term lease obligations	$ 34	$ 159	$ 305

Debt (Narrative) (Details)		1 Months Ended		3 Months Ended		9 Months Ended		12 Months Ended		60 Months Ended	
	Mar. 29, 2021 USD ($)	Mar. 31, 2021 USD ($)	May 31, 2020 USD ($)	Sep. 30, 2021 USD ($)	Sep. 30, 2020 USD ($)	Sep. 30, 2021 USD ($) item shares	Sep. 30, 2020 USD ($)	Dec. 31, 2020 USD ($) item $ / shares shares	Dec. 31, 2019 USD ($) $ / shares shares	Dec. 31, 2020 USD ($) item $ / shares	Mar. 31, 2020 USD ($)
Debt Instrument [Line Items]											
Fair value of note payable								$ 900,000		$ 900,000	
Contingent Payment Obligation, Minimum Return						$ 47,200,000					
Contingent Payment Obligation, Maximum Obligation				$ 10,800,000		10,800,000		42,000,000.0		42,000,000.0	
Fair Value, Measurement with Unobservable Inputs Reconciliation, Recurring Basis, Liability, Gain (Loss) Included in Other Comprehensive Income (Loss)				$ (172,000)	$ (105,000)	$ (2,996,000)	$ (3,487,000)	(8,367,000)	$ (1,094,000)		
Brickell [Member]											
Debt Instrument [Line Items]											
Debt Instrument, Estimated Minimum Return								42,000,000	39,000,000		
Mintz [Member]											
Debt Instrument [Line Items]											
Repayments of Debt		$ 3,000,000.0									
Secured Debt [Member] | Brickell [Member]											
Debt Instrument [Line Items]											
Repayments of Debt										3,300,000	
Proceeds from debt								0	$ 0	18,000,000	
Secured Debt [Member] | Mintz [Member]											
Debt Instrument [Line Items]											
Repayments of Debt	$ 3,000,000.0										
Notes payable								3,100,000		3,100,000	
Unpaid fees and expenses								$ 3,600,000		$ 3,600,000	
Convertible Debt [Member]											
Debt Instrument [Line Items]											
Interest rate				12.00%		12.00%		8.00%		8.00%	
Interest expense						$ 200,000					
Outstanding principal converted						$ 850,000					
Shares issued | shares						2,800,000		710,000	1,600,000		
Aggregate common stock | item						215,000					
Debt, term						5 years					
Convertible Debt [Member] | Debt Instrument, Redemption, Period One [Member]											
Debt Instrument [Line Items]											
Principal prepayment						0.25%					

Convertible Debt [Member] | Debt Instrument, Redemption, Period Two [Member]					
Debt Instrument [Line Items]					
Principal prepayment		0.20%			
Convertible Debt [Member] | Debt Instrument, Redemption, Period Three [Member]					
Debt Instrument [Line Items]					
Principal prepayment		0.15%			
Convertible Debt [Member] | Debt Instrument, Redemption, Period Four [Member]					
Debt Instrument [Line Items]					
Principal prepayment		0.10%			
Note Payable To A Related Party [Member] | Unsecured Debt [Member] | Sterne, Kessler, Goldstein & Fox, PLLC [Member]					
Debt Instrument [Line Items]					
Debt			$ 800,000		$ 800,000
Interest expense			$ 30,000.00	$ 40,000.00	
Note Payable To A Related Party [Member] | Secured Debt [Member] | Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. [Member]					
Debt Instrument [Line Items]					
Interest rate			12.00%		12.00%
Repayments of Debt			$ 1,200,000		
Transfer of capital stock			50.00%		
Accrued interest			$ 30,000.00		$ 30,000.00
Notes payable			$ 3,100,000		$ 3,100,000
Promissory Notes [Member] | Unsecured Debt [Member] | Sterne, Kessler, Goldstein & Fox, PLLC [Member]					
Debt Instrument [Line Items]					
Debt	$ 700,000	$ 700,000			
Interest rate	4.00%	4.00%	4.00%		4.00%
Debt payment per month		$ 10,000	$ 10,000		
Final balloon payment			$ 680,000		$ 680,000
Maturity date			Apr. 30, 2022		
Promissory Notes [Member] | Convertible Debt [Member]					
Debt Instrument [Line Items]					
Proceeds from debt			$ 450,000	2,440,000	
Beneficial conversion feature			170,000	550,000	
Interest expense			470,000	320,000	
Amortization			170,000	120,000	
Contractual interest			300,000	200,000	
Outstanding principal converted			$ 150,000	$ 100,000	
Shares issued | shares			750,000	250,000	
Conversion price | $ / shares			$ 0.20	$ 0.40	$ 0.20

Aggregate common stock	item	23,600,000		
Debt, term	5 years		
Promissory Notes [Member]	Convertible Debt [Member]	Measurement Input, Prepayment Rate [Member]	Debt Instrument, Redemption, Period One [Member]			
Debt Instrument [Line Items]			
Measurement input	item	0.25		0.25
Promissory Notes [Member]	Convertible Debt [Member]	Measurement Input, Prepayment Rate [Member]	Debt Instrument, Redemption, Period Two [Member]			
Debt Instrument [Line Items]			
Measurement input	item	0.20		0.20
Promissory Notes [Member]	Convertible Debt [Member]	Measurement Input, Prepayment Rate [Member]	Debt Instrument, Redemption, Period Three [Member]			
Debt Instrument [Line Items]			
Measurement input	item	0.15		0.15
Promissory Notes [Member]	Convertible Debt [Member]	Measurement Input, Prepayment Rate [Member]	Debt Instrument, Redemption, Period Four [Member]			
Debt Instrument [Line Items]			
Measurement input	item	0.10		0.10
Promissory Notes [Member]	Convertible Debt [Member]	Measurement Input, Default Rate [Member]			
Debt Instrument [Line Items]			
Measurement input	item	0.12		0.12
Short Term Promissory Notes [Member]			
Debt Instrument [Line Items]			
Interest rate	20.00%		20.00%
Short Term Promissory Notes [Member]	Unsecured Debt [Member]			
Debt Instrument [Line Items]			
Repayments of Debt	$ 230,000		
Accrued interest	40,000.00		$ 40,000.00
Interest expense	$ 10,000.00	$ 30,000.00	
Shares issued	shares	1,740,426		
Convertible Debt, July 18, 2019 [Member]	Convertible Debt [Member]			
Debt Instrument [Line Items]			

Interest rate			7.50%		7.50%	
Contingent Payment Obligation [Member] | Unsecured Debt [Member]						
Debt Instrument [Line Items]						
Common stock issued			$ 3,800,000			
Termination payment			2,700,000		$ 2,700,000	$ 5,000,000.0
Contingent Payment Obligation [Member] | Unsecured Debt [Member] | Termination Fee [Member]						
Debt Instrument [Line Items]						
Fair value of payment obligation			600,000	400,000	600,000	
Measurement input			$ 600,000	$ 400,000	600,000	
Paycheck Protection Program Loan [Member]						
Debt Instrument [Line Items]						
Interest rate	1.00%					
Debt payment per month	$ 8,000					
Maturity date			May 03, 2022			
Proceeds from debt	$ 200,000					
Contingent Payment Rights [Member]						
Debt Instrument [Line Items]						
Common stock issued		1,000,000.0				
Proceeds from debt		$ 400,000				
Contingent Payment Rights [Member] | Unsecured Debt [Member]						
Debt Instrument [Line Items]						
Common stock issued			$ 1,800,000			
Proceeds from debt			900,000			
Fair value of payment obligation			2,500,000		2,500,000	
Measurement input			2,500,000		2,500,000	
Fair Value, Measurement with Unobservable Inputs Reconciliation, Recurring Basis, Liability, Gain (Loss) Included in Other Comprehensive Income (Loss)			400,000			
Contingent Payment Rights [Member] | Unsecured Debt [Member] | Measurement Input, Quotient [Member]						
Debt Instrument [Line Items]						
Fair value of payment obligation			10,000,000		10,000,000	
Measurement input			10,000,000		10,000,000	
Contingent Payment Rights [Member] | Unsecured Debt [Member] | Measurement Input, Investors Subscription [Member]						
Debt Instrument [Line Items]						

Fair value of payment obligation			10,000,000	10,000,000
Measurement input			10,000,000	10,000,000
Contingent Payment Rights [Member] | Unsecured Debt [Member] | Measurement Input, Investors Subscription, Aggregate [Member]				
Debt Instrument [Line Items]				
Fair value of payment obligation			4,700,000	4,700,000
Measurement input			$ 4,700,000	$ 4,700,000
Minimum [Member] | Brickell [Member]				
Debt Instrument [Line Items]				
Percentage of proceeds payment			55.00%	
Minimum [Member] | Contingent Payment Obligation [Member]				
Debt Instrument [Line Items]				
Percentage of proceeds payment		55.00%		
Maximum [Member] | Brickell [Member]				
Debt Instrument [Line Items]				
Percentage of proceeds payment			100.00%	
Maximum [Member] | Contingent Payment Obligation [Member]				
Debt Instrument [Line Items]				
Percentage of proceeds payment		100.00%		
Cumulative Effect, Period of Adoption, Adjustment [Member] | Convertible Debt [Member]				
Debt Instrument [Line Items]				
Beneficial conversion feature			$ 800,000	
Amortization			$ 300,000	
Significant Other Observable Inputs (Level 2) [Member] | Convertible Debt [Member]				
Debt Instrument [Line Items]				
Fair value of note payable	$ 2,400,000	$ 2,400,000		

Debt (Summary Of Aggregate Maturities) (Details) $ in Thousands	Dec. 31, 2020 USD ($)
Debt [Abstract]	
2021	$ 191
2022	832
Convertible notes, net	$ 1,023

Debt (Schedule Of Convertible Notes Payable) (Details) - USD ($) $ / shares in Units, $ in Thousands	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020	Dec. 31, 2019
Debt Instrument [Line Items]			
Convertible notes, net	$ 3,015	$ 3,018	$ 2,733
Convertible Notes Dated September 10, 2018 [Member]			
Debt Instrument [Line Items]			
Maturity Date	Sep. 07, 2023		
Convertible Note Dated September 19, 2018 [Member]			
Debt Instrument [Line Items]			
Maturity Date	Sep. 19, 2023		
Convertible Note Dated July 18, 2019 [Member]			
Debt Instrument [Line Items]			
Maturity Date	Jul. 18, 2024		
Convertible Note Dated September 13, 2019 [Member]			
Debt Instrument [Line Items]			
Maturity Date	Sep. 13, 2024		
Convertible Notes Dated January 8, 2020 [Member]			
Debt Instrument [Line Items]			
Maturity Date	Jan. 08, 2025		
Convertible Debt [Member]			
Debt Instrument [Line Items]			
Total principal balance	$ 3,015	3,865	3,565
Less Unamortized discount		847	832
Convertible notes, net	$ 3,015	$ 3,018	2,733
Convertible Debt [Member] | Convertible Notes Dated September 10, 2018 [Member]			
Debt Instrument [Line Items]			
Fixed Conversion Rate	$ 0.40	$ 0.40	
Effective Interest Rate	8.00%	23.40%	
Maturity Date		Sep. 07, 2023	
Total principal balance	$ 200	$ 600	700
Convertible Debt [Member] | Convertible Note Dated September 19, 2018 [Member]			
Debt Instrument [Line Items]			
Fixed Conversion Rate	$ 0.57	$ 0.57	

Effective Interest Rate	8.00%	10.20%	
Maturity Date		Sep. 19, 2023	
Total principal balance	$ 425	$ 425	425
Convertible Debt [Member] | Convertible Notes Dated February/March 2019 [Member]			
Debt Instrument [Line Items]			
Fixed Conversion Rate	$ 0.25	$ 0.25	
Effective Interest Rate	8.00%	8.00%	
Total principal balance	$ 850	$ 1,300	1,300
Convertible Debt [Member] | Convertible Note Dated June/July 2019 [Member]			
Debt Instrument [Line Items]			
Fixed Conversion Rate	$ 0.10	$ 0.10	
Effective Interest Rate	8.00%	8.00%	
Total principal balance	$ 340	$ 340	390
Convertible Debt [Member] | Convertible Note Dated July 18, 2019 [Member]			
Debt Instrument [Line Items]			
Fixed Conversion Rate	$ 0.08	$ 0.08	
Effective Interest Rate	7.50%	46.10%	
Maturity Date		Jul. 18, 2024	
Total principal balance	$ 700	$ 700	700
Convertible Debt [Member] | Convertible Note Dated September 13, 2019 [Member]			
Debt Instrument [Line Items]			
Fixed Conversion Rate	$ 0.10	$ 0.10	
Effective Interest Rate	8.00%	25.90%	
Maturity Date		Sep. 13, 2024	
Total principal balance	$ 50	$ 50	$ 50
Convertible Debt [Member] | Convertible Notes Dated January 8, 2020 [Member]			
Debt Instrument [Line Items]			
Fixed Conversion Rate	$ 0.13	$ 0.13	
Effective Interest Rate	8.00%	20.30%	
Maturity Date		Jan. 08, 2025	
Total principal balance	$ 450	$ 450	
Minimum [Member] | Convertible Debt [Member] | Convertible Notes Dated February/March 2019 [Member]			
Debt Instrument [Line Items]			
Maturity Date	Feb. 28, 2024	Feb. 28, 2024	

Minimum [Member] | Convertible Debt [Member] | Convertible Note Dated June/July 2019 [Member]		
Debt Instrument [Line Items]		
Maturity Date	Jun. 07, 2024	Jun. 07, 2024
Maximum [Member] | Convertible Debt [Member] | Convertible Notes Dated February/March 2019 [Member]		
Debt Instrument [Line Items]		
Maturity Date	Mar. 13, 2024	Mar. 13, 2024
Maximum [Member] | Convertible Debt [Member] | Convertible Note Dated June/July 2019 [Member]		
Debt Instrument [Line Items]		
Maturity Date	Jul. 15, 2024	Jul. 15, 2024

Debt (Reconciliation Of Secured And Unsecured Contingent Obligation At Fair Value) (Details) - USD ($) $ in Thousands	9 Months Ended	12 Months Ended	
	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Secured Debt [Abstract]			
Secured contingent payment obligation	$ 33,057	$ 26,651	
Secured contingent payment obligation	35,940	33,057	$ 26,651
Contingent Payment Obligation [Member] | Unsecured Debt [Member]			
Secured Debt [Abstract]			
Change in fair value	113	1,961	
Unsecured Debt [Abstract]			
Unsecured contingent payment obligation	5,222		
Reclassification of other liabilities		1,003	
Issuance of contingent payment rights	412	2,258	
Change in fair value	113	1,961	
Unsecured contingent payment obligation	5,747	5,222	
Contingent Payment Obligation [Member] | Secured Debt [Member]			
Secured Debt [Abstract]			
Secured contingent payment obligation	33,057	26,651	25,557
Change in fair value	2,883	6,406	1,094
Secured contingent payment obligation	35,940	33,057	26,651
Unsecured Debt [Abstract]			
Change in fair value	$ 2,883	$ 6,406	$ 1,094

Fair Value Measurements (Narrative) (Details)	Sep. 30, 2021 item	Dec. 31, 2020 USD ($) item	Dec. 31, 2019 USD ($)
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Assets level 1 to Level 2 transfers | $		$ 0	$ 0
Assets level 2 to Level 1 transfers | $		0	0
Liabilities level 1 to Level 2 transfers | $		0	0
Liabilities level 2 to Level 1 transfers | $		0	$ 0
Fair value of note payable | $		$ 900,000	
Measurement Input, Discount Rate [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input		0.1415	
Measurement Input, Risk Free Interest Rate [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input		0.0015	
Measurement Input, Entity Credit Risk [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input		0.08	
Measurement Input, Litigation Inherent Risk [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input		0.06	
Secured Debt [Member] | Measurement Input, Discount Rate [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input	0.1441		
Secured Debt [Member] | Measurement Input, Risk Free Interest Rate [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input	0.0041		
Secured Debt [Member] | Measurement Input, Entity Credit Risk [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input	0.08		
Secured Debt [Member] | Measurement Input, Litigation Inherent Risk [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Measurement input	0.06		

Fair Value Measurements (Schedule Of Assets And Liabilities Measured At Fair Value On A Recurring Basis) (Details) - Fair Value, Recurring [Member] - USD ($) $ in Thousands	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019
Secured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Liabilities	$ 35,940	$ 33,057	$ 26,651
Unsecured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Liabilities	5,747	5,222	
Quoted Prices In Active Markets (Level 1) [Member] | Secured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Liabilities			
Quoted Prices In Active Markets (Level 1) [Member] | Unsecured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Liabilities			
Significant Other Observable Inputs (Level 2) [Member] | Secured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Liabilities			
Significant Other Observable Inputs (Level 2) [Member] | Unsecured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Liabilities			
Significant Unobservable Inputs (Level 3) [Member] | Secured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			
Liabilities	35,940	33,057	$ 26,651
Significant Unobservable Inputs (Level 3) [Member] | Unsecured Contingent Payment Obligation [Member]			
Fair Value, Assets and Liabilities Measured on Recurring and Nonrecurring Basis [Line Items]			

Liabilities	$ 5,747	$ 5,222

Fair Value Measurements (Quantitative Information) (Details) $ in Millions	9 Months Ended Sep. 30, 2021 USD ($) item	12 Months Ended Dec. 31, 2020 USD ($) item
Unsecured Debt [Member] | Minimum [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated cash outflows | $	$ 0.0	$ 0.0
Duration	1 year 3 months 18 days	1 year
Unsecured Debt [Member] | Minimum [Member] | Estimated Probabilities [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated probabilities | item	0.25	0.25
Unsecured Debt [Member] | Weighted Average [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated cash outflows | $	$ 8.1	$ 7.3
Duration	2 years 6 months	2 years 6 months
Unsecured Debt [Member] | Weighted Average [Member] | Estimated Probabilities [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated probabilities | item	0.25	0.25
Unsecured Debt [Member] | Maximum [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated cash outflows | $	$ 10.8	$ 9.7
Duration	3 years 3 months 18 days	3 years 6 months
Unsecured Debt [Member] | Maximum [Member] | Estimated Probabilities [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated probabilities | item	0.25	0.25
Secured Debt [Member] | Minimum [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated cash outflows | $	$ 0.0	$ 0.0
Duration	3 months 18 days	1 year
Secured Debt [Member] | Minimum [Member] | Estimated Probabilities [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated probabilities | item	0	0.05
Secured Debt [Member] | Weighted Average [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated cash outflows | $	$ 50.2	$ 46.1

Duration	2 years 6 months	2 years 6 months
Secured Debt [Member] | Weighted Average [Member] | Estimated Probabilities [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated probabilities | item	0.21	0.23
Secured Debt [Member] | Maximum [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated cash outflows | $	$ 76.8	$ 70.2
Duration	3 years 3 months 18 days	3 years 6 months
Secured Debt [Member] | Maximum [Member] | Estimated Probabilities [Member]		
Fair Value Measurement Inputs and Valuation Techniques [Line Items]		
Estimated probabilities | item	0.25	0.25

Legal Proceedings (Details)	1 Months Ended												9 Months Ended	12 Months Ended	
	Jul. 31, 2020 item	Jul. 31, 2020 claim	Jun. 30, 2020 item claim	May 31, 2020 claim item	Apr. 30, 2020 claim item	Feb. 29, 2020 item claim	Jan. 31, 2020 USD ($)	Jul. 31, 2019 item	Jul. 31, 2019 claim	Mar. 31, 2018 item claim	Mar. 31, 2017 item claim	Dec. 31, 2015 item claim	Sep. 30, 2021 USD ($) claim	Dec. 31, 2020 USD ($) item	Dec. 31, 2019 USD ($)
Commitments and Contingencies [Line Items]															
Gain contingency, damages sought | $							$ 1,300,000,000								
Accrued costs | $														$ 936,000	$ 1,081,000
Germany [Member]															
Commitments and Contingencies [Line Items]															
Statutory fees and costs | $														250,000	$ 370,000
Accrued costs | $													$ 0	$ 140,000	
ParkerVision v. Apple and Qualcomm (Middle District of Florida) [Member]															
Commitments and Contingencies [Line Items]															
Number of petitions | item								6							
Number of patents allegedly infringed upon										4		4			
Number of patents allegedly infringed upon | item												4			
Number of patents dismissed | item										3					
Number of patents with motion to dismiss										3					
Claim construction					7			2	2						
ParkerVision V. Intel (Western District of Texas) [Member]															
Commitments and Contingencies [Line Items]															
Number of patents allegedly infringed upon				2		8									
ParkerVision v. Intel II (Western District of Texas) [Member]															
Commitments and Contingencies [Line Items]															
Number of patents allegedly infringed upon	2	2	1												
Number of patents found not infringed upon			1												
Number of patents allegedly infringed upon | item				2		8								10	
ParkerVision v. Qualcomm (Middle District of Florida) [Member]															
Commitments and Contingencies [Line Items]															
Number of petitions | item											6				
Gain contingency, damages sought | $													$ 1,300,000,000		
Number of patents allegedly infringed upon											6		4		

Gain Contingency, Patents Found Infringed upon, Number			3	
Number of patents allegedly infringed upon seeking invalidation		4		
Number of patents allegedly infringed upon | item				4
Number of patents found infringed upon | item			2	
Number of patents found not infringed upon | item			3	
Number of patents with split decision			2	
Estimated loss | $				$ 1,300,000,000
Minimum [Member] | ParkerVision v. Qualcomm (Middle District of Florida) [Member]				
Commitments and Contingencies [Line Items]				
Claim construction	7			
Maximum [Member] | ParkerVision v. Apple and Qualcomm (Middle District of Florida) [Member]				
Commitments and Contingencies [Line Items]				
Claim construction	10	6		
Maximum [Member] | ParkerVision v. Qualcomm (Middle District of Florida) [Member]				
Commitments and Contingencies [Line Items]				
Claim construction	10			

Income Taxes And Tax Status (Narrative) (Details) - USD ($)	12 Months Ended		
	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Tax Credit Carryforward [Line Items]			
Foreign income tax expense			
Current tax provision or benefit	$ 0	$ 0	
Corporate tax rate	21.00%	21.00%	
Operating loss carryforwards	$ 323,200,000		
Operating loss carryforwards subject to expiration	294,100,000		
Unrecognized tax benefits	927,000	$ 927,000	$ 927,000
Accrued interest or penalties	0	0	
Income tax-related interest income, expense or penalties	0	$ 0	
Research Tax Credit Carryforward [Member]			
Tax Credit Carryforward [Line Items]			
Tax credit carryforward, Amount	$ 6,600,000		
Minimum [Member]			
Tax Credit Carryforward [Line Items]			
Operating loss carryforwards, expiration	Dec. 31, 2020		
Period subject to IRS examination	2001		
Minimum [Member] | Research Tax Credit Carryforward [Member]			
Tax Credit Carryforward [Line Items]			
Operating loss carryforwards, expiration	Dec. 31, 2021		
Maximum [Member]			
Tax Credit Carryforward [Line Items]			
Operating loss carryforwards, expiration	Dec. 31, 2037		
Period subject to IRS examination	2020		
Maximum [Member] | Research Tax Credit Carryforward [Member]			
Tax Credit Carryforward [Line Items]			
Operating loss carryforwards, expiration	Dec. 31, 2038		
Convertible Debt [Member] | Promissory Notes [Member]			
Tax Credit Carryforward [Line Items]			
Unrecognized tax benefits	$ 200,000		

Income Taxes And Tax Status (Schedule of Effective Income Tax Rate Reconciliation) (Details) - USD ($) $ in Thousands	12 Months Ended	
	Dec. 31, 2020	Dec. 31, 2019
Income Taxes And Tax Status [Abstract]		
Tax benefit at statutory rate	$ (4,111)	$ (1,985)
State tax benefit	(842)	(407)
Increase in valuation allowance	4,307	2,341
Other	646	51
Income Tax Expense (Benefit), Total		

Income Taxes And Tax Status (Schedule of Deferred Tax Assets And Liabilities) (Details) - USD ($) $ in Thousands	Dec. 31, 2020	Dec. 31, 2019
Income Taxes And Tax Status [Abstract]		
Net operating loss carry-forward	$ 80,848	$ 83,865
Research and development credit carry-forward	6,603	7,608
Stock compensation	122	(28)
Patents and other	1,466	1,479
Contingent payment obligations	5,235	3,119
Inventories		139
Fixed assets	54	3
Accrued liabilities	64	200
Lease liabilities	77	142
Other		3
Deferred tax assets, gross	94,469	96,530
Less valuation allowance	(94,245)	(96,320)
Net deferred tax asset	224	210
Convertible debt	(224)	(210)
Deferred tax liabilities, gross	(224)	(210)
Net deferred tax asset		

Income Taxes And Tax Status (Schedule of Unrecognized Tax Benefits Roll Forward) (Details) - USD ($) $ in Thousands	Dec. 31, 2020	Dec. 31, 2019
Income Taxes And Tax Status [Abstract]		
Unrecognized tax benefits, beginning of year	$ 927	$ 927
Unrecognized tax benefits, end of year	$ 927	$ 927

Stock Authorization and Issuance (Narrative) (Details) - USD ($)								1 Months Ended					4 Months Ended	5 Months Ended	9 Months Ended		12 Months Ended											
	Jan. 25, 2021	Oct. 30, 2020	Jun. 08, 2020	Mar. 16, 2020	Feb. 10, 2020	Nov. 29, 2005	Jun. 30, 2021	Apr. 30, 2021	Mar. 31, 2021	Jan. 31, 2021	Mar. 31, 2020	Jan. 31, 2020	Dec. 31, 2020	Aug. 31, 2020	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2020	Dec. 31, 2019	Sep. 28, 2021	Sep. 27, 2021	Nov. 20, 2020	Jul. 31, 2020	Jun. 30, 2020	Feb. 28, 2020	Nov. 30, 2019	Oct. 31, 2019	Dec. 31, 2018	Nov. 17, 2005
Stock Authorization And Issuance [Line Items]																												
Common stock, shares authorized													140,000,000		150,000,000	140,000,000	140,000,000	110,000,000				140,000,000	110,000,000		110,000,000	75,000,000		
Preferred Stock, Shares authorized													15,000,000			15,000,000	15,000,000											100,000
Preferred Stock, Shares outstanding													0			0	0											
Shares reserved for issuance																			150,000,000	140,000,000								
Exercise price per warrant									$ 1.75				$ 0.45			$ 0.45	$ 0.45											
Outstanding warrants															9,800,000													
Class of Warrant or Right, Weighted Average Remaining Life																	3 years											
Sale of common stock, number of shares									3,230,942					5,871,584														
Sale of common stock									$ 4,200,000																			
Sale of stock price per share									$ 1.29																			
Shares of common stock issued upon exercise of warrants																	12,900,000	12,200,000										
Estimated fair market value													$ 1,700,000		$ 2,800,000	$ 1,700,000	$ 1,700,000	$ 1,300,000										
Issuance of common stock for services, shares									500,000																			
Issuance of stocks to consultants, value									$ 330,000																			
Liquidated damages													1.00%															
Maximum liquidated damages in the event in the even the common stock is not registered for resale within specific time periods													$ 100,000															
Number of warrants issued									1,619,289																			
Proceeds from Warrant Exercises															$ 900,000													
Unsecured Debt [Member]																												
Stock Authorization And Issuance [Line Items]																												
Proceeds from sale of contingent payment rights										$ 400,000																		
Mintz [Member]																												
Stock Authorization And Issuance [Line Items]																												
Repayments of Debt									$ 3,000,000.0																			
Warrants, Options And Unvested RSUs [Member]																												
Stock Authorization And Issuance [Line Items]																												
Shares reserved for issuance													25,300,000			25,300,000	25,300,000											
Aspire Capital [Member]																												
Stock Authorization And Issuance [Line Items]																												
Warrants Beneficially Own																	9.99%											
Warrants Beneficially Own, Prior Notice																	61 days											
Aspire Capital, Amendment [Member]																												
Stock Authorization And Issuance [Line Items]																												
Warrants to purchase common stock																								5,000,000				
Exercise price per warrant													$ 0.001			$ 0.001	$ 0.001											
Non-cash warrant expense																	$ 1,780,000											
warrants exercised																	1,430,000											
Proceeds from Warrant Exercises																	$ 500,000											
New Aspire Warrant [Member]																												
Stock Authorization And Issuance [Line Items]																												
Warrants to purchase common stock																								5,000,000				
Exercise price per warrant																								$ 0.74				
warrants exercised																	3,070,000											
Proceeds from Warrant Exercises																	$ 1,100,000											
Series E Preferred Stock [Member]																												
Stock Authorization And Issuance [Line Items]																												
Preferred Stock, Shares outstanding													0			0	0											
Consultants [Member]																												
Stock Authorization And Issuance [Line Items]																												
Issuance of common stock for services, shares								35,000																				
Issuance of stocks to consultants, value								$ 40,000.00																				
Consultants [Member] | Chelsea Investor Relations [Member]																												
Stock Authorization And Issuance [Line Items]																												
Issuance of stocks to consultants, value					$ 150,000																							
Agreement term																	24 months											
Share-based Goods and Nonemployee Services Transaction, Quantity of Securities Issued					500,000																							
Consultants [Member] | Tailwinds Research Group LLC [Member]																												
Stock Authorization And Issuance [Line Items]																												
Exercise price per warrant				$ 1.00																								
Share-based Goods and Nonemployee Services Transaction, Quantity of Securities Issued				200,000																								
Proceeds from Warrant Exercises				$ 60,000.00																								
Shareholder Approved Equity Compensation Plans [Member]																												
Stock Authorization And Issuance [Line Items]																												
Shares reserved for issuance													200,000			200,000	200,000											
Minimum [Member] | Aspire Capital, Amendment [Member]																												
Stock Authorization And Issuance [Line Items]																												
Exercise price per warrant																								0.35				
Maximum [Member]																												
Stock Authorization And Issuance [Line Items]																												

Liquidated damages										6.00%					
Maximum [Member] | Aspire Capital [Member]															
Stock Authorization And Issuance [Line Items]															
Warrants Beneficially Own													19.99%		
Maximum [Member] | Aspire Capital, Amendment [Member]															
Stock Authorization And Issuance [Line Items]															
Exercise price per warrant															$ 0.74
Weighted Average [Member]															
Stock Authorization And Issuance [Line Items]															
Warrant term											3 years 2 months 12 days				
Exercise price per warrant											$ 0.73				
Subsequent Event [Member]															
Stock Authorization And Issuance [Line Items]															
Exercise price per warrant						$ 0.16									
Third Party [Member]															
Stock Authorization And Issuance [Line Items]															
Sale of common stock, number of shares		70,000		100,000			50,000								
Sale of common stock		$ 20,000.00		$ 120,000			$ 30,000.00								
Issuance of common stock for services, shares					50,000										
Issuance of stocks to consultants, value					$ 70,000.00										
Third Party [Member] | Subsequent Event [Member]															
Stock Authorization And Issuance [Line Items]															
Sale of common stock							30,000.00								
Principal [Member] | Convertible Debt [Member]															
Stock Authorization And Issuance [Line Items]															
Shares reserved for issuance										23,600,000		23,600,000	23,600,000		
Interest In-Kind [Member] | Convertible Debt [Member]															
Stock Authorization And Issuance [Line Items]															
Shares reserved for issuance										7,500,000		7,500,000	7,500,000		
Rights Agreement [Member]															
Stock Authorization And Issuance [Line Items]															
Redemption price										$ 0.01		$ 0.01	$ 0.01		
Exercise price per warrant			$ 8.54												
Threshold percentage at which rights separate from common stock			15.00%												
Rights Agreement [Member] | Minimum [Member]															
Stock Authorization And Issuance [Line Items]															
Exercise price per warrant														$ 14.50	
Rights Agreement [Member] | Maximum [Member]															
Stock Authorization And Issuance [Line Items]															
Exercise price per warrant														$ 8.54	
Private Placements With Accredited Investors [Member]															
Stock Authorization And Issuance [Line Items]															
Proceeds from issuance of common stock								$ 900,000	$ 200,000			$ 3,800,000			
Aggregate offering price								$ 0.35		$ 0.35		$ 0.35	$ 0.35		
Aggregate offering shares								2,571,432		10,857,876		10,857,876	10,857,876		
Unsecured Debt								$ 900,000		$ 1,800,000		$ 1,800,000	$ 1,800,000		
Private Placements With Accredited Investors [Member] | Subsequent Event [Member]															
Stock Authorization And Issuance [Line Items]															
Proceeds from issuance of common stock						$ 4,200,000	1,000,000.0								
Aggregate offering price							$ 0.35								
Aggregate offering shares						3,230,942	2,976,430								
Warrants to purchase common stock						1,619,289									
Exercise price per warrant						$ 1.75									
Liquidated damages						1.00%	1.00%								
Maximum liquidated damages in the event in the even the common stock is not registered for resale within specific time periods						$ 250,000	$ 60,000.00								
Private Placements With Accredited Investors [Member] | Subsequent Event [Member] | Maximum [Member]															
Stock Authorization And Issuance [Line Items]															
Liquidated damages						6.00%	6.00%								
Private Placements With Accredited Investors B [Member]															
Stock Authorization And Issuance [Line Items]															
Aggregate offering price									$ 0.13						
Aggregate offering shares									1,169,232						
Private Placements With Accredited Investors C [Member]															
Stock Authorization And Issuance [Line Items]															
Aggregate offering price									$ 0.15						
Aggregate offering shares									166,667						
Chelsea Investor Relations [Member] | Subsequent Event [Member]															
Stock Authorization And Issuance [Line Items]															
Issuance of stocks to consultants, value	$ 330,000														
Share-based Goods and Nonemployee Services Transaction, Quantity of Securities Issued	500,000														
Securities Purchase Agreements [Member]															
Stock Authorization And Issuance [Line Items]															

<table>
<tr><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr>
<tr><td>Sale of common stock, number of shares</td><td></td><td></td><td>2,976,430</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Sale of common stock</td><td></td><td></td><td>$ 1,000,000.0</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Sale of stock price per share</td><td></td><td></td><td>$ 0.35</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Securities Purchase Agreements [Member] | Third Party [Member]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Stock Authorization And Issuance [Line Items]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Shelf, authorized shares</td><td></td><td></td><td></td><td></td><td></td><td></td><td>50,000</td></tr>
<tr><td>Sale of common stock, number of shares</td><td></td><td>30,000</td><td></td><td></td><td></td><td></td><td>100,000</td></tr>
<tr><td>Sale of common stock</td><td></td><td>$ 10,000.00</td><td></td><td></td><td></td><td></td><td>$ 50,000.00</td></tr>
<tr><td>Securities Purchase Agreements [Member] | Third Party [Member] | Subsequent Event [Member]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Stock Authorization And Issuance [Line Items]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Sale of common stock, number of shares</td><td></td><td></td><td>50,000</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Short Term Promissory Notes [Member] | Unsecured Debt [Member]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Stock Authorization And Issuance [Line Items]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Repayments of Debt</td><td></td><td></td><td></td><td></td><td></td><td></td><td>230,000</td></tr>
<tr><td>Contingent Payment Obligation [Member] | Unsecured Debt [Member]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Stock Authorization And Issuance [Line Items]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Unsecured Debt</td><td></td><td></td><td></td><td>5,222,000</td><td>$ 5,747,000</td><td>5,222,000</td><td>5,222,000</td></tr>
<tr><td>Contingent Payment Rights [Member] | Unsecured Debt [Member]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Stock Authorization And Issuance [Line Items]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Fair value of payment obligation</td><td></td><td></td><td></td><td>$ 2,500,000</td><td></td><td>$ 2,500,000</td><td>$ 2,500,000</td></tr>
<tr><td>Contingent Payment Rights [Member] | Third Party [Member] | Unsecured Debt [Member]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Stock Authorization And Issuance [Line Items]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Fair value of payment obligation</td><td>100,000</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Unsecured Debt</td><td>$ 20,000.00</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Stock Authorization And Issuance (Summary Of Equity Offerings) (Details) - USD ($)	1 Months Ended Mar. 31, 2021	9 Months Ended Sep. 30, 2021	12 Months Ended Dec. 31, 2020
Equity Offerings [Line Items]			
# of Common Shares/ Units Sold	$ 4,200,000		
Average Exercise Price Per Warrant	$ 1.75		$ 0.45
Net Proceeds		$ 900,000	
Aspire Capital, Amendment [Member]			
Equity Offerings [Line Items]			
Average Exercise Price Per Warrant			$ 0.001
Net Proceeds			$ 500,000
Common Stock [Member] | Private Placement Of Common Stock [Member] | January 2020 [Member]			
Equity Offerings [Line Items]			
# of Common Shares/ Units Sold			$ 1,335
Average Price per Share/Unit			$ 0.13
Net Proceeds			$ 177,000
Common Stock [Member] | Private Placement Of Common Stock, Amended To Add CPR [Member] | March 2020 [Member]			
Equity Offerings [Line Items]			
# of Common Shares/ Units Sold			$ 2,571
Average Price per Share/Unit			$ 0.35
Net Proceeds			$ 900,000
Common Stock [Member] | Private Placement Of Common Stock With CPRs [Member] | April 2020 to December 2020 [Member]			
Equity Offerings [Line Items]			
# of Common Shares/ Units Sold			$ 10,858
Average Price per Share/Unit			$ 0.35
Net Proceeds			$ 3,724,000
Warrants Outstanding [Member] | Warrant Amendment [Member] | February 2020 [Member]			
Equity Offerings [Line Items]			
Number of warrants issued			5,000,000
Average Exercise Price Per Warrant			$ 0.74

Share-Based Compensation (Narrative) (Details) - USD ($)			1 Months Ended		3 Months Ended	9 Months Ended	12 Months Ended		
	Aug. 10, 2021	Mar. 09, 2021	Apr. 30, 2021	Mar. 31, 2021	Sep. 30, 2021	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019	Aug. 31, 2019
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]									
Unrecognized compensation cost, net of estimated forfeitures					$ 3,700,000	$ 3,700,000	$ 360,000		
Expected weighted average period to recognize the compensation cost, in years						1 year 3 months	6 months		
Total share-based expense					$ 750,000	$ 2,570,000			
Number of shares authorized					27,000,000	27,000,000	12,000,000		
Issuance of common stock for services, shares				500,000					
Issuance of stocks to consultants, value				$ 330,000					
2008 Equity Incentive Plan [Member]									
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]									
Number of shares available for grant							20,473		
Maximum number of shares per employee							5,000		
Number of shares authorized							50,000		
2011 Long Term Incentive Equity Plan [Member]									
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]									
Number of shares available for grant							25,627		
Maximum number of shares per employee							150,000		
Number of shares authorized							3,000,000.0		
2019 Long-Term Incentive Equity Plan [Member]									
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]									

Number of shares available for grant			155,000		
Number of shares authorized			12,000,000		12,000,000.0
Restricted Stock Award And Restricted Stock Unit [Member]					
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]					
Vested fair value			$ 300,000		
Stock Options [Member]					
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]					
Weighted average fair value of option shares granted		$ 0.54	$ 0.27	$ 0.14	
Fair market value of vested shares			$ 900,000	$ 500,000	
Intrinsic value of options exercised			$ 0	$ 0	
Minimum [Member] | Restricted Stock Units (RSUs) [Member]					
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]					
Vesting period			1 year		
Maximum [Member] | Restricted Stock Units (RSUs) [Member]					
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]					
Vesting period			3 years		
Consultants [Member]					
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]					
Issuance of common stock for services, shares	35,000				
Issuance of stocks to consultants, value	$ 40,000.00				
Consultant 1 [Member]					
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]					

<table>
<tr><td>Vesting period</td><td></td><td>1 year</td><td></td><td></td></tr>
<tr><td>Issuance of common stock for services, shares</td><td></td><td>32,000</td><td></td><td></td></tr>
<tr><td>Issuance of stocks to consultants, value</td><td></td><td>$ 50,000.00</td><td></td><td></td></tr>
<tr><td>Consultant 2 [Member]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Share-based Compensation Arrangement by Share-based Payment Award [Line Items]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Vesting period</td><td>1 year</td><td></td><td></td><td></td></tr>
<tr><td>Issuance of common stock for services, shares</td><td>150,000</td><td></td><td></td><td></td></tr>
<tr><td>Issuance of stocks to consultants, value</td><td>$ 200,000</td><td></td><td></td><td></td></tr>
<tr><td>Named Executive Employees [Member] | Stock Options [Member]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Share-based Compensation Arrangement by Share-based Payment Award [Line Items]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Issuance of common stock for services, shares</td><td></td><td></td><td>11,900,000</td><td></td></tr>
<tr><td>Non Employee Directors [Member] | Maximum [Member] | 2019 Long-Term Incentive Equity Plan [Member]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Share-based Compensation Arrangement by Share-based Payment Award [Line Items]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Maximum number of shares per employee</td><td></td><td></td><td></td><td>1,000,000.0</td></tr>
<tr><td>Weighted average fair value of option shares granted</td><td></td><td></td><td></td><td>$ 175,000</td></tr>
<tr><td>Non Employee [Member] | Restricted Stock Units (RSUs) [Member]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Share-based Compensation Arrangement by Share-based Payment Award [Line Items]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Vesting period</td><td></td><td></td><td></td><td>1 year</td></tr>
<tr><td>Non Employee [Member] | Stock Options [Member]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Share-based Compensation Arrangement by Share-based Payment Award [Line Items]</td><td></td><td></td><td></td><td></td></tr>
</table>

Issuance of common stock for services, shares	1,100,000

Share-Based Compensation (Schedule Of Share-Based Compensation Expense Included In Statements Of Operations) (Details) - USD ($) $ in Thousands	12 Months Ended	
	Dec. 31, 2020	Dec. 31, 2019
Employee Service Share-based Compensation, Allocation of Recognized Period Costs [Line Items]		
Total share-based compensation expense	$ 1,244	$ 589
Research And Development Expense [Member]		
Employee Service Share-based Compensation, Allocation of Recognized Period Costs [Line Items]		
Total share-based compensation expense		5
Selling, General and Administrative Expenses [Member]		
Employee Service Share-based Compensation, Allocation of Recognized Period Costs [Line Items]		
Total share-based compensation expense	$ 1,244	$ 584

Share-Based Compensation (Summary Of Restricted Stock Activity) (Details) - Restricted Stock Award And Restricted Stock Unit [Member] shares in Thousands	12 Months Ended
	Dec. 31, 2020 $ / shares shares
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]	
Non-vested at beginning of year, Shares | shares	
Granted, Shares | shares	1,016
Vested, Shares | shares	(829)
Non-vested at end of year, Shares | shares	187
Non-vested at beginning of year, Weighted-Average Grant-Date Fair Value | $ / shares	
Granted, Weighted Average Grant Date Fair Value | $ / shares	0.31
Vested, Weighted Average Grant Date Fair Value | $ / shares	0.31
Non-vested at end of year, Weighted-Average Grant-Date Fair Value | $ / shares	$ 0.33

Share-Based Compensation (Summary Of Option Activity) (Details) - Stock Options [Member] $ / shares in Units, shares in Thousands	12 Months Ended Dec. 31, 2020 USD ($) $ / shares shares
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]	
Outstanding, Shares, Beginning of year | shares	11,410
Granted, Shares | shares	843
Exercised, Shares | shares	
Forfeited, Shares | shares	(13)
Outstanding, Shares, End of year | shares	12,240
Outstanding, Weighted Average Exercise Price, Beginning of year | $ / shares	$ 0.33
Granted, Weighted Average Exercise Price | $ / shares	0.31
Exercised, Weighted Average Exercise Price | $ / shares	
Forfeited, Weighted Average Exercise Price | $ / shares	38.86
Outstanding, Weighted Average Exercise Price, End of year | $ / shares	$ 0.28
Outstanding, Weighted Average Remaining Contractual Term	5 years 6 months
Outstanding, Aggregate Intrinsic Value | $	$ 3,401
Vested and expected to vest at end of year, shares | shares	9,490
Vested and expected to vest at end of year, weighted average exercise price | $ / shares	$ 0.31
Vested and expected to vest at end of year, weighted average remaining contractual term	5 years 6 months
Vested and expected to vest at end of year, aggregate intrinsic value | $	$ 2,578

Share-Based Compensation (Summary Of Valuation Assumptions) (Details) - Stock Options [Member]	12 Months Ended	
	Dec. 31, 2020	Dec. 31, 2019
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]		
Expected option term	5 years	5 years
Expected annual dividend yield	0.00%	0.00%
Minimum [Member]		
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]		
Expected volatility factor	127.40%	119.10%
Risk-free interest rate	0.33%	1.60%
Maximum [Member]		
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]		
Expected volatility factor	135.30%	
Risk-free interest rate	1.63%	

Share-Based Compensation (Summary Of Options And Warrants By Exercise Price Range) (Details) - Stock Options [Member] shares in Thousands	12 Months Ended
	Dec. 31, 2020 $ / shares shares
Options Outstanding	
Number Outstanding | shares	12,240
Wtd. Avg. Exercise Price	$ 0.28
Wtd. Avg. Remaining Contractual Life	5 years 6 months
Options Vested	
Number Exercisable | shares	9,490
Wtd. Avg. Exercise Price	$ 0.31
Wtd. Avg. Remaining Contractual Life	5 years 6 months
$0.171 - $0.33 [Member]	
Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range [Line Items]	
Exercise price minimum	$ 0.171
Exercise price maximum	$ 0.33
Options Outstanding	
Number Outstanding | shares	11,318
Wtd. Avg. Exercise Price	$ 0.18
Wtd. Avg. Remaining Contractual Life	5 years 7 months 6 days
Options Vested	
Number Exercisable | shares	8,624
Wtd. Avg. Exercise Price	$ 0.18
Wtd. Avg. Remaining Contractual Life	5 years 7 months 6 days
$0.50 - $0.60 [Member]	
Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range [Line Items]	
Exercise price minimum	$ 0.50
Exercise price maximum	$ 0.60
Options Outstanding	
Number Outstanding | shares	513
Wtd. Avg. Exercise Price	$ 0.59
Wtd. Avg. Remaining Contractual Life	5 years
Options Vested	
Number Exercisable | shares	457
Wtd. Avg. Exercise Price	$ 0.60
Wtd. Avg. Remaining Contractual Life	4 years 9 months 18 days
$1.98 - $2.13 [Member]	

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range [Line Items]	
Exercise price minimum	$ 1.98
Exercise price maximum	$ 2.13
Options Outstanding	
Number Outstanding | shares	381
Wtd. Avg. Exercise Price	$ 2.02
Wtd. Avg. Remaining Contractual Life	3 years 4 months 24 days
Options Vested	
Number Exercisable | shares	381
Wtd. Avg. Exercise Price	$ 2.02
Wtd. Avg. Remaining Contractual Life	3 years 4 months 24 days
$13.80 [Member]	
Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range [Line Items]	
Exercise price maximum	$ 13.80
Options Outstanding	
Number Outstanding | shares	28
Wtd. Avg. Exercise Price	$ 13.80
Wtd. Avg. Remaining Contractual Life	6 months
Options Vested	
Number Exercisable | shares	28
Wtd. Avg. Exercise Price	$ 13.80
Wtd. Avg. Remaining Contractual Life	6 months

Related Party Transactions (Details) - USD ($)	12 Months Ended Dec. 31, 2020	Dec. 31, 2019	Sep. 30, 2021	Mar. 31, 2021	Jan. 31, 2020
Related Party Transaction [Line Items]					
Sale of stock price per share				$ 1.29	
Common stock, shares issued	58,591,000	34,097,000	74,743,000		
Sterne, Kessler, Goldstein & Fox, PLLC [Member]					
Related Party Transaction [Line Items]					
Amount paid to related party	$ 10,000.00	$ 20,000.00			
Stacie Wilf [Member]					
Related Party Transaction [Line Items]					
Accounts payable					$ 80,000.00
Common stock, shares issued					500,000
Promissory Notes [Member] | Unsecured Debt [Member] | Sterne, Kessler, Goldstein & Fox, PLLC [Member]					
Related Party Transaction [Line Items]					
Amount paid to related party	100,000	$ 0			
Secured notes payable	$ 800,000				

Subsequent Events (Details) - USD ($)					1 Months Ended					3 Months Ended	4 Months Ended	9 Months Ended			
	Mar. 26, 2021	Mar. 09, 2021	Jan. 25, 2021	Jan. 11, 2021	Apr. 30, 2021	Mar. 31, 2021	Jan. 31, 2021	Mar. 31, 2020	Jan. 31, 2020	Mar. 31, 2021	Dec. 31, 2020	Sep. 30, 2021	Dec. 31, 2020	Dec. 31, 2019	Aug. 31, 2019
Subsequent Event [Line Items]															
Amount received from investors											$ 400,000		$ 400,000		
Liquidated damages											1.00%				
Maximum liquidated damages in the event in the even the common stock is not registered for resale within specific time periods											$ 100,000				
Exercise price per warrant						$ 1.75				$ 1.75	$ 0.45		$ 0.45		
Number of shares authorized											12,000,000	27,000,000	12,000,000		
Issuance of common stock for services, shares						500,000									
Issuance of stocks to consultants, value						$ 330,000									
Proceeds from warrants exercised												$ 900,000			
Subsequent Event [Member]															
Subsequent Event [Line Items]															
Exercise price per warrant						$ 0.16				$ 0.16					
Payment to settle outstanding accounts and notes payable for litigation costs										$ 3,000,000.0					
Private Placements With Accredited Investors [Member]															
Subsequent Event [Line Items]															
Aggregate offering shares								2,571,432			10,857,876		10,857,876		
Aggregate offering price								$ 0.35			$ 0.35		$ 0.35		
Proceeds from issuance of common stock								$ 900,000	$ 200,000				$ 3,800,000		
Private Placements With Accredited Investors [Member] | Subsequent Event [Member]															
Subsequent Event [Line Items]															
Aggregate offering shares						3,230,942	2,976,430			3,230,942					
Aggregate offering price							$ 0.35								
Proceeds from issuance of common stock						$ 4,200,000	$ 1,000,000.0								
Liquidated damages						1.00%	1.00%								
Maximum liquidated damages in the event in the even the common stock is not registered for resale within specific time periods						$ 250,000	$ 60,000.00								
Warrants to purchase common stock						1,619,289				1,619,289					
Exercise price per warrant						$ 1.75				$ 1.75					
Commitment to file registration statement, period						30 days									
Commitment to file, effective period						90 days									
Exercise price						$ 1.29				$ 1.29					
Chelsea Investor Relations [Member] | Subsequent Event [Member]															
Subsequent Event [Line Items]															
Issuance of stocks to consultants, value			$ 330,000												
Share-based Goods and Nonemployee Services Transaction, Quantity of Securities Issued			500,000												
Consultants [Member]															
Subsequent Event [Line Items]															
Issuance of common stock for services, shares					35,000										

Issuance of stocks to consultants, value				$ 40,000.00				
2019 Long-Term Incentive Equity Plan [Member]								
Subsequent Event [Line Items]								
Number of shares authorized					12,000,000	12,000,000		12,000,000.0
2019 Long-Term Incentive Equity Plan [Member] | Subsequent Event [Member]								
Subsequent Event [Line Items]								
Number of shares authorized			27,000,000					
Exercise price			$ 0.54					
Option period			2 years					
2019 Long-Term Incentive Equity Plan [Member] | Jeffrey Parker [Member] | Subsequent Event [Member]								
Subsequent Event [Line Items]								
Maximum number of shares per employee			8,000,000					
2019 Long-Term Incentive Equity Plan [Member] | Cynthia French [Member] | Subsequent Event [Member]								
Subsequent Event [Line Items]								
Maximum number of shares per employee			1,000,000					
2019 Long-Term Incentive Equity Plan [Member] | Three Non-Employee Directors [Member] | Subsequent Event [Member]								
Subsequent Event [Line Items]								
Maximum number of shares per employee			380,000					
2019 Long-Term Incentive Equity Plan [Member] | Other Key Employees [Member] | Subsequent Event [Member]								
Subsequent Event [Line Items]								
Maximum number of shares per employee			2,900,000					
2019 Long-Term Incentive Equity Plan [Member] | Consultants [Member] | Subsequent Event [Member]								
Subsequent Event [Line Items]								
Shares granted		32,000						
Agreement term		1 year						
Share granted, value		$ 50,000.00						
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. [Member]								
Subsequent Event [Line Items]								
Estimated loss					$ 3,600,000	$ 3,600,000	$ 3,600,000	
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. [Member] | Subsequent Event [Member]								
Subsequent Event [Line Items]								
Payment to settle outstanding accounts and notes payable for litigation costs	$ 3,000,000.0							
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. [Member] | Note Payable To A Related Party [Member] | Secured Debt [Member]								
Subsequent Event [Line Items]								

Long-term note payable, related party			3,100,000		3,100,000
Accrued interest			$ 30,000.00		$ 30,000.00
Maximum [Member]					
Subsequent Event [Line Items]					
Liquidated damages			6.00%		
Maximum [Member] | Private Placements With Accredited Investors [Member] | Subsequent Event [Member]					
Subsequent Event [Line Items]					
Liquidated damages	6.00%	6.00%			
Weighted Average [Member]					
Subsequent Event [Line Items]					
Exercise price per warrant				$ 0.73	