Risk Factors Comparison 2023-03-10 to 2022-03-09 Form: 10-K

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An investment in our common stock involves a high degree of risk. You should carefully consider the risks described below and the other information in this Annual Report on Form 10- K and in other filings we make with the SEC before making an investment decision. Our business, prospects, financial condition, or operating results could be harmed by any of these risks, as well as other risks not currently known to us or that we currently consider immaterial. If any of such risks and uncertainties actually occurs, our business, financial condition or operating results could differ materially from the plans, projections and other forward- looking statements included in the section titled " Management' s Discussion and Analysis of Financial Condition and Results of Operations " and elsewhere in this report and in our other public filings. The trading price of our common stock could decline due to any of these risks, and, as a result, you may lose all or part of your investment. Risks Directly Related to the ongoing COVID- 19 Pandemic The COVID- 19 pandemic has previously adversely affected significant portions of our business and could have a material adverse effect on our financial condition and results of operations. ~~Authorities have imposed,~~ **The emergence of the Omicron** and ~~businesses and individuals have implemented, numerous~~ **subsequent variants beginning in late 2021 with a resulting increase in COVID cases in 2022 resulted in re- implementation of various** measures ~~to try to contain the virus or treat its impact~~ , ~~such as~~ **including shutdowns,** travel bans and restrictions, ~~quarantines~~ **limitations on public and private gatherings** , **business and port closures or operating restrictions, social distancing, and** shelter- in- place ~~/ stay- at- home and social distancing~~ orders ~~, shutdowns, and vaccine requirements~~ **in certain regions around the world** . ~~These~~ -- **The health effects of the pandemic and the above** measures **taken in response thereto** have **had an effect on the global economy in general and have materially** impacted and ~~may further~~ **will likely continue to** impact ~~our workforce and~~ **the Company' s financial condition, results of** operations ~~, the operations of our customers,~~ and **cash flows** ~~those of our respective suppliers and partners. We have experienced, and could in the future experience, reduced workforce availability at some of our sites, construction delays, and reduced capacity at some of our suppliers~~ . We have operations in the **United States** ~~US, Canada~~ , South Korea, Japan, Vietnam, India, **Spain, and Canada** as well as in other countries in Europe, Asia- Pacific, Middle East and Latin America, and each of these countries ~~is taking~~ **has taken varied** measures in response to the pandemic. Restrictions on our manufacturing or support operations or workforce, similar limitations for our suppliers, and transportation restrictions or disruptions ~~can~~ **could** limit our ability to meet customer demand and could have a material adverse effect on our financial condition and results of operations. Our customers have experienced, and may in the future experience, disruptions in their operations and supply chains, which can result in delayed, reduced, or cancelled orders, or collection risks, and which may adversely affect our results of operations. We have experienced and continue to experience disruptions in our supply chain due to the impact of the COVID- 19 pandemic, which has also impacted and may adversely impact our operations (including, without limitation, logistical and other operational costs) and the operations of some of our key suppliers. **Supply chain pricing, freight and logistics costs, product and component availability, and extended lead- times became a challenge in 2021 and continued into 2022.** If our vendors for product components are unable to meet our cost, quality, supply and transportation requirements, continue to remain financially viable or fulfill their contractual commitments and obligations, we could experience disruption in our supply chain, including shortages in supply or increases in production costs, which would materially adversely affect our results of operations. The current worldwide shortage of semiconductors **and continued inflation** may exacerbate these risks ~~. The pandemic has caused us to modify our business practices, including with respect to employee travel; employee work locations; limitations on physical participation in meetings, events, and conferences; and social distancing measures. Future vaccine mandates in the countries in which we operate could adversely affect our workforce retention and hiring. We may take further actions as required by government authorities or others, or that we determine are in the best interests of our employees, customers, suppliers, and partners. Work- from- home and other measures introduce additional operational risks, including cybersecurity risks, and have affected the way we conduct our product development, validation, and qualification, customer support, and other activities, which could have a material adverse effect on our operations. There is no certainty that such measures will be sufficient to mitigate the risks posed by the virus, and illness and workforce disruptions could lead to unavailability of key personnel and harm our ability to perform critical functions~~ . The pandemic has significantly increased economic and demand uncertainty and has led to volatility in capital markets and credit markets. Adverse changes in economic conditions related to the COVID- 19 pandemic can significantly harm demand for our products and make it more challenging to forecast our operating results. Given the continued and substantial economic uncertainty and volatility created by the pandemic, it is difficult to predict the nature and extent of impacts on demand for our products. The degree to which COVID- 19 impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including the duration and severity of the pandemic; the actions taken to contain the virus or treat its impact; other actions taken by governments, businesses, and individuals in response to the virus and resulting economic disruption; and how quickly and to what extent normal economic and operating conditions can resume. Additional impacts and risks may arise that we are not aware of or able to respond to effectively. We are similarly unable to predict the extent of the impact of the pandemic on our customers, suppliers, and other partners, but a material effect on these parties could also materially adversely affect us. The impact of COVID- 19 can also exacerbate other risks discussed in this Risk Factors section and throughout this report. Risks Related to our Liquidity We may not have the liquidity to support our future operations and capital requirements. As of December 31, ~~2021~~ **2022** , we had approximately $ ~~46~~ **34** . ~~7~~ **3** million in unrestricted cash and cash equivalents, including $ ~~30~~ **11** . ~~1~~ **3** million in cash balances held by our international subsidiaries. If we are unable to raise additional capital, we may be unable to adequately fund our existing operations. Our current liquidity condition exposes us to the following risks: (i) vulnerability to adverse economic conditions in our industry or the economy in general; (ii) limitations on our ability to adequately plan for, or react to, changes in our business and industry; and (ii) negative investor and customer perceptions about our financial stability, which could limit our ability to obtain financing or acquire customers. Our current liquidity condition could be further harmed, and we may incur significant losses or expend significant amounts of capital if: (i) the market for our products develops more slowly than anticipated or if it retracts; (ii) we fail to establish market share or generate revenue at anticipated levels; (iii) our capital expenditure forecasts change or prove to be inaccurate; ~~or~~ (iv) we fail to respond to unforeseen challenges or take advantage of unanticipated opportunities; or (v) the on- going COVID- 19 pandemic continues to negatively impact our business or further exacerbates any of the foregoing risks. To meet our liquidity needs and to finance our capital expenditures and working capital needs for our business, we may be required to raise substantial additional capital, reduce our operations (including through the sale of assets) or both. We have experienced significant losses and we may incur losses in the future. If we fail to generate sufficient revenue to sustain our profitability, our stock price could decline. We had a net loss of $ **37. 4 million, $** 34. 7 million and $ 23. 1 million for the years ended December 31, **2022,** 2021 **,** and 2020, respectively. Additionally, we have incurred significant losses in prior years. We have an accumulated deficit of $ ~~87~~ **124** . ~~0~~ **8** million as of December 31, ~~2021~~ **2022** . We expect that we will continue to incur substantial ~~manufacturing~~ **product cost** , research and product development, sales and marketing, customer support, administrative and other expenses in connection with the ongoing development of our business. In addition, we may be required to spend more on research and product development than originally budgeted to respond to industry trends. We may also incur significant new costs related to acquisitions and the integration of new technologies and other acquisitions that may occur in the future. We may not be able to adequately manage costs and expenses or achieve or maintain adequate operating margins. As a result, our ability to ~~sustain~~ **achieve** profitability in future periods will depend on our ability to generate and sustain higher revenue while maintaining reasonable costs and expense levels. If we fail to generate sufficient revenue to ~~sustain~~ **achieve** profitability in future periods, we may continue to incur operating losses, which could be substantial, and our stock price could decline ~~. In connection with the Keymile acquisition, we assumed certain of Keymile' s liabilities, which could harm our business, operations, financial condition, and liquidity. Pursuant to the definitive agreement for the acquisition of Keymile GmbH, now DZS GmbH (" Keymile " or " DZS GmbH "), we assumed certain of Keymile' s liabilities, including tax and pension liabilities, and any liabilities that may arise related to breaches of representations and warranties made by Keymile in connection with a prior sale of assets by Keymile that survive through 2022. Although the definitive agreement for the Keymile acquisition entitles us to indemnification for certain losses incurred related to those assumed liabilities, our right to indemnification from the Keymile sellers is limited by the survival period of the representations and warranties included in the Keymile acquisition definitive agreement and recovery is limited in amount to the purchase price of Keymile, or EUR 10. 3 million (approximately $ 11. 7 million). Additionally, our rights to recovery against such losses is limited under our and third party provided warranty and indemnity liability insurance coverage of up to EUR 35. 3 million (approximately $ 40. 2 million). If such claims or losses exceed such amount, or if they are not indemnifiable under the Keymile acquisition definitive agreement, any such losses could negatively impact our financial situation. In addition, our closing of the Keymile acquisition could give rise to substantial tax liabilities under German law, which could negatively impact our financial condition and liquidity~~ . Customer and Product Risk The long and variable sales cycles for our products could cause revenue and operating results to vary significantly from quarter to quarter. The target customers for our products have substantial and complex networks that they traditionally expand in large increments on a periodic basis. Accordingly, our marketing efforts are focused primarily on prospective customers that may purchase our products as part of a large- scale network deployment. Our target customers typically require a lengthy evaluation, testing and product qualification process. Throughout this process, we are often required to spend considerable time and incur significant expenses educating and providing information to prospective customers about the uses and features of our products. Even after a company makes the final decision to purchase our products, it could deploy our products over extended periods of time. The timing of deployment of our products varies widely, and depends on a number of factors, including our customers' skill sets, geographic density of potential subscribers, the degree of configuration and integration required to deploy our products, and our customers' ability to finance their purchase of our products as well as their operations. The impact of the COVID- 19 pandemic on our supply chain has increased the volatility of our deployment timeframes. As a result of any of these factors, our revenue and operating results could vary significantly from quarter to quarter. The market we serve is highly competitive and we may not be able to compete successfully. Competition in communications equipment markets is intense. These markets are characterized by rapid change, converging technologies and a migration to networking solutions that offer superior advantages. We are aware of many companies in related markets that address particular aspects of the features and functions that our products provide. Currently, our primary competitors in our core business include ADTRAN, Calix, Huawei, Nokia and ZTE, among others. In our FiberLAN business, our competitors include Cisco, Nokia and Tellabs. In our Ethernet switching business, our competitors include Cisco, and Juniper. We also may face competition from other communications equipment companies or other companies that may enter our markets in the future. In addition, a number of companies have introduced products that address the same network needs that our products and solutions address, both domestically and internationally. Many of our competitors have longer operating histories, greater name recognition, larger customer bases and greater financial, technical, sales and marketing resources than we do and may be able to undertake more extensive marketing efforts, adopt more aggressive pricing policies and provide more customer financing than we can. In particular, we are encountering price- focused competitors from Asia, especially China, which places pressure on us to reduce our prices. If we are forced to reduce prices in order to secure customers, we may be unable to sustain gross margins at desired levels or achieve profitability. Competitive pressures could result in increased pricing pressure, reduced profit margins, increased sales and marketing expenses and failure to increase, or the loss of, market share, any of which could reduce our revenue and adversely affect our financial results.

Moreover, our competitors may foresee the course of market developments more accurately than we do and could develop new technologies that render our products less valuable or obsolete. In our markets, principal competitive factors include: (i) product performance; (ii) interoperability with existing products; (iii) scalability and upgradeability; (iv) conformance to standards; (v) breadth of services; (vi) reliability; (vii) ease of installation and use; (viii) geographic footprints for products; (ix) ability to provide customer financing; (x) pricing; (xi) technical support and customer service; and (xii) brand recognition. If we are unable to compete successfully against our current and future competitors, we may have difficulty obtaining or retaining customers, and we could experience price reductions, order cancellations, increased expenses and reduced gross margins, any of which could have a material adverse effect on our business, operations, financial condition, and liquidity. We depend upon the development of new products and enhancements to existing products, and if we fail to predict and respond to emerging technological trends and customers' changing needs, our operating results and market share may suffer. The markets for our products are characterized by rapidly changing technology, evolving industry standards, changes in end- user requirements, frequent new product introductions and changes in communications offerings from network service provider customers. Our future success depends on our ability to anticipate or adapt to such changes and to offer, on a timely and cost- effective basis, products that meet changing customer demands and industry standards. We may not have sufficient resources to successfully and accurately anticipate customers' changing needs and technological trends, manage long development cycles or develop, introduce and market new products and enhancements. The process of developing new technology is complex and uncertain, and if we fail to develop new products or enhancements to existing products on a timely and cost- effective basis, or if our new products or enhancements fail to achieve market acceptance, our business, operations, financial condition and liquidity would be materially adversely affected. Because our products are complex and are deployed in complex environments, our products may have defects that we discover only after full deployment by our customers, which could have a material adverse effect on our business. We produce highly complex products that incorporate leading- edge technology, including both hardware and software. Software often contains defects or programming flaws that can unexpectedly interfere with expected operations. In addition, our products are complex and are designed to be deployed in large quantities across complex networks. Because of the nature of these products, they can only be fully tested when completely deployed in large networks with high amounts of traffic, and there is no assurance that our pre- shipment testing programs will be adequate to detect all defects. As a result, our customers may discover errors or defects in our hardware or software, or our products may not operate as expected. If we are unable to cure a product defect, we could experience damage to our reputation, reduced customer satisfaction, loss of existing customers and failure to attract new customers, failure to achieve market acceptance, reduced sales opportunities, loss of revenue and market share, increased service and warranty costs, diversion of development resources, legal actions by our customers, and increased insurance costs. Defects, integration issues or other performance problems in our products could also result in damages to our customers, financial or otherwise. Our customers could seek damages for related losses from us, which could seriously harm our business, operations, financial condition and liquidity. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly. The occurrence of any of these problems would seriously harm our business, operations, financial condition and liquidity. Sales to communications service providers are especially volatile, and weakness in sales orders from this industry could harm our business, operations, financial condition and liquidity. Sales activity in the service provider industry depends upon the stage of completion of expanding network infrastructures, the availability of funding, and the extent to which service providers are affected by regulatory, economic and business conditions in the country of operations. Although some service providers may be increasing capital expenditures over the depressed levels that have prevailed over the last few years, weakness in orders from this industry could have a material adverse effect on our business, operations, financial condition and liquidity. **Additionally, a weaker global economy could cause some of these service providers to delay or cancel planned capital expenditures.** Changes in technology, competition, overcapacity, changes in the service provider market, regulatory developments, adverse economic effects caused by the COVID- 19 pandemic and constraints on capital availability have had a material adverse effect on many of our service provider customers, with many of these customers going out of business or substantially reducing their expansion plans. These conditions have materially harmed our business and operating results, and we expect that some or all of these conditions may continue for the foreseeable future. Finally, service provider customers typically have longer implementation cycles; require a broader range of services including design services; demand that vendors take on a larger share of risks; often require acceptance provisions, which can lead to a delay in revenue recognition; and expect financing from vendors. All these factors can add further risk to business conducted with service providers. We depend on a limited source of suppliers for several key components. If we are unable to obtain these components on a timely basis, we will be unable to meet our customers' product delivery requirements, which would harm our business. We currently purchase several key components from a limited number of suppliers. If any of our limited source of suppliers become insolvent, cease business or experience capacity constraints, work stoppages or any other reduction or disruption in output, they may be unable to meet our delivery schedules. Our suppliers may enter into exclusive arrangements with our competitors, be acquired by our competitors, stop selling their products or components to us at commercially reasonable prices, refuse to sell their products or components to us at any price or be unable to obtain or have difficulty obtaining components for their products from their suppliers. If we do not receive critical components from our limited source of suppliers in a timely manner, we will be unable to meet our customers' product delivery requirements. Any failure to meet a customer' s delivery requirements could materially adversely affect our business, operations, and financial condition and liquidity and could materially damage customer relationships **. We may occasionally build up in inventory in response to these supply chain issues which increases the risk of inventory obsolescence** . The current worldwide shortage of semiconductors may exacerbate these risks. We rely on the availability of third- party licenses. Many of our products are designed to include software or other intellectual property licensed from third parties. It may be necessary in the future to seek or renew licenses relating to various elements of the technology used to develop these products. We cannot assure you that our existing or future third- party licenses will be available to us on commercially reasonable terms, if at all. Our inability to maintain or obtain any third- party license required to sell or develop our products and product enhancements could require us to obtain substitute technology of lower quality or performance standards, or at greater cost. Our intellectual property rights could prove difficult to protect and enforce. We generally rely on a combination of copyrights, patents, trademarks and trade secret laws and commercial agreements containing restrictions on disclosure and other appropriate terms to protect our intellectual property rights. We enter into confidentiality, employee, contractor and commercial agreements with our employees, consultants and corporate partners, and control access to and distribution of our proprietary information and use of our intellectual property and technology. Despite our efforts to protect our proprietary rights, unauthorized parties, including those affiliated with foreign governments, may attempt to copy or otherwise obtain and use our products, technology or intellectual property. Monitoring unauthorized use of our technology and intellectual property is difficult, and we do not know whether the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries or jurisdictions where laws may not protect our proprietary rights as extensively as in the United States. We cannot assure you that our pending, or any future, patent applications will be granted, that any existing or future patents will not be challenged, invalidated, or circumvented, or that any existing or future patents will be enforceable or that infringement by third parties will even be detected. While we are not dependent on any individual patents, if we are unable to protect our proprietary rights, we may find ourselves at a competitive disadvantage to others who need not incur the substantial expense, time and effort required to create the innovative products. There are additional risks to our intellectual property as a result of our international business operations. We may face risks to our technology and intellectual property as a result of our conducting strategic business discussions outside of the United States, and particularly in jurisdictions that do not have comparable levels of protection of corporate proprietary information and assets such as intellectual property, trademarks, trade secrets, know- how and customer information and records. While these risks are common to many companies, conducting business in certain foreign jurisdictions, housing technology, data and intellectual property abroad, or licensing technology to joint ventures with foreign partners may have more significant exposure. For example, we have shared intellectual properties with entities in China, South Korea, India, Thailand, and Vietnam pursuant to confidentiality agreements in connection with discussions on potential strategic collaborations, which may expose us to material risks of theft of our proprietary information and other intellectual property, including technical data, manufacturing processes, data sets or other sensitive information. Our technology may be reverse engineered by the parties or other parties, which could result in our patents being infringed or our know- how or trade secrets stolen. The risk can be by direct intrusion wherein technology and intellectual property is stolen or compromised through cyber intrusions or physical theft through corporate espionage, including with the assistance of insiders, or via more indirect routes. Claims that our current or future products or components contained in our products infringe the intellectual property rights of others may be costly and time consuming to defend and could adversely affect our ability to sell our products. The communications equipment industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent, copyright, trademark and other intellectual property rights, that may relate to technologies and related standards that are relevant to us. From time to time, we receive correspondence from companies claiming that our products are using technology covered by or related to the intellectual property rights of these companies and inviting us to discuss or demanding licensing or royalty arrangements for the use of the technology or seeking payment for damages, injunctive relief and other available legal remedies through litigation. These companies also include third- party non- practicing entities (also known as patent trolls) that focus on extracting royalties and settlements by enforcing patent rights through litigation or the threat of litigation. These companies typically have little or no product revenues and therefore our patents could provide little or no deterrence against such companies filing patent infringement lawsuits against us. In addition, third parties have initiated and could continue to initiate litigation against our manufacturers, suppliers, distributors or even our customers alleging infringement or misappropriation of their proprietary rights with respect to existing or future products, or components of our products. For example, proceedings alleging patent infringement are routinely commenced in various jurisdictions against manufacturers and consumers of products in the wireless and broadband communications industry. In some cases, courts have issued rulings adverse to such manufacturers and customers, which can result in monetary damages that we are obligated to indemnify or that may impact the cost and availability of components or sales of our products. Courts may also issue injunctions preventing manufacturers from offering, distributing, using or importing products that include the challenged intellectual property. Adverse rulings or injunctive relief awarded against key suppliers of components for our products could result in delays or stoppages in the shipment of affected components, or require us to recall, modify or redesign our products containing such components. Regardless of the merit of claims against us or our manufacturers, suppliers, distributors or customers, intellectual property litigation can be time consuming and costly, and result in the diversion of the attention of technical and management personnel. Any such litigation could force us to stop manufacturing, selling, distributing, exporting, incorporating or using products or components that include the challenged intellectual property, or to recall, modify or redesign such products. In addition, if a party accuses us of infringing upon its proprietary rights, we may have to enter into royalty or licensing agreements, which may not be available on terms acceptable to us, if at all. If we are unsuccessful in any such litigation, we could be subject to significant liability for damages and loss of our proprietary rights. Any of these events or results could have a material adverse effect on our business, operations, financial condition and liquidity. Due to the international nature of our business, political or economic changes or other factors in a specific country or region could harm our future revenue, costs and expenses, and financial condition. We currently have significant operations in ~~Canada,~~ South Korea, **Japan, Vietnam,** India **, Spain,** and ~~Vietnam~~ **Canada** , as well as sales and technical support teams in various locations around the world. We continue to consider opportunities to expand our international operations in the future. The successful management and expansion of our international operations requires significant human effort and the commitment of substantial financial resources. Further, our international operations may be subject to certain risks, disruptions and challenges that could materially harm our business, operations, financial condition, and liquidity, including: (i) unexpected changes in laws, policies and regulatory requirements, including but not limited to regulations related to import- export control; (ii) trade protection measures, tariffs, embargoes and other regulatory requirements which could affect our ability to import or export our products into or from various countries; (iii) political unrest or instability, acts of terrorism or war in countries where we or our suppliers or customers have operations, including **the ongoing military conflict between Russia and Ukraine and China- Taiwan tensions** ~~heightened security concerns stemming from North Korea in relation to our operations in South Korea~~ ; (iv) political considerations that affect service provider and government spending patterns; (v) heightened political tensions between the U. S. and China regarding the COVID- 19 pandemic, trade practices and intellectual property rights; (vi) differing technology standards or customer requirements; (vii) developing and customizing our products for foreign countries; (viii) fluctuations in currency exchange rates, foreign exchange controls and restrictions on cash repatriation; (ix) longer accounts receivable collection cycles and financial instability of customers; (x) requirements for additional liquidity to fund our international operations; (xi) pandemics, epidemics and other public health crises, such as the COVID- 19 pandemic; (xii) difficulties and excessive costs for staffing and managing foreign operations; (xiii) ineffective legal protection of our intellectual property rights in certain countries; (xiv) potentially adverse tax consequences; and (xv) changes in a country' s or region' s political and economic conditions. In addition, some of our customer purchase agreements are governed by foreign laws and regulations, which may differ significantly from the laws and regulations of the United States. We may be limited in our ability to enforce our rights under these agreements and to collect damages, if awarded. Any of these factors could harm our existing international operations and business or impair our ability to continue expanding into international markets. We face exposure to foreign currency exchange rate fluctuations. We conduct significant business in South Korea, Japan, **Vietnam,** India, ~~Vietnam~~ **Spain** , **and Canada, as well as in other countries in** Europe **, Asia- Pacific** , Middle East and Latin America, all of which subject us to foreign currency exchange rate risk. We have in the past and may in the future undertake a hedging program to mitigate the impact of foreign currency exchange rate fluctuations. The use of such hedging activities may not offset any or more than a portion of the adverse financial effects of unfavorable movements in foreign currency exchange rates over the limited time the hedges are in place. Moreover, the use of hedging instruments may introduce additional risks if we are unable to structure effective hedges with such instruments, which could adversely affect our business, operations, financial condition, and liquidity. As such, our results of operations and our cash flows could be impacted by changes in foreign currency exchange rates. Risks Related to our Industry The telecommunications networking business requires the application of complex revenue and expense recognition rules and the regulatory environment affecting generally accepted accounting principles is uncertain. Changes in financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations and harm our business. The nature of our business requires the application of complex revenue and expense recognition rules and the current regulatory environment affecting U. S. GAAP is uncertain. Significant changes in U. S. GAAP could affect our financial statements going forward and may cause adverse, unexpected financial reporting fluctuations and harm our operating results. U. S. GAAP is subject to interpretation by the Financial Accounting Standards Board, the Securities and Exchange Commission (SEC) and various bodies formed to promulgate and interpret appropriate accounting principles. In addition, we have in the past and may in the future need to significantly change our customer contracts, accounting systems and processes when we adopt future or proposed changes in accounting principles. The cost and effect of these changes may negatively impact our results of operations during the periods of transition. Changes in government regulations related to our business could harm our operations, financial condition, and liquidity. Our operations are subject to various laws and regulations, including those regulations promulgated by the Federal Communications Commission (" FCC "). The FCC has jurisdiction over the entire communications industry in the United States and, as a result, our existing and future products and our customers' products are subject to FCC rules and regulations. Changes to current FCC rules and regulations and future FCC rules and regulations could negatively affect our business. Non- compliance with the FCC' s rules and regulations would expose us to potential enforcement actions, including monetary forfeitures, and could damage our reputation among potential customers. The uncertainty associated with future FCC decisions may cause network service providers to delay decisions regarding their capital expenditures for equipment for broadband services. In addition, international regulatory bodies establish standards that may govern our products in foreign markets. The SEC has adopted disclosure rules regarding the use of " conflict minerals " mined from the Democratic Republic of Congo and adjoining countries and procedures regarding a manufacturer' s efforts to prevent the sourcing of such conflict minerals. These rules may have the effect of reducing the pool of suppliers who can supply " conflict free " components and parts, and we may not be able to obtain " conflict free " products or supplies in sufficient quantities for our operations. Also, we may face reputational challenges with our customers, stockholders and other stakeholders if we are unable to sufficiently verify the origins for the conflict minerals used in our products. In addition, governments and regulators in many jurisdictions have implemented or are evaluating regulations relating to cyber security, privacy and data protection, which can affect the markets and requirements for networking and communications equipment. We are unable to predict the scope, pace or financial impact of government regulations and other policy changes that could be adopted in the future, any of which could negatively impact our operations and costs of doing business. Because of our smaller size, legislation or governmental regulations can significantly increase our costs and affect our competitive position. Changes to or future domestic and international regulatory requirements could result in postponements or cancellations of customer orders for our products and services, which could harm our business, operations, financial condition and liquidity. Further, we cannot be certain that we will be successful in obtaining or maintaining regulatory approvals that could, in the future, be required to operate our business. Industry consolidation may lead to increased competition and could harm our operating results. There has been a trend toward industry consolidation in the communications equipment market for several years. We expect this trend to continue as companies attempt to strengthen or hold their market positions in an evolving industry and as companies are acquired or are unable to continue operations. We believe that industry consolidation may result in stronger competitors that are better able to compete as sole- source vendors for customers. This could have a material adverse effect on our business, operations, financial condition, and liquidity. Furthermore, rapid consolidation could result in a decrease in the number of customers we serve. The loss of a major customer could have a material adverse effect on our business, operations, financial condition, and liquidity. Risks Related to our Common Stock DASAN Networks, Inc. (" DNI ") owns a significant amount of our outstanding common stock and has the ability to exert significant influence or control over any matters that require stockholder approval, including the election of directors and the approval of certain transactions, and DNI' s interests may conflict with our interests and the interests of other stockholders. As of December 31, ~~2021~~ **2022** , DNI owned approximately ~~36~~ **29** . ~~7~~ **4** % of the outstanding shares of our common stock, representing a significant amount of the votes entitled to be cast by the holders of our outstanding common stock at a stockholder meeting. Due to its significant ownership percentage of our common stock, DNI has the ability to substantially influence or control the outcome of any matter submitted for the vote of our stockholders, including the election of directors and the approval of certain transactions. The interests of DNI may conflict with the interests of our other stockholders or with holders of our indebtedness and may cause us to take actions that our other stockholders or holders of our indebtedness do not view as beneficial. DNI' s large concentration of stock ownership may make it more difficult for a third party to acquire us or discourage a third party from seeking to acquire us. Any potential third- party acquirer would most likely need to negotiate any such transaction with DNI, and the interests of DNI with respect to such transaction may be different from the interests of our other stockholders or with holders of our indebtedness. Additionally, two of the Company' s directors serve as executive officers of DNI – Min Woo Nam is the Chief Executive Officer and Chairman of the Board of Directors of DNI and Choon Yul Yoo is the Chief Operating Officer of DNI. Messrs. Nam and Yoo owe fiduciary duties to us and, in addition, have duties to DNI. As a result, these directors may face real or apparent conflicts of interest with respect to matters affecting both us and DNI. There is a limited public market of our common stock. There is a limited public market for our common stock. The average daily trading volume in our common stock during the 12 months ended December 31, ~~2021~~ **2022** was approximately ~~125~~ **111** , 000 shares per day. We cannot provide assurances that a more active trading market will develop or be sustained. As a result of low trading volume in our common stock, the purchase or sale of a relatively small number of shares of our common stock could result in significant price fluctuations and it may be difficult for holders to sell their shares without depressing the market price of our common stock. DNI, our largest stockholder, owned approximately ~~10~~ **9** . 1 million shares of our common stock as of December 31, ~~2021~~ **2022** and such shares are registered with the SEC for resale. ~~Its~~ **These** shares ~~became~~ **are** eligible for resale without restriction as to volume limitations. Our stock price could suffer a significant decline as a result of any sudden increase in the number of shares sold in the public market or market perception that the increased number of shares available for sale will exceed the demand for our common stock. We do not expect to declare or pay dividends in the foreseeable future. We do not expect to declare or pay dividends in the foreseeable future, as we anticipate that we will invest future earnings in the development and growth of our business. Therefore, holders of our common stock will not receive any return on their investment unless they sell their securities, and holders may be unable to sell their securities on favorable terms or at all. General Risk Factors We may need additional capital, and we cannot be certain that additional financing will be available. In **2022, we entered into a Credit Agreement, as amended from time to time, (the " Credit Agreement ") by and between the Company, as borrower, certain subsidiaries of the Company, as guarantors, the lenders party thereto and JPMorgan Chase Bank, N. A., as administrative agent, which provided for Revolving Credit Facility in an aggregate principal amount of up to $ 30. 0 million. On May 27, 2022, the Company entered into a First Amendment to Credit Agreement (the " Amendment "), which, among other things, provides for a Term Loan in an aggregate principal amount of $ 25. 0 million. Refer to Note 8 Debt, in the Notes to Consolidated Financial Statements, for more detail. In November 2022 and** January 2021, we **also** raised approximately $ **30. 8 million and $** 59. 5 million **, respectively,** in ~~an~~ **separate** equity ~~offering~~ **offerings** . Refer to Note 9 Stockholders' Equity, in the Notes to Consolidated Financial Statements, for more detail. We need sufficient capital to fund our ongoing operations and may require additional financing in the future to expand our business, acquire assets or repay or refinance our existing debt. Our ability to obtain financing will depend, among other things, on our development efforts, business plans, operating performance and condition of the capital markets at the time we seek financing. We cannot assure you that additional financing will be available to us on favorable terms when required, or at all **. Any debt financing secured by us in the future could become more expensive due to rising interest rates or involve restrictive covenants relating to our capital- raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital** . If we raise additional funds through the issuance of equity, equity- linked or debt securities, those securities may have rights, preferences or privileges senior to the rights of our common stock, and our stockholders may experience dilution. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things: (i) maintain existing operations; (ii) pay ordinary expenses; (iii) fund our business expansion or product innovation; (iv) pursue future business opportunities, including acquisitions; (v) respond to unanticipated capital requirements; (vi) repay or refinance our existing debt; (vii) hire, train and retain employees; or (viii) respond to competitive pressures or unanticipated working capital requirements. Our failure to do any of these things could seriously harm our business, financial condition, liquidity and operating results. In addition, we may be required to reduce the scope of our planned product development and sales and marketing efforts beyond the reductions that we have previously taken, and reduce operations in low margin regions, including reductions in headcount, which could have a material adverse effect on our business, operations, financial condition and liquidity. Our **level of indebtedness could adversely affect our business, operations, financial condition, and liquidity In 2022, we entered into the Credit Agreement and the Amendment by and between the Company, as borrower, certain subsidiaries of the Company, as guarantors, the lenders party thereto and JPMorgan Chase Bank, N. A., as administrative agent. On October 31, 2022, DASAN Network Solutions, Inc., a corporation organized under the laws of the Republic of Korea, and an indirect, wholly- owned subsidiary of the Company (" DNS Korea "), entered into a Loan Agreement with Dasan Networks, Inc. (" DNI"), pursuant to which DNS Korea borrowed KRW 7. 2 billion ($ 5. 0 million USD) from DNI (the " November 2022 DNI Loan "). In the first quarter of 2023, the**

entire outstanding balance on this term loans was repaid and DNS Korea entered into a new short- term loan arrangement with DNI (the " February 2023 DNI Loan ") and borrowed KRW 5 billion ($ 4. 1 million USD). As of December 31, 2022, the Company' s debt obligation under the Term Loan was $ 24. 1 million, net of unamortized issuance cost of $ 0. 3 million. The Company had $ 4. 0 million outstanding borrowings and $ 0. 1 million in letters of credit issued under the $ 30. 0 million Revolving Credit Facility as of December 31, 2022. The Company' s debt obligation under the November 2022 DNI Loan was KRW 7. 2 billion ($ 5. 7 million USD) as of December 31, 2022. We may incur additional indebtedness in the future, including additional borrowings under the Credit Agreement or other future credit facilities with other financial institutions or DNI. Even if we are able to obtain new financing upon a default under the Credit Agreement and the February 2023 DNI Loan, it may not be on commercially reasonable terms or on terms that are acceptable to us. The level of indebtedness could have important consequences and could materially and adversely affect us in a number of ways, including: • limiting our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions or general corporate purposes; • limiting our flexibility to plan for, or react to, changes in our business or market conditions; • requiring us to use a significant portion of any future cash flow from operations to repay or service the debt, thereby reducing the amount of cash available for other purposes; • making us more highly leveraged than some of our competitors, which could place us at a competitive disadvantage; and • making us more vulnerable to the impact of adverse economic and industry conditions and increases in interest rates. The Credit Agreement, the February 2023 DNI Loan and the instruments governing our other indebtedness contain certain covenants, limitations, and conditions with respect to the Company that could restrict our ability to operate our business. The covenants include a maximum leverage ratio, a minimum fixed charge coverage ratio, a minimum liquidity covenant and minimum EBITDA, as well as financial reporting obligations, and usual and customary events of default. On February 15, 2023, the Company entered into a Second Amendment to Credit Agreement (the" Second Amendment"), which amends the Credit Agreement dated February 9, 2022 (as previously amended on May 27, 2022). The Second Amendment, among other things, suspends certain financial covenants until the fiscal quarter ending September 30, 2023. If an event of default occurs under the Credit Agreement or the February 2023 DNI Loan, as applicable, the agent and the lenders will be entitled to take various actions, including requiring the immediate repayment of all outstanding amounts, terminating commitments to make additional advances and selling our assets to satisfy the obligations under the outstanding indebtedness. We cannot assure you that we will be able to comply with our financial or other covenants in the future, or that any covenant violations will be waived in the future. Any acceleration of amounts due could have a material adverse effect on our business, operations, financial condition, and liquidity. We cannot assure you that we will be able to generate cash flow in amounts sufficient to enable us to service our debt or to meet our working capital and capital expenditure requirements. If we are unable to generate sufficient cash flow from operations or to borrow sufficient funds to service our debt, due to borrowing base restrictions or otherwise, we may be required to sell assets, reduce capital expenditures, purchase credit insurance or obtain additional financing. We cannot assure you that we will be able to engage in any of these actions on reasonable terms, if at all. Our future operating results are difficult to predict and our stock price may continue to be volatile. As a result of a variety of factors discussed in this Annual Report on Form 10- K, our revenues for a particular quarter are difficult to predict. Our revenue and operating results may vary significantly from quarter to quarter due to a number of factors, many of which are outside of our control. The primary factors that could affect our results of operations include the following: (i) commercial acceptance of our products and services; (ii) fluctuations in demand for network access products; (iii) fluctuation in gross margin; (iv) our ability to attract and retain qualified and key personnel; (v) the timing and size of orders from customers; (vi) the ability of our customers to finance their purchase of our products as well as their own operations; (vii) new product introductions, enhancements or announcements by our competitors; (viii) our ability to develop, introduce and ship new products and product enhancements that meet customer requirements in a timely manner; (ix) changes in our pricing policies or the pricing policies of our competitors; (x) the loss of or failure to renew on commercially reasonable terms any third- party licenses necessary for or relating to our products; (xi) the ability of our company and our contract manufacturers to attain and maintain production volumes and quality levels for our products; (xii) our ability to obtain sufficient supplies of sole or limited source components; (xiii) increases in the prices of the components we purchase, or quality problems associated with these components; (xiv) unanticipated changes in regulatory requirements which may require us to redesign portions of our products; (xv) changes in accounting rules; (xvi) integrating and operating any acquired businesses; (xvii) our ability to achieve targeted cost reductions; (xviii) how well we execute on our strategy and operating plans; (xix) general economic conditions as well as those specific to the communications, internet and related industries; and (xx) the economic uncertainty created by the ongoing COVID- 19 pandemic, including its potentially adverse impact on all the foregoing factors. Any of the foregoing factors, or any other factors discussed elsewhere herein, could have a material adverse effect on our business, operations, financial condition and liquidity that could adversely affect our stock price. Further, the ongoing COVID- 19 pandemic has resulted in severe disruption and volatility in the financial markets. We anticipate that our stock price and trading volume may continue to be volatile in the future, whether due to the factors described above, volatility in public stock markets generally (particularly in the technology sector) or otherwise. Strategic acquisitions or investments that we have made or that we could pursue or make in the future may disrupt our operations and harm our business, operations, financial condition, and liquidity. As part of our business strategy, we have made investments in and acquired other companies, including **ASSIA** ~~Optelian and RIFT~~ in ~~2021~~ **2022** , that we believe are complementary to our core business. In the future we may continue to make investments in or acquire other companies or complementary solutions or technologies. Any such acquisition or investment may divert the attention of management and cause us to incur various expenses in identifying, investigating, and pursuing suitable opportunities, whether or not the transactions are completed, and may result in unforeseen operating difficulties and expenditures. These transactions could also result in dilutive issuances of equity securities, the incurrence of debt or assumption of liabilities, and increase our risk of litigation exposure, which could adversely affect our operating results. In addition, if the resulting business from such a transaction fails to meet our expectations, our operating results, business, and financial condition may suffer or we may be exposed to unknown risks or liabilities. Additionally, any significant acquisition would require the consent of our lenders. Any failure to receive such consent could delay or prohibit us from acquiring companies that we believe could enhance our business. Furthermore, we may dedicate significant time and capital resources in the pursuit of acquisition opportunities and may be unable to find and identify desirable acquisition targets or business opportunities or be successful in entering into an agreement with any particular strategic partner. Upon the closing of any acquisition transaction, we will need to integrate the acquired organization and its products and services with our legacy operations. The integration process may be expensive, time- consuming and a strain on our resources and our relationships with employees, customers, distributors and suppliers, and ultimately may not be successful. The benefits or synergies we may expect from the acquisition of complementary or supplementary businesses may not be realized to the extent or in the time frame we initially anticipated. Mergers and acquisitions of high- technology companies are inherently subject to increased risk and to many factors outside of our control, and we cannot be certain that our previous or future acquisitions will be successful and will not materially adversely affect our business, operations, financial condition, and liquidity. Any failure to successfully acquire and integrate acquired organizations and their products and services could seriously harm our business, operations, financial condition, and liquidity. Some of the risks that could affect our ability to successfully integrate acquired businesses, including **ASSIA'** ~~Optelian and Rift'~~ s telecommunication systems business, include those associated with: (i) failure to successfully further develop the acquired products or technology; (ii) insufficient revenues to offset increased expenses associated with acquisitions and where competitors in such markets have stronger market positions; (iii) conforming the acquired company' s standards, policies, processes, procedures and controls with our operations; (iv) difficulties in entering markets in which we have no or limited prior experience; (v) difficulties in integrating the operations, technologies, products and personnel of the acquired companies; (vi) coordinating new product and process development, especially with respect to highly complex technologies; (vii) potential loss of key employees, customers, distributors, vendors and other business partners of the companies we acquire following and continuing after the announcement of acquisition plans or transactions; (viii) hiring and training additional management and other critical personnel; (ix) in the case of foreign acquisitions, the need to integrate operations across different cultures and languages and to address the particular economic, currency, political and regulatory risks associated with specific countries; (x) increasing the scope, geographic diversity and complexity of our operations; (xi) diversion of management' s time and attention away from normal daily operations of the business and the challenges of managing larger and more widespread operations resulting from acquisitions; (xii) consolidation of facilities, integration of the acquired company' s accounting, human resource and other administrative functions and coordination of product, engineering and sales and marketing functions; (xiii) the geographic distance between the companies; (xiv) failure to comply with covenants related to the acquired business; (xv) unknown, underestimated, and / or undisclosed liabilities for activities of the acquired company before the acquisition, including patent and trademark infringement claims, violations of laws, employment claims, pension liabilities, commercial disputes, tax liabilities and other known and unknown liabilities; (xvi) litigation or other claims in connection with the acquired company, including claims for terminated employees, customers, former stockholders or other third parties; and (xvii) the disruption, economic and otherwise, created by the on- going COVID- 19 pandemic, including its potentially compounding effect on all the foregoing factors. If demand for our products and solutions does not develop as we anticipate, then our business operations, financial condition, and liquidity will be adversely affected. Our future revenue depends significantly on our ability to successfully develop, enhance and market our products and solutions to our target markets. Most network service providers have made substantial investments in their current infrastructure, and they may elect to remain with their current architectures or to adopt new architectures in limited stages or over extended periods of time. A decision by a customer to purchase our products will involve a significant capital investment. We must convince our service provider customers that they will achieve substantial benefits by deploying our products for future upgrades or expansions. We may experience difficulties with product reliability, partnering, and sales and marketing efforts that could adversely affect our business and divert management attention and resources from our core business. We do not know whether a viable market for our products and solutions will develop or be sustainable in our businesses. If these markets do not develop or develop more slowly than we expect, including as a result of conditions created by the ongoing COVID- 19 pandemic, our business, operations, financial condition and liquidity will be materially harmed. Increased tariffs on products and goods that we purchase from off- shore sources (particularly Chinese sources) and changes in international trade policies and relations could have an adverse effect on our customers and operating results. The pricing of our products to customers and our ability to conduct business with certain customers can be affected by changes in U. S. and other countries' trade policies. For example, before the trade deal was signed between the U. S. and China on January 15, 2020, the United States had imposed tariffs on a wide- range of products and goods manufactured in China that are directly or indirectly imported into the United States. In response, various countries and economic regions announced plans or intentions to impose retaliatory tariffs on a wide- range of products they import from the United States. Any newly imposed, announced and threatened U. S. tariffs and retaliatory tariffs could have the effect of increasing the cost of materials we use to manufacture certain products, which could result in lower margins. The tariffs could also result in disruptions to our supply chain, as suppliers struggle to fill orders from companies trying to purchase goods in bulk ahead of announced tariffs. Although we believe that the incremental costs to us of these tariffs were immaterial, if new tariffs are imposed or if new tariffs apply to additional categories of components used in our manufacturing activities, and if we are unable to pass on the costs of tariffs to our customers, our operating results would be harmed. Changes in political environments, governmental policies, international trade policies and relations, including as a result of tensions between the United States and China regarding the COVID- 19 pandemic, trade practices and the protection of intellectual property rights, could result in revisions to laws or regulations or their interpretation and enforcement, trade sanctions, or retaliatory actions by

China in response to U. S. actions, which could have an adverse effect on our customers, business plans and operating results. We rely on contract manufacturers for a portion of our manufacturing requirements. ~~We rely~~ **Through 2022, we have relied** on contract manufacturers to perform a portion of the manufacturing operations for our products. **In October 2022, we announced an agreement with Fabrinet, a third- party provider of electro- mechanical and electronic manufacturing and distribution services, to transition the sourcing, procurement, order- fulfillment, manufacturing and return merchandise authorization activities in the Company' s Seminole, Florida facility to Fabrinet.** ~~These~~ -- **The transition began in October 2022 and substantially completed in the beginning of 2023, whereupon the Company no longer manufactures its products. Fabrinet and other** contract manufacturers **we utilize** build products for other companies, including our competitors. In addition, we do not have contracts in place with some of these providers and may not be able to effectively manage those relationships. We cannot be certain that our contract manufacturers will be able to fill our orders in a timely manner. We face a number of risks associated with this dependence on contract manufacturers including reduced control over delivery schedules, the potential lack of adequate capacity during periods of excess demand, poor manufacturing yields and high costs, quality assurance, increases in prices, and the potential misappropriation of our intellectual property. We have experienced in the past, and may experience in the future, problems with our contract manufacturers, such as inferior quality, insufficient quantities and late delivery of products. We face supply chain risk, and our failure to estimate customer demand properly could result in excess or obsolete component inventories that could adversely affect our gross margins. ~~Occasionally~~ **We have experienced** , ~~we~~ **and** may **continue to** experience ~~a~~ supply ~~shortage~~ **shortages** , or ~~a delay~~ **delays** in receiving, certain component parts as a result of strong demand for the component parts and / or capacity constraints or other problems experienced by suppliers. If shortages or delays persist, the price of these components may increase, or the components may not be available at all, and we may also encounter shortages if we do not accurately anticipate our needs. Conversely, we may not be able to secure enough components at reasonable prices or of acceptable quality to build new products in a timely manner in the quantities or configurations needed. Accordingly, our revenue and gross margins could suffer until other sources can be developed. During 2021 **and 2022** , we experienced disruptions in our supply chain, and we anticipate that such disruptions will continue in ~~2022~~ **2023** . These supply issues have limited our ability to supply demand of certain customers. It is difficult to predict the future impact of these ongoing supply issues. Our operating results would also be adversely affected if, anticipating greater demand than actually develops, we commit to the purchase of more components than we need. Furthermore, as a result of binding price or purchase commitments with suppliers, we may be obligated to purchase components at prices that are higher than those available in the current market. In the event that we become committed to purchase components at prices in excess of the current market price, our gross margins could decrease. In the past we experienced component shortages that adversely affected our financial results and, in the future, may continue to experience component shortages. The loss of a key customer or a significant deterioration in the financial condition of a key customer could have a material adverse effect on the Company' s results of operations. The Company' s revenue is dependent on several key customers. A loss of one or more of the Company' s key customers, or a dispute or litigation with one of these key customers could affect adversely our revenue and results of operations. A significant deterioration in the financial condition or bankruptcy filing of a key customer could affect adversely the Company' s business, results of operations, and financial condition. In addition, the Company is subject to credit risk associated with the concentration of accounts receivable from its key customers. As of December 31, ~~2021~~ **2022** , ~~two~~ **no** customers represented **more than** ~~26 % and~~ 10 % of net accounts receivable. As of December 31, ~~2021~~ **2022** ~~,~~ the Company has an allowance for doubtful account of $ ~~16~~ **13** . ~~7~~ **1** million related to one customer. If one or more of the Company' s top customers were to become bankrupt or insolvent or otherwise were unable to pay for the products and services provided by the Company, including as a result of conditions created by the on- going COVID- 19 pandemic, the Company may incur significant write- offs of accounts receivable or incur other impairment charges, which may have a material adverse effect on the Company' s results of operations. We have experienced significant turnover with respect to our executives ~~and our board~~ , and our business could be adversely affected by these and other transitions in our senior management team or if any future vacancies cannot be filled with qualified replacements in a timely manner. We have experienced significant turnover on our executive team ~~and board~~ since 2018. As a result of this turnover, our remaining management team has been required to take on increased responsibilities, which could divert attention from key business areas. If we continue to experience similar turnover in the future, we may be unable to timely replace the talent and skills of our management team ~~and directors~~ . Management transitions are often difficult and inherently cause some loss of institutional knowledge, which could negatively affect our results of operations and financial condition. Our ability to execute our business strategies may be adversely affected by the uncertainty associated with these transitions and the time and attention from the board and management needed to fill any future vacant roles could disrupt our business. If we are unable to successfully identify and attract adequate replacements for future vacancies in our management roles in a timely manner, we could experience increased employee turnover and harm to our business, growth, financial condition, results of operations and cash flows. We face significant competition for executives with the qualifications and experience we seek. Further, we cannot guarantee that we will not face similar turnover in the future. Our senior management' s knowledge of our business and industry would be difficult to replace, and any further turnover could negatively affect our business, growth, financial conditions, results of operations and cash flows. Decreased effectiveness of share- based compensation could adversely affect our ability to attract and retain employees. We have historically used equity incentives, including stock options **and restricted stock units** , as a key component of our employee compensation program in order to align the interests of our employees with the interests of our stockholders, encourage employee retention and provide competitive compensation and benefit packages. If the trading price of our common stock declines, this would reduce the value of our share- based compensation to our present employees and could adversely affect our ability to retain existing or attract prospective employees. Difficulties relating to obtaining stockholder approval of equity compensation plans could also make it harder or more expensive for us to grant share- based payments to employees in the future. Our success largely depends on our ability to retain and recruit key personnel, and any failure to do so could harm our ability to meet key objectives. Our future success depends upon the continued services of our Chief Executive Officer and other key employees, and our ability to identify, attract and retain highly skilled technical, managerial, sales and marketing personnel who have critical industry experience and relationships that we rely on to build and operate our business. As discussed elsewhere in these Risk Factors, we have experienced significant turnover on our executive team ~~and board~~ since 2018, including the departures of our former Chief Executive Officer and Chief Financial Officer. The loss of the services of any of our key employees or executive officers could delay the development and production of our products and negatively impact our ability to maintain customer relationships, which could harm our business, operations, financial condition and liquidity. Our collection, processing, storage, use, and transmission of personal data could give rise to liabilities as a result of governmental regulation, increasing legal requirements. We collect, process, store, use, and transmit personal data on a daily basis. Personal data is increasingly subject to legal and regulatory protections around the world, which vary widely in approach and which possibly conflict with one another. In recent years, for example, U. S. legislators and regulatory agencies, such as the Federal Trade Commission, as well as U. S. states have increased their focus on protecting personal data by law and regulation and have increased enforcement actions for violations of privacy and data protection requirements. The State of California recently adopted the California Consumer Protection Act (" CCPA "), which went into effect on January 1, 2020. The European Commission also approved and adopted the General Data Protection Regulation (GDPR), a data protection law, which became effective in May 2018. These data protection laws and regulations are intended to protect the privacy and security of personal data that is collected, processed, and transmitted in or from the relevant jurisdiction. Both the CCPA and the GDPR established new requirements applicable to the processing of personal data, afford new data protection rights to individuals and impose significant penalties for data breaches. Individuals also have a right to compensation under the GDPR for financial or non-financial losses. In July 2020, the EU- U. S. Privacy Shield framework which allowed U. S. companies that self- certify to the U. S. Department of Commerce and publicly commit to comply with specified requirements to import personal data from the EU was invalidated as a GDPR compliance mechanism by the European Court of Justice (" ECJ "). These developments create some uncertainty. Ensuring compliance with these laws is an ongoing commitment that involves substantial costs, which could otherwise adversely affect our business operations and negatively impact our financial position or cash flows. Any failure to comply with applicable regulations could also result in regulatory enforcement actions against us, subject us to negative publicity and significant penalties and ultimately cause an adverse effect on our business. If we experience a significant disruption in, or breach in security of, our information technology systems, our business could be adversely affected. We rely on several centralized information technology systems to provide products and services, maintain financial records, process orders, manage inventory, process shipments to customers and operate other critical functions. If we experience a prolonged system disruption in the information technology systems that involve our interactions with customers or suppliers, it could result in the loss of sales and customers and significant incremental costs, which could adversely affect our business. In addition, our information technology systems could be susceptible to damage, disruptions or shutdowns due to power outages, hardware failures, computer viruses, attacks by computer hackers, telecommunication failures, user errors, catastrophes or other unforeseen events. Furthermore, security breaches of our information technology systems could result in the misappropriation or unauthorized disclosure of confidential information belonging to the company or our employees, partners, customers or suppliers, which could result in significant financial, legal or reputational damage to the Company. In response to the COVID-19 pandemic, a large portion of our workforce worked remotely, and future remote working could exacerbate any of the foregoing risks. Compliance or the failure to comply with current and future environmental regulations could cause us significant expense. We are subject to a variety of federal, state, local and foreign environmental regulations. If we fail to comply with any present or future regulations, we could be subject to liabilities, the suspension of production or prohibitions on the sale of our products. In addition, such regulations could require us to incur other significant expenses to comply with environmental regulations, including expenses associated with the redesign of any non- compliant product. From time to time new regulations are enacted, and it is difficult to anticipate how such regulations will be implemented and enforced and the impact that they could have on our operations or results. For example, in 2003 the European Union enacted the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive and the Waste Electrical and Electronic Equipment Directive, for implementation in European Union member states. We are aware of similar legislation that is currently in force or has been considered in the U. S., as well as other countries, such as Japan and China. Implementation of and compliance with these laws may be costly or could otherwise adversely affect our business operations, which could negatively impact our financial position or cash flows. Our failure to comply with any such regulatory requirements or contractual obligations could result in us being liable for costs, fines, penalties or third- party claims, and could jeopardize our ability to conduct business in countries or jurisdictions where such regulations apply. Failure to comply with the U. S. Foreign Corrupt Practices Act and similar laws associated with our international activities could subject us to significant civil or criminal penalties. Failure to comply with the Foreign Corrupt Practices Act could subject us to significant civil or criminal penalties. A significant portion of our revenues is generated from sales outside of the United States. As a result, we are subject to the U. S. Foreign Corrupt Practices Act (the " FCPA "). The FCPA generally prohibits U. S. companies and their intermediaries from making corrupt payments to foreign officials for the purpose of obtaining or keeping business or otherwise obtaining favorable treatment and requires companies to maintain adequate record- keeping and internal accounting practices to accurately reflect the transactions of the company. The FCPA applies to companies, individual directors, officers, employees and agents. Under the FCPA, U. S. companies may be held liable for the corrupt actions taken by employees, strategic or local partners or other representatives. If we or our intermediaries fail to comply with the requirements of the FCPA or similar legislation, governmental authorities in the U. S. and elsewhere could seek to impose civil and / or criminal fines and penalties which could have an adverse effect on our results of operations, financial condition and cash flow. **We have identified a material weakness in our internal control over financial reporting, and our business may be adversely affected if we do not remediate this**

material weakness, or if we have other material weaknesses or significant deficiencies in our internal control over financial reporting in the future. In connection with their evaluation of our disclosure controls and procedures, our chief executive officer (" CEO ") and chief financial officer (" CFO ") concluded that a material weakness exists in our internal control over financial reporting. This material weakness relates to a misapplication of U. S. generally accepted accounting principles related to revenue recognition for a sales agreement with an existing customer which was subject to unique terms. Specifically, the Company' s processes, procedures and controls related to financial reporting were not effective to ensure there was comprehensive analysis, documentation and accounting review of relevant facts in connection with revenue recognition related to such transaction. We have identified a number of measures to strengthen our internal control over financial reporting and address the material weakness that we identified and corrected prior to issuance of the related financial statements. (See Item 9A. Controls and Procedures contained in this report). The existence of one or more material weaknesses or significant deficiencies could result in errors in our financial statements, and substantial costs and resources may be required to rectify any internal control deficiencies. If we cannot produce reliable financial reports, investors could lose confidence in our reported financial information, we may be unable to obtain additional financing to operate and expand our business and our business and financial condition could be harmed. Our business and future operating results are subject to global economic and market conditions. Market turbulence and weak economic conditions, including those caused by the on- going COVID- 19 pandemic, as well as concerns about energy costs, geopolitical issues, inflation, the availability and cost of credit, business and consumer confidence, and unemployment could impact our business in a number of ways, including: Potential deferment of purchases and orders by customers: Uncertainty about global economic conditions could cause consumers, businesses and governments to defer purchases in response to flat revenue budgets, tighter credit, decreased cash availability and weak consumer confidence. Accordingly, future demand for our products could differ materially from our current expectations. Customers' inability to obtain financing to make purchases and / or maintain their business: Some of our customers require substantial financing in order to finance their business operations, including capital expenditures on new equipment and equipment upgrades, and make purchases from us. The potential inability of these customers to access the capital needed to finance purchases of our products and meet their payment obligations to us could adversely impact our business, operations, financial condition, and liquidity. While we monitor these situations carefully and attempt to take appropriate measures to protect ourselves, including factoring credit arrangements to financial institutions, it is possible that we may have to defer revenue until cash is collected or write- down or write- off uncollectible accounts. Such write- downs or write- offs, if large, could have a material adverse effect on our business, operations, financial condition, and liquidity. If our customers become insolvent due to market and economic conditions or otherwise, it could have a material adverse effect on our business, operations, financial condition and liquidity. Negative impact from increased financial pressures on third- party dealers, distributors and retailers: We make sales in certain regions through third- party dealers, distributors and retailers. These third parties may be impacted, among other things, by a significant decrease in available credit. If credit pressures or other financial difficulties result in insolvency for these third parties and we are unable to successfully transition end customers to purchase our products from other third parties, or from us directly, it could adversely impact our business, operations, financial condition, and liquidity. Negative impact from increased financial pressures on key suppliers: Our ability to meet customers' demands depends, in part, on our ability to obtain timely and adequate delivery of quality materials, parts and components from our suppliers. Certain of our components are available only from a single source or limited sources. If certain key suppliers were to become capacity constrained or insolvent, it could result in a reduction or interruption in supplies or a significant increase in the price of supplies and adversely impact our financial condition and results of operations. In addition, credit constraints of key suppliers could result in accelerated payment of accounts payable by us, impacting our cash flow. We may experience material adverse impacts on our business, operations, financial condition, and liquidity as a result of weak or recessionary economic or market conditions in the United States, South Korea, Germany, or the rest of the world. Natural disasters, public health crises, political crises, and other catastrophic events or other events outside of our control may damage our facilities or the facilities of third parties on which we depend, and could materially impact our supply chain and the operations of our customers and suppliers. Our global headquarters is located in Plano, Texas ~~and our~~ **, we have development centers in the** U. S. **, South Korea, Vietnam, India, Spain, and Canada and our** manufacturing ~~facility is~~ **partners are primarily** located in ~~Seminole~~ **the U. S.** , ~~Florida~~ **China and South Korea** . These facilities are subject to disruption from natural causes beyond our control, including physical risks from tornados, severe storms, floods, other natural disaster or power shortages or outages that could disrupt operations or impair critical systems. Any of these disruptions or other events outside of our control could affect our business negatively, harming our operating results. In addition, in the event any of our facilities or the facilities of our suppliers, contract manufacturers, third- party service providers, or customers, is affected by natural disasters, such as hurricanes, earthquakes, tsunamis, power shortages or outages, floods or monsoons, public health crises, such as pandemics and epidemics, including the ongoing COVID- 19 pandemic to the extent not already occurring, political crises, such as terrorism, war, political instability or other conflict, or other events outside of our control, our business and operating results could suffer. Disasters occurring at our or our vendors' facilities also could impact our reputation. Any of the foregoing events may have the effect of disrupting our supply chain, which could harm our business, financial condition results of operations. Illness, travel restrictions, absenteeism, or other workforce disruptions could negatively affect our supply chain, manufacturing, distribution, or other business processes. We may face additional production disruptions in the future, which may place constraints on our ability to produce products in a timely manner or may increase our costs. Future issuances of additional equity securities could result in dilution of existing stockholders' equity ownership. We may determine from time to time to issue additional equity securities to raise additional capital, to support growth, or, as we have in recent years, to make acquisitions. Further, we may issue stock options, grant restricted stock awards or other equity awards to retain, compensate and / or motivate our employees and directors. These issuances of our securities could dilute the voting and economic interests of existing stockholders.