Risk Factors Comparison 2023-12-15 to 2022-12-16 Form: 10-K

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Investing in our securities involves a high degree of risk. In addition to the other information contained in this report, you should consider the following risk factors before investing in our securities. Risks Related to Our Business and Industry Our **backlog may not be an accurate indicator of the level and timing of our future revenues. As a result of order volumes growth in prior periods, driven by supply chain constraints and longer delivery lead times, our backlog grew from $ 1. 2 billion at the end of fiscal 2020 to $ 4. 2 billion at the end of fiscal 2022. As supply chain conditions improved, we have been able to increase shipment volumes and reduce lead times, and our backlog decreased to $ 2. 6 billion at the end of fiscal 2023. However, our order volumes began to moderate in the fourth quarter of fiscal 2022, and we continued to experience orders that are below revenue during fiscal 2023. We do not expect the very high level of orders we experienced in earlier periods in fiscal 2021 and fiscal 2022 to return or continue in the long- term. While we expect order volumes to normalize over time, we expect our backlog to continue to reduce in fiscal 2024. Backlog may be fulfilled several quarters following receipt of a purchase order, either due to customer schedules or delays caused by supply chain constraints. Generally, our customers may cancel, delay delivery or change their orders with limited advance notice, or they may decide not to accept our products and services, although instances of both cancellation and non- acceptance have been rare historically. Backlog also includes certain service obligations that may relate to a multi- year support period. As a result, backlog should not necessarily be viewed as an accurate indicator of future revenue for any particular period. Our** revenue, gross margin **,** and operating results can fluctuate significantly and unpredictably from quarter to quarter. Our revenue, gross margin **,** and results of operations can fluctuate significantly and unpredictably from quarter to quarter. Our budgeted expense levels are based on our visibility into customer spending plans and our projections of future revenue and gross margin. Visibility into customer spending levels can be uncertain, spending patterns are subject to change, and reductions in our expense levels can take significant time to implement. **Historically** ~~In recent years~~ , a significant portion of our quarterly revenue was generated from customer orders received during that same quarter (which we refer to as “ book to revenue ”) and **was** therefore less predictable and subject to fluctuation due to a quarterly shortfall in orders **from expectations** . ~~More recently~~ **During fiscal 2022** , however, we ~~have~~ generated a significant backlog of customer orders, and **through the first half of fiscal 2023,** our **revenue was** ~~results can be~~ more significantly impacted by availability of supply, as well as **customer** ~~any order cancellations or~~ delivery deferrals of existing backlog. ~~Accordingly~~ **Specifically, during fiscal 2023, certain customers, including communications service providers and cable and multiservice operators in North America, and cloud providers, that had earlier placed significant advanced orders, rescheduled deliveries for a portion of such orders, to address their capital budget and capacity to absorb such inventory operationally. We expect our backlog to continue to reduce in fiscal 2024. As that happens, we expect our reliance upon securing quarterly book to revenue orders to grow and those orders to represent a more typical composition of our quarterly revenue over time. However, within these dynamics** , our results for a particular ~~quarter~~ **period** can be difficult to predict **. These dynamics** , ~~and~~ **as well as** a range of factors **,** including those set forth below **,** can materially adversely affect quarterly revenue, gross margin **,** and operating results: • changes in spending levels or network deployment plans by customers, particularly with respect to our service provider and **cloud** ~~Web- scale~~ provider customers; • order timing and volume, including book to revenue orders; • the timing of revenue recognition on sales, particularly relating to large orders; • availability of components and manufacturing capacity; • shipment and delivery timing **, including any deferral of delivery** ; • backlog levels; • the level of competition and pricing pressure in our industry; • the pace and impact of price erosion that we regularly encounter in our markets; • the impact of commercial concessions or unfavorable commercial terms required to maintain incumbency or secure new opportunities with key customers; • the mix of revenue by product segment, geography **,** and customer in any particular quarter; • our level of success in achieving targeted cost reductions and improved efficiencies in our supply chain; • our incurrence of start- up costs, including lower margin phases of projects required to support initial deployments, gain new customers or enter new markets; • our level of success in accessing new markets and obtaining new customers; • long- and short- term changing behaviors or customer needs that impact demand for our products and services or the products and services of our customers; • technology- based price compression and our introduction of new platforms with improved price for performance; • changing market, economic **,** and political conditions, including the impact of tariffs and other trade restrictions or efforts to withdraw from or materially modify international trade agreements; • factors beyond our control such as natural disasters, climate change, acts of war or terrorism, and public health emergencies, such as the COVID- 19 pandemic; • the financial stability of our customers and suppliers; • consolidation activity among our customers, suppliers **,** and competitors; • installation service availability and readiness of customer sites; • adverse impact of foreign exchange; and • seasonal effects in our business. As a result of these factors and other conditions affecting our business and operating results, we believe that quarterly comparisons of our operating results are not necessarily a good indication of ~~possible~~ future performance. Quarterly fluctuations from the above **and other** factors may cause our revenue, gross margin **,** and results of operations to underperform in relation to our guidance, long- term financial targets or the expectations of financial analysts or investors, which may cause volatility or decreases in our stock price. Challenges relating to ~~current~~ supply chain ~~constraints~~ **dynamics** , including semiconductor components, could adversely impact our growth, gross margins and financial results. In the face of ~~extraordinary~~ demand across a range of industries, ~~the~~ global supply ~~market~~ for certain raw materials and components, including, in particular, semiconductor, integrated circuits **,** and other electronic components used in most of our products, ~~has~~ **experienced substantial constraint and disruption in recent**

prior periods. As a result, we experienced significant ~~constraint and disruption in recent periods. This constrained supply environment has adversely affected, and could further affect,~~ component ~~availability~~ **shortages** , **extended** lead times ~~and cost~~ , ~~and could increase~~ **increased** ~~the likelihood of~~ **costs, and** unexpected ~~cancellations~~ - **cancellation** or ~~delays~~ - **delay** of previously committed supply of key components **across our supplier base** . ~~In~~ **While reliability of supply has improved, extended lead times** ~~an~~ **and elevated component** ~~effort to mitigate these risks, we have incurred higher~~ costs **could** ~~to secure available inventory, extended our purchase commitments and placed non- cancellable, advanced orders with or through suppliers, particularly for long lead time components. Our efforts to expand our manufacturing capacity and multi- source and pre- order components and finished goods inventory may fail to reduce the impact of these adverse supply chain conditions. Despite our mitigation efforts, constrained supply conditions during fiscal 2022 adversely impacted and are expected to~~ continue to adversely impact our revenue, ~~results of operations and~~ our ~~ability to meet customer demand. For example, fiscal 2022 revenue was adversely impacted by a range of disruptions in our supply chain, including later- than- expected deliveries, lower- than- expected quantities and third- party manufacturing disruptions that took production offline for periods of time. During fiscal 2022, delays and lower- than- expected deliveries from a small group of our suppliers of integrated circuit components that are essential for delivering finished products had a disproportionate impact on our results of operations. At the same time, increased costs~~ - **cost of goods sold** ~~associated with supply premiums~~ , ~~expediting fees~~ and ~~freight and logistics have impacted and can be expected to continue to adversely impact~~ our ~~gross margin, profitability and~~ ability to reduce the cost to produce our products in a manner consistent with prior periods. ~~The COVID~~ **It is unclear when the supply environment will fully stabilize and what impacts it will have on our business and results of operations in future periods. In addition, current geopolitical trends could impact the availability of components, and certain related export controls on critical minerals and semiconductor technology and chips could constrain supply and adversely impact both delivery and development of such components. This volatility has adversely affected, and could further affect, component availability, lead times and cost, which can adversely impact our revenue and have an impact on customer purchasing decisions. In an effort to address these risks, we have implemented mitigation strategies, including expanding manufacturing capacity, implementing multi** - **sourcing activities** ~~19 pandemic has also contributed to and exacerbated this strain~~ , **qualifying alternative parts,** and **redesigning products; however,** ~~there~~ **these** ~~can be no assurance that~~ **efforts may fail to reduce** the ~~impacts~~ - **impact** of **adverse** ~~the pandemic on our~~ supply chain **conditions** ~~will not continue, or worsen, in the future~~ . ~~The current supply~~ **Supply** chain challenges could also impact customer satisfaction or future business opportunities with customers, and result in increased use of cash, engineering design changes, and delays in new product introductions, each of which could adversely impact our business and financial results. ~~We have recently been experiencing unprecedented demand, and our backlog may not be an accurate indicator of our level and timing of future revenues. As a result of order volumes growth in recent periods, our backlog has grown from $ 2. 2 billion at the end of fiscal 2021 to $ 4. 2 billion at the end of fiscal 2022. Backlog may be fulfilled several quarters following receipt of a purchase order, either due to customer purchasing schedules or delays caused by supply chain constraints. Backlog also includes certain service obligations that may relate to a multi- year support period. Our ability to fulfill backlog is being adversely impacted by the current global supply constraints described above. Generally, our customers may cancel, delay or change their orders with limited advance notice, or they may decide not to accept our products and services, although instances of both cancellation and non- acceptance have been rare historically. As a result, backlog should not necessarily be viewed as an accurate indicator of future revenue for any particular period. In addition, we believe that some portion of our increased order volumes in recent periods reflects customer acceleration of future orders due to the implementation of security of supply strategies, or spending that was delayed or deferred in prior years due to COVID- 19- related impacts. Our order growth relative to revenue has begun to moderate since the first half of fiscal 2022 and we do not expect the relative level of orders we experienced in fiscal 2022 to be sustainable in the long- term.~~ A small number of customers account for a significant portion of our revenue. The loss **of one or more** of these customers or a significant reduction in their spending could have a material adverse effect on our business and results of operations. A significant portion of our revenue is concentrated among a small number of customers. For example, our ten largest customers contributed **53. 7 % of our revenue for fiscal 2023 and** 56. 3 % of our revenue for fiscal 2022 ~~and 55. 5 % of our revenue for fiscal 2021~~ . Historically, our largest customers by revenue have principally consisted of large communications service providers. For example, **a cloud provider customer accounted for approximately 12. 8 % of our revenue for fiscal 2023,** AT & T accounted for approximately **10. 6 % of our revenue for fiscal 2023 and** 11. 9 % of our revenue for fiscal 2022 ~~and 12. 4 % of our revenue for fiscal 2021~~ , ~~while~~ **and** Verizon accounted for approximately 11. 1 % of our revenue for fiscal 2022. As a result of efforts in recent years to diversify our business, the customer segments and geographies that comprise our customer base and top customers by revenue have changed. During fiscal ~~2022~~ **2023** , four **cloud** ~~Web- scale~~ providers were among our top ten customers. **Cloud provider** ~~Web- scale~~ customers have been important contributors to our revenue through both our direct sales to them, including for data center interconnection, and their indirect impact on purchases by other network operators. Consequently, our financial results and our ability to grow our business are closely correlated with the spending of a relatively small number of customers. Our business and results of operations could be materially adversely impacted by the loss of a large customer within or outside of these customer segments as well as by reductions in spending or capital expenditure budgets, changes in network deployment plans or changes in consumption models for acquiring networking solutions by our largest customers. There have been significant horizontal and vertical consolidation activities by communications service providers and cable operators ~~, with several such operators acquiring media and content companies~~ . Customer consolidation can increase customer purchasing power and has in the past resulted in delays or reductions in network spending due to changes in strategy or leadership, the timing of regulatory approvals and **high levels of** debt ~~burdens associated with~~ **taken on as a result of** such transactions. Because of our concentration of revenue with communications service providers and **cloud** ~~Web- scale~~ providers, our business and results of operations can be significantly affected by market, industry **, regulatory** or competitive dynamics adversely affecting these customer segments. For example, communications service providers continue to face a rapidly shifting competitive landscape as cloud service operators, OTT providers, and other content providers **continue to** challenge their traditional business models and network infrastructures. These dynamics have in the past had an adverse effect on network spending levels by certain of our largest service provider customers. Several of these, including AT & T, have announced various initiatives that seek to modify how they purchase networking infrastructure or reduce capital expenditures on network infrastructure in future periods that may adversely affect our results of operations. Our business and results of operations could be materially adversely affected by these factors and other market, industry or competitive dynamics adversely impacting our customers. We face intense competition that could hurt our sales and results of operations, and we expect the competitive landscape in which we operate **or intend to operate** to continue to broaden to include additional solutions providers. We face an intense competitive market for sales of communications networking equipment, software and services. Competition is intense on a global basis, as we and our competitors aggressively seek to capture market share and displace incumbent equipment vendors. Our industry has historically been dominated by a small number of very large vendors, some of which have substantially greater financial, marketing and research and development resources, broader product offerings and more established relationships with service providers and other customer segments than we do. In addition, to drive scale and market share gains and meet the intense investment capacity required to keep pace with technology innovation, acquisition activity among vendors of networking solutions has increased. Consolidation in our industry may result in competitors with greater resources, pricing flexibility, or other synergies, which may provide them with a competitive advantage. Certain of our customers are adopting procurement strategies that seek to purchase a broader set of networking solutions from two or more vendors. As these customers move to dual or multiple vendor strategies and add new vendors, we may lose our status as sole or primary vendor. We also compete with a number of smaller companies that provide significant competition for specific products, applications, customer segments or geographic markets. Due to the narrower focus of their efforts, these competitors may be more attractive to customers in a particular product niche or commercial opportunity. Generally, competition in our markets is based on any one or a combination of the following factors: • functionality, speed, capacity, scalability ~~,~~ **and** performance ~~, quality and reliability~~ of **network** solutions; • the ability to meet ~~customer~~ business needs and drive successful outcomes; • price for performance, cost per bit and total cost of ownership of **network** solutions; • incumbency and strength of existing business relationships; • **technology roadmap and forward innovation capacity, including the** ability to **invest significant sums in research** ~~offer comprehensive networking solutions, consisting of hardware, software~~ and ~~services~~ **development** ; • time- to- market in delivering products and features ~~; • technology roadmap and forward innovation capacity and ability to deliver on network innovation~~ ; • company stability and financial health; • ability to ~~supply~~ **offer comprehensive networking solutions, consisting of hardware, software** and **services** ~~product delivery lead times~~ ; • flexibility and openness of platforms, including ease of integration, interoperability and integrated management; • ability to offer solutions that accommodate a range of **different** ~~emerging customer~~ consumption models ~~for network solutions~~ ; • operating costs **and total cost of ownership; • software and network automation capabilities; • ability to manage challenging supply chain environments** , **including manufacturing and lead-time capability; • services and support capabilities; • security of enterprise, product development, support processes, and products; •** space requirements and power consumption of network solutions; **and** • ~~software and~~ **ability to offer solutions that help customers manage the lifecycle impacts of their** ~~network~~ **networks** ~~automation~~ and **achieve their climate sustainability goals** ~~analytics capabilities; and • services and support capabilities~~ . Part of our strategy is to leverage our technology leadership and to aggressively capture additional market share and displace competitors, particularly with communications service providers internationally. In an effort to maintain our incumbency or to secure new customer opportunities, we have in the past, and may in the future, agree to aggressive pricing, commercial concessions and other unfavorable terms that result in low or negative gross margins on a particular order or group of orders. Competition can also result in onerous commercial and legal terms and conditions that place a disproportionate amount of risk on us. We expect the competition in our industry to continue to broaden and to intensify, as we invest in complementary technologies or adjacent market opportunities, and as network operators pursue a diverse range of network strategies and consumption models. As these changes occur, we expect that our business will compete more directly with additional networking solution suppliers, including IP router vendors **, component vendors** and other suppliers or integrators of networking technology. In addition, as we seek increased customer adoption of our Blue Planet Automation Software and Services, and as network operator demands for programmability, automation and analytics increase, we expect to compete more directly with software vendors and IT vendors or integrators of these solutions. We may also face competition from system and component vendors, including those in our supply chain, that develop networking products based on off- the- shelf or commoditized hardware technology, referred to as " white box " hardware **, and as we pursue additional methods to bring the enabling technologies in our networking platforms to market** . An increase in competitive intensity, the adoption of new consumption models, our entry into new markets or the entry of new competitors into our markets may adversely impact our business and results of operations. ~~The COVID- 19 pandemic has impacted our business and results of operation and could have a material adverse effect on our business, results of operations and financial condition in the future. The COVID- 19 pandemic and related countermeasures have caused economic and financial disruptions in most of the regions in which we sell our products and services and conduct our business operations. Unprecedented actions were taken by governments and other institutions globally to try to mitigate the impact of the COVID- 19 pandemic, some of which continued through fiscal 2022 in certain regions or to certain extents. In fiscal 2022, the COVID- 19 pandemic continued to challenge our business operations and adversely impact our financial results, including due to restrictions on travel and gatherings in certain countries and regions, including China, significant supply chain disruptions, and a dynamic demand environment for our products and services. In accordance with relevant public health guidance and local conditions, we have conducted a phased return to our offices and facilities, implemented a hybrid remote / office working model, and resumed certain travel, but continue to closely monitor the COVID- 19 pandemic to determine if additional actions or policy adjustments are required. The~~

~~magnitude and duration of disruption from the COVID- 19 pandemic, and its impact on global business activity and our business and operations, remain uncertain. See also the risk factors above entitled " Challenges relating to current supply chain constraints, including with respect to semiconductors and integrated circuits, could adversely impact our revenue, gross margins and financial results " and " We have recently been experiencing unprecedented demand, and our backlog may not be an accurate indicator of our level and timing of future revenues. "~~ Investment of research and development resources in communications networking technologies for which there is not an adequate market demand, or failure to invest sufficiently or timely in technologies for which there is high market demand, would adversely affect our revenue and profitability. The market for communications networking hardware and software solutions is characterized by rapidly evolving technologies, changes in market demand and increasing adoption of software- based networking solutions. We continually invest in research and development to sustain or enhance our existing hardware and software solutions and to develop or acquire new technologies including new software platforms. There is often a lengthy period between commencing these development initiatives and bringing new or improved solutions to market. Accordingly, there is no guarantee that our new products or enhancements to other solutions will achieve market acceptance or that the timing of market adoption will be as predicted. As a general matter, there is a significant possibility that some of our development decisions, including significant expenditures on acquisitions, research and development, or investments in technologies, will not meet our expectations, and that our investment in some projects will be unprofitable. There is also a possibility that we may miss a market opportunity because we failed to invest or invested too late in a technology, product or enhancement sought by our customers or the markets into which we sell. Changes in market demand or investment priorities may also cause us to discontinue existing or planned development for new products or features, which can have a disruptive effect on our relationships with customers. In addition, failure to develop, on a cost-effective basis, innovative new or enhanced solutions that are attractive to customers and profitable to us could have a material adverse effect on our business, results of operations, financial condition and cash flows. We have no guaranteed purchases and regularly must re- win business for existing customers. Generally, our customer contracts do not require customers to purchase any minimum or guaranteed volumes, and we conduct sales through framework contracts under which customers place purchase orders for which they often have the right to modify or cancel. We must regularly compete for and win business with existing customers across all of our customer segments. In addition, **cloud** ~~Web- scale~~ providers tend to operate on shorter procurement cycles than some of our traditional customers, which can require us to compete to re- win business with these customers more frequently than required with other customers segments. As such, there is no assurance that our incumbency will be maintained at any given customer or that our revenue levels from a customer in a particular period can be achieved in future periods. Customer spending levels can be unpredictable, and our sales to any customer could significantly decrease or cease at any time. Network equipment sales often involve lengthy sales cycles and protracted contract negotiations that may require us to agree to commercial terms or conditions that negatively affect pricing, risk allocation, payment and the timing of revenue recognition. Our sales efforts, particularly with communications service providers, **cloud** ~~Web- scale~~ providers and other large customers, often involve lengthy sales cycles. These selling efforts often involve a significant commitment of time and resources that may include extensive product testing, laboratory or network certification, network or region- specific product certification and homologation requirements for deployment in networks. Even after a customer awards its business to us or decides to purchase our solutions, the length of time before deployment can vary depending on the customer' s schedule, site readiness, the size of the network deployment, the degree of custom configuration required and other factors. Additionally, these sales also often involve protracted and sometimes difficult contract negotiations in which we may deem it necessary to agree to unfavorable contractual or commercial terms that adversely affect pricing, expose us to penalties for delays or non- performance **,** and require us to assume a disproportionate amount of risk. To maintain incumbency with key customers, we **have in the past and** may **in the future** be required to offer discounted pricing, make commercial concessions or offer less favorable terms as compared to our historical business arrangements with these customers. We may also be requested to provide deferred payment terms, vendor or third- party financing or other alternative purchase structures that extend the timing of payment. Alternatively, customers may insist on terms and conditions that we deem too onerous or not in our best interest, and we may be unable to reach a commercial agreement. As a result, we may incur substantial expense and devote time and resources to potential sales opportunities that never materialize or result in lower than anticipated sales and gross margin. If we are unable to adapt our business to the consumption models for networking solutions adopted by our customers and to offer attractive solutions across these consumption models, our business, competitive position and results of operations could be adversely affected. Growing bandwidth demands and network operator efforts to reduce costs are resulting in a diverse range of approaches to the design and procurement of network infrastructure. We refer to these different approaches as " consumption models. " These consumption models can include: the traditional systems procurement of fully integrated solutions including acquiring hardware, software and services from the same vendor; the procurement of a fully integrated hardware solution from one vendor with the separate use of a network operator' s own SDN- based controller; the procurement of an integrated photonic line system with open interfaces from one vendor and the separate or " disaggregated " procurement of modem technology from a different vendor; or the development and use of published reference designs and open source specifications for the procurement of " white box " hardware to be used with open source software. In parallel, network operators are also exploring procurement alternatives for software solutions, ranging from integrated and proprietary software platforms to fully open source software. We believe that network operators will continue to consider a variety of different consumption models. Many of these approaches are in their very early stages of development and evaluation, and the types of models and their levels of adoption will depend in significant part on the nature of the circumstances and strategies of particular network operators. Among our customers, AT & T, certain **cloud** ~~Web- scale~~ providers and others are pursuing network strategies that emphasize enhanced software programmability, management and control of networks, and deployment of " white box " hardware. A number of network operators are pursuing the deployment of smaller form factor, pluggable modem technology, particularly within switching and routing solutions, as an alternative to integrated optical networking platforms. Other network operators, including certain of our **cloud provider** ~~Web-scale~~ customers, are playing a leading role in the transition to software- defined networking ~~or~~ **,** the standardization of communications network solutions **and the assembly of their own hardware platforms based on enabling third party components** . We believe that the potential for different approaches to the procurement of networking infrastructure will require network operators and vendors to evolve and broaden their existing solutions and commercial models over time. Adoption of a range of consumption models may also alter and broaden our competitive landscape to include other technology vendors, including routing vendors, component vendors and IT software vendors. If we are unable to adapt our business to these new consumption models and offer attractive solutions and commercial models that accommodate the range of consumption models ultimately adopted by our customers or within our markets, our business, competitive position and results of operations could be adversely affected. Our go- to- market activities and the distribution of our WaveLogic coherent modem technology within the market for high- performance transceivers / modems could expose us to increased or new forms of competition, or adversely affect our existing systems business and results of operations. We recently entered the market for high- performance transceivers / modems to monetize our coherent optical technology, expand our addressable market and address a range of customer consumption models for networking solutions. Making our critical technology available in this manner could adversely impact the sale of products in our existing systems business. For example, our customers may choose to adopt disaggregated consumption models or third- party solutions that embed Ciena- designed optical modules instead of purchasing systems- based solutions from us. Accordingly, we may encounter situations where we are competing for opportunities in the market directly against a system from one of our competitors that incorporates Ciena- designed modules or other component technologies. Making this key technology available and enabling third- party sales of Ciena- designed modules may adversely affect our competitive position and increase the risk that third parties misappropriate or attempt to use our technology or related intellectual property without our authorization. These and other risks or unanticipated liabilities or costs associated with the sales of our WaveLogic coherent technology could harm our reputation and adversely affect our business and our results of operations. Our go- to- market activities and the distribution of our WaveLogic coherent technology within the market for high- performance transceivers / modems could expose us to increased or new forms of competition, or adversely affect our systems business and results of operation. Accurately matching necessary inventory levels to customer demand within the current environment is challenging, and we may incur additional costs or be required to write off significant inventory that would adversely impact our results of operations. ~~Since~~ **From** the second quarter of fiscal 2021 **through the third quarter of fiscal 2022** , we **received** ~~have experienced~~ unprecedented ~~demand~~ **orders** for our products and services, **during a period when** ~~and matching necessary inventory to fulfill that demand within~~ the ~~current~~ supply **environment was** constrained ~~environment is challenging~~ . We **took** ~~have and continue to take~~ a number of steps to mitigate ~~the~~ **these** ~~current supply chain~~ challenges, including extending our purchase commitments and placing non- cancellable, advanced orders with or through suppliers, particularly for long lead **-** time components. As of October ~~29~~ **28** , ~~2022~~ **2023 ,** we had $ ~~2~~ **1** . ~~6~~ **7** billion in outstanding purchase order commitments to our contract manufacturers and component suppliers for inventory. We ~~have~~ also **expanded** ~~been expanding~~ our manufacturing capacity and ~~have been accumulating~~ **accumulated available** raw materials inventory ~~of components that are available, in some cases with expanded lead times, in an effort~~ to prepare us to be able to produce finished goods more quickly ~~when~~ **as** supply constraints ~~ease~~ **eased** for **those** ~~certain common~~ components **in shorter supply** ~~, including integrated circuit components, for which delivery continues to be delayed~~ . As a result of this strategy, our inventory ~~has~~ increased from $ 374. 3 million at the end of **of** fiscal 2021 to $ ~~946~~ **1** . ~~7~~ **1** ~~million~~ **billion** at the end of fiscal ~~2022~~ **2023** . These inventory practices ~~,~~ and their associated costs, ~~have~~ had **in recent fiscal periods** , and ~~can be expected to~~ **could in the future** continue to have, an adverse impact on our cash from operations. These inventory practices ~~also~~ **, particularly when considered in the context of our backlog,** further introduce obsolescence risk that can impact our results of operations and financial condition. **During fiscal 2023, certain customers, including communications service providers and cable and multiservice operators in North America and cloud providers, that had earlier placed significant advanced orders, rescheduled deliveries for a portion of such orders. Accordingly, our inventory needs for a particular period can fluctuate and be difficult to predict.** If our customers were to cancel **or delay** orders ~~as a result of increased lead times or~~ **for** ~~otherwise~~ **extended periods** , inventory could become obsolete and we could be required to write off or write down the inventory associated with those orders. In addition, if customers were to cancel **or delay** existing or forecasted orders for which we have significant outstanding commitments to our contract manufacturers or suppliers, we may be required to purchase inventory under these commitments that we are unable to sell. If we are required to write off or write down a significant amount of inventory, our results of operations for the applicable period would be materially adversely affected. Our inability to effectively manage the matching of inventory with customer demand **, particularly** within ~~the current~~ **any supply constrained** environment **,** could adversely impact our results of operations and financial condition, and could result in loss of revenue, increased costs, or delays that could adversely impact customer satisfaction. If the market for network software does not evolve in the way we anticipate or if customers do not adopt our Blue Planet Automation Software and Services, we may not be able to monetize these software assets and realize a key part of our business strategy. A key part of our business strategy is to increase customer adoption of our Blue Planet Automation Software ~~Platform~~ . If the markets relating to software solutions for network automation, including service orchestration, route optimization, analytics and assurance, and ~~SDN or NFV~~ **multi- cloud orchestration** , do not develop as we anticipate, or if we are unable to commercialize, increase market awareness and gain adoption of our Blue Planet Automation Software and Services within those markets, revenue from our Blue Planet Automation Software and Services may not grow. We have a limited history in commercializing and selling these software solutions and ~~have only recently acquired certain elements~~ **we continue to build out the capability** of our Blue Planet portfolio. Moreover, the market and competitive landscape for these solutions is dynamic, and it is difficult to predict important trends, including the potential growth, if any, of this market. If the market for these software solutions does not evolve in the way we anticipate or if customers do not adopt our Blue Planet

Automation Software and Services, a ~~key~~ part of our strategy for growth would be adversely affected and our financial results may suffer. Our exposure to the credit risks of our customers and resellers may make it difficult to collect receivables and could adversely affect our revenue and operating results. In the course of our sales to customers and resale channel partners, we may have difficulty collecting receivables, and our business and results of operations could be exposed to risks associated with uncollectible accounts. Lack of liquidity in the capital markets, macroeconomic weakness and market volatility may increase our exposure to these credit risks. Our attempts to monitor customer payment capability and to take appropriate measures to protect ourselves may not be sufficient, and it is possible that we may have to write down or write off accounts receivable. Such write- downs or write- offs could negatively affect our operating results for the period in which they occur, and, if large, could have a material adverse effect on our revenue and operating results. We may be required to write down the value of certain significant assets, which would adversely affect our operating results. We have a number of significant assets on our balance sheet as of October ~~29~~ **28** , ~~2022~~ **2023** , the value of which can be adversely impacted by factors related to our business and operating performance, as well as factors outside of our control. As of October ~~29~~ **28** , ~~2022~~ **2023** , our balance sheet includes a $ ~~824~~ **809** . ~~0~~ **3** million net deferred tax asset. The value of our net deferred tax assets can be significantly impacted by changes in tax policy, changes in future tax rates, or by our tax planning strategy. ~~For example, the Tax Cuts and Jobs Act (the “ Tax Act ”) required us to write down our net deferred tax assets by approximately $ 438. 2 million in fiscal 2018.~~ If any ~~additional~~ write- downs are required, our operating results may be materially adversely affected. As of October ~~29~~ **28** , ~~2022~~ **2023** , our balance sheet also includes $ ~~328~~ **444** . ~~3~~ **8** million of goodwill. We test each reporting unit for impairment of goodwill on an annual basis and ~~,~~ between annual tests, if an event occurs or circumstances change that would, more likely than not, reduce the fair value of the reporting unit below its carrying value. As of October ~~29~~ **28** , ~~2022~~ **2023** , our balance sheet also includes $ ~~427~~ **575** . ~~2~~ **0** million in long- lived assets, which includes $ ~~69~~ **205** . ~~5~~ **6** million of intangible assets. Valuation of our long- lived assets requires us to make assumptions about future sales prices and sales volumes for our products. These assumptions are used to forecast future, undiscounted cash flows on which our estimates are based ~~. The value of our net deferred tax asset above may also be subject to change in the future, based on our actual or projected generation of future taxable income~~ . If market conditions or our forecasts for our business or any particular operating segment change, we may be required to reassess the value of these assets. We could be required to record an impairment charge against our goodwill and long- lived assets or a valuation allowance against our deferred tax assets. Any write- down of the value of these significant assets would have the effect of decreasing our earnings or increasing our losses in such period. If we are required to take a substantial write- down or charge, our operating results would be materially adversely affected in such period. ~~Product performance problems~~ **Problems** ~~and undetected errors~~ affecting the performance, interoperability, reliability or security of our products could damage our business reputation and negatively affect our results of operations. The development and production of sophisticated hardware and software for communications network equipment is highly complex. Some of our products can be fully tested only when deployed in communications networks or when carrying traffic with other equipment, and software products may contain bugs that can interfere with expected performance. As a result, undetected defects or errors, and product quality, interoperability, reliability **, security** and performance problems are often more acute for initial deployments of new products and product enhancements. We have recently launched, or are in the process of launching, a number of new hardware and software offerings, including **new** evolutions of our WaveLogic coherent optical modem technology and new Routing and Switching platforms and solutions targeting edge, access and aggregation networks. Unanticipated product performance problems can relate to the design, manufacturing, installation, operation and interoperability of our products. Undetected errors can also arise as a result of defects in components, software or manufacturing, installation or maintenance services supplied by third parties, and technology acquired from or licensed by third parties. From time to time **,** we have had to replace certain components, provide software remedies or other remediation in response to defects or bugs, and we may have to do so again in the future. Remediation of such events could materially adversely impact our business and results of operations. In addition, we **have encountered and** may **continue to** encounter unanticipated security vulnerabilities relating to our ~~products or~~ **technology, including as a result of** the activities of our supply chain **and our use of third party software** . Our products are used in customer networks **and** ~~transmitting~~ ---- **transmit** a range of sensitive information, and **our software products, including our Blue Planet solutions, play** ~~any~~ - **an important role in managing network elements and delivering services. Communications technologies have frequently been the target of attacks from a range of threat actors including nation states and other malicious parties. Any** actual or perceived exposure of our solutions to **vulnerabilities,** malicious software or cyber- attacks could result in liability or regulatory action and adversely affect our business and results of operations. Product performance, reliability, security and quality problems may result in some or all of the following effects: • damage to our reputation, declining sales and order cancellations; • increased costs to remediate defects or replace products; • payment of liquidated damages, contractual or similar penalties, or other claims for performance failures or delays; • increased warranty expense or estimates resulting from higher failure rates, additional field service obligations or other rework costs related to defects; • higher charges for increased inventory obsolescence **; • disruption to the operation of our network operator customers; • reporting and other publication to customers or regulatory bodies** ; • costs, liabilities and claims that may not be covered by insurance coverage or recoverable from third parties; and • delays in recognizing revenue or collecting accounts receivable. These and other consequences relating to undetected errors affecting the quality, reliability and security of our products could negatively affect our business and results of operations. Strategic acquisitions and investments could disrupt our operations and may expose us to increased costs and unexpected liabilities. From time to time, we acquire or make investments in other technology companies, or enter into other strategic relationships, to expand the markets we address, diversify our customer base or acquire, or accelerate the development of, technology or products. To do so, we may use cash, issue equity that could dilute our current stockholders, or incur debt or assume indebtedness. Strategic transactions can involve numerous additional risks, including: • failure to consummate or delay in consummating such transactions; • failure to achieve the anticipated transaction benefits or the projected financial results and operational synergies; • greater than expected acquisition and integration costs; • disruption due to the integration and rationalization of operations, products, technologies and personnel; • diversion of management attention; • difficulty completing projects of the acquired company and costs related to in- process projects; • difficulty managing customer transitions or entering into new markets; • the loss of key employees; • disruption or termination of business relationships with customers, suppliers, vendors, landlords, licensors and other business partners; • ineffective internal controls over financial reporting; • dependence on unfamiliar suppliers or manufacturers; • assumption of or exposure to unanticipated liabilities, including intellectual property infringement or other legal claims; and • adverse tax or accounting impact. As a result of these and other risks, our acquisitions, investments or strategic transactions may not realize the intended benefits and may ultimately have a negative impact on our business, results of operation and financial condition. **Emerging issues related to the development and use of artificial intelligence (AI) could give rise to legal or regulatory action, damage our reputation or otherwise materially harm of our business. Our development and use of AI technology in our products and operations remains in the early phases. While we aim to develop and use AI responsibly and attempt to mitigate ethical and legal issues presented by its use, we may ultimately be unsuccessful in identifying or resolving issues before they arise. AI technologies are complex and rapidly evolving and the technologies that we develop or use may ultimately be flawed. Moreover, AI technology is subject to rapidly evolving domestic and international laws and regulations, which could impose significant costs and obligations on the company. For example, in 2023 the Biden Administration issued a new, executive order on safe, secure and trustworthy AI and the EU introduced the AI Act to establish rules for providers and users. Emerging regulations may pertain to data privacy, data protection, and the ethical use of AI, as well as clarifying intellectual property considerations. Our use of AI could give rise to legal or regulatory action, increased scrutiny or liability, damage our reputation or otherwise materially harm our business.** Risks Relating to the Macroeconomic Environment and our Global Presence Our business and operating results could be adversely affected by unfavorable changes in macroeconomic and market conditions and reductions in the level of spending by customers in response to these conditions. Our business and operating results depend significantly on general market and economic conditions. Market volatility and weakness in the regions in which we operate have previously resulted in sustained periods of decreased demand for our products and services that **have** adversely affected our operating results. The current global macroeconomic environment is volatile and continues to be significantly and adversely impacted by **inflation** ~~the COVID- 19 pandemic~~ , **geopolitical trends impacting the** global supply chain ~~constraints~~ , ~~inflation~~ **rising interest rates** , and a dynamic ~~demand~~ environment **for customer spending** . Macroeconomic and market conditions could also be adversely affected by a variety of political, economic or other factors in the United States and international markets that could in turn adversely affect spending levels of our customers and their end users, and could create volatility or deteriorating conditions in the markets in which we operate. Due to our concentration of revenue in the United States, we would expect to incur a more significant impact from any adverse change in the capital spending environment or macroeconomic or market weakness in the United States. Macroeconomic uncertainty or weakness could result in: • reductions in customer spending and delay, deferral or cancellation of network infrastructure initiatives; • increased competition for fewer network projects and sales opportunities; • increased pricing pressure that may adversely affect revenue, gross margin and profitability; • decreased ability to forecast operating results and make decisions about budgeting, planning and future investments; • increased overhead and production costs as a percentage of revenue; • tightening of credit markets needed to fund capital expenditures by us or our customers; • customer financial difficulty, including order cancellations, delivery deferrals, longer collection cycles and difficulties collecting accounts receivable or write- offs of receivables; • business and financial difficulties faced by our suppliers or other partners, including impacts to material costs, sales, liquidity levels, ability to continue investing in their businesses, ability to import or export goods, ability to meet development commitments and manufacturing capability; and • increased risk of charges relating to excess and obsolete inventories and the write- off of other intangible assets. Each of our customers has a unique set of circumstances, and it is unclear how macroeconomic and market conditions may continue to impact their purchasing volumes or behaviors. Reductions in customer spending in response to unfavorable or uncertain macroeconomic and market conditions, globally or in a particular region where we operate, would adversely affect our business, results of operations and financial condition. The international scale of our sales and operations exposes us to additional risk and expense that could adversely affect our results of operations. We market, sell and service our products globally, maintain personnel in numerous countries, and rely on a global supply chain for sourcing important components and manufacturing our products. Our international sales and operations are subject to inherent risks, including: • adverse social, political and economic conditions, such as continued inflation and rising interest rates; • effects of adverse changes in currency exchange rates; • greater difficulty in collecting accounts receivable and longer collection periods; • difficulty and cost of staffing and managing foreign operations; • higher incidence **and risk** of corruption or unethical business practices; • less protection for intellectual property rights in some countries; • tax and customs changes that adversely impact our global sourcing strategy, manufacturing practices, transfer- pricing, or competitiveness of our products for global sales; • compliance with certain testing, homologation or customization of products to conform to local standards; • significant changes to free trade agreements, trade protection measures, tariffs **and other import measures** , export compliance **, economic sanctions measures** , domestic preference procurement requirements, qualification to transact business and additional regulatory requirements; • natural disasters (including as a result of climate change), acts of war or terrorism, and public health emergencies, including the COVID- 19 pandemic; and • uncertain economic, legal and political conditions in Europe, Asia and other regions where we do business, including, for example, as a result of **continued impacts of Brexit on the relationship between the United Kingdom and Europe,** the ongoing military ~~conflict~~ **conflicts** between Russia and Ukraine **and Israel and Hamas,** and changes in China- Taiwan and U. S.- China relations. We utilize a sourcing strategy that emphasizes global procurement of materials that has direct or indirect dependencies upon a number of vendors with operations in the Asia- Pacific region. We also rely upon third- party contract manufacturers, including those with facilities in Canada, Mexico, Thailand and the United States, to manufacture, support and ship our products. Physical, regulatory, technological, market, reputational, and legal risks related to climate change in these regions and globally are increasing in impact and diversity and the magnitude of any short- term or long- term adverse impact on our business or results of operations remains unknown. The physical impacts of climate change, including as a result of certain types of natural disasters occurring more frequently or with more intensity or changing weather patterns, could disrupt our supply chain, result in damage to or closures of our facilities, and could otherwise have an adverse impact on our business, operating results, and financial condition. See also the risk factor below entitled " Government regulations related to the environment, climate change and social initiatives could adversely affect our business and operating results. " Our international operations are subject to complex foreign and U. S. laws and regulations, including anti- bribery and corruption laws, antitrust or competition laws, data privacy laws, such as the GDPR, and environmental regulations, among others. In particular, recent years have seen a substantial increase in anti- bribery law enforcement activity by U. S. regulators, and we currently operate and seek to operate in many parts of the world that are recognized or perceived as having greater potential for corruption. Violations of any of these laws and regulations could result in fines and penalties, criminal sanctions against us or our employees, prohibitions on the conduct of our business and on our ability to offer our products and services in certain geographies, and significant harm to our business reputation. Our policies and procedures to promote compliance with these laws and regulations and to mitigate these risks may not protect us from all acts committed by our employees or third- party vendors, including contractors, agents and services partners or **from** the misinterpretation or changing application of such laws. Additionally, the costs of complying with these laws (including the costs of investigations, auditing and monitoring) could adversely affect our current or future business. Our business, operations and financial results could also be adversely impacted by instability, disruption or destruction in a significant geographic region, including as a result of war, terrorism, riot, civil insurrection or social unrest; natural or man- made disasters; public health emergencies; or economic instability or weakness. For example, in February 2022, armed conflict escalated between Russia and Ukraine. The United States and certain other countries have imposed sanctions on Russia and could impose further sanctions, which could damage or disrupt international commerce and the global economy. We are complying with a broad range of U. S. and international sanctions and export control requirements imposed on Russia and, in March 2022, we announced our decision to suspend our business operations in Russia immediately. Although this decision did not materially impact our results of operations for fiscal 2022 **or 2023** due to the limited amount of business that we conducted in Russia historically, it is not possible to predict the broader or longer- term consequences of this conflict, which could include further sanctions **, export control and import restrictions** , embargoes, regional instability, geopolitical shifts and adverse effects on macroeconomic conditions, security conditions, currency exchange rates and financial markets. Such geopolitical instability and uncertainty could have a negative impact on our ability to sell to, ship products to, collect payments from, and support customers in certain countries and regions based on trade restrictions, sanctions, embargoes and export control law restrictions, and logistics restrictions including closures of air space, and could increase the costs, risks and adverse impacts from supply chain and logistics challenges. The success of our international sales and operations will depend, in large part, on our ability to anticipate and manage these risks effectively. Our failure to manage any of these risks could harm our international operations, reduce our international sales, and could give rise to liabilities, costs or other business difficulties that could adversely affect our operations and financial results. Efforts to increase our sales and capture market share in targeted international markets may be unsuccessful. Part of our business and growth strategy is to expand our geographic reach and increase market share in international markets through a combination of direct and indirect sales resources. We are also aggressively pursuing opportunities with service provider customers in additional geographies, including EMEA and APAC. This diversification of our markets and customer base has been a significant component of the growth of our business in recent years. Our efforts to continue to increase our sales and capture market share in international markets may ultimately be unsuccessful or may adversely impact our financial results, including our gross margin. Our failure to continue to increase our sales and market share in international markets could limit our growth and could harm our results of operations. We may be adversely affected by fluctuations in currency exchange rates. As a company with global operations, we face exposure to movements in foreign currency exchange rates. Due to our global presence, a portion of our revenue, operating expense and assets and liabilities are non- U. S. Dollar denominated and therefore subject to foreign currency fluctuation. We face exposure to currency exchange rates as a result of the growth in our non- U. S. Dollar denominated operating expense in Canada, Europe, Asia and Latin America. An increase in the value of the U. S. Dollar could increase the real cost to our customers of our products in those markets outside the United States where we sell in U. S. Dollars, and a weakened U. S. Dollar could increase the cost of local operating expenses and procurement of materials or service that we purchase in foreign currencies. From time to time, we hedge against currency exposure associated with anticipated foreign currency cash flows or assets and liabilities denominated in foreign currency. Such attempts to offset the impact of currency fluctuations are costly, and we cannot hedge against all foreign exchange rate volatility. Losses associated with these hedging instruments and the adverse effect of foreign currency exchange rate fluctuation may negatively affect our results of operations. Risks Related to Our Operations and Reliance on Third Parties We may experience delays in the development and production of our products that may negatively affect our competitive position and business. Our hardware and software networking solutions, including our WaveLogic modem technology and the components thereof, are based on complex technology, and we can experience unanticipated delays in developing, manufacturing and introducing these solutions to market. Delays in product development efforts by us or our supply chain may affect our reputation with customers, affect our ability to capture market opportunities and impact the timing and level of demand for our products. We are regularly introducing new products and enhancements and each step in their development cycle presents serious risks of failure, rework or delay, any one of which could adversely affect the cost- effectiveness and timely development of our products. **Reworks, in particular, if required, can be a very expensive and time- consuming effort.** We may encounter delays relating to engineering development activities and software, design, sourcing and manufacture of critical components, and the development of prototypes. The development of new technologies may increase the complexity of supply chain management or require the acquisition, licensing or interworking with the technology of third parties. In addition, intellectual property disputes, failure of critical design elements and other execution risks may delay or even prevent the release of these products. If we do not successfully develop or produce products in a timely manner, our competitive position may suffer, and our business, financial condition and results of operations could be harmed. We rely on third- party contract manufacturers, and our business and results of operations may be adversely affected by risks associated with their businesses, financial condition **,** and the geographies in which they operate. We rely on third- party contract manufacturers, including those with facilities in Canada, Mexico, Thailand, and the United States, to perform a substantial portion of our supply chain activities, including component sourcing, manufacturing, product testing and quality, and fulfillment and logistics relating to the distribution and support of our products. There are a number of risks associated with our dependence on contract manufacturers, including: • reduced control over delivery schedules and planning; • reliance on the quality assurance procedures of third parties; • potential uncertainty regarding manufacturing yields and costs; • availability of manufacturing capability and capacity, particularly during periods of high demand; • **the impact of wage inflation and labor shortages on cost; • the impact of supply chain constraints on our contract manufacturers' costs and business models; • risks associated with the ability of our contract manufacturers to perform to our manufacturing needs; •** risks and uncertainties associated with the locations or countries where our products are manufactured, including ~~potential~~ manufacturing disruptions caused by social, geopolitical, environmental **,** or health factors, ~~including pandemics or widespread health epidemics~~ such as the COVID- 19 pandemic; • risks associated with data security ~~breaches~~ **incidents, including disruptions** , interdiction **,** or cyber-attacks targeting **or affecting** our third- party manufacturers, including manufacturing disruptions or unauthorized access to **or acquisition of** information; • changes in law or policy governing tax, trade, manufacturing, development **,** and investment in the countries where we currently manufacture our products, including the World Trade Organization Information Technology Agreement or other free trade agreements; • inventory liability for excess and obsolete supply; • limited warranties provided to us; and • potential misappropriation of our intellectual property. ~~For example, during the first half of fiscal 2022, we experienced third- party manufacturing disruptions that took production of certain of our products offline for periods of time, which adversely impacted our revenue.~~ If our contract manufacturers are unable or unwilling to manufacture our products or components of our products, or if we experience a disruption in manufacturing, we may be required to identify and qualify alternative manufacturers, which could cause us to be delayed in or unable to meet our supply requirements to our customers. The process of qualifying a new contract manufacturer and commencing volume production is expensive and time- consuming, and if we are required to change or qualify a new contract manufacturer, we would likely experience significant business disruption **,** and could lose revenue and damage our existing customer relationships. These and other risks **associated with our contract manufacturers' businesses, financial condition, and the geographies in which they operate** could impair our ability to fulfill orders, harm our sales and impact our reputation with customers **in ways that adversely** ~~. See also the risk factor above entitled " The COVID- 19 pandemic has impacted~~ -- **impact** our business and results of ~~operation and could have a material adverse effect on our business, results of~~ operations ~~and financial condition in the future " for additional factors related to COVID- 19 and our third- party contract manufacturers that could adversely affect our business and financial results~~ . Our reliance on third- party component suppliers, including sole and limited source suppliers, exposes our business to additional risk, including risk relating to our suppliers' businesses and financial position and risks arising as a result of geopolitical events, and could limit our sales, increase our costs and harm our customer relationships. We maintain a global sourcing strategy and depend on a diverse set of third- party suppliers in international markets that comprise our supply chain. We rely on these third parties for activities relating to product design, development and support, and in the sourcing of products, components, subcomponents and related raw materials. Our products include optical and electronic components for which reliable, high-volume supply is often available only from sole or limited sources. We do not have any guarantees of supply from our third-party suppliers, and in certain cases we have limited contractual arrangements or are relying on standard purchase orders. ~~During fiscal 2022~~ **In recent periods** , delays and lower- than- expected deliveries from a small group of our suppliers of integrated circuit components that are essential for delivering finished products had a disproportionate, adverse impact on our results of operations. There is no assurance that we will be able to secure the components or subsystems that we require, in sufficient quantity and quality, **within our preferred timelines** and on reasonable terms. The loss of a source of supply, or lack of sufficient availability of key components, could require that we locate an alternate source or redesign our products, either of which could result in business interruption and increased costs. Increases in market demand or scarcity of raw materials or components have resulted, and may in the future result, in shortages in availability of important components for our solutions, supply allocation challenges, deployment delays and increased cost, lead times and delivery cycle timelines. There are a number of significant technology trends or developments underway or emerging – including the IoT, autonomous vehicles, and advances in mobile communications such as ~~the emergence of~~ 5G **technologies** – that have previously resulted in, and we believe will continue to result in, increased market demand for key raw materials or components upon which we rely. A number of our key technology vendors rely upon sales to customers, including our competitors, in China for a material portion of their revenue. Recently, there have been a number of significant geopolitical events, including trade tensions and regulatory actions, involving the governments of the United States and China. In May 2019, the U. S. Department of Commerce amended the EAR by adding Huawei and certain affiliates to the " Entity List " for actions contrary to the national security and foreign policy interests of the United States, imposing significant new restrictions on export, reexport and transfer of U. S. regulated technologies and products to Huawei. In August 2020, the U. S. Department of Commerce added additional Huawei affiliates to the Entity List, confirmed the expiration of a temporary general license applicable to Huawei and amended the foreign direct product rule in a manner that represents a significant expansion of its application to Huawei. More recently, the U. S. Department of Commerce has expanded the scope of the EAR by amending the foreign direct product rule, resulting in more products made outside the United States becoming subject to the EAR for purposes of exports or transfers to certain countries and / or parties, which increases compliance risks and licensing obligations for companies dealing with such products. Several of our third- party component suppliers, including certain sole and limited source suppliers, sell products to Huawei and, in some cases, Huawei is a significant customer for such suppliers. At this time, there can be no assurance regarding the scope or duration of these restrictions, including the foreign direct product rule, or further actions imposed on Huawei and other companies located and operating in China, and any future impact on our suppliers. Any continued restriction on our suppliers' ability to make sales to Huawei and other companies may adversely impact their businesses and financial position. In addition, China is in the midst of executing a five- year plan to improve China' s capabilities in the optoelectronics industry. There can be no assurance that this initiative, or similar efforts in China such as the Made in China 2025 initiatives (and actions taken by the U. S. government in response to such efforts), will not have an adverse impact on the business of our suppliers or our access to necessary components. These and similar industry, market and regulatory disruptions affecting our suppliers could, in turn, expose our business to loss or lack of supply or discontinuation of components that could result in lost revenue, additional product costs, increased lead times and deployment delays that could harm our business and customer relationships. Our business and results of operations would be negatively affected if we were to experience any significant disruption or difficulties with key suppliers affecting the price, quality, availability or timely delivery of required components. We rely on third- party resellers and distribution partners to sell our solutions, and on third- party service partners for installation, maintenance and support functions, and our failure to develop and manage these relationships effectively could adversely affect our business, results of operations, and relationships with our customers. In order to sell into new markets, diversify our customer base and broaden the application for our solutions, and to complement our global field resources, we rely on a number of third- party resellers, distribution partners and sales agents, both domestic and international, and we believe that these relationships are an important part of our business. There can be no assurance that we will successfully identify and qualify these resources or that we will realize the expected benefits of these sales relationships. We also rely on a number of third- party service partners, both domestic and international, to complement our global service and support resources. We rely on these partners for certain installation, maintenance and support functions. In addition, as network operators increasingly seek to rely on vendors to perform additional services relating to the design, construction and operation of their networks, the scope of work performed by our support partners is likely to increase and may include areas where we have less experience providing or managing such services. We must successfully identify, assess, train and certify qualified service partners in order to ensure the proper installation, deployment and maintenance of our products, as well as to ensure the skillful performance of other services associated with expanded solutions offerings, including site assessment and construction- related services. Certain service partners may provide similar services for other companies, including our competitors. We may not be able to manage our relationships with our service partners effectively, and we cannot be certain that they will be able to deliver services in the manner or time required, that we will be able to maintain the continuity of their services, or that they will adhere to our approach to ethical business practices. We may also be exposed to a number of risks or challenges relating to the performance of our service partners, including: • delays in recognizing revenue; • liability for injuries to persons, damage to property or other claims relating to the actions or omissions of our service partners; • our services revenue and gross margin may be adversely affected; and • our relationships with customers could suffer. As our service offering expands and customers look to identify vendors capable of managing, integrating and optimizing multi- domain, multi- vendor networks with unified software, our relationships with third- party service partners will become increasingly important. We must also assess and certify or qualify third- party resellers, distribution partners, sales agents and service partners in order to ensure their understanding of and willingness and ability to adhere to our standards of conduct and business ethics. Vetting and certification of these resellers, agents and distribution and service partners can be costly and time- consuming. Certain resellers, agents and distribution and service partners may not have the same operational history, financial resources and scale that we have. If we do not effectively identify, develop and manage our relationships with third- party resellers, distribution partners, sales agents or service partners, or if they fail to perform services in the manner or time required, our financial results and relationships with customers could be adversely affected. We may also be held responsible or liable for the actions or omissions of these third parties. Actions, omissions or violations of law by our third- party sales partners or agents or service partners could have a material adverse effect on our business, operating results and financial condition. We may be exposed to unanticipated risks and additional obligations in connection with our resale of complementary products or technology of other companies. We have entered into agreements with strategic supply partners that permit us to distribute their products or technology. We may rely on these relationships to add complementary products or technologies, to diversify our product portfolio, or to address a particular customer or geographic market. We may enter into additional OEM, resale or similar strategic arrangements in the future. We may incur unanticipated costs or difficulties relating to our resale of third- party products. Our third- party relationships could expose us to risks associated with the business, financial condition, intellectual property rights and supply chain continuity of such partners, as well as delays in their development, manufacturing or delivery of products or technology. We may also be required by customers to assume warranty, indemnity, service and other commercial obligations, including potential liability to customers, greater than the commitments, if any, made to us by our technology partners. Some of our strategic supply partners are relatively small companies with limited financial resources. If they are unable to satisfy their obligations to us or our customers, we may have to expend our own resources to satisfy these obligations. Exposure to these risks could harm our reputation with key customers and could negatively affect our business and our results of operations. Growth of our business is dependent on the proper functioning and scalability of our internal business processes and information systems. Adoption of new systems, modifications or interruptions of services may disrupt our business, processes and internal controls. We rely on a number of internal business processes and information systems to support key business functions, and the efficient operation of these processes and systems is critical to managing our business. Our business processes and information systems must be sufficiently scalable to support the growth of our business and may require modifications or upgrades that expose us to a number of operational risks. We continually pursue initiatives to transform and optimize our business operations through the reengineering of certain processes, investment in automation, and engagement of strategic partners or resources to assist with certain business functions. **For example, to enhance operational efficiency and modernize our supply chain operations, we are pursuing a number of digital technology transformation efforts, including advanced analytics, automation, and other digital solutions. In addition, our business may begin to operate in new markets and through new supply chain models that may require different internal processes to manage.** These changes require a significant investment of capital and human resources and may be costly and disruptive to our operations, and they could impose substantial demands on management time. These changes may also require changes in our information systems, modification of internal control procedures and significant training of employees or third- party resources. ~~There can be no assurance that our business and operations will not experience disruption in connection with system upgrades or other initiatives. Even if we do not encounter these adverse effects or disruption in our business, the design and implementation of these new systems may be more costly than anticipated.~~ Our IT systems, and those of third- party IT providers or business partners, may also be vulnerable to damage or disruption caused by circumstances beyond our control, including catastrophic events, power anomalies or outages, natural disasters (including as a result of climate change), **data** ~~cyber-~~ security related incidents, and computer system or network failures. There can be no assurance that our business systems or those of our third- party business partners will not be subject to similar incidents, exposing us to significant cost, reputational harm and disruption or damage to our business. Restructuring activities could disrupt our business and affect our results of operations. We have taken steps, including reductions in force, office closures, and internal reorganizations to reduce the cost of our operations, improve efficiencies, or realign our organization and staffing to better match our market opportunities and our technology development initiatives. We may take similar steps in the future as we seek to realize operating synergies, to achieve our target operating model and profitability objectives, or to reflect more closely changes in the strategic direction of our business or the evolution of our site strategy and workplace. These changes could be disruptive to our business, including our research and development efforts, and could result in significant expense, including accounting charges for inventory and technology- related write- offs, workforce reduction costs and charges relating to consolidation of excess facilities. Substantial expense or charges resulting from restructuring activities could adversely affect our results of operations and use of cash in those periods in which we undertake such actions. If we are unable to attract and retain qualified personnel, we may be unable to manage our business effectively. Our future success and ability to maintain a technology leadership position depends upon our ability to recruit and retain the services of executive, engineering, sales and marketing, and support personnel. Competition to attract and retain highly skilled technical, engineering and other personnel with experience in our industry is intense, and our employees have been the subject of targeted hiring by our competitors. Competition is particularly intense in certain jurisdictions where we have research and development centers, including the Silicon Valley area of northern California, and for engineering talent generally. The **lasting** impact of the COVID- 19 pandemic has resulted in higher employee costs, increased attrition **,** and significant shifts in the labor market and employee expectations. We may experience difficulty retaining and motivating existing employees and attracting qualified personnel to fill key positions. In addition, labor shortages and employee mobility may make it more difficult to hire and retain employees. There can be no assurance that the programs, initiatives, rewards and recognition that are part of our annual " people strategy " will be successful in attracting and retaining the talent necessary to execute on our business plans. Because we rely on equity awards as a significant component of compensation, particularly for our executive team, a lack of positive performance in our stock price, reduced grant levels, or changes to our compensation program may adversely affect our ability to attract and retain key employees. In addition, none of our executive officers is bound by an employment agreement for any specific term. We have a number of workforce planning initiatives underway and our failure to manage these programs effectively could result in the loss of key personnel. Similarly, the failure to properly manage the necessary knowledge transfer required from these employee transitions could impact our ability to maintain industry and innovation leadership. If we are unable to attract and retain qualified personnel, we may be unable to manage our business effectively, and our operations and financial results could suffer. In addition, a number of our team members are foreign nationals who rely on visas or work- entry permits in order to legally work in the United States and other countries. Changes in government policy and global events such as pandemics may interfere with our ability to hire or retain personnel who require these visas or entry permits. ~~For example, in response to the COVID- 19 pandemic, numerous U. S. Embassies suspended or delayed the processing of new visa applications for a period of time during the pandemic due to COVID- 19 related concerns impacting embassy operations and staffing. Additional changes~~ **Changes** in immigration policy, including the implementation of restrictive interpretations by the U. S. Citizenship and Immigration Services of regulatory requirements for H- 1B, L- 1 and other U. S. work visa categories, may also adversely affect our ability to hire or retain key talent, which could have an impact on our business operations. Risks Related to Intellectual Property, Litigation, Regulation and Government Policy Our intellectual property rights may be difficult and costly to enforce. We generally rely on a combination of patents, copyrights, trademarks and trade secret laws to establish and maintain proprietary rights in our products and technology. Although we have been issued numerous patents, and other patent applications are currently pending, there can be no assurance that any of these patents or other proprietary rights will not be challenged, invalidated or circumvented, or that our rights will provide us with any competitive advantage. In addition, there can be no assurance that patents will be issued for our pending applications or that claims allowed on any patents will be sufficiently broad to protect our technology. Further, the laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States. We are subject to the risk that third parties may attempt to access, divert or use our intellectual property without authorization. We are also vulnerable to third parties who illegally distribute or sell counterfeit, stolen, or unfit versions of our products, which could have a negative impact on our reputation and business. Protecting against the unauthorized use of our products, technology and other proprietary rights is difficult, time- consuming and expensive, and we cannot be certain that the steps that we are taking will detect, prevent or minimize the risks of such unauthorized use. In addition, our intellectual property strategy must continually evolve to protect our proprietary rights in new solutions, including our software solutions. Litigation may be necessary to enforce or defend our intellectual property rights or to determine the validity or scope of the proprietary rights of others. Such litigation could result in substantial cost and diversion of management time and resources, and there can be no assurance that we will obtain a successful result. Any inability to protect and enforce our intellectual property rights could harm our ability to compete effectively. We may incur significant costs in response to claims by others that we infringe their intellectual property rights. From time to time third parties may assert claims or initiate litigation or other proceedings related to patent, copyright, trademark and other intellectual property rights to technologies and related standards that are relevant to our business. We have been subject to several claims related to patent infringement, and we have been requested to indemnify customers pursuant to contractual indemnity obligations relating to infringement claims made by third parties. The rate of infringement assertions by patent assertion entities is increasing, particularly in the United States. Generally, these patent owners neither manufacture nor use the patented invention directly, and they seek to derive value from their ownership solely through royalties from patent licensing programs. We could be adversely affected by litigation, other proceedings or claims against us, as well as claims against our manufacturers, suppliers or customers, alleging infringement of third- party proprietary rights by our products and technology, or components thereof. Regardless of the merit of these claims, they can be time- consuming, divert the time and attention of our technical and management personnel, and result in costly litigation or otherwise require us to incur substantial costs, including legal fees. These claims, if successful, could require us to: • pay substantial damages or royalties; • comply with an injunction or other court order that could prevent us from offering certain of our products; • seek a license for the use of certain intellectual property, which may not be available on commercially reasonable terms or at all; • develop non- infringing technology, which could require significant effort and expense and ultimately may not be successful; and • indemnify our customers or other third parties pursuant to contractual obligations to hold them harmless or pay expenses or damages on their behalf. Any of these events could adversely affect our business, results of operations and financial condition. Our exposure to risks associated with the use of intellectual property may increase as a result of acquisitions, as we would have a lower level of visibility into the development process with respect to the acquired technology and the steps taken to safeguard against the risks of infringing the rights of third parties. Our products incorporate software and other technology under license from third parties, and our business would be adversely affected if this technology were no longer available to us on commercially reasonable terms. We integrate third- party software and other technology into our operating system, network management, and intelligent automation software and other products. As a result, we may be required to license certain software or technology from third parties, including competitors. Licenses for software or other technology may not be available or may not continue to be available to us on commercially reasonable terms. Failure to obtain or maintain such licenses or other third- party intellectual property rights could affect our development efforts and market opportunities, or could require us to re- engineer our products or to obtain alternate technologies. Third- party licensors may insist on unreasonable financial or other terms in connection with our use of such technology. Our failure to comply with the terms of any license may result in our inability to continue to use such license, which may result in significant costs, harm our market opportunities and require us to obtain or develop a substitute technology. Some of our solutions, including our operating system software, Platform Software, and Blue Planet Automation Software, utilize elements of open source or publicly available software. As network operators seek to enhance programmability and automation of networks, we expect that we and other communications networking solutions vendors will increasingly contribute to and use technology or open source software developed by standards ~~settings~~ - **setting** bodies or other industry forums that seek to promote the integration of network layers and functions. The terms of such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our products. This increases our risks associated with our use of such software and may require us to seek licenses from third parties, to re- engineer our products or to discontinue the sale of such solutions. Difficulty obtaining and maintaining technology licenses with third parties may disrupt development of our products, increase our costs and adversely affect our business. Data security breaches and cyber- attacks **targeting our enterprise technology environment and assets** could compromise our intellectual property **, technology** or other sensitive information and cause significant damage to our business, reputation and operational capacity. In the ordinary course of our business, ~~we maintain on~~ our network **environment** ~~systems,~~ and ~~on~~ **assets, and** the networks **and assets** of our third- party ~~providers~~ **business partners** , **including our supply chain and other vendors, maintain** certain information that is confidential, regulated, proprietary or otherwise sensitive in nature **to our business** . This information **may** ~~includes~~ - **include** intellectual property **and product information** , personal data, financial information and **other** confidential business information relating to us and our employees, customers, suppliers and other business partners. **The frequency, sophistication and unpredictability of cybersecurity events globally have increased, and can be more acute during times of geopolitical tension or instability between countries. In addition,** ~~Companies~~ **companies** in the technology industry, and in particular ~~in the~~ **, manufacturers of networking and** ~~telecommunications~~ ---- **communications** ~~industry~~ **products** , have been increasingly subjected to a wide variety of **data** security incidents, **including** cyber- attacks and other attempts to gain unauthorized access to ~~networks~~ - **network asset, infrastructure** or sensitive information. Our network systems, devices, storage and other business applications, and the systems, storage and other business applications **that we rely on and that are** maintained by our third- party providers, have been in the past, and may be in the future, subjected to **security incidents including attack, exploitation, intrusion, disruption and other malfeasance or** attempts to gain unauthorized access ~~to our~~ - **or conduct** ~~networks, devices, applications or information, malfeasance or~~ other ~~system disruptions~~ **unauthorized activities. Such data security incidents may be caused by malice or negligence from either third party or internal actors. These threats arise from actions by nation states, independent hackers, hacktivist groups, organized cybercrime entities, and other third parties, as well as from malicious actors from within or supporting our organization** . In some cases, it is difficult to anticipate **,** ~~or to~~ detect ~~immediately~~ **or identify indicators of** such incidents and **assess** the damage caused thereby. If an actual or perceived **data** ~~breach of~~ security

~~occurs in~~ **incident affects** our network or any of our third- party providers' networks, we could incur significant costs, our **technology and** operations could be impacted, our customers and other stakeholders could be impacted, ~~and~~ our reputation could be harmed ~~. In addition~~ , ~~the internet has experienced an~~ **and** ~~increase~~ **we may become involved** in **litigation** ~~cyber threats during the COVID- 19 pandemic in the form of phishing emails~~ , **including with respect to allegations** ~~malware attachments and malicious websites. These risks, as well as the number and frequency~~ of ~~cybersecurity events globally,~~ **breach of contract. We** may also be **subject to increased regulatory oversight** ~~heightened during times of geopolitical tension or instability between countries~~ , including **governmental investigations** , **enforcement actions, and regulatory fines. We could also experience delays in reporting our financial results, and we may lose revenue and profits as a result of our inability to timely produce, distribute, invoice, and collect payments** for **our products** ~~example, the ongoing military conflict between Russia~~ and ~~Ukraine~~ **services. Additionally, a data security incident may result in significant remediation expenses and increased cybersecurity protection and insurance costs** . While we work to safeguard our ~~internal~~ **enterprise** network systems and **to** validate the security of our third- party providers to mitigate these potential risks, including through information security policies ~~and~~ **,** employee awareness and training **and other technical, procedural and administrative controls** , there is no assurance that such actions will be sufficient to prevent future **data** ~~cyber- attacks or~~ security ~~breaches~~ **incidents or insider threats** . We have been subjected in the past, and expect to be subjected in the future, to a range of incidents including phishing, emails purporting to come from a company executive or vendor seeking payment requests, malware, and communications from look- alike corporate domains, as well as security- related risks created by ~~the~~ **malicious internal actors internally and our** use of third- party software and services. We ~~may~~ **have** also ~~be~~ **been** subject ~~in the future~~ to ~~ransomware attacks, nation~~ **unauthorized access and exfiltration of confidential data as a result of the exploitation of zero day vulnerabilities involving our use of third** - **party applications** ~~state cyber attacks or other types of cyber attacks~~ . While these types of incidents to which we have been subjected have not had a material effect on our business **, technology, operations** or our network security to date, future **data security** incidents could compromise **material** confidential or otherwise protected information, **seize,** destroy or corrupt data, or otherwise disrupt our operations or impact our customers or other stakeholders. ~~These~~ **We and our network environment may also be subject in the future to ransomware attacks, nation- state cyber attacks or other types of cyber attacks. A failure to promptly disclose such material incidents as required by law may result in additional financial or regulatory consequences. We have incurred, and will continue to incur, expenses to comply with privacy and data protection standards and protocols imposed by law, regulation, industry standards and contractual obligations. Increased regulation of data collection, use and retention practices, including self- regulation and industry standards, changes in existing laws and regulations, enactment of new laws and regulations, increased enforcement activity, and changes in interpretation of laws, could increase our cost of compliance and operation. And while we may be entitled to damages if our third- party providers fail to satisfy their** security **- related** ~~events could also negatively impact our reputation and our competitive position and could result in litigation~~ -- **obligations to us** ~~with third parties, regulatory action, loss of business, potential liability and increased remediation costs~~ , any ~~of which could~~ **award may be insufficient to cover our damages, or we may be unable to recover such award. While we** have ~~a material adverse effect~~ **purchased cybersecurity insurance, there are no assurances that the coverage would be adequate in relation to any incurred losses. Moreover, as cyber- attacks increase in frequency and magnitude, we may be unable to obtain cybersecurity insurance in amounts and** on **terms we view as adequate for** our ~~financial condition and results of~~ operations. We are a party to legal proceedings, investigations and other claims or disputes, which are costly to defend and, if determined adversely to us, could require us to pay fines or damages, undertake remedial measures, or prevent us from taking certain actions, any of which could adversely affect our business. In the course of our business, we are, and in the future may be, a party to legal proceedings, investigations and other claims or disputes, which have related and may relate to subjects including commercial transactions, intellectual property, securities, employee relations, or compliance with applicable laws and regulations. Legal proceedings and investigations are inherently uncertain **,** and we cannot predict their duration, scope, outcome or consequences. There can be no assurance that these or any such matters that have been or may in the future be brought against us will be resolved favorably. In connection with any government investigations, in the event the government takes action against us or the parties resolve or settle the matter, we may be required to pay substantial fines or civil and criminal penalties and / or be subject to equitable remedies, including disgorgement or injunctive relief. Other legal or regulatory proceedings, including lawsuits filed by private litigants, may also follow as a consequence. These matters are likely to be expensive and time- consuming to defend, settle and / or resolve, and may require us to implement certain remedial measures that could prove costly or disruptive to our business and operations. They may also cause damage to our business reputation. The unfavorable resolution of one or more of these matters could have a material adverse effect on our business, results of operations, financial condition or cash flows. Changes in trade policy, including the imposition of tariffs **and other import measures** , increased export control and investment restrictions, and efforts to withdraw from or materially modify international trade agreements, as well as other regulatory efforts impacting the import and sale of foreign equipment, may adversely affect our business, operations and financial condition. The United States and various foreign governments have established certain trade and tariff requirements under which we have implemented a global approach to the sourcing and manufacture of our products, as well as distribution and fulfillment to customers around the world. ~~In recent years~~ **From time to time** , the U. S. government has indicated a willingness to revise, renegotiate, or terminate various existing multilateral trade agreements and to impose new taxes and restrictions on certain goods imported into the U. S. Because we rely on a global sourcing strategy and third- party contract manufacturers in markets outside of the U. S. to perform substantially all of the manufacturing of our products, such steps, if adopted, could adversely impact our business and operations, increase our costs, and make our products less competitive in the U. S. and other markets. For example, our supply chain includes certain direct and indirect suppliers based in China who supply goods to us, our manufacturers or our third- party suppliers. Recently, there have been a number of significant geopolitical events, including trade tensions and regulatory actions, involving the governments of the United States and China. The U. S. government has raised tariffs, and imposed new tariffs, on a wide range of imports of Chinese products, including component elements of our solutions and certain finished goods products that we sell. U. S. tariff policy involving imports from China are slated for a broad review in 2023. The U. S. government has also introduced broad new restrictions on imports from China allegedly manufactured with forced labor, and the EU has debated similar restrictions **, while other countries are debating or have introduced similar restrictions on imports of goods produced in whole or in part with the use of forced labor** . China has retaliated by raising tariffs, and imposing new tariffs, on certain exports of U. S. goods to China, as well as introducing blocking measures to restrict the ability of domestic companies to comply with U. S. trade restrictions **and could take further steps to retaliate against U. S. industries or companies** . In May 2020, the U. S. introduced significant further restrictions limiting access to controlled U. S. technology to additional Chinese government and commercial entities, including certain of our competitors based in China ~~. In August 2020, the U. S. Department of Commerce took further action against Huawei by adding additional Huawei affiliates to the Entity List, confirming the expiration of a temporary general license applicable to Huawei and amending the foreign direct product rule in a manner that represents a significant expansion of its application to Huawei~~ . More recently, in October 2022, the U. S. Department of Commerce imposed additional export control restrictions targeting the provision of ~~, inter alia,~~ certain semiconductors and related technology to China that could further disrupt supply chains that could adversely impact our business. In addition, the U. S. Federal Communications Commission (the " FCC ") in November 2022 prohibited communications equipment deemed to pose an unacceptable risk to national security from obtaining the equipment authorization that allows the products to be imported, marketed, or sold in the U. S. This prohibition currently includes telecommunications equipment produced by Huawei and its affiliates and subsidiaries and four other Chinese companies, and additional entities may be subsequently added to this list. The situation involving U. S.- China trade relations remains volatile and uncertain **,** and there can be no assurance that further actions by either country will not have an adverse impact on our business, operations and access to technology, or components thereof, sourced from China. **See also the risk factor with the caption beginning " Our reliance on third- party component suppliers … " above.** At this time, it remains unclear what additional actions, if any, will be taken by the U. S. or other governments with respect to international trade agreements, the imposition of tariffs on goods imported into the U. S., tax policy related to international commerce, increased export control and investment restrictions, import or use of foreign communications equipment, or other trade matters. Based on our manufacturing practices and locations, there can be no assurance that any future executive or legislative action in the United States or other countries relating to tax policy and trade regulation would not adversely affect our business, operations and financial results. Government regulation of usage, import or export of our products, or our technology within our products, changes in that regulation, or our failure to obtain required approvals for our products, could harm our international and domestic sales and adversely affect our revenue and costs of sales. Failure to comply with such regulations could result in enforcement actions, fines, penalties or restrictions on export privileges. In addition, costly tariffs on our equipment, restrictions on importation, trade protection measures and domestic preference requirements of certain countries could limit our access to these markets and harm our sales. These regulations could adversely affect the sale or use of our products, substantially increase our cost of sales and adversely affect our business and revenue. Changes in government regulations affecting the communications and technology industries and the businesses of our customers could harm our prospects and operating results. The FCC has jurisdiction over many companies in the U. S. telecommunications industry, and similar agencies have jurisdiction over the communications industries in other countries. Many of our largest customers, including service providers and cable and multiservice network operators, are subject to the rules and regulations of these agencies, while others participate in and benefit from government- funded programs that encourage the ~~development~~ **deployment** of network infrastructures. These regulatory requirements and funding programs are subject to changes that may adversely impact our customers, with resulting adverse impacts on our business. In December 2017, the FCC ~~deregulated broadband internet access service providers and removed their classification as telecommunications service providers under Title II of the Communications Act. This decision, which was partially upheld in an October 2020 decision by the U. S. Court of Appeals for the District of Columbia Circuit, repeals~~ **repealed most of the** net neutrality **rules** ~~regulations that prohibit~~ **prohibiting** blocking, degrading **,** or prioritizing certain types of internet traffic **that it had imposed in 2015,** and ~~restores~~ **restored** ~~the~~ **a** light touch regulatory treatment of broadband service **. The** ~~in place prior to 2015~~ **2017** ~~. Although the FCC' s initial~~ decision **was partially upheld in October 2020 by an appellate** ~~has preempted state jurisdiction on net neutrality, the U. S. Court~~ **court** ~~of Appeals~~ **, although the 2020** decision vacated the specific preemption provision in the 2017 order. **In October 2023,** ~~A number of states have taken executive action directed at reinstating aspects of~~ the FCC **proposed** ~~' s 2015 order. California, among other states, has passed legislation that seeks to reestablish net neutrality. The current FCC is expected to initiate a rulemaking~~ to reclassify broadband internet access service **(" BIAS ")** as a Title II telecommunications service ~~, with additional~~ **under Title II of the Communications Act and reinstate** net neutrality obligations **on BIAS providers. The impact of these rules, if adopted, remains uncertain and further judicial review is likely. A number of states, including California, have also taken executive action or passed legislation seeking to reestablish net neutrality, and there are efforts within Congress to pass federal legislation to codify uniform net neutrality requirements** . Changes in regulatory requirements or uncertainty associated with the regulatory environment could delay or serve as a disincentive to investment in network infrastructures by network operators, which could adversely affect the sale of our products and services. Similarly, changes in regulatory tariff requirements or other regulations relating to pricing or terms of carriage on communications networks could slow the development or expansion of network infrastructures and adversely affect our business, operating results, and financial condition. Separately, certain of our **cloud provider** ~~Web- scale~~ customers have been the subject of regulatory and other government actions, including inquiries and investigations, formal or informal, by competition authorities in the United States, Europe and other jurisdictions. In July 2019, the U. S. Department of Justice announced that it would commence an antitrust review into significant online technology platforms, and in September 2019, various state attorneys general announced antitrust investigations involving certain technology companies. In addition, certain committees of the U. S. Congress have recently held hearings and pursued investigations to consider the businesses associated with these platforms, their impact on competition, and their conduct. There can be no assurance that these government actions will not adversely impact the network spending, procurement strategies, or business practices of our **cloud provider** ~~Web- scale~~ customers in a manner adverse to us ~~. The effects of the United Kingdom' s withdrawal from membership in the European Union remain uncertain. In January 2020, the UK formally withdrew from the EU in an action commonly known as Brexit. It remains possible that the level of economic activity in this region will be adversely impacted by Brexit and that there will be increased regulatory and legal complexities, including those relating to tax, trade, security and employees. Such changes could be costly and potentially disruptive to our operations and business relationships in these markets. Economic uncertainty related to Brexit, including volatility in global stock markets and currency exchange rates, could adversely impact our business. While we have adopted certain operational and financial measures to reduce the risks of doing business internationally, we cannot ensure that such measures will be adequate to allow us to operate without disruption or adverse impact to our business and financial results in the affected regions~~ . Our operations are regulated under various federal, state, local and international laws relating to the environment and climate change. If we were to violate or become liable under these laws or regulations, we could incur fines, costs related to damage to property or personal injury and costs related to investigation or remediation activities. Our product design efforts and the manufacturing of our products are also subject to evolving requirements relating to the presence of certain materials or substances in our equipment, including regulations that make producers for such products financially responsible for the collection, treatment and recycling of certain products. For example, our operations and financial results may be negatively affected by environmental regulations, such as the WEEE and RoHS regulations that have been adopted by the EU. Compliance with these and similar environmental regulations may increase our cost of designing, manufacturing, selling and removing our products. The SEC requires disclosure regarding the use of " conflict minerals " mined from the Democratic Republic of the Congo and adjoining countries (the " DRC ") and disclosure with respect to procedures regarding a manufacturer' s efforts to prevent the sourcing of such minerals from the DRC. Certain of these minerals are present in our products. SEC rules implementing these requirements may have the effect of reducing the pool of suppliers that 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. Because our supply chain is complex, we may face reputational challenges with our customers, stockholders and other stakeholders if we are unable to verify sufficiently the origins for the " conflict minerals " used in our products and cannot assert that our products are " conflict free. " Environmental or similar social initiatives may also make it difficult to obtain supply of compliant components or may require us to write off non- compliant inventory, which could have an adverse effect on our business and operating results. **Investor and other stakeholder scrutiny related to our environmental, social and governance practices, and our disclosed performance and aspirations for these practices, may increase costs and expose us to numerous risks. Investors, business partners, employees, legislators, regulators, and other stakeholders are increasingly focused on ESG matters, including our ESG practices. As expectations have grown, we have established and communicated various initiatives, goals and aspirations related to ESG matters. Any disclosed goals and aspirations reflect our current plans and assumptions, are subject to assumptions that could change over time, and may not be achieved. In addition, the standards and laws by which ESG efforts are tracked and measured are in many cases new, have not been harmonized, and continue to evolve. Our efforts to abide by these standards and laws and to accomplish and accurately report on our initiatives, goals and aspirations present numerous operational, reputational, financial, legal, and other risks. Our processes and controls may not always align with evolving standards, our interpretation of standards may differ from others, and standards may continue to change over time, any of which could result in significant revisions to our goals, our reported progress toward those goals, or other ESG information we disclose. In addition, any failure or perceived failure to pursue or fulfill our previously stated goals, targets and objectives or to satisfy various reporting standards within the timelines we announce, or at all, could also have similar negative impacts and expose us to government enforcement actions, private litigation and reputational harm.** Changes in tax law or regulation, effective tax rates and other adverse outcomes with taxing authorities could adversely affect our results of operations. Our future effective tax rates could be subject to volatility or adversely affected by changes in tax laws, regulations, accounting principles, or interpretations thereof. The impact of income taxes on our business can also be affected by a number of items relating to our business. These may include estimates for and the actual geographic mix of our earnings; changes in the valuation of our deferred tax assets; the use or expiration of net operating losses or research and development credit arrangements applicable to us in certain geographies; and changes in our methodology for transfer pricing, valuing developed technology or conducting intercompany arrangements. ~~In August 2022, the Inflation Reduction Act was signed into law, which made a number of changes to the Internal Revenue Code, including adding a 1 % excise tax on stock buybacks by publicly traded corporations and a 15 % corporate minimum tax on adjusted financial statement income of certain large companies. The impact of these provisions on our effective tax rate will also depend on additional guidance to be issued by the Secretary of the U. S. Department of the Treasury. We are currently evaluating the impact of these provisions on our effective tax rate. Further, the Tax Act amended the Internal Revenue Code to require that specific research and experimental (" R & E ") expenditures be capitalized and amortized over five years (U. S. R & E) or fifteen years (non- U. S. R & E) beginning in the Company' s fiscal 2023. Although the U. S. Congress has considered legislation that would defer, modify, or repeal the capitalization and amortization requirement, there is no assurance that the provision will be deferred, repealed, or otherwise modified. If the requirement is not repealed or otherwise modified, it may increase our cash taxes and effective tax rate.~~ Additionally, the Organization for Economic Co- operation and Development (the " OECD ") ~~, an international association comprised of 38 countries, including the United States,~~ has **introduced a framework to implement** ~~issued proposals that change long- standing tax principles including on~~ a global minimum **corporate** tax **of 15 %** ~~initiative. On~~

~~December 12~~ , **referred** ~~2022 the European Union member states agreed~~ to **as** ~~implement the OECD' s~~ Pillar ~~2 global corporate~~ **Two or the** minimum tax **directive. Many aspects of the minimum tax directive will be effective beginning in fiscal 2025, with certain remaining impacts to be effective beginning in fiscal 2026. While it is uncertain whether the U. S. will enact legislation to adopt the minimum tax directive, certain countries in which we operate have adopted legislation, and other countries are in the process of introducing legislation to implement the minimum tax directive. While we do not currently expect the minimum tax directive to have a material impact on our effective tax** rate ~~of 15 %~~ **, our analysis is ongoing as the OECD continues to release additional guidance and countries implement legislation. To the extent additional changes take place in the countries in which we operate, it is possible that these legislative changes and efforts may increase uncertainty and have an adverse impact** on **our** ~~companies with revenues of at least $ 790 million, which would go into effect~~ **effective** ~~in 2024. Other countries including the United Kingdom, Switzerland, Canada, Australia and South Korea are also actively considering changes to their~~ tax **rates or operations** ~~laws to adopt certain parts of the OECD' s proposals~~ . We are ~~also~~ subject to the continuous examination of our income and other tax returns by the Internal Revenue Service and other tax authorities globally, and we have a number of such reviews underway at any time. It is possible that tax authorities may disagree with certain positions we have taken **,** and an adverse outcome of such a review or audit could have a negative effect on our financial position and operating results. There can be no assurance that the outcomes from such examinations, or changes in tax law or regulation impacting our effective tax rates, will not have an adverse effect on our business, financial condition and results of operations. Failure to maintain effective internal controls over financial reporting could have a material adverse effect on our business, operating results and stock price. Section 404 of the Sarbanes- Oxley Act of 2002 requires that we include in our annual report a report containing management' s assessment of the effectiveness of our internal controls over financial reporting as of the end of our fiscal year and a statement as to whether or not such internal controls are effective. Compliance with these requirements has resulted in, and is likely to continue to result in, significant costs and the commitment of time and operational resources. Certain ongoing initiatives, including efforts to transform business processes or to transition certain functions to third- party resources or providers, will necessitate modifications to our internal control systems, processes and related information systems as we optimize our business and operations. Our expansion into new regions could pose further challenges to our internal control systems. We cannot be certain that our current design for internal control over financial reporting, or any additional changes to be made, will be sufficient to enable management to determine that our internal controls are effective for any period, or on an ongoing basis. If we are unable to assert that our internal controls over financial reporting are effective, market perception of our financial condition and the trading price of our stock may be adversely affected, and customer perception of our business may suffer. Risks Related to Our Common Stock, Indebtedness and Investments Our stock price is volatile. Our common stock price has experienced substantial volatility in the past and may remain volatile in the future. Volatility in our stock price can arise as a result of a number of the factors discussed in this " Risk Factors " section. ~~During~~ **From** fiscal ~~2022~~ **2020 through fiscal 2023** , our closing stock price ranged from a high of $ 77. 60 per share to a low of $ ~~39~~ **34** . ~~16~~ **50** per share. The stock market has experienced significant price and volume fluctuation that has affected the market price of many technology companies, with such volatility often unrelated to the operating performance of these companies. Divergence between our actual results and our forward- looking guidance for such results, the published expectations of investment analysts, or the expectations of the market generally, can cause significant swings in our stock price. Our stock price can also be affected by market conditions in our industry as well as announcements that we, our competitors, vendors or our customers may make. These may include announcements by us or our competitors of financial results or changes in estimated financial results, technological innovations, the gain or loss of customers, or other strategic initiatives. Our common stock is also included in certain market indices, and any change in the composition of these indices to exclude our company ~~would~~ **could** adversely affect our stock price. In addition, if the market for technology stocks or the broader stock market continues to experience a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition or results of operations. These and other factors affecting macroeconomic conditions or financial markets may materially adversely affect the market price of our common stock in the future. Outstanding indebtedness under our senior secured credit facilities and senior unsecured notes may adversely affect our liquidity and results of operations and could limit our business. We are a party to credit agreements relating to a $ 300. 0 million senior secured ~~asset- based~~ revolving credit facility, an outstanding senior secured term loan with approximately $ ~~675~~ **1** . ~~7~~ **2** ~~million~~ **billion** due ~~2025~~ **2030,** and an outstanding senior unsecured indenture pursuant to which we issued $ 400. 0 million in aggregate principal amount of 4. 00 % senior notes due 2030 ~~(the " 2030 Notes ")~~ . The agreements governing these credit facilities contain certain covenants that limit our ability, among other things, to incur additional debt, create liens and encumbrances, pay cash dividends, redeem or repurchase stock, enter into certain acquisition transactions or transactions with affiliates, repay certain indebtedness, make investments, or dispose of assets. The agreements also include customary remedies, including the right of the lenders to take action with respect to the collateral securing the loans, that would apply should we default or otherwise be unable to satisfy our debt obligations. Our indebtedness could have important negative consequences, including: • increasing our vulnerability to adverse economic and industry conditions; • limiting our ability to obtain additional financing, particularly in unfavorable capital and credit market conditions; • debt service and repayment obligations that may adversely impact our results of operations and reduce the availability of cash resources for other business purposes; • limiting our flexibility in planning for, or reacting to, changes in our business and the markets; and • placing us at a possible competitive disadvantage to competitors that have better access to capital resources. We may also enter into additional debt transactions or credit facilities, including equipment loans, working capital lines of credit, senior notes **,** and other long- term debt, which may increase our indebtedness and result in additional restrictions on our business. In addition, major debt rating agencies regularly evaluate our debt based on a number of factors. There can be no assurance that we will be able to maintain our existing debt ratings, and failure to do so could adversely affect our cost of funds, liquidity and access to capital markets. Significant volatility and uncertainty in the capital markets may limit our access to funding on favorable terms or at all. The operation of our business requires significant capital. We have accessed the capital markets in the past and have successfully raised funds, including through the issuance of equity, convertible notes and other indebtedness, to increase our cash position, support our operations and undertake strategic growth initiatives. We regularly evaluate our liquidity position, debt obligations and anticipated cash needs to fund our long-term operating plans, and we may consider it necessary or advisable to raise additional capital or incur additional indebtedness in the future. If we raise additional funds through further issuance of equity or securities convertible into equity, or undertake certain transactions intended to address our existing indebtedness, our existing stockholders could suffer dilution in their percentage ownership of our company, or our leverage and outstanding indebtedness could increase. Current capital market conditions, including the impact of inflation, have increased borrowing rates and can be expected to significantly increase our cost of capital as compared to prior periods should we seek additional funding. Moreover, global capital markets have undergone periods of significant volatility and uncertainty in the past, and there can be no assurance that such financing alternatives will be available to us on favorable terms or at all, should we determine it necessary or advisable to seek additional capital. **42**