Risk Factors Comparison 2023-09-06 to 2022-09-12 Form: 10-K

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This section is a summary of the risks that we presently believe are material to the operations of the Company. Additional risks of which we are not presently aware or which we presently deem immaterial may also impair the Company' s business, financial condition or results of operations. Risk Factors Summary Risks Related to our Business and the Industry in which we Operate ● We have a limited operating history upon which investors can evaluate our business and future prospects. ● We may not generate sufficient revenues to achieve profitability. ● We **have recently engaged, and may in the future engage, in acquisitions that could disrupt our business, cause dilution to our shareholders and harm our financial condition and operating results. ● We** are **subject to a number** ~~dependent on the proper functioning~~ of **restrictive covenants relating to** our ~~critical~~ **indebtedness, which may restrict our business and financing** ~~facilities~~ - **activities . ● Our business** , ~~our supply chain~~ **results of operation** and ~~distribution networks and the~~ financial ~~stability of~~ **condition have been, and could in the future be, adversely affected by a pandemic, epidemic** ~~our~~ - **or** ~~customers~~ **other public health emergency** . ● The industry and the markets in which the Company operates are highly competitive and subject to rapid technological change. ● We are still developing many of our products, and they may not be accepted in the market. ● **Winning business in the semiconductor industry is subject to a lengthy process that often requires us to incur significant expense, from which we may ultimately generate no revenue. ●** We face risks associated with the operation of our manufacturing facility **. ● The ongoing supply shortage experienced by the semiconductor industry has disrupted, and will likely continue to disrupt normal business activity, and may have an adverse effect on our results of operations** . ● The average selling prices of semiconductor products in our markets have often decreased rapidly and may do so in the future. ● Problems in scaling our manufacturing operations or poor manufacturing yields could have a material adverse effect on our business. ● Industry overcapacity could cause us to underutilize our manufacturing facilities and have a material adverse effect on our financial performance **. ● We face intense competition, which may cause pricing pressures, decreased gross margins and loss of potential market share and may materially and adversely affect our business, financial condition and results of operations** . ● We contract with a number of large service providers and product companies that have considerable bargaining power, which may require us to agree to terms and conditions that could have an adverse effect on our business or ability to recognize revenues. ● We may be subject to risks related to doing business in, and having counterparties based in, foreign countries. ● **Economic regulation in China could adversely impact our business and results of operations. ●** We depend on a few large customers for a substantial portion of our revenue. ● Global shortages in manufacturing capacities could negatively affect our operations and negatively impact our results of operations. ● Changes in general economic conditions, together with other factors, cause significant upturns and downturns in the ~~semiconductor~~ industry, and our business, therefore, may also experience cyclical fluctuations in the future. ● If we are unable to attract and retain qualified personnel to contribute to the development, manufacture and sale of our products, we may not be able to effectively operate our business. Risks Related to Our Intellectual Property ● If we fail to obtain, maintain and enforce our intellectual property rights, we may not be able to prevent third parties from using our proprietary technologies. ● We have a limited number of patent applications, which may not result in issued patents or patents that fully protect our intellectual property. ● We are and may in the future be involved in lawsuits to protect or enforce our patents, which could be expensive, time- consuming and unsuccessful. ● We need to protect our trademark rights and disclosure of our trade secrets to prevent competitors from taking advantage of our goodwill. ● Development of certain technologies with our customers or manufacturers may result in restrictions on jointly- developed intellectual property. ● We are and may be subject to claims of infringement, misappropriation or misuse of third party intellectual property that, regardless of merit, could result in significant expense and loss of our intellectual property rights. Risks Related to our Financial Condition ● We have a history of losses, will need substantial additional funding to continue our operations and may not achieve or sustain profitability in the future. **● Servicing our debt requires a significant amount of cash or Common Stock, and we may not have sufficient cash flow from our business or have the ability to issue the necessary number of shares of Common Stock to pay our substantial debt.** Risks Related to Regulatory Requirements **● Government regulation may adversely affect our business.** ● We may incur substantial expenses in connection with regulatory requirements, and any regulatory compliance failure could cause our business to suffer. ● ~~Compliance with~~ **There could be an adverse change or increase in the laws and / or** regulations **governing** ~~regarding the use of " conflict minerals " could limit the supply and increase the cost of certain metals used in manufacturing~~ our ~~products~~ **business** . Investment Risks ● Our common stock has been thinly traded and its share price in the public markets has experienced, and may in the future experience, extreme volatility. ● Stockholders may experience dilution of their ownership interests because of the future issuance of additional shares of our stock or other securities. General Risk Factors ● Security breaches and other disruptions could compromise our proprietary information and expose us to liability, which would cause our business and reputation to suffer. ● ~~Our business and operations would suffer in the event of system failures, and our operations are vulnerable to interruption by natural disasters, terrorist activity, power loss and other events beyond our control, the occurrence of which could materially harm our business. ●~~ Litigation or legal proceedings, including product liability claims, could expose us to significant liabilities, occupy a significant amount of our management' s time and attention and damage our reputation ~~. ● Unsolicited takeover proposals, governance change proposals, proxy contests and certain proposals / actions by activist investors may create additional risks and uncertainties with respect to our business~~ . ● There could be an adverse change or increase in the laws and / or regulations governing our business ~~. ● We may engage in future acquisitions that could disrupt our business, cause dilution to our shareholders and harm our financial condition and~~

~~operating results. ● Delaware law, our charter documents, and the ability of our Board of Directors to issue additional stock could impede or discourage a takeover or change of control that stockholders may consider favorable. ● Our bylaws provide, subject to certain exceptions, that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for certain stockholder litigation matters~~ . We have a limited operating history upon which investors can evaluate our business and future prospects. We are an emerging commercial company that ~~recently~~ began **meaningful** commercial operations **in 2019 by** selling advanced single- crystal BAW filter products for RFFEs for use in the mobile wireless device industry. Historically, we have primarily focused on R & D of high efficiency acoustic wave resonator technology utilizing single- crystal piezoelectric materials, and have ~~earned minimal revenue~~ **not become profitable** from operations ~~since inception~~ . Since our expectations of potential customers and future demand for our products are based on only limited experience, it is difficult for our management and our investors to accurately forecast and evaluate our future prospects and our revenues. Our proposed progression of our operations is therefore subject to all of the risks inherent in light of the expenses, difficulties, complications and delays frequently encountered in connection with the growth of any new business and the development of a product, as well as those risks that are specific to our business in particular. The risks include, but are not limited to, our reliance on third parties to complete some processes for the manufacturing and packaging of our products, the possibility that we will not be able to develop functional and scalable products, or that although functional and scalable, our products and / or services will not be accepted in the market. To successfully introduce and market our products at a profit, we must establish brand name recognition and competitive advantages for our products. There are no assurances that the Company can successfully address these challenges. If it is unsuccessful, the Company and its business, financial condition and operating results will be materially and adversely affected. We may not generate sufficient revenues to achieve profitability. We have incurred operating losses since our inception and expect to continue to have negative cash flow from operations. We have only generated minimal revenues from shipment of product while our primary sources of funds have been R & D grants, MEMS foundry services (which we exited in 2021), issuances of our equity, and debt. Our future profitability will depend on our ability to create a sustainable business model and generate sufficient revenues, which is subject to a number of factors, including our ability to successfully implement our strategies and execute our R & D plan, our ability to implement our improved design and cost reductions into manufacturing of our RF filters, the availability of funding, market acceptance of our products, consumer demand for end products incorporating our products, our ability to compete effectively in a crowded field, our ability to respond effectively to technological advances by timely introducing our new technologies and products, and global economic and political conditions. Our future profitability also depends on our expense levels, which are influenced by a number of factors, including the resources we devote to developing and supporting our projects and potential products, the continued progress of our research and development of potential products, our ability to improve R & D efficiencies, license fees or royalties we may be required to pay, and the potential need to acquire licenses to new technology, the availability of intellectual property for licensing or acquisition, or the use of our technology in new markets, which could require us to pay unanticipated license fees and royalties in connection with these licenses. Our development and commercialization efforts may prove more expensive than we currently anticipate, and we may not succeed in increasing our revenues to offset higher expenses. These expenses, among other things, may cause our net income and working capital to decrease. If we fail to generate sufficient revenue and manage our expenses, we may never achieve profitability, which would adversely and materially affect our ability to provide a return to our investors. We have recently engaged, and may in the future engage, in acquisitions that could disrupt our business, cause dilution to our shareholders and harm our financial condition and operating results. In October 2021, we acquired a majority ownership position in RFM Integrated Device, Inc. (" RFMi ") and, on April 29, 2022, exercised the right to acquire the remaining 49 %. **In January 2023, we acquired all of the outstanding capital stock of Grinding and Dicing Services, Inc. (" GDSI ").** The consideration for the ~~acquisition~~ **acquisitions has** ~~includes~~ **included** cash ~~and~~ **,** common stock **, a secured promissory note,** as well as **a** possible earn- out ~~payments~~ - **payment with respect to RFMi** that may be paid in cash or common stock based on its future trading price. We may in the future make additional acquisitions of, or investments in, companies that we believe have products or capabilities that are a strategic or commercial fit with our current business or otherwise offer opportunities for our company. In connection with these acquisitions or investments, we may: ● issue common stock or other forms of equity that would dilute our existing shareholders' percentage of ownership, ● incur debt and assume liabilities, and ● incur amortization expenses related to intangible assets or incur large and immediate write- offs. We may not be able to complete acquisitions on favorable terms, if at all. If we do complete an acquisition, such as of RFMi **and GDSI** , we cannot assure you that it will ultimately strengthen our competitive position, that it will be viewed positively by customers, financial markets or investors or that we will otherwise realize the expected benefits of such an acquisition to the anticipated extent or at all. Furthermore, the ~~acquisition~~ **acquisitions** of RFMi **and GDSI** and any future acquisitions could pose numerous additional risks to our expected operations, including, but not limited to: ● problems integrating the purchased business, products or technologies, ● challenges in achieving strategic objectives, cost savings and other anticipated benefits, ● increases to our expenses, ● the assumption of significant liabilities, which may have been previously unknown or not discoverable through diligence, that exceed the limitations of any applicable indemnification provisions or the financial resources of any indemnifying party, ● inability to maintain relationships with prospective key customers, vendors and other business partners of the acquired businesses, ● diversion of management' s attention from its day- to- day responsibilities, ● difficulty in maintaining controls, procedures and policies during the transition and integration, ● entrance into marketplaces where we have no or limited prior experience and where competitors have stronger marketplace positions, ● potential **stockholder litigation challenging the acquisition, which could result in significant costs of defense, indemnification and liability, ● potential** loss of key employees, particularly those of the acquired entity, and ● historical financial information may not be representative or indicative of our results as a combined company. Acquisitions may also have unanticipated tax, legal, regulatory and accounting ramifications, including recording goodwill and non- amortizable intangible assets that are subject to impairment testing on a regular basis and potential periodic impairment charges and incurring amortization expenses related to certain intangible assets. If our goodwill and intangible assets on our consolidated balance sheet arising from the RFMi **and GDSI** ~~acquisition~~ **acquisitions** become impaired, it would require us to record a material charge to earnings in accordance with generally accepted accounting principles. As a result of our ~~acquisition~~ **acquisitions** of RFMi **and GDSI** , we recorded approximately $ ~~8~~ **14** . ~~1~~ **6** million of goodwill and $ ~~9~~ **17** . ~~5~~ **7** million of intangible assets which are currently shown as assets on our consolidated balance sheet at June 30, ~~2022~~ **2023** . Generally Accepted Accounting Principles (" GAAP ") require us to test our goodwill and intangible assets for impairment on an annual basis, or more frequently if indicators for potential impairment exist. The testing required by GAAP involves estimates and judgments by management. Although we believe our assumptions and estimates are reasonable and appropriate, any changes in key assumptions, including a failure to meet business plans or other unanticipated events and circumstances, may affect the accuracy or validity of such estimates. If in the future we determine that an impairment exists, we may be required to record a material charge to earnings in our consolidated financial statements during the period in which any impairment of our goodwill or intangible assets is determined. We are subject to a number of restrictive covenants ~~,~~ relating to our indebtedness, which may restrict our business and financing activities. The indenture governing our convertible notes imposes operating and other restrictions on us. Such restrictions may affect, and in many respects limit or prohibit, among other things, our ability to: ● incur or guarantee additional indebtedness; ● issue preferred stock or stock of any subsidiary; ● make investments or acquisitions; ● merge, consolidate, dissolve or liquidate; ● engage in certain asset sales (including the sale of stock of our subsidiary); ● grant liens (except permitted liens); ● pay dividends; ● engage in transactions with our affiliates; and ● enter into a new line of business. The restrictions in the indenture governing the convertible notes may prevent us from taking actions that we believe would be in the best interests of our business, and may make it difficult for us to successfully execute our business strategy or effectively compete with companies that are not similarly restricted. We also may incur future debt obligations that might subject us to additional restrictive covenants that could affect our financial and operational flexibility. Our ability to comply with these covenants in future periods will largely depend on the pricing of our products and services, and our ability to successfully implement our overall business strategy. We cannot assure you that we will be granted waivers or amendments to these agreements if for any reason we are unable to comply with these agreements. The breach of any of these covenants and restrictions could result in a default under the indenture governing the convertible notes, which could result in an acceleration of our indebtedness. **Our business** ~~We are dependent on the proper functioning of our critical facilities~~ , ~~our supply chain~~ **results of operation** and ~~distribution networks and the~~ financial **condition** ~~stability of our customers, all of which~~ have been ~~negatively impacted~~ **, and could in the future be, adversely affected** by **a** ~~the COVID- 19~~ pandemic **, epidemic** ~~in a manner that may have a materially adverse effect on our~~ - **or other public health emergency** ~~business, financial condition or results of operations. Our ability to manufacture products may be materially adversely impacted by COVID- 19~~ . The COVID- 19 pandemic ~~is~~ **had a significant** ~~impacting~~ --- **impact on** worldwide economic activity ~~, which has had a corresponding effect on our sales activity. The impact of this pandemic has been~~ and **caused** ~~will likely continue to be extensive in many aspects of society, and has resulted in and will likely continue to result in significant~~ disruptions ~~to the global economy,~~ **in our supply chain and distribution networks** as well as **sales activity** ~~businesses and capital markets around the world~~ . ~~With the ongoing effect of the~~ **Another pandemic, including a new** COVID- 19 **variant, or other public health emergency, together with preventative measures taken to contain or mitigate such crises, could adversely impact our results of operations and financial conditions. In addition, a** pandemic **or** ~~in the United States and~~ other ~~countries,~~ **public health emergency could impact the proper functioning of financial** and **capital markets, foreign currency exchange rates, product and energy costs, labor supply and costs, and interest rates. Any pandemic or** ~~the~~ **other public health emergency could also amplify the other risks and** ~~uncertainty~~ **uncertainties** ~~as to potential future waves of COVID~~ **described in this Annual Report on Form 10** - **K** ~~19 infections, it is unclear how economic activity and workflows will continue to be impacted and for how long. Many employers in the United States have in the past or are currently requiring their employees to work from home or not come into their offices or facilities~~ . We ~~manufacture primarily out~~ **cannot reasonably predict the ultimate impact** of **any pandemic or** ~~one facility in Canandaigua, New York. In order to mitigate the~~ **other public** ~~risk posed by COVID- 19, we have in the past implemented, and may in the future implement social distancing measures, daily self-~~ health **emergency** ~~attestations, and mandatory mask policies~~ , including ~~when warranted by state and local guidelines. We also have implemented in~~ the **extent of any adverse impact** ~~past new staffing plans in our facilities whereby certain employees worked remotely and the remaining~~ on ~~- site force was divided into multiple shifts or segregated in different parts of the facility. Our actions continue to evolve in response to new government measures, available vaccines, and scientific knowledge regarding COVID- 19. To date, these protocols have not resulted in a decrease in the production capabilities of our facility. However, if the manufacturing capabilities of this facility are adversely impacted as a result of COVID- 19, whether by a decrease in productivity caused by precautionary measures or by one or more employees becoming ill, it may not be possible for us to timely manufacture relevant products at required levels or at all. A reduction or interruption in any of our manufacturing processes could have a material adverse effect on~~ our business, results of operations ~~,~~ **and** financial condition **, which will depend on, among other things, the duration** and ~~cash flows. We also might~~ **spread, the impact of governmental regulations that may** be ~~unable~~ **imposed in response, the effectiveness of actions taken** to ~~obtain~~ **contain** ~~certain supplies, product components, or equipment from our~~ - **or mitigate** ~~suppliers and vendors due to constraints created by COVID- 19. For instance, we have observed delays in certain suppliers' deliveries of materials necessary for us to manufacture our products and in certain vendors' ability to manufacture equipment used in our production process. Additionally, travel restrictions and stay- at- home orders or similar mandates of foreign and domestic governments have prevented us from visiting suppliers' facilities as part of our quality control processes and have constrained or delayed visits by out- of- state employees and suppliers to perform installations, maintenance and service. These impacts may delay our launch of new products, adversely affect our ability to deliver customers' orders timely or in~~ the **outbreak,** ~~requested quantities and inhibit our ability to ensure~~ the ~~quality~~ **availability, safety and efficacy** of **vaccines,**

including against emerging variants of the infectious disease, and global economic conditions ~~supplies used in our products. Our sales may be materially adversely impacted by COVID- 19~~. Our sales efforts typically function by in- person meetings with customers and potential customers to discuss our products. The method and timing of these meetings has been altered due to stay- at- home orders and travel restrictions relating to COVID- 19. This limitation on the ability of our sales personnel to maintain their customary interaction with customers may negatively affect demand for our products. We have also found that potential customers have been forced to slow and reprioritize various product development projects as a result of COVID- 19. This disruption to our sales activity and our customers' businesses, and the resulting delay in the growth of our business, may have a material adverse effect on our results of operations, financial condition and cash flows. Furthermore, a reduction or delay in revenues will prolong our dependence on capital raising to finance our operations. The industry and the markets in which the Company operates are highly competitive and subject to rapid technological change. Therefore, in order for our products to be competitive and achieve market acceptance, we need to keep pace with rapid development of new process technologies. The markets in which we compete are intensely competitive. We operate primarily in the industry that designs and produces semiconductor components for wireless communications and other wireless devices, which is subject to rapid changes in both product and process technologies based on demand and evolving industry standards. The markets for our products are characterized by: ● rapid technological developments and product evolution, ● rapid changes in customer requirements, ● frequent new product introductions and enhancements, ● continuous demand for higher levels of integration, decreased size and decreased power consumption, ● short product life cycles with declining prices over the life cycle of the product, and ● evolving industry standards. The continuous evolutions of these technologies and frequent introduction of new products and enhancements have generally resulted in short product life cycles for wireless semiconductor products, in general, and for RFFEs, in particular. Our R & D activity and resulting products could become obsolete or less competitive sooner than anticipated because of a faster than anticipated change in one or more of the above- noted factors. Therefore, in order for our products to be competitive and achieve market acceptance, we need to keep pace with rapid development of new process technologies, which requires us to: ● respond effectively to technological advances by timely introducing new technologies and products, ● successfully implement our strategies and execute our R & D plan in practice, ● improve the efficiency of our technology, and ● implement our improved design and cost reductions into manufacturing of our RF filters. We are still developing many of our products, and they may not be accepted in the market. Although we believe that our XBAW acoustic wave resonator technology, which utilizes high purity piezoelectric materials, provides material advantages over existing RF filters technologies, and we have developed and are currently developing various methods of integration suitable for implementation of this technology into RF filters, we cannot be certain that our RF BAW filters will be able to achieve or maintain market acceptance. While we have fabricated R & D filters that demonstrate the performance of our XBAW technology, and this technology has been qualified for mass production, the Company is undergoing a critical production ramp to commercial scale. There are no assurances that we can successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields. In addition to our limited operating history, we will depend on a limited number of manufacturers and customers for a significant portion of our revenue in the future and we cannot guarantee their acceptance of our products. Each of these factors may adversely affect our ability to implement our business strategy and achieve our business goals. The successful development of our XBAW technology and market acceptance of our RF BAW filters will be highly complex and will depend on the following principal competitive factors, including our ability to: ● comply with industry standards and effectively compete against current technology for producing RF acoustic wave filters, ● differentiate our products from offerings of our competitors by delivering RF BAW filters that are higher in quality, reliability and technical performance, ● anticipate customer and market requirements, changes in technology and industry standards and timely develop improved technologies that meet high levels of satisfaction of our potential customers, ● maintain, grow and manage our internal teams to the extent we increase our operations and develop new segments of our business, ● develop and maintain successful collaborative, strategic, and other relationships with manufacturers, customers and contractors, ● protect, develop or otherwise obtain adequate intellectual property for our technology and our filters; and ● obtain strong financial, sales, marketing, technical and other resources necessary to develop, test, manufacture, commercialize and market our filters. If we are unsuccessful in accomplishing these objectives, we may not be able to compete successfully against current and potential competitors. As a result, our XBAW technology and our RF filters may not be accepted in the market and we may never attain profitability. Winning business in the semiconductor industry is subject to a lengthy process that often requires us to incur significant expense, from which we may ultimately generate no revenue. Our business is dependent on us winning competitive bid selection processes, known as " design wins ". These selection processes are typically lengthy and can require us to dedicate significant development expenditures and scarce engineering resources in pursuit of a single customer opportunity. Failure to obtain a particular design win may prevent us from obtaining design wins in subsequent generations of a particular product. This can result in lost revenue and can weaken our position in future selection processes. Winning a product design does not guarantee sales to a customer. A delay or cancellation of a customer' s plans could materially and adversely affect our financial results, as we incur significant expense in the design process and may generate little or no revenue from it. In addition, the timing of design wins is unpredictable and implementing production for a major design win, or multiple design wins at the same time, may strain our resources and supply chain. In such event, we may be forced to dedicate significant additional resources and incur additional costs and expenses. Further, often customers will only purchase limited numbers of evaluation units until they qualify the products and / or the manufacturing line for those products. The qualification process can take significant time and resources. Delays in qualification or failure to qualify our products may cause a customer to discontinue use of our products and result in a significant loss of revenue. Finally, customers could choose at any time to stop using our products or could fail to successfully market and sell their products, which could reduce demand for our products, and cause us to hold excess inventory, materially adversely affecting our business, financial condition and results of operations. These risks are exacerbated by the fact that many of our products, and the end products into which our products are incorporated, often have very short life cycles. We face risks associated with the operation of our manufacturing facility. We operate a wafer fabrication facility in Canandaigua, NY that we acquired in June 2017. We currently use several international and domestic suppliers to assemble and test our products, as well as our own test and tape and reel facilities located in the U. S. A number of factors related to our facilities will affect our business and financial results, including the following: ● our ability to adjust production capacity in a timely fashion in response to changes in demand for our products; ● the significant fixed costs of operating the facilities; ● factory utilization rates; ● our ability to qualify our facilities for new products and new technologies in a timely manner; ● the availability of raw materials, the impact of the volatility of commodity pricing and tariffs imposed on raw materials, including substrates, gold, platinum and high purity source materials such as gallium, aluminum, arsenic, indium, silicon, phosphorous and palladium; ● our manufacturing cycle times; ● our manufacturing yields; ● our ability to hire, train and manage qualified production personnel; ● our compliance with applicable environmental and other laws and regulations; and ● our ability to avoid prolonged periods of down- time in our facilities for any reason. We are dependent upon third parties for the supply of raw materials and components. Our manufacturing operations depend on obtaining adequate supplies of raw materials and components used in our manufacturing processes at a competitive cost, including silicon wafers, copper lead frames, precious and rare earth metals, ceramic packages and various chemicals and gases. Although we maintain relationships with suppliers located around the world with the objective of ensuring that we have adequate sources for the supply of raw materials and components for our manufacturing needs, increases in demand from the semiconductor industry for such raw materials and components, as well as increased demand for commodities in general, can result in tighter supplies and higher costs. Our suppliers may not be able to meet our delivery schedules, we may lose a significant or sole supplier, a supplier may not be able to meet performance and quality specifications and we may not be able to purchase such supplies or material at a competitive cost. If a supplier were unable to meet our delivery schedules or if we lost a supplier or a supplier were unable to meet performance or quality specifications, our ability to satisfy customer obligations would be materially and adversely affected. In addition, we review our relationships with suppliers of raw materials and components for our manufacturing needs on an ongoing basis. In connection with our ongoing review, we may modify or terminate our relationship with one or more suppliers. We may also enter into sole supplier arrangements to meet certain of our raw material or component needs. While we do not typically rely on a single source of supply for our raw materials, we are currently dependent on a limited number of sole- source suppliers. If we were to lose these sole sources of supply, for any reason, a material adverse effect on our business could result until an alternate source is obtained. As certain materials are highly specialized, the lead time needed to identify and qualify a new supplier is typically lengthy and there is often no readily available alternative source. To the extent we enter into additional sole supplier arrangements for any of our raw materials or components, the risks associated with our supply arrangements would be exacerbated. The ongoing supply shortage experienced by the semiconductor industry has disrupted and will likely continue to disrupt normal business activity, and may have an adverse effect on our results of operations. The global silicon semiconductor industry is experiencing a shortage in supply and difficulties in ability to meet customer demand. In particular, the ~~recent~~ government- mandated COVID- 19 containment measures in China have impacted supply shipments and created ongoing risk and uncertainty. These issues have led to an increase in lead- times of the production of semiconductor chips and components. We have experienced, and expect to continue to experience, disruption to parts of our semiconductor supply chain, including procuring necessary components and inputs, such as wafers and substrates, in a timely fashion, with suppliers increasing lead times or placing products on allocation and raising prices. We have also incurred higher costs to secure available inventory, or have extended our purchase commitments or placed non- cancellable orders with suppliers, which introduces inventory risk if our forecasts and assumptions are inaccurate. In addition, disruptions to commercial transportation infrastructure have increased delivery times for materials and components to our facilities and, in some cases, our ability to timely ship our products to customers. We have seen some of our customers become more conservative in response to these complications by reducing their purchases and inventories or postponing capital expenditures, including product orders from us. We believe the global supply chain challenges and their adverse impact on our business will persist and the degree to which the pandemic ultimately impacts our business and results of operations will depend on future developments beyond our control. Social and environmental responsibility regulations, policies and provisions, as well as customer and investor demands, may make our supply chain more complex and may adversely affect our relationships with customers and investors. There is an increasing focus on corporate **,** social and environmental responsibility in the semiconductor industry, particularly with OEMs that manufacture consumer electronics. A number of our customers have adopted, or may adopt, procurement policies that include social and environmental responsibility provisions or requirements that their suppliers should comply with, or they may seek to include such provisions or requirements in their procurement terms and conditions. An increasing number of investors are also requiring companies to disclose corporate **,** social and environmental policies, practices and metrics. In addition, various jurisdictions are developing climate change- based laws or regulations that could cause us to incur additional direct costs for compliance, as well as indirect costs resulting from our customers, suppliers, or both incurring additional compliance costs that are passed on to us. These legal and regulatory requirements, as well as investor expectations, on corporate environmental and social responsibility practices and disclosure, are subject to change, can be unpredictable, and may be difficult and expensive for us to comply with, given the complexity of our supply chain and our significant outsourced manufacturing. If we are unable to comply, or are unable to cause our suppliers or manufacturers to comply, with such policies or provisions or meet the requirements of our customers and investors, a customer may stop purchasing products from us or an investor may sell their shares, and may take legal action against us, which could harm our reputation, revenue and results of operations. In **recent years, there has been an increased focus from stakeholders, regulators and the public in general on corporate, social and environmental matters, including greenhouse gas emissions and climate- related risks, renewable energy, water stewardship, waste management, diversity, equality and inclusion, responsible sourcing and supply chain, human rights, and social responsibility. We may be unable**

to satisfactorily meet evolving standards, regulations and disclosure requirements related to corporate, social, and environmental matters. Such matters can affect the willingness or ability of investors to make an investment in our Company, as well as our ability to meet regulatory requirements, including the SEC' s proposed rules related to greenhouse gas emissions. Any failure, or perceived failure, to meet evolving stakeholder expectations, additional regulations and industry standards or achieve our corporate, social, and environmental responsibility goals could have an adverse effect on our business, results of operations, financial condition, or stock price. In addition, as part of their corporate **,** social and environmental responsibility programs, an increasing number of OEMs are seeking to source products that do not contain minerals sourced from areas where proceeds from the sale of such minerals are likely to be used to fund armed conflicts, such as in the Democratic Republic of Congo. This could adversely affect the sourcing, availability and pricing of minerals used in the manufacture of semiconductor devices, including our products. As a result, we may face difficulties in satisfying these customers' demands, which may harm our sales and operating results. The average selling prices of semiconductor products in our markets have often decreased rapidly and may do so in the future, which could harm our revenue and gross profit. Certain of the semiconductor products we develop and sell are used for high volume applications. As a result, the prices of those products have often decreased rapidly. Gross profit on our products may be negatively affected by, among other things, pricing pressures from our customers. We have reduced, and may in the future reduce, the average selling prices of our products in response to, or in anticipation of, future competitive pricing pressures, new product introductions by us or our competitors and other factors. In addition, some of our customer agreements provide for volume- based pricing and product pricing roadmaps, which can also reduce the average selling prices of our products over time. Our margins and financial results will suffer if we are unable to offset any reductions in our average selling prices by increasing our sales volumes, reducing manufacturing costs, or developing new and higher value- added products on a timely basis. If we experience poor manufacturing yields, our operating results may suffer. Our products have unique designs and are fabricated using multiple semiconductor process technologies that are highly complex. In many cases, our products are assembled in customized packages. Many of our products consist of multiple components in a single module and feature enhanced levels of integration and complexity. Our customers insist that our products be designed to meet their exact specifications for quality, performance and reliability. Our manufacturing yield is a combination of yields across the entire supply chain, including wafer fabrication, assembly and test yields. Defects in a single component in an assembled module product can impact the yield for the entire module, which means the adverse economic impacts of an individual defect can be multiplied many times over if we fail to discover the defect before the module is assembled. Due to the complexity of our products, we periodically experience difficulties in achieving acceptable yields and other quality issues, particularly with respect to new products. Our customers test our products once they have been assembled into their products. The number of usable products that result from our production process can fluctuate as a result of many factors, including: ● design errors; ● minute impurities and variations in materials used; ● contamination of the manufacturing environment; ● equipment failure or variations in the manufacturing processes; ● losses from broken wafers or other human error; and ● defects in substrates and packaging. We constantly seek to improve our manufacturing yields. Typically, for a given level of sales, when our yields improve, our gross margins improve, and when our yields decrease, our unit costs are higher, our margins are lower, and our operating results are adversely affected. Costs of product defects and deviations from required specifications could include the following: ● writing off inventory; ● scrapping products that cannot be fixed; ● accepting returns of products that have been shipped; ● providing product replacements at no charge; ● reimbursement of direct and indirect costs incurred by our customers in recalling or reworking their products due to defects in our products; ● travel and personnel costs to investigate potential product quality issues and to identify or confirm the failure mechanism or root cause of product defects; and ● defending against litigation. These costs could be significant and could reduce our gross margins. Our reputation with customers also could be damaged as a result of product defects and quality issues, and product demand could be reduced, which could harm our business and financial results. Problems in scaling our manufacturing operations could have a material adverse effect on our business. Future customer demand may require us to significantly increase our manufacturing capacity. There are substantial technical challenges to increasing manufacturing capacity, including equipment acquisition lead times, materials procurement, scaling our manufacturing process, manufacturing site expansion, and the need to significantly increase production yields while maintaining or improving quality control and assurance. Developing commercial- scale manufacturing facilities will require the investment of substantial additional funds and the hiring and retention of additional management, quality assurance, quality control and technical personnel who have the necessary manufacturing experience. The scaling of manufacturing capacity is subject to numerous risks and uncertainties and may lead to variability in product quality or reliability, prolonged construction timelines, as well as resources required to acquire, install and maintain manufacturing equipment, among others, all of which can lead to unexpected delays in manufacturing output. Additionally, the production of our products must occur in a highly controlled and clean environment to minimize particles and other yield- and quality- limiting contaminants. Weaknesses in process control or minute impurities in materials may cause a substantial percentage of defective products. We may not be able to maintain stringent quality controls and contamination problems could arise. Material defects in our products could result in loss or delay of revenues, delayed market acceptance, damage to our reputation, lost customers, legal claims, increased insurance costs or increased service and warranty costs. If we are unable to successfully scale up our manufacturing operations to meet customer demand, our business growth could be materially adversely affected. Industry overcapacity could cause us to underutilize our manufacturing facilities and have a material adverse effect on our financial performance. It is difficult to predict future demand for our products, which makes it difficult to estimate future requirements for production capacity and avoid periods of overcapacity. Fluctuations in the growth rate of industry capacity relative to the growth rate in demand for our products also can lead to overcapacity and contribute to cyclicality in the semiconductor market. Capacity expansion projects have long lead times and require capital commitments based on forecasted product trends and demand well in advance of production orders from customers. In recent years, we have made significant capital investments to expand our RF filter capacity to address forecasted future demand patterns. In certain cases, these capacity additions may exceed the near- term demand requirements, leading to overcapacity situations and underutilization of our manufacturing facilities. As many of our manufacturing costs are fixed, these costs cannot be reduced in proportion to the reduced revenues experienced during periods of underutilization. Underutilization of our manufacturing facilities can adversely affect our gross margin and other operating results. If demand for our products experiences a prolonged decrease, we may be required to close or idle facilities and write down our long- lived assets or shorten the useful lives of underutilized assets and accelerate depreciation, which would increase our expenses. We face intense competition, which may cause pricing pressures, decreased gross margins and loss of potential market share and may materially and adversely affect our business, financial condition and results of operations. We compete with U. S. and international semiconductor manufacturers and mobile semiconductor companies of all sizes in terms of resources and market share, some of whom have significantly greater financial, technical, manufacturing and marketing resources than we do. We expect competition in our markets to intensify as new competitors enter the market, existing competitors merge or form alliances, and new technologies emerge. Our competitors may introduce new solutions and technologies that are superior to our products, are verified on a commercial scale, and have achieved widespread market acceptance. Certain of our competitors may be able to adapt more quickly than we can to new or emerging technologies and changes in customer requirements or may be able to devote greater resources to the development, promotion and sale of their products than we can. This implementation may require us to modify the manufacturing process for our filters, design new products to more stringent standards, and redesign some existing products, which may prove difficult for us and result in delays in product deliveries and increased expenses. Increased competition could also result in pricing pressures, declining average selling prices for our products, decreased gross margins and loss of potential market share. We will need to make substantial investments to develop these enhancements and technologies, and we cannot assure investors that we will have funds available for these investments or that these enhancements and technologies will be successful. If a competing technology emerges that is, or is perceived to be, superior to our existing technology and we are unable to adapt to these changes and to compete effectively, our market share and financial condition could be materially and adversely affected, and our business, revenue, and results of operations could be harmed. **In addition, from time to time, governments may provide subsidies or make other investments that could give competitive advantages to many semiconductor companies. In August 2022, the United States enacted the CHIPS Act, which, among other things, provides funding to increase domestic production and research and development in the semiconductor industry. Our competitors could receive government funding allocated under the CHIPS Act or otherwise benefit from such investments to a greater extent than we do, which could cause them to gain market share and adversely affect our business, financial condition and results of operations.** We contract with a number of large service providers and product companies that have considerable bargaining power, which may require us to agree to terms and conditions that could have an adverse effect on our business or ability to recognize revenues. Large service providers and product companies comprise a significant portion of our current and target customer bases. These customers generally have greater purchasing and bargaining power than smaller entities and, accordingly, often request and receive more favorable terms from suppliers, including us. As we seek to expand our sales to existing customers and acquire new customers, we may be required to agree to terms and conditions that are favorable to our customers and that may affect the timing of our ability to recognize revenue, increase our costs and have an adverse effect on our business, financial condition, and results of operations. Furthermore, large customers have increased buying power and ability to require onerous terms in our contracts with them, including pricing, warranties, and terms related to indemnification, intellectual property ownership and licensing. If we are unable to satisfy the terms of these contracts, it could result in liabilities of a material nature, including litigation, damages, additional costs, loss of market share, loss of intellectual property rights or exclusive use of such rights, and loss of reputation. Additionally, the terms these large customers may require, such as most- favored customer or exclusivity provisions with respect to specific products, may impact our ability to do business with other customers and generate revenues from such customers. We may be subject to risks related to doing business in, and having counterparties based in, foreign countries. We engage in operations, and enter into agreements with counterparties, located outside the U. S., which exposes us to political, governmental and economic instability and foreign currency exchange rate fluctuations. Any disruption caused by these factors could harm our business, results of operations, financial condition, liquidity and prospects. Risks associated with potential operations, commitments and investments outside of the U. S. include but are not limited to risks of: ● global and local economic, social and political conditions and uncertainty **, including heightened tensions between the U. S. and China, China and Taiwan, or other countries** ; ● currency exchange restrictions and currency fluctuations; ● war, including the Russian- Ukrainian conflict, or terrorist attack; ● local outbreak of disease, such as COVID- 19; ● renegotiation or nullification of existing contracts or international trade arrangements; ● labor market conditions and workers' rights affecting our manufacturing operations or those of our customers; ● macro- economic conditions impacting key markets and sources of supply; ● changing laws and policies affecting trade, taxation, financial regulation, immigration, and investment; ● compliance with laws and regulations that differ among jurisdictions, including those covering taxes, intellectual property ownership and infringement, imports and exports, anti- corruption and anti- bribery, antitrust and competition, data privacy, and environment, health, and safety; and ● general hazards associated with the assertion of sovereignty over areas in which operations are conducted, transactions occur, or counterparties are located. As our reporting currency is the U. S. dollar, any operations conducted outside the U. S. or transactions denominated in foreign currencies would face additional risks of fluctuating currency values and exchange rates, hard currency shortages and controls on currency exchange. In addition, we would be subject to the impact of foreign currency fluctuations and exchange rate changes on our financial reports when translating our assets, liabilities, revenues and expenses from operations or transactions outside of the U. S. into U. S. dollars at the then- applicable exchange rates. These translations could result in changes to our results of operations from period to period. RFMi relies on third parties **outside the U. S.** , including ~~third parties~~ in **Taiwan** ~~countries outside the U.~~

~~S.~~ , for its development and manufacturing activities. Our subsidiary, RFMi, depends on ~~various~~ contractors for certain of its manufacturing and research and development activities. Specifically, RFMi' s contract manufacturer, TST, produces the majority of products sold by RFMi. TST ships some products to RFMi for distribution to end customers and, in some cases, ships products directly to those customers. TST is located in Taiwan and therefore geopolitical changes in China- Taiwan relations could disrupt its operations, which would adversely affect RFMi' s ability to manufacture certain products. ~~Additionally~~ **In addition** , **we have leased office space and have operations in Taiwan. Accordingly, our business, financial condition and results of operations may be affected by changes in governmental and economic policies in Taiwan, social instability and diplomatic and social developments in or affecting Taiwan due to its unique international political status. We cannot assure that relations between Taiwan and China will not face political, military or economic uncertainties in the future. Any deterioration in the relations between Taiwan and China, and other factors affecting military, political or economic conditions in Taiwan, could disrupt** RFMi ~~has outsourced some of their research and development activities to individuals located in Russia. As a result of the ongoing invasion of Ukraine by Russia, the U. S., other North Atlantic Treaty Organization member states, as well as non- member states, have implemented sanctions against Russia and certain Russian banks, enterprises and individuals. These, as well as any future additional sanctions and any resulting conflict between Russia and the U. S., could hinder RFMI~~ ' s ~~abilities to compensate its contractors located in Russia and restrict their abilities to continue working for RFMi, which could have an~~ **and** ~~adverse effect on~~ our business **operations** ~~, financial condition~~ and **materially and adversely affect our** results of operations. Economic regulation in China could adversely impact our business and results of operations. A significant portion of our potential customer base is in China. For many years, the Chinese economy has experienced periods of rapid growth and wide fluctuations in the rate of inflation. In response to these factors, the Chinese government has, from time to time, adopted measures to regulate growth and to contain inflation, including currency controls and measures designed to restrict credit, control prices or set currency exchange rates. Such actions in the future, as well as other changes in Chinese laws and regulations, including actions in furtherance of China' s stated policy of reducing its dependence on foreign semiconductor manufacturers as well as China' s data localization policies and measures, could increase the cost of doing business in China, foster the emergence of Chinese- based competitors, decrease the demand for our products in China, or reduce the supply of critical materials for our products, which could have a material adverse effect on our business and results of operations. Changes in government trade **and investment** policies, including the imposition of tariffs, export restrictions, sanctions, **transaction restrictions,** or ~~other~~ retaliatory measures could limit our ability to sell our products to certain customers, which may materially adversely affect our sales and results of operations. The U. S. or foreign governments may take administrative, legislative or regulatory action that could materially interfere with our ability to sell products in certain countries, particularly Russia and in China. For example, beginning in May 2018, the U. S. imposed tariffs, ranging from 7. 5 % to 25 % on approximately two- thirds of U. S. imports from China, including certain electronic components and equipment. China has taken retaliatory actions, including imposing tariffs on certain U. S. exports effective September, 2019. While the imposition of these tariffs did not have a direct, material adverse impact on our business during fiscal year ended June 30, ~~2022~~ **2023** , the direct and indirect effects of tariffs and other restrictive trade policies are difficult to measure and are only one part of a larger U. S. / China economic and trade policy ~~disagreement~~ **friction** . For example, U. S. government actions targeting exports of certain technologies to and from China are becoming more pervasive. In 2018, the U. S. adopted new laws designed to address concerns about the export of emerging and foundational technologies to China. In ~~addition, in May 2019~~ - **2021** , ~~then~~ - **the** ~~–~~ **U. S. Department of Commerce issued regulations implementing former** President Trump ~~issued an~~ **' s** executive order **invoking** ~~that invoked~~ national emergency economic powers to implement a framework to regulate the acquisition or transfer of information communications technology in transactions that imposed undue national security risks. In **addition** ~~May 2020~~ , ~~then~~ - **the U. S. Department of Commerce enacted new rules that expanded export license requirements for U. S. companies to sell certain items to companies and other end** - ~~President Trump issued~~ **users in China that are designated as military end- users or have operations that could support military end uses; has added additional Chinese companies to its restricted entity list and unverified list under suspicion of military- civil fusion, support of Russia, or other factors associated with** a ~~similar executive order regarding potential~~ **broadening scope of national security concerns; and has expanded an existing rule (referred to as the** foreign ~~threats~~ **direct product rule) in a manner that could cause foreign- made wafers, chipsets, and certain related items** to ~~the~~ **be subject to** U. S. **licensing requirements if certain** ~~bulk- power system from foreign adversaries. Also in May 2020, the U. S. Department of Commerce took actions to restrict~~ Chinese ~~entities' access~~ **corporations or their affiliates are parties** to ~~U. S. technologies~~ **a transaction involving the items** . In response to these and other U. S. actions, China could determine to take **or appear to have taken** countermeasures against U. S. companies doing business in or with China. These series of actions and other types of countermeasures could lead to additional restrictions on the export of products that include or enable certain technologies, including products we could potentially provide to China- based customers. More recently ~~the~~ **in August 2023, President** Biden ~~Administration has begun work on~~ **issued an executive order that provides for the establishment of a** new outbound investment ~~screening~~ **program to block** and **regulate investment in China in sensitive technologies. In addition, the Biden administration has and likely will continue to take action under U. S.** export control **laws** ~~initiatives related~~ to **restrict transfer of goods,** technology ~~transfers~~ **, information, and the provision of services** that could harm U. S. national security. Furthermore, the imposition of tariffs on our potential customers' products that are imported from China to the U. S. could harm sales of such products, which could indirectly harm our business. We cannot predict what actions may ultimately be taken with respect to tariffs, export controls, countermeasures, or other trade measures between the U. S. and China or other countries, what products may be subject to such actions, or what actions may be taken by the other countries in retaliation. The loss or temporary loss of potential foreign customers or the imposition of restrictions on our ability to sell products to such customers as a result of tariffs, export restrictions, sanctions or other U. S. executive or regulatory actions could materially adversely affect our sales, business and results of operations. We depend on a few large customers for a substantial portion of our revenue. A substantial portion of our revenue comes from large purchases by a small number of customers. Our future operating results depend on both the success of our largest customers and on our success in diversifying our products and customer base. The concentration of our revenue with a relatively small number of customers makes us particularly dependent on factors, both positive and negative, affecting those customers. If demand for their devices incorporating our products increases, our results are favorably impacted, while if demand for their devices decreases, they may reduce their purchases of, or stop purchasing, our products and our operating results would suffer. Even if we achieve a design win, our customers can delay, temporarily suspend, or cancel the manufacture or release of a new device for any reason, such as a shortage of supply of other components needed to manufacture their device. Most of our customers can cease incorporating our products into their devices with little notice to us and with little or no penalty. The loss of a large customer and failure to add new customers to replace lost revenue would have a material adverse effect on our business, financial condition and results of operations. Global shortages in manufacturing capacities could negatively affect our operations and negatively impact our results of operations. Our business depends in significant part upon manufacturers of products requiring semiconductors, as well as the current and anticipated production of these products. As a supplier to such manufacturers, we are subject to the business cycles that characterize the industry. Recent sharp increases in demand for semiconductor products have resulted in a global shortage of manufacturing capacities and it is unclear how long this shortage may last. If our customers are forced to reduce the amount of their products they manufacture or plan to manufacture due to a limited supply of semiconductors, our business, financial condition and results of operations could be negatively affected. Changes in general economic conditions, together with other factors, cause significant upturns and downturns in the industry, and our business, therefore, may also experience cyclical fluctuations in the future. From time to time, changes in general economic conditions, together with other factors, may cause significant upturns and downturns in the semiconductor industry. These fluctuations are due to a number of factors, many of which are beyond our control, including: ● levels of inventory in our end markets, ● availability and cost of supply for manufacturing of our products, ● changes in end- user demand for the products manufactured with our technology and sold by our prospective customers, ● exposure to foreign currency exchange rates, import duties and tariffs, ● inflation or a tightening of the credit markets ● industry production capacity levels and fluctuations in industry manufacturing yields, ● market acceptance of our current and future customers' products that incorporate our RF filters, ● the gain or loss of significant customers, ● the effects of competitive pricing pressures, including decreases in average selling prices of products, ● new product and technology introductions by competitors, ● changes in the mix of products produced and sold, and ● intellectual property disputes. As a result, the demand for our products can change quickly and in ways we may not anticipate, and our business, therefore, may also experience cyclical fluctuations in future operating results. In addition, future downturns in the electronic systems industry could adversely impact our revenue and harm our business, financial condition and results of operations. Macroeconomic weakness and uncertainty also make it more difficult for us to accurately forecast revenue, gross margin and expenses, and may make it more difficult to raise or refinance debt. For example, an escalation of trade tensions between the U. S. and China has resulted in trade restrictions and increased tariffs that harm our ability to participate in Chinese markets or compete effectively with Chinese companies. Sustained uncertainty about, or worsening of, current global economic conditions and further escalation of trade tensions between the U. S. and its trading partners, especially China, and possible decoupling of the U. S. and China economies, could result in a global economic slowdown and long- term changes to global trade. If we are unable to attract and retain qualified personnel to contribute to the development, manufacture and sale of our products, we may not be able to effectively operate our business. As the source of our technological and product innovations, our key technical personnel represent a significant asset. We believe that our future success is highly dependent on the continued services of our current key officers, employees, and Board members, as well as our ability to attract and retain highly skilled and experienced technical personnel. The loss of their services could have a detrimental effect on our operations. Specifically, the loss of the services of our President and Chief Executive Officer, our Chief Financial Officer, or our Executive Vice President of Business Development, any major changes in our Board or other senior management, or our inability to attract, retain and motivate qualified personnel could have a material adverse effect on our ability to operate our business. The competition for management and technical personnel is intense in the wireless semiconductor industry, and therefore, we cannot assure you that we will be able to attract and retain qualified management and other personnel necessary for the design, development, manufacture and sale of our products. If we are unable to establish effective marketing and sales capabilities or enter into additional agreements with third parties to market and sell our products, we may not be able to effectively generate and sustain or increase product revenues. We have limited experience selling, marketing or distributing products and currently have a small internal marketing and sales force. To progress the launch and commercialization of our technology and our products, we must build on a territory- by- territory basis marketing, sales, distribution, managerial and other non- technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. Therefore, we may choose to collaborate, either globally or on a territory- by- territory basis, with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems. If so, our success will depend, in part, on our ability to enter into and maintain collaborative relationships for such capabilities, such collaborator' s strategic interest in the products under development and such collaborator' s ability to successfully market and sell any such products. If we are unable to enter into such arrangements when needed on acceptable terms or at all, we may not be able to successfully commercialize our products. Further, to the extent that we depend on third parties for marketing and distribution, any revenues we receive will depend upon the efforts of such third parties, and there can be no assurance that such efforts will be successful. If we decide in the future to establish an internal sales and marketing team with technical expertise and supporting distribution capabilities to commercialize our products, it could be expensive and time consuming and would require significant attention of our executive officers to manage. We may also not have sufficient resources to allocate to the sales and marketing of our products. Any failure or delay in the development of sales, marketing and distribution capabilities, either through collaboration with one or more third parties or through internal efforts, would adversely impact the commercialization of any of our products that we obtain approval to market. As a result, our future product revenue would suffer, and we may incur significant additional losses. We may engage in future acquisitions that could disrupt our business, cause dilution to our shareholders and harm our financial condition and operating results. **We** ~~While we currently~~ have **in the past** ~~no specific plans to acquire~~ **acquired** ~~any~~ other businesses **and** ~~, we~~ may, in the future, make acquisitions of, or investments in, companies that we believe have products or capabilities that are a strategic or commercial fit with our current business or otherwise offer opportunities for our company. In connection with these acquisitions or investments, we may: ● issue Common Stock or other forms of equity that would dilute our existing shareholders' percentage of ownership, ~~● incur debt and assume liabilities, and ● incur amortization expenses related to intangible assets or incur large and immediate write- offs.~~ We may not be able to complete acquisitions on favorable terms, if at all. If we do complete an acquisition, we cannot assure you that it will ultimately strengthen our competitive position or that it will be viewed positively by customers, financial markets or investors. Furthermore, future acquisitions could pose numerous additional risks to our expected operations, including: ● ~~problems integrating the purchased business, products or technologies, ● challenges in achieving strategic objectives, cost savings and other anticipated benefits, ● increases to our expenses, ●~~ the assumption of significant liabilities that exceed the limitations of any applicable indemnification provisions or the financial resources of any indemnifying party, ● inability to maintain relationships with prospective key customers, vendors and other business partners of the acquired businesses, ~~● diversion of management' s attention from its day- to- day responsibilities, ● difficulty in maintaining controls, procedures and policies during the transition and integration, ● entrance into marketplaces where we have no or limited prior experience and where competitors have stronger marketplace positions, ● potential loss of key employees, particularly those of the acquired entity, and ● historical financial information may not be representative or indicative of our results as a combined company.~~ Unsolicited takeover proposals, governance change proposals, proxy contests and certain proposals / actions by activist investors may create additional risks and uncertainties with respect to our financial position, operations, strategies and management, and may adversely affect our ability to attract and retain key employees. Any perceived uncertainties may affect the market price and volatility of our securities. Public companies in the technology industry have been the target of unsolicited takeover proposals in the past. In the event that a third party, such as a competitor, private equity firm or activist investor makes an unsolicited takeover proposal, or proposes to change our governance policies or board of directors, or makes other proposals concerning our ownership structure or operations, our review and consideration of such proposals may be a significant distraction for our management and employees, and may require us to expend significant time and resources. Such proposals may create uncertainty for our employees, additional risks and uncertainties with respect to our financial position, operations, strategies and management, and may adversely affect our ability to attract and retain key employees. Any perceived uncertainties as to our future direction also may affect the market price and volatility of our securities. If we fail to obtain, maintain and enforce our intellectual property rights, we may not be able to prevent third parties from using our proprietary technologies. Our long- term success largely depends on our ability to market technologically competitive products which, in turn, largely depends on our ability to obtain and maintain adequate intellectual property protection and to enforce our proprietary rights without infringing the proprietary rights of third parties. While we rely upon a combination of our patent applications currently pending with the United States Patent and Trademark Office (" USPTO "), our trademarks, copyrights, trade secret protection and confidentiality agreements to protect the intellectual property related to our technologies, there can be no assurance that: ● our currently pending or future patent applications will result in issued patents, ● our limited patent portfolio will provide adequate protection to our core technology, ● we will succeed in protecting our technology adequately in all key jurisdictions, ● we will be able to finalize negotiations to enter into agreements pursuant to which we will license certain patents, or ● we can prevent third parties from disclosure or misappropriation of our proprietary information which could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding any competitive advantage we may derive from the proprietary information. In addition, we intend to expand our international presence, and effective patent, copyright, trademark and trade secret protection may not be available or may be limited in foreign countries. We have a limited number of patent applications, which may not result in issued patents or patents that fully protect our intellectual property. In the United States and internationally we had **108** ~~one hundred seventeen pending patent~~ applications as of August ~~31~~ **25** , ~~2022~~ **2023** ; however, there is no assurance that any of the pending applications or our future patent applications will result in patents being issued, or that any patents that may be issued as a result of existing or future applications will provide meaningful protection or commercial advantage to us. The process of seeking patent protection in the United States and abroad can be long and expensive. Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain at the time of filing that we are the first to file any patent application related to our technology. In addition, patent applications are often published as part of the patent application process, even if such applications do not issue as patents. When published, such applications will become publicly available, and proprietary information disclosed in the application will become available to others. While at present we are unaware of competing patent applications, competing applications could potentially surface. Even if all of our pending patent applications are granted and result in registration of our patents, we cannot predict the breadth of claims that may be allowed or enforced, or that the scope of any patent rights could provide a sufficient degree of protection that could permit us to gain or keep our competitive advantage with respect to these products and technologies. For example, we cannot predict: ● the degree and range of protection any patents will afford us against competitors, including whether third parties will find ways to make, use, sell, offer to sell or import competitive products without infringing our patents; ● if and when patents will be issued; ● if third parties will obtain patents claiming inventions similar to those covered by our patents and patent applications; ● if third parties have blocking patents that could be used to prevent us from marketing our own patented products and practicing our own technology; or ● whether we will need to initiate litigation or administrative proceedings (e. g., at the USPTO) in connection with patent rights, which may be costly whether we win or lose. As a result, the patent applications we own may fail to result in issued patents in the United States. Third parties may challenge the validity, enforceability or scope of any issued patents or patents issued to us in the future, which may result in those patents being narrowed, invalidated or held unenforceable. Even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from developing similar products that do not infringe the claims made in our patents. If the breadth or strength of protection provided by the patents we hold or pursue is threatened, we may not be able to prevent others from offering similar technology and products in the RFFE mobile market and our ability to commercialize our RF filters with technology protected by those patents could be threatened. If we fail to obtain issued patents outside of the United States, our ability to prevent misappropriation of our proprietary information or infringement of our intellectual property rights in countries outside of the United States where our filters may be sold in the future may be significantly limited. If we file foreign patent applications related to our pending U. S. patent applications or to our issued patents in the United States, these applications may be contested and fail to result in issued patents outside of the United States or we may be required to narrow our claims. Even if some or all of our patent applications are granted outside of the United States and result in issued patents, effective enforcement of rights granted by these patents in some countries may not be available due to the differences in foreign patent and other laws concerning intellectual property rights, a relatively weak legal regime protecting intellectual property rights in these countries, and because it is difficult, expensive and time- consuming to police unauthorized use of our intellectual property when infringers are overseas. This failure to obtain or maintain adequate protection of our intellectual property rights outside of the United States could have a materially adverse effect on our business, results of operations and financial conditions. We are **,** and may in the future be **,** involved in lawsuits to protect or enforce our patents, which could be expensive, time- consuming and unsuccessful. Competitors may infringe our patents or the patents of our potential licensors. To attempt to stop infringement or unauthorized use, we may file infringement claims from time to time, which can be expensive and time consuming and distract management. If we pursue any infringement proceeding, a court may decide that a patent of ours or one of our licensors is not valid or is unenforceable or may refuse to stop the other party from using the relevant technology on the grounds that our patents do not cover the technology in question. Additionally, any enforcement of our patents may provoke third parties to assert counterclaims against us. Some of our current and potential competitors have the ability to dedicate substantially greater resources to enforcing their intellectual property rights than we have. Moreover, the legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, which could reduce the likelihood of success of, or the amount of damages that could be awarded resulting from, any infringement proceeding we pursue in any such jurisdiction. An adverse result in any infringement litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing, which could limit the ability of our filters to compete in those jurisdictions. Interference proceedings could be provoked by third parties or brought by the USPTO to determine the priority of inventions with respect to our patents or patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to use it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms, or at all. We need to protect our trademark rights and disclosure of our trade secrets to prevent competitors from taking advantage of our goodwill. We believe that the protection of our trademark rights is an important factor in product recognition, protecting our brand, maintaining goodwill, and maintaining or increasing market share. We currently have ~~five~~ **nineteen registered domestic and international** trademarks **and** ~~that we have filed to~~ **two** ~~register with the USPTO~~ **pending domestic trademark applications** including the ~~Akoustis and~~ **marks AKOUSTIS,** XBAW **,** ~~word mark~~ and ~~the XBAW logo~~ **RFMi in multiple forms** and ~~we~~ **international classes. We** may expend substantial cost and effort in an attempt to register new trademarks and maintain and enforce our trademark rights. If we do not adequately protect our rights in our trademarks from infringement, any goodwill that we have developed in those trademarks could be lost or impaired. Third parties may claim that the sale or promotion of our products, when and if we have any, may infringe on the trademark rights of others. Trademark infringement problems occur frequently in connection with the sale and marketing of products in the RFFE mobile industry. If we become involved in any dispute regarding our trademark rights, regardless of whether we prevail, we could be required to engage in costly, distracting and time- consuming litigation that could harm our business. If the trademarks we use are found to infringe upon the trademark of another company, we could be liable for damages and be forced to stop using those trademarks, and as result, we could lose all the goodwill that has been developed in those trademarks. In addition to the protection afforded by patents and trademarks, we seek to rely on copyright, trade secret protection and confidentiality agreements to protect proprietary know- how that is not patentable, processes for which patents are difficult to enforce and any other elements of our processes that involve proprietary know- how, information or technology that is not covered by patents. For Akoustis, this includes chip layouts, circuit designs, resonator layouts and implementation, and MEMS resonator device engineering. Although we require all of our employees and certain consultants and advisors to assign inventions to us, and all of our employees, consultants, advisors and any third parties who have access to our proprietary know- how, information or technology to enter into confidentiality agreements, our trade secrets and other proprietary information may be disclosed, or competitors may otherwise gain access to such information or independently develop substantially equivalent information. If we are unable to prevent material disclosure of the intellectual property related to our technologies to third parties, we will not be able to establish or maintain the competitive advantage that we believe is provided by such intellectual property, which would weaken our competitive market position, and materially adversely affect our business and operational results. Development of certain technologies with our manufacturers and other suppliers may result in restrictions on jointly- developed intellectual property. In order to maintain and expand our strategic relationship with manufacturers of our filters and other suppliers, we may, from time to time, develop certain technologies jointly with these manufacturers and other suppliers and file for further intellectual property protection and / or seek to commercialize such technologies. We may enter into joint development agreements with manufacturers and other suppliers to provide for joint development works and joint intellectual property rights by us and by such manufacturer or supplier. Such agreements may restrict our commercial use of such intellectual property, or may require written consent from, or a separate agreement with, that manufacturer or supplier. In other cases, we may not have any rights to use intellectual property solely developed and owned by such manufacturer, supplier, or another third party. If we cannot obtain commercial use rights for such jointly- owned intellectual property or intellectual property solely owned by these manufacturers or suppliers, our future product development and commercialization plans may be adversely affected. We are, and may become, subject to claims of infringement, misappropriation or misuse of third party intellectual property that, regardless of merit, could result in significant expense and loss of our intellectual property rights. The semiconductor industry is characterized by the vigorous pursuit and protection of intellectual property rights. We have not undertaken a comprehensive review of the rights of third parties in our field. From time to time, we may ~~may~~ be named in lawsuits or receive notices or inquiries from third parties regarding our products or the manner in which we conduct our business suggesting that we may be infringing, misappropriating or otherwise misusing patent, copyright, trademark, trade secret and other intellectual property rights. Any claims that our technology infringes, misappropriates or otherwise misuses the rights of third parties, regardless of their merit or resolution, could be expensive to litigate or settle and could divert the efforts and attention of our management and technical personnel, cause significant delays and materially disrupt the conduct of our business. We may not prevail in such proceedings given the complex technical issues and inherent uncertainties in intellectual property litigation. If such proceedings result in an adverse outcome, we could be required to: ● pay substantial damages, including treble damages if we were held to have willfully infringed; ● cease the manufacture, offering for sale or sale of the infringing technology or processes; ● expend significant resources to develop non-infringing technology or processes; ● obtain a license from a third party, which may not be available on commercially reasonable terms, or may not be available at all; or ● lose the opportunity to license our technology to others or to collect royalty payments based upon successful protection and assertion of our intellectual property against others. On October 4, 2021, the Company was named as a defendant in a complaint filed by Qorvo, Inc. **(“ Qorvo ”)** in the United States District Court for the District of Delaware alleging, among other things, patent infringement, false advertising, false patent marking, and unfair competition **. The complaint alleges that the defendants misappropriated proprietary information, made misleading statements about the characteristics of certain of its products, and sold products infringing on certain of the plaintiff’ s patents** . The plaintiff seeks an injunction enjoining ~~us~~ **the Company** from the alleged infringement and damages, including punitive and statutory enhanced damages, in an unspecified amount. The Company filed a motion to dismiss all of the claims other than the direct patent infringement claims, but the court permitted the plaintiff to file an amended complaint which the court subsequently determined was sufficient for pleading purposes. The Court ~~dismissed~~ **denied** the Company’ s motion in May 2022. ~~We believe this lawsuit~~ **The Court held a claims construction hearing in November 2022, issuing** ~~is~~ **its** ~~without merit~~ **claim construction order on March 15, 2023. On February 8, 2023, Qorvo filed a second amended complaint adding allegations of misappropriation of trade secrets, racketeering activities,** and **civil conspiracy. The Company continues to develop its defenses and mitigation strategies, and** ~~intend~~ **intends** to **proceed in** ~~defend~~ **defending itself vigorously** against ~~it vigorously~~ **the claims asserted by Qorvo** . However, ~~we~~ **the Company** can provide no assurance as to the outcome of such dispute, and such action may result in judgments against ~~us~~ **the Company** for an injunction, significant damages or other relief, such as future royalty payments to Qorvo ~~, Inc.~~ or restrictions on certain of ~~our~~ **the Company’ s** activities. **On April 20, 2023, the Company filed a complaint against Qorvo in the United States District Court for the Eastern District of Texas alleging infringement by Qorvo of a patent licensed exclusively to the Company by Cornell University. The complaint alleges Qorvo’ s willful infringement of the Cornell patent and seeks remedies including enhanced damages and attorneys’ fees. On July 24, 2023, Qorvo filed a motion to dismiss the complaint. On August 11, 2023, Qorvo filed a motion to strike Akoustis’ infringement contentions. The Company intends to vigorously pursue its claims against Qorvo but can provide no assurance as to the outcome of this dispute.** Resolution of ~~such~~ **each of the** ~~matter~~ **matters described above** may be prolonged and costly, and the ultimate result or judgment is uncertain due to the inherent uncertainty in litigation and other proceedings. **An adverse result in the matters described above would have a material adverse effect on the Company’ s business.** Even if ultimately settled or resolved in ~~our~~ **the Company’ s** favor, ~~this~~ **the matters described above** and other possible future actions may result in significant expenses, diversion of management and technical personnel attention and disruptions and delays in ~~our~~ **the Company’ s** business and product development, and other collateral consequences, all of which could have a material adverse effect on ~~our~~ **its** business, financial condition **,** and results of operations. Any out- of- court settlement of ~~this~~ **the above matters** or other actions may also have an adverse effect on ~~our~~ **the Company’ s** business, financial condition and results of operations, including, but not limited to, substantial expenses, the payment of royalties, licensing or other fees payable to third parties, or restrictions on ~~our~~ **its** ability to develop, manufacture **,** and sell ~~our~~ **its** products. **From time to time, the Company may become involved in other lawsuits, investigations, and claims that arise in the ordinary course of business. The Company believes it has meritorious** ~~Defense~~ **defenses against such other pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes** of any **such** ~~intellectual property infringement claims against us, regardless of their~~ - **other** ~~merit~~ **pending actions, the Company believes the amount of liability, if any, with respect to such other pending actions** , would **not** ~~involve substantial litigation expense and would be a significant diversion of resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, obtain one or more licenses from third parties, limit our business to avoid the infringing activities, pay royalties and / or redesign our infringing technology or alter related formulations, processes, methods or other technologies, any or all of which may be impossible or require substantial time and monetary expenditure. The occurrence of any of the above events could prevent us from continuing to develop and commercialize our filters and our business could~~ materially ~~suffer~~ **affect its financial position, results of operations, or cash flows** . In addition, our agreements with prospective customers and manufacturing partners may require us to indemnify such customers and manufacturing partners for third party intellectual property infringement claims. Pursuant to such agreements, we may be required to defend such customers and manufacturing partners against certain claims that could cause us to incur additional costs. While we endeavor to include as part of such indemnification obligations a provision permitting us to assume the defense of any indemnification claim, not all of our current agreements contain such a provision and we cannot provide any assurance that our future agreements will contain such a provision, which could result in increased exposure to us in the case of an indemnification claim. We have a history of losses, will need substantial additional funding to continue our operations and may not achieve or sustain profitability in the future. Our operations have consumed substantial amounts of cash since inception. Our filter business has incurred losses since its inception in May 2014. We anticipate that our operating expenses will increase in the foreseeable future as we continue to pursue the development of our patent- pending high purity piezoelectric materials technology, invest in marketing, sales and distribution of our products to grow our business, acquire customers, commercialize our technology in the mobile wireless market and continue to invest in our manufacturing facility in Canandaigua, NY. These efforts may prove more expensive than we currently anticipate, and we may not succeed in generating sufficient revenues to offset these higher expenses. In addition, we expect to incur significant expenses related to regulatory requirements and our ability to obtain, protect, and defend our intellectual property rights. We may also encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may increase our capital needs and / or cause us to spend our cash resources faster than we expect. Accordingly, we will need to obtain substantial additional funding in order to continue our operations. To date, we have financed our operations through a mix of investments from private investors, public offerings of equity and debt securities, foundry services revenue, RF filter revenue, and grant funding, and we expect to continue to utilize such means of financing for the foreseeable future. Additional funding from those or other sources may not be available when or in the amounts needed, on acceptable terms, or at all. If we raise additional capital through the sale of equity, or securities convertible into equity, it would result in dilution to our then existing stockholders, which could be significant depending on the price at which we may be able to sell our securities and the amount of securities we issue. If we raise additional capital through the incurrence of indebtedness, we may become subject to covenants restricting our business activities, and holders of debt instruments may have rights and privileges senior to those of our equity investors. In addition, servicing the interest and principal repayment obligations under debt facilities could divert funds that would otherwise be available to support research and development, or commercialization activities. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate the production and sale of our RF filter products, our R & D programs for our acoustic wave filter technology or any future commercialization efforts. Any of these events could materially and adversely affect our business, financial condition and prospects, and could cause our business to fail. Servicing our debt requires a significant amount of cash or Common Stock, and we may not have sufficient cash flow from our business or have the ability to issue the necessary number of shares of Common Stock to pay our substantial debt. Pursuant to the convertible note offering we completed in June 2022, we incurred $ 44. 0 million of indebtedness **and we issued a $ 4. 0 million promissory note in connection with our acquisition of GDSI** . This level of debt could have significant consequences on future operations, including: ● increasing our vulnerability to adverse economic and industry conditions; ● making it more difficult for us to meet our payment and other obligations; ● making it more difficult to obtain any necessary future financing for working capital, capital expenditures, debt service requirements or other purposes; ● requiring the dedication of a substantial portion of any cash flow from operations to service our indebtedness, thereby reducing the amount of cash flow available for other purposes, including capital expenditures; ● placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital than we have; and ● limiting our flexibility in planning for, or reacting to, changes in our business and the markets in which we compete. Accrued interest on our 6. 0 % Convertible Senior Notes due 2027 is payable semi- annually in cash or freely tradable shares of Common Stock. Our ability to make scheduled payments of interest depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt in cash and make necessary capital expenditures. ~~Furthermore, we may not issue Common Stock to make payments of interest to the extent such issuance would violate Nasdaq Marketplace Rule 5635 (d), which limits the amount of Common Stock that we may privately issue without prior stockholder approval. Therefore, our ability to repay debt with Common Stock will depend on the capital markets and whether we have obtained stockholder approval for such issuances of Common Stock.~~ If we are unable to generate sufficient cash flow ~~or issue Common Stock~~ to satisfy payment obligations under our convertible notes, we may be required to adopt one or more alternatives, such as selling assets or obtaining additional equity capital on terms that may be onerous or highly dilutive. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations. **If we determine to pay the interest in shares of Common Stock, it could materially dilute our current stockholders.** Our ability to raise capital may be materially adversely impacted by ~~COVID- 19~~ **economic and geopolitical uncertainties** . A sustained disruption in the capital markets from **economic and geopolitical uncertainties such as** the COVID- 19 pandemic **, bank failures, inflation, recession, or higher interest rates** could negatively impact our ability to raise capital. In the past, we have financed our operations primarily by the issuance of equity and debt securities. However, we cannot predict ~~when~~ **if such economic and geopolitical uncertainties will impact** the **capital markets or if we will be able to raise additional funds on terms acceptable to us. Such** macro- economic ~~disruption~~ **disruptions** ~~stemming from COVID- 19 will ebb or when the economy will return to pre-COVID- 19 levels, if at all. This macro- economic disruption~~ may disrupt our ability to raise additional capital to finance our operations in the future, which could materially and adversely affect our business, financial condition and prospects, and could ultimately cause our business to fail. Government regulation may adversely affect our business. The effects of regulation may materially and adversely impact our business. For example, regulatory policies of the FCC relating to radio frequency emissions, consumer protection laws of the FTC, product safety regulatory activities of the Consumer Products Safety Commission **, the import / export regulatory activities of the Department of Commerce, international traffic in arms regulations (ITAR)**

administered by the Department of State , and environmental regulatory activities of the EPA could impede sales of our products in the United States. We and our customers are also subject to various import and export laws and regulations. If we fail to continue to comply with these regulations, we may be unable to manufacture the affected products or ship these products to certain customers and be subject to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, or injunctions. Additionally, these rules and regulations may in the future be expanded such that they may have a greater effect on our business than they do currently. As described above under the risk factor entitled " We may be subject to risks related to doing business in, and having counterparties based in, foreign countries, " our business is also increasingly subject to complex foreign and U. S. laws and regulations, including but not limited to, anti-corruption laws, such as the Foreign Corrupt Practices Act and equivalent laws in other jurisdictions, antitrust or competition laws, and data privacy laws, among others. Foreign governments may also impose tariffs, duties and other import restrictions on components that we obtain from non- domestic suppliers and may impose export restrictions on products that we sell internationally. These tariffs, duties or restrictions could materially and adversely affect our business, financial condition and results of operations. Our product or manufacturing standards could also be impacted by new or revised environmental rules and regulations or other social initiatives. Those rules, or similar rules that may be adopted in other jurisdictions, could adversely affect our costs, the availability of minerals used in our products and our relationships with customers and suppliers. We may incur substantial expenses in connection with regulatory requirements, and any regulatory compliance failure could cause our business to suffer. The wireless communications industry is subject to ongoing regulatory obligations and review. See " Business- Government Regulations " above. Maintaining compliance with these requirements may result in significant additional expense to us, and any failure to maintain such compliance could cause our business to suffer. Noncompliance with applicable regulations or requirements could also subject us to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, or injunctions. An adverse outcome in any such litigation could require us to pay contractual damages, compensatory damages, punitive damages, attorneys' fees and costs. These enforcement actions could harm our business, financial condition and results of operations. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, financial condition and results of operations could be materially adversely affected. In addition, responding to any action will likely result in a significant diversion of management' s attention and resources and an increase in professional fees. Compliance with regulations regarding the use of " conflict minerals " could limit the supply and increase the cost of certain metals used in manufacturing our products. Regulations in the United States require that we determine whether certain materials used in our products, referred to as conflict minerals, originated in the Democratic Republic of the Congo or adjoining countries, or originated from recycled or scrap sources. We incur costs associated with our policies and procedures to comply with the applicable rules and due diligence procedures. In addition, verification and reporting requirements could affect the sourcing and availability of minerals that are used in the manufacture of our products, and we may face reputational and competitive challenges if we are unable to sufficiently verify the origins of all conflict minerals used in our products. We may also face challenges with government regulators, potential customers, suppliers and manufacturers if we are unable to sufficiently verify that the metals used in our products are conflict free. There could be an adverse change or increase in the laws and / or regulations governing our business. We and our operating ~~subsidiary~~ **subsidiaries** are subject to various laws and regulations in different jurisdictions, and the interpretation and enforcement of laws and regulations are subject to change. We are also subject to different tax regulations in each of the jurisdictions where we conduct our business or where our management or the management of our operating subsidiary is located. We expect that the scope and extent of regulation in these jurisdictions, as well as regulatory oversight and supervision, will generally continue to increase. There can be no assurance that future regulatory, judicial and legislative changes in any jurisdiction will not have a material adverse effect on us or hinder us in the operation of our business. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations applicable to us. These current or future laws and regulations may impair our research, development or production efforts or impact the research activities we pursue. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions, which could cause our financial condition to suffer. You could lose all of your investment. An investment in our securities is speculative and involves a high degree of risk. Potential investors should be aware that the value of an investment in the Company may go down as well as up. In addition, there can be no certainty that the market value of an investment in the Company will fully reflect its underlying value. Our common stock has been thinly traded and its share price in the public markets has experienced, and may in the future experience, extreme volatility. Our common stock has traded on the Nasdaq Capital Market, under the symbol " AKTS, " since March 13, 2017. Since that date, our common stock has been relatively thinly traded and at times been subject to price volatility. Recently, from July 1, ~~2021~~ **2022** to June 30, ~~2022~~ **2023** , the closing price of our common stock on the Nasdaq Capital Market ranged from $ ~~3~~ **2** . ~~36~~ **34** to $ ~~10~~ **5** . ~~79~~ **23** per share. The trading price of our Common Stock may be significantly affected by various factors, including quarterly fluctuations in our operating results, changes in investors' and analysts' perception of the business risks and conditions of our business, issuance of additional shares in connections with strategic transactions or acquisitions we may make, our ability to meet the earnings estimates and other performance expectations of financial analysts or investors, unfavorable commentary or downgrades of our stock by equity research analysts, and general economic or political conditions. Additionally, the stock market and ~~development- stage~~ public companies **with relatively smaller public floats** in particular have been subject to extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. Additionally, technical factors in the public trading market for our stock may produce price movements that may or may not comport with macro, industry or company- specific fundamentals, including, without limitation, the sentiment of retail investors (including as may be expressed on financial trading and other social media sites), speculation in the press, in the investment community, or on the internet, including on online forums and social media, about our Company, our industry or our securities, the amount and status of short interest in our securities (including a " short squeeze "), access to margin debt, trading in options and other derivatives on our common stock and other technical trading factors. We may incur rapid and substantial decreases in our stock price in the foreseeable future that are unrelated to our operating performance or prospects. There can be no guarantee that our stock price will remain at current prices or that future sales of our common stock will not be at prices lower than the sales price in this offering. The daily trading volume of our common stock has historically been relatively low. If we are unable to develop and maintain a liquid market for our common stock, you may not be able to sell your common stock at prices you consider to be fair or at times that are convenient for you, or at all. This situation may be attributable to a number of factors, including but not limited to the fact that we are a ~~development- stage~~ company **with a smaller public float** that is relatively unknown to stock analysts, stockbrokers, institutional investors, and others in the investor community. In addition, investors may be risk averse to investments in ~~development- stage~~ companies **with smaller public floats** . The low trading volume is outside of our control and may not increase or, if it increases, may not be maintained. In addition, following periods of volatility in the market price of a company' s securities, litigation has often been brought against that company and we may become the target of litigation as a result of price volatility. Litigation could result in substantial costs and divert our management' s attention and resources from our business. This could have a material adverse effect on our business, results of operations and financial condition. Stockholders may experience dilution of their ownership interests because of the future issuance of additional shares of our Common Stock or preferred stock or other securities that are convertible into or exercisable for our Common Stock or preferred stock. In the future, we may issue our authorized but previously unissued equity securities, resulting in the dilution of the ownership interests of our stockholders. The Company is authorized to issue an aggregate of ~~100~~ **125** , 000, 000 shares of Common Stock and 5, 000, 000 shares of preferred stock. We may issue additional shares of our Common Stock or other securities that are convertible into or exercisable for our Common Stock in connection with hiring or retaining employees, future acquisitions, future sales of our securities for capital raising purposes, or for other business purposes. In addition, as of September 6, ~~2022~~ **2023** , ~~warrants and~~ options to purchase ~~41, 103 and~~ 3, ~~020~~ **156** , ~~002~~ **037** shares ~~, respectively,~~ of our Common Stock were outstanding. The future issuance of additional shares of our Common Stock may create downward pressure on the trading price of the Common Stock. We ~~will~~ **may** need to raise additional capital in the ~~near~~ future to meet our working capital needs, and there can be no assurance that we will not ~~be required to~~ issue additional shares, warrants or other convertible securities in the future in conjunction with these capital raising efforts, including at a price (or exercise prices) below the price you paid for your stock. We do not anticipate paying dividends on our Common Stock. Cash dividends have never been declared or paid on our Common Stock, and we do not anticipate such a declaration or payment for the foreseeable future. We expect to use future earnings, if any, to fund business growth. Therefore, stockholders will not receive any funds absent a sale of their shares of Common Stock. If we do not pay dividends, our Common Stock may be less valuable because a return on your investment will only occur if our stock price appreciates. We cannot assure stockholders that our stock price will appreciate or that they will receive a positive return on their investment if and when they sell their shares. Security breaches and other disruptions could compromise our proprietary information and expose us to liability, which would cause our business and reputation to suffer. We rely on trade secrets, technical know- how and other unpatented proprietary information relating to our product development and manufacturing activities to provide us with competitive advantages. We protect this information by entering into confidentiality agreements with our employees, consultants, strategic partners and other third parties. We also design our computer networks and implement various procedures to restrict unauthorized access to dissemination of our proprietary information. We face internal and external data security threats. Current, departing or former employees or third parties **that** ~~could attempt to~~ improperly use or access our computer systems and networks ~~to~~ **could** copy, obtain or misappropriate our proprietary information or otherwise interrupt our business. Like other businesses, we are also subject to significant system or network disruptions from numerous causes, including computer viruses and other cyber- attacks, facility access issues, new system implementations and energy blackouts. Security breaches, computer malware, phishing, spoofing, and other cyber- attacks have become more prevalent and sophisticated in recent years. Geopolitical instability, such as Russia' s invasion of Ukraine, may increase the likelihood that we will experience direct or collateral consequences from cyber conflicts between nation- states or other politically motivated actors targeting critical technology infrastructure. While we defend against these threats on a daily basis, we do not believe that such attacks to date have caused us any material damage. Because the techniques used by computer hackers and others to access or sabotage networks constantly evolve and generally are not recognized until launched against a target, we may be unable to anticipate, counter or ameliorate all of these techniques. As a result, our and our customers' proprietary information may be misappropriated, and the impact of any future incident cannot be predicted. Any loss of such information could harm our competitive position, result in a loss of customer confidence in the adequacy of our threat mitigation and detection processes and procedures, cause us to incur significant costs to remedy the damages caused by the incident, and divert management and other resources. We routinely implement improvements to our network security safeguards and we are devoting increasing resources to the security of our information technology systems. We cannot, however, assure that such system improvements will be sufficient to prevent or limit the damage from any future cyber- attack or network disruption. The costs related to cyber- attacks or other security threats or computer systems disruptions typically would not be fully insured or indemnified by others. Occurrence of any of the events described above could result in loss of competitive advantages derived from our R & D efforts or our intellectual property. Moreover, these events may result in the early obsolescence of our products, product development delays, or diversion of the attention of management and key information technology and other resources, or otherwise adversely affect our internal operations and reputation or degrade our financial results and stock price. We may be subject to theft, loss, or misuse of personal data by or about our employees, customers or other third parties, which could increase our expenses, damage our reputation, or result in legal or regulatory proceedings. In the ordinary course of our business, we have access to sensitive, confidential or personal data or information regarding our employees and others that is subject to privacy and security laws and regulations. The theft, loss, or misuse of personal data collected, used, stored, or transferred by us to run our business, or by our third- party service providers, including business process software applications providers and other vendors that have access to sensitive data, could result in damage to our reputation, disruption of our business activities, significantly increased business and security costs or costs related to defending legal claims. Global privacy legislation, enforcement, and policy activity in this area are rapidly expanding and creating a complex regulatory compliance environment. For example, the European Union has adopted the General Data Protection Regulation (" GDPR "), which requires companies to comply with rules regarding the handling of personal data, including its use, protection and the ability of persons whose data is stored to correct or delete such data about themselves. Failure to meet GDPR requirements could result in penalties of up to the higher of € 20 million or 4 % of worldwide revenue. In addition, the interpretation and application of consumer and data protection laws in the U. S., Europe and elsewhere are often uncertain and fluid, and may be interpreted and applied in a manner that is inconsistent with our data practices. Complying with these changing laws has caused, and could continue to cause, us to incur substantial costs, which could have an adverse effect on our business and results of operations. Further, failure to comply with existing or new rules may result in significant penalties or orders to stop the alleged non- compliant activity. Finally, even our inadvertent failure to comply with federal, state, or international privacy- related or data protection laws and regulations could result in audits, regulatory inquiries or proceedings against us by governmental entities or others. Our business and operations would suffer in the event of system failures, and our operations are vulnerable to interruption by natural disasters, terrorist activity, power loss and other events beyond our control, the occurrence of which could materially harm our business. Despite the implementation of security measures, our internal computer systems and those of our contractors and consultants are vulnerable to damage from computer viruses, unauthorized access as well as telecommunication and electrical failures. While we have not experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our R & D. If any disruption or security breach resulted in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and / or the further development of our technology for RF filters could be delayed. We are also vulnerable to accidents, electrical blackouts, fires, labor strikes, terrorist activities, war, natural disasters, including hurricanes, earthquakes, floods and tornadoes, and other events beyond our control, and we have not undertaken a systematic analysis of the potential consequences to our business as a result of any such events and do not have an applicable recovery plan in place. We carry business interruption insurance that would compensate us for certain actual losses from interruptions of our business that may occur, however that may not fully cover all losses incurred, any losses or damages incurred could cause our business to materially suffer. Litigation or legal proceedings, including product liability claims, could expose us to significant liabilities, occupy a significant amount of our management' s time and attention and damage our reputation. We are from time to time party to various litigation claims and legal proceedings. We evaluate these claims and proceedings to assess the likelihood of unfavorable outcomes and estimate, if possible, the amount of potential losses. If we or any of our manufacturers fails to successfully manufacture wafers that conform to our design specifications and the strict regulatory requirements of the FCC, it may result in substantial risk of undetected flaws in components or other materials used by our manufacturers during fabrication of our products and could lead to product defects and costs to repair or replace these parts or materials, significantly impacting our ability to develop and implement our technology and to improve performance of our products. In addition, claims made or threatened by our suppliers, customers or current or former employees could adversely affect our relationships, damage our reputation or otherwise adversely affect our business, financial condition or results of operations. The costs associated with defending product liability and other claims, and the payment of damages, could be substantial. Our reputation could also be adversely affected by such claims, whether or not successful. We may establish reserves as appropriate based upon assessments and estimates in accordance with our accounting policies in accordance with U. S. GAAP. We base our assessments, estimates and disclosures on the information available to us at the time and rely on legal and management judgment. Actual outcomes or losses may differ materially from assessments and estimates. Actual settlements, judgments or resolutions of these claims or proceedings may negatively affect our business and financial performance. A successful claim against us that is not covered by insurance or is in excess of our available insurance limits could require us to make significant payments of damages and could materially adversely affect our financial condition, results of operations and cash flows. Delaware law, our charter documents and the ability of our Board of Directors to issue additional stock could impede or discourage a takeover or change of control that stockholders may consider favorable. As a Delaware corporation, we are subject to certain anti- takeover provisions. Under Delaware law, a corporation may not engage in a business combination with any holder of 15 percent or more of its capital stock unless the holder has held the stock for three years or, among other things, the board of directors has approved the transaction. Accordingly, our Board of Directors could rely on Delaware law to prevent or delay an acquisition of our company. In addition, certain provisions of our certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management. These provisions include only our Board of Directors being able to fill vacancies on the Board and various limitations in our bylaws on stockholder meeting, including advance notice requirements for stockholders to make nominations of candidates for election as directors or to bring matters before an annual meeting of stockholders and our stockholders not having the ability to call a special meeting. Our Board of Directors is authorized to issue up to 5, 000, 000 shares of preferred stock with powers, rights and preferences designated by it. Shares of voting or convertible preferred stock could be issued, or rights to purchase such shares could be issued, to create voting impediments or to frustrate persons seeking to effect a takeover or otherwise gain control of the Company. The ability of the Board to issue such additional shares of preferred stock, with rights and preferences it deems advisable, could discourage an attempt by a party to acquire control of the Company by tender offer or other means. Such issuances could therefore deprive stockholders of benefits that could result from such an attempt, such as the realization of a premium over the market price for their shares in a tender offer or the temporary increase in market price that such an attempt could cause. Moreover, the issuance of such additional shares of preferred stock to persons supporting of the Board of Directors could make it more difficult to remove incumbent managers and directors from office even if such change were to be favorable to stockholders generally. Our bylaws provide, subject to certain exceptions, that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or stockholders. Our bylaws provide, subject to limited exceptions, that the Court of Chancery of the State of Delaware will, to the fullest extent permitted by law, be the sole and exclusive forum for any claims, including any derivative actions or proceedings brought on our behalf, (1) that are based upon a violation of a duty by a current or former director or officer or stockholder in such capacity or (2) that may be brought in the Court of Chancery pursuant to the Delaware General Corporation Law. Any person or entity purchasing or otherwise acquiring any interest in shares of our Common Stock shall be deemed to have notice of and to have consented to the provisions of our bylaws described above. This choice of forum provision may limit a stockholder' s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision that is contained in our bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could materially adversely affect our business, financial condition and results of operations. As a smaller reporting company and a non- accelerated filer, we are subject to scaled disclosure requirements that may make it more challenging for investors to analyze our results of operations and financial prospects and may cause investors to find our Common Stock less attractive. As a smaller reporting company, we are subject to scaled disclosure requirements that may make it more challenging for investors to analyze our results of operations and financial prospects. For instance, as a " smaller reporting company, " which is generally defined as a company with less than $ 250 million of public float or a company with less than $ 100 million in annual revenues and either no public float or a public float of less than $ 700 million, we may elect to provide simplified executive compensation disclosures in our filings and take advantage of other decreased disclosure obligations in our filings with the SEC, including being required to provide only two years of audited financial statements in our annual reports. Consequently, it may be more challenging for investors to analyze our results of operations and financial prospects. Additionally, under current SEC rules, we are not an " accelerated filer " and so not required to include an auditor attestation of the effectiveness of our internal control over financial reporting in this Annual Report on Form 10- K. We cannot predict if investors will find our Common Stock less attractive because we may rely on these reduced requirements. If some investors find our Common Stock less attractive as a result, there may be a less active trading market for our Common Stock and the price of shares of our Common Stock may be more volatile. Being a public company is expensive and administratively burdensome. As a public reporting company, we are subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended (the " Exchange Act "), and other federal securities laws, rules and regulations related thereto, including compliance with the Sarbanes- Oxley Act. Complying with these laws and regulations requires the time and attention of our Board of Directors and management and increases our expenses. Among other things, we are required to: ● maintain and evaluate a system of internal control over financial reporting in compliance with the requirements of Section 404 of the Sarbanes- Oxley Act and the related rules and regulations of the SEC and the Public Company Accounting Oversight Board; ● maintain policies relating to disclosure controls and procedures; ● prepare and distribute periodic reports in compliance with our obligations under federal securities laws; ● institute a more comprehensive compliance function, including with respect to corporate governance; and ● involve, to a greater degree, our outside legal counsel and accountants in the above activities. The costs of preparing and filing annual and quarterly reports, proxy statements and other information with the SEC and furnishing audited reports to stockholders is expensive and much greater than that of a privately- held company, and compliance with these rules and regulations may require us to hire additional financial reporting, internal controls and other finance personnel, and will involve a material increase in regulatory, legal and accounting expenses and the attention of management. There can be no assurance that we will be able to comply with the applicable regulations in a timely manner, if at all. In addition, being a public company makes it more expensive for us to obtain director and officer liability insurance. In the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain this coverage. These factors could also make it more difficult for us to attract and retain qualified executives and members of our Board of Directors, particularly directors willing to serve on the Audit Committee of our Board of Directors.