

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

FORM 10-K

(Mark One)

☒ Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended July 31, 2022

☐ Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Commission File Number: 0-7928



(Exact name of registrant as specified in its charter)

Delaware

11-2139466

(State or other jurisdiction of incorporation /organization)

(I.R.S. Employer Identification Number)

68 South Service Road, Suite 230,
Melville, NY

11747

(Address of principal executive offices)

(Zip Code)

(631) 962-7000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Trading Symbol(s)

Name of each exchange on which registered

Common Stock, par value \$.10 per share

CMTL

Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:

None

(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

☐ Yes ☒ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 of Section 15(d) of the Act.

☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data file required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

☒ Yes ☐ No

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.
☒

Indicate by check mark whether registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
☐ Yes ☒ No

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant, computed by reference to the closing sales price as quoted on the Nasdaq Global Select Market on January 31, 2022 was approximately \$525,123,000.

The number of shares of the registrant's common stock outstanding on September 23, 2022 was 27,676,772.

DOCUMENTS INCORPORATED BY REFERENCE.

Certain portions of the document listed below have been incorporated by reference into the indicated Part of this Annual Report on Form 10-K:

Proxy Statement for 2022 Annual Meeting of Stockholders - Part III

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Note: As used in this Annual Report on Form 10-K ("Form 10-K"), the terms "Comtech," "we," "us," "our" and "our Company" mean Comtech Telecommunications Corp. and its subsidiaries.

Note About Forward-Looking Statements

This Form 10-K contains "forward-looking statements," including statements concerning our financial and operating performance, the future of our industry, product development, pending or threatened litigation, potential transactions, business strategy, continued acceptance of our products, market demand and growth, and dependence on significant customers. These statements can be identified by the use of forward-looking terminology such as "may," "will," "should," "could," "would," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential," "continue," "target," the negative of these terms, or other similar words or comparable terminology. In general, all statements of fact in this report other than statements of historical fact are forward-looking information. When considering forward-looking statements, you should keep in mind the risk factors and other cautionary statements included in this Form 10-K, because these risks and factors could cause our actual results to differ materially from those described in such forward-looking statements. However, the risks described in this Form 10-K are not the only risks that we face. Additional risks and uncertainties, not currently known to us or that do not currently appear to be material, may also materially adversely affect our business, financial condition and/or operating results in the future. We describe risks and uncertainties that could cause actual results and events to differ materially in "*Risk Factors*" (Part I, Item 1A of this Form 10-K), "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" (Part II, Item 7 of this Form 10-K) and "*Quantitative and Qualitative Disclosures about Market Risk*" (Part II, Item 7A of this Form 10-K). We do not intend to update or revise publicly any forward-looking statements, whether because of new information, future events, or otherwise, except as required by law.

PART I

ITEM 1. BUSINESS

Founded in 1967, we are a leading global provider of next-generation 911 emergency systems ("NG-911") and secure wireless and satellite communications technologies. We see these two end-markets as part of what Comtech has identified as the "Failsafe Communications Market." This includes the critical communications infrastructure that people, businesses, and governments rely on when durable, trusted connectivity is required, no matter where they are – on land, at sea, or in the air – and no matter what the circumstances – from armed conflict to a natural disaster. Our solutions are designed to fulfill our customers' needs for secure wireless communications in the most demanding environments, including those where traditional communications are unavailable or cost-prohibitive, and in mission-critical and other scenarios where performance is crucial. We anticipate future growth in our business due to increasing demand for global voice, video and data usage. We provide our solutions to both commercial and governmental customers.

Business Segments

In the fourth quarter of fiscal 2022, we revised our business segments to better align them with end-markets for our products and services. Our businesses have been re-organized into two new reportable segments: "Satellite and Space Communications" and "Terrestrial and Wireless Networks." All current and prior periods reflected in this Form 10-K have been presented according to these two new segments, unless otherwise noted. For more information and for financial information about our business segments, including net sales, operating income, Adjusted EBITDA (a Non-GAAP financial measure), total assets, and our operations outside the United States, refer to "*Notes to Consolidated Financial Statements - Note (11) Segment Information*" included in "*Part II - Item 8 - Financial Statements and Supplementary Data*."

We offer advanced secure wireless communications technologies founded on decades of expertise in the satellite communications and cellular markets. We believe these markets are undergoing a period of long-term growth, reinvestment, and rapid technological change. We manage our business through two reportable operating segments: Satellite and Space Communications and Terrestrial and Wireless Networks. Our senior management team supports these business segments by, among other things, actively seeking to identify and leverage synergies that exist between the segments, including in areas such as manufacturing, technology, sales, marketing, customer support and finance. The diagram below summarizes our key products, systems, and services by our two reportable operating segments:

Satellite and Space Communications Segment
(Approximately 58% of fiscal 2022 net sales)

- Satellite ground station technologies, services and system integration that facilitate the transmission of voice, video and data over GEO, MEO and LEO satellite constellations, including solid-state and traveling wave tube power amplifiers, modems, VSAT platforms and frequency converters
- Satellite communications and tracking antenna systems, including high precision full motion fixed and mobile X/Y tracking antennas, RF feeds, reflectors, and radomes
- Over-the-horizon microwave equipment that can transmit digitized voice, video, and data over distances up to 200 miles using the troposphere and diffraction, including the Comtech COMETTM
- Solid-state, RF microwave high-power amplifiers and control components designed for radar, electronic warfare, data link, medical and aviation applications
- Procurement and supply chain management of high reliability EEE parts for satellite, launch vehicle and manned space applications
- Field support sustainment services and technology insertion services primarily supporting tactical VSAT systems, Blue Force Tracking Systems and cybersecurity training services

Terrestrial and Wireless Networks Segment
(Approximately 42% of fiscal 2022 net sales)

- Wireless/VoIP 911 location and routing services to connect emergency calls to Public Safety Answering Points
- SMS Text to 911 services, providing alternate paths for individuals who need to request assistance (via text messaging) a method to reach Public Safety Answering Points
- Next Generation 911 solutions, providing emergency call routing, location validation, policy-based routing rules, logging, and security functionality
- Emergency Services IP Network transport infrastructure for emergency services communications and support of Next Generation 911 services
- Call handling applications for Public Safety Answering Points
- Wireless emergency alerts solutions for network operators
- Software and equipment for location-based and text messaging services for various applications, including for public safety, commercial and government services
- Cybersecurity training, skills labs, and competency assessments for both technical and non-technical applications

The markets and key technologies for each segment are further described below.

Satellite and Space Communications Segment

Overview

Our Satellite and Space Communications segment designs, builds and supports a variety of sophisticated communications equipment that is designed to meet or exceed the highest standards for performance and quality by businesses and governments worldwide. Applications of our equipment include high-throughput cellular backhaul solutions, modem troposcatter communications equipment, satellite ground station systems, electronic components engineered for use in outer space and high-powered RF/microwave amplifiers and control components. Our customers and end-users include the world's largest corporations, governments and defense agencies, including the U.S. government.

Our Satellite and Space Communications segment has four product areas: Satellite Modem and Amplifier Technologies, Troposcatter and SATCOM Solutions, Space Components and Antennas, and High-Power Amplifiers and Switches.

Satellite Modem and Amplifier Technologies

We believe we are a leading provider of satellite earth station modems, solid-state amplifiers and traveling wave tube amplifiers. Many of our key satellite earth station modems incorporate forward error correction and bandwidth compression technologies, which enable our customers to optimize their satellite networks by either reducing their satellite transponder lease costs or increasing data throughput. We hold leadership positions in the market for high-throughput modems used in cellular backhaul, a market that has been rapidly growing due to increased mobile phone usage and increasing data throughput demands from LTE and 5G deployments worldwide.

An estimated 3 billion people globally remain unconnected to any wireless services, representing a significant opportunity. In fiscal 2021, we introduced a Time Division Multiple Access ("TDMA") technology solution which offers best-in-class support for very large satellite networks that use Very Small Aperture Terminals ("VSATs"). This technology allows our customers to cost-effectively provide wireless services to end-users in complex geographies or areas where cellular infrastructure is otherwise unavailable. In fiscal 2022, we introduced ELEVATETM, a revolutionary solution that combines our Heights Dynamic Network Access ("H-DNA") and TDMA technologies into a single VSAT platform that delivers increased value to our customers by enabling private or shared VSAT networks of any size and topology on a single unified platform. To date, although sales cycles are long, we have made good progress in securing several significant orders for ELEVATETM.

We also provide rugged, highly efficient, and reliable amplifiers for commercial and military applications around the world. These High-Power Amplifiers ("HPAs") are used in critical communications links on the ground, in the air and on the sea; they support fixed traditional and direct-to-home broadcast, mobile news gathering, transportable and flyaway systems, secure high data rate communications, and broadband access over satcom. These products include configurations that are formally qualified for use on aircraft.

Finally, we believe we are well-positioned in the millimeter wave ("mmWave") market and expect that market to continue to grow as new satellite constellations move into those higher, less crowded frequencies. The Ka band LEO and MEO amplifiers that we design and manufacture for large commercial customers' non-GEO constellations represent key strategic wins as we build position in higher frequency bands.

Troposcatter and SATCOM Solutions

With persistent threats from state and non-state actors, governments around the world are increasingly seeking ways to mitigate vulnerabilities using information and more reliable communication systems to increase decision-makers' situational awareness. Many of our mission-critical technologies are part of integrated communication infrastructure systems such as the U.S. military's Command, Control, Communications, Computers, Cyber Intelligence, Surveillance and Reconnaissance (also known as "C5ISR") systems and similarly complex networks for international governments.

We believe we are a world leader in the design and supply of troposcatter equipment. We have designed, manufactured, and delivered troposcatter systems (sometimes referred to as over-the-horizon ("OTH") microwave products and systems) for over fifty years.

Our OTH systems, which include our patented forward error correction technology, can transmit video and other broadband applications at high throughputs in the most demanding environments: U.S. and foreign governments use our over-the-horizon microwave systems to, among other things, transmit radar tracking, run C5ISR applications and connect to remote border locations. Additionally, energy companies use our systems to enable communication links for offshore oil rigs and other remote locations, as well as for exploration activities. The Comtech COMET™, introduced two years ago, is a rapidly deployable OTH microwave system that directly addresses a void in capabilities that have long been desired by tactical communications planners: low probability of intercept and low probability of detection ("LPI/LPD"), while providing high reliability, mission essential communications. The COMET™ is capable of being transported in a carrying case by a single individual and set up in under fifteen minutes, extending critical services into areas where there is no communications infrastructure, or the infrastructure has been destroyed. U.S. Special Forces, as well as non-U.S. NATO forces, have already begun procuring and deploying the COMET™ for high reliability, mission essential communications.

We provide field support sustainment services, centralized and deployed depot services, and technology insertion services to the U.S. Army's AN/TSC-198 family of communication systems that are commonly referred to as "SNAP" (Secret Internet Protocol Router ("SIPR") and Non-secure Internet Protocol Router ("NIPR") Access Point) VSATs, support for the Army "SCOUT" (Scalable Class of Unified Terminals), and Army T2C2 (Tactical Command Communication). We also provide sustainment services for the U.S. Army's Blue Force Tracking-1 ("BFT-1") system in addition to support for Army IP networks. Our field support services include providing U.S. Department of Defense ("DoD") personnel with curriculum development and training services to support cybersecurity workforce development.

Space Components and Antennas

For over 45 years, we have been recognized as an industry leader and global supplier of high-reliability products and supply chain management and engineering services, supporting selection of space-qualified parts for satellite and launch vehicle tracking solutions geared for critical NASA programs as well as several international space and defense agencies. Our engineers are not only involved in the design of products, but our technical team is heavily involved with the customer development of electronic parts and testing specifications to assure capability, reliability and radiation tolerance to specific mission/project requirements both as an individual service and for Electrical, Electronic, and Electromechanical ("EEE") parts supplied to our customers. We also lead and conduct failure analysis investigations and assist with manufacturing and test problems at the source and support reporting and selloff with the customer and its prime (such as the Japanese Space Exploration Agency ("JAXA") and NASA). Our quality engineering team assures that the product received from our suppliers and test facilities are compliant to their respective specifications prior to shipment to our end customers. Most recently, our service offerings have been expanded to include kitting to customer Bill of Materials with direct shipments to customer designated contract manufacturers.

Within the satellite communications market, we are a leading provider of X/Y terminal solutions that fully support the mission requirements of LEO, MEO and GEO satellite communication and tracking requirements, offering a host of high-performance single-band and multi-band feed solutions. We also supply maritime antenna solutions that are fielded by foreign governments.

High Power Amplifiers and Switches

We offer several unique high-performance transmit and receive technologies used in sophisticated communication systems, including electronic warfare, radar, data link, medical and identification friend or foe ("IFF"). As our customers push the envelope for mobility, speed and frequency, we believe that demand for high-performance transmission products will increase over time.

Our solid-state, high-power RF microwave amplifiers and related switching control technologies are utilized in many critical applications, including electronic warfare, communications, radar, data link, IFF and medical applications (such as oncology treatment systems). In the electronic warfare marketplace, we support a variety of legacy systems and are participating in the ongoing migration to platforms that require smaller and lighter amplifiers integrated with additional signal processing functionality, providing more complete transmit and receive functionality. Our solutions are designed to increase the flexibility of systems by providing wider bandwidth capabilities to address increased data transmission needs in challenging environments. We also believe the desire for increased airspace situational awareness will create increased opportunities for our radar and IFF products, which are used by government and commercial customers around the world. Our high power and highly reliable Gallium Nitride ("GaN") amplifier technology is increasingly used both to update existing radar systems for improved sensitivity and range, as well as for new radar applications and installations. In addition to technologies that enhance performance of primary radars, we also supply solutions for IFF systems that provide positive identification of radar targets for secondary surveillance systems.

Satellite and Space Communications: Key Markets and Growth Drivers

Combined, our Satellite and Space Communications segment offers our customers one-stop-shopping for sophisticated satellite ground station technologies and solutions, including SCPC and TDMA modems, amplifiers, antennas, frequency converters and network software for customers who utilize satellite communications. Our products are used to modulate, demodulate and amplify signals, carry voice, video and/or data over networks and are vital to satellite communication applications, including air-to-ground communications, video broadcasting and the backhaul of cellular traffic. Our Satellite and Space Communications segment manufactures most of the satellite ground station equipment we sell to our customers.

We believe that the overall satellite ground station equipment industry will grow from current levels and will be increasingly combined with existing and new cellular networks. This growth is expected to occur because of widespread deployment of, and upgrades to, 4G and 5G ground-based systems, including satellite earth stations, as well as the integration of high-performance amplifiers necessary to meet long-term demand for high-performance satellite communications applications, such as satellite-based wireless backhaul, DTH, HD and 4K broadcasting, and in-flight connectivity. We believe that Comtech is well-positioned to capitalize on this demand through sales of our market-leading satellite ground station technologies, including new next-generation satellite earth station technologies that can be used with the thousands of new LEO, MEO and large HTS satellite constellations that are expected to be deployed over the next several years.

Examples of end-market applications that are driving long-term demand for our satellite-based communication technologies include:

- **New LEO, MEO and HTS Satellites:** Thousands of new satellites are reportedly being launched over the next several years, according to announcements by companies including Telesat Lightspeed, OneWeb, SpaceX Starlink, Amazon Kuiper and Viasat, which we believe will lead to increasingly complex satellite networks. As service providers work to offer connectivity to these high-speed, high-bandwidth satellites and expand their networks to handle the demand for new LEO, MEO and HTS applications, we believe our ELEVATE™, Heights™ and UHP networking platforms, our solid-state amplifiers and our X/Y antennas will ultimately be incorporated into many new installations and equipment upgrades. We continue to provide modems and amplifiers to existing LEO and MEO communications satellite providers and expect to see growth in imaging satellites alongside commercial imaging constellations, including conventional, thermal, and hyperspectral.
- **Satellite-Based Cellular Backhaul:** Demand for satellite-based cellular backhaul services is anticipated to grow rapidly as a result of the increased penetration of smart cellular phones and network upgrades to 4G and 5G in developing regions of the world. Ultimately, as 5G services continue to be deployed, we expect that mobile data services will become more critical. As mobile data penetration expands and mobile data consumption increases, wireless carriers must invest in their mobile network infrastructures, and we believe businesses will require back-up communications. In developing regions of the world, and in remote areas where terrestrial network infrastructure is lacking (or where challenging geography prohibits it), wireless network operators often backhaul, or transport, their wireless data traffic using satellite-based networking technologies. Comtech is well positioned to serve the high-performance, high availability needs of satellite-based cellular backhaul through sales of our SCPC and TDMA satellite modems as well as our Heights™, ELEVATE™ and UHP networking platforms.
- **Government and Military Satellite Communications:** Government users rely on high-speed connectivity in a variety of conditions throughout the world to provide real time information sharing, including Situational Awareness ("SA"), dissemination of Intelligence, Surveillance, and Reconnaissance ("ISR") information, and communications. Our communications solutions provide command and control and satellite networking capabilities that support U.S. and allied government initiatives for assured and resilient communications capabilities, as well as supporting interoperability objectives, including the Joint All Domain Command and Control ("JADC2") efforts.
- **Enterprise Networks and Internet of Things ("IoT"):** Satellite services are increasingly used for Machine-to-Machine data connectivity for both critical infrastructure applications such as utility companies (electrical grid, oil rigs, gas pipelines, water companies) as well as IoT networks. Comtech TDMA equipment is widely used in these applications, where it delivers superior network availability (by making use of geographical hub redundancy and other technologies), and high Quality of Service ("QoS").

Terrestrial and Wireless Networks Segment

Overview

Our Terrestrial and Wireless Networks segment is a leading provider of the hardware, software, and solutions critical to any modern 911 public safety and mobile network operator ("MNO") infrastructure, as well as for applications services requiring the specific location of a mobile user's geospatial position. From the moment a 911 call is made, Comtech provides highly reliable solutions that contribute to emergency calls being processed instantly, with proper routing to first responders. Our solutions include feature-rich data sets (such as: precise location information, route optimization, text messaging, photos and real-time video), putting first responders in the best possible position to make decisions when every second counts. Our customers are the businesses, communities and governments that need to implement and improve 911 infrastructure in the U.S., as well as MNOs in the U.S. and abroad that have a need to determine subscriber location within a network or to facilitate messaging services. In 2021, we were recognized by Frost & Sullivan, a leading third-party research firm, for registering the most significant year-over-year market share increase among all NG-911 primary contract holders. As such, we believe that we are a leader in public safety communication and location technologies.

The Terrestrial and Wireless Networks segment is organized into four product areas: Next Generation 911 & Call Delivery, Solacom Call Handling Solutions, Trusted Location and Messaging Solutions, and Cyber Security Training & Services.

Next Generation 911 & Call Delivery

In addition to 911 call routing, we provide systems integration, geospatial location information, satellite and location infrastructure terminals, and linkage to NG-911 Emergency Services IP Networks ("ESInet"). We also offer what we believe are best-in-class 911 call handling solutions under the Solacom brand name. We believe state and local governments need to upgrade existing legacy networks, location technologies, and call handling systems to modern NG-911 systems infrastructure, including 911 text messaging services, advanced data, real-time photos, and other types of information sharing over IP networks.

As the U.S. and Canada broadly adopt upgraded NG-911 and call handling solutions, we believe that other countries will follow similar technology and telecommunications advancements. Comtech's public safety and location technology solutions have been deployed since 2006 and are utilized by domestic MNOs, as well as internationally, to provide reliable device location determination for public safety and commercial applications. Many of our technologies, such as positioning, mapping, and text messaging, are embedded in our public safety and location offerings to help address mapping, routing, and geolocations. Our solutions address Federal Communications Commission ("FCC") mandates for emergency services as they relate to location delivery by supporting precise caller location. Our text messaging platforms are used by wireless carriers to provide short messaging services ("SMS") to their end-customers as well as being used to communicate with 911 public safety answering points ("PSAPs").

Solacom Call Handling Solutions

We offer what we believe is a best-in-class call handling solution marketed under the Solacom Guardian brand name, which provides an integrated text-to-and-from 911 solution on a unified platform. The solution provides a flexible user interface, adapts to varying customer environments and preferences, provides powerful call conferencing capabilities, enhanced reporting capabilities and offers geospatial 911 location call display directly from a customized map. Because of its advanced features, it allows us to offer an immediate upgrade path to existing and new customers and has expanded our presence in the public safety solutions market with more than 700 PSAPs and emergency call centers installed in 5 countries.

The Guardian platform includes an integrated cloud-based texting solution ("Guardian Messenger") which provides call takers / dispatchers with the ability to collect, process and share previously unavailable live incident information such as text, photos, and video via SMS and multimedia messaging services ("MMS"), from one integrated desktop. The Guardian platform also offers a cloud-based reporting and analytics solution ("Guardian Insights"), designed to assist emergency call center directors to know their operations, so they can better plan and manage resources and workloads.

We are investing in product enhancements for our Guardian platform including additional cloud-based capabilities, analytics, and cyber security solutions. We have significantly increased our "911-as-a-Service" ("911aaS") offering, deploying hosted 911 call centers solutions across numerous states and regions in the U.S. and provinces in Canada.

Trusted Location and Messaging Solutions

We believe that as the industry moves toward digital transformation, customers will be looking for situational awareness solutions that are built on top of mapping and geo-services. Our location technology solutions enable the determination of a mobile phone's geospatial position in a variety of environments, leveraging a wide range of signals including Global Positioning System ("GPS"), Global Navigation Satellite Systems ("GNSS") and multiple cellular positioning technologies ranging from 2G through 5G mobile networks. For our installed base of systems, we provide ongoing operational support, including administration of system components, system optimization, configuration management and maintenance services, including tracking customer support issues, troubleshooting, and developing and installing maintenance releases.

Our Location Studio™ platform enables customers, particularly public safety agencies, to build their own applications with end-user functionality, such as maps, search, geocoding, routing, and navigation, using their own brand. We believe that customers and prospects are increasingly looking for alternatives to mapping services that are subject to change by the provider, and which meet market privacy and security requirements. The Location Studio™ platform is a complete end-to-end location application consisting of maps, map data, including our Trusted OpenStreetMap ("TOSM") geo-services, application program interfaces ("APIs") and software development kits ("SDKs") enabling public safety ecosystems and enterprises to customize unique mapping applications. Map data includes positioning, search, enhanced local content, custom maps, navigation, geo-fencing, tracking integrated with third party data sources like camera feeds and IoT sensor data via cross-platform APIs and SDKs supporting all leading operating systems.

In fiscal 2022, we began marketing SmartResponse™, a newly developed cloud-based solution that offers a common operational picture to PSAPs and first responders, enabling an effective data-driven response for security agencies and first responders by providing a holistic information environment for them. This new solution offers streaming live feeds from traffic cameras at and near incident location, and accesses caller information like past residences, criminal history, or next-of-kin information at the tap of a button. Offering a bird's-eye view of integrated data, the SmartResponse™ solution empowers first responders to ensure appropriate resources are on the scene and to better serve the public in emergency situations.

Cyber Security Training & Services

During the first quarter of fiscal 2022, Contech launched a new cybersecurity brand, CyberStronger™, to provide cybersecurity solutions and services tailored to threat monitoring and assessment, training, and workforce development. Offerings include cyber threat detection and management, off-the-shelf and custom training, hands-on skills labs, and competency-based assessments mapped to cybersecurity job roles. The CyberStronger™ solutions also include the CYBRScore® set of products that provide hands-on assessments and training to upskill and reskill cybersecurity workforces. These solutions were created by a team of former national intelligence community members who have the practical cybersecurity experience and abilities required to meet the demanding needs of Contech's customer base which includes government entities, large universities, and enterprise-level corporations.

Our offerings are suitable for both technical and non-technical teams to close the skills gap in the cyber security field and also provide continuous feedback and evidence to the organizations about their teams' proficiency. Our PerformanScore® is a performance-based scoring platform that uniquely and adaptively measures skills across a range of credible responses to a defined set of tasks, allowing for a consistent and immediate evaluation.

Terrestrial and Wireless Networks: Key Markets and Growth Drivers

We are a leading provider of modern public safety and location technologies. Our next generation solutions enable rich, multimedia information to be delivered alongside 911 calls. Also, our E911 and NG-911 call routing solutions allow cellular carriers and voice over the Internet ("VoIP") carriers, as well as legacy telecommunications carriers, to deliver emergency calls to public safety emergency call centers nationwide. When someone places an emergency call, our technologies identify the call as an emergency call, access the user's location information from the wireless or VoIP networks and location databases, and route the call to the assigned public safety jurisdiction. Today, we provide public safety and location technologies to many U.S. telecommunication carriers, the largest being Verizon (for which we provide 911 call routing via cellular service). We believe we service a significant portion of the carrier market for 911 cellular call routing applications, along with one other leading competitor.

With the advent of 5G networks, new network-based positioning technologies are poised to deliver opportunities thanks to the ongoing digital transformation of multiple industry verticals, including the Public Safety, Transportation, Manufacturing, Healthcare and Retail industries. As these industries increasingly rely on data from connected devices, using location information in real-time is expected to enhance existing business processes and outcomes as well as end user experiences. We believe end-market applications such as worker's safety in high-risk areas, smart manufacturing, and autonomous driving would benefit enormously from new precision-positioning techniques. Also, MNOs can now provide even more advanced location-based services, in addition to existing connectivity solutions.

Examples of end-market applications that are driving long-term demand for our Terrestrial and Wireless Networks technologies include:

- ***Our XyPoint® Mobile Location Platform:*** Provided to MNOs globally, our virtualized location-based services ("LBS") platform is a high availability robust solution with multiple positioning technologies, that allows authorized users to locate and track specific mobile devices and monitor specific areas of interest. MNOs can use this platform for location accuracy to support a wide variety of use cases, including public safety, location intelligence, network optimization and big data analytics. On the legacy front, our LBS platform is compatible within 2G through 4G wireless networks, as well as an enabler to the MNOs to seamlessly migrate to cloud native environments, as they start their migrations to 5G.

- **Comtech INSIGHTS™ LightSource™:** Provides first responders a reporting and analytics platform for the rich data created in Comtech's NG-911 core systems. Authorized users at state, regional, and jurisdiction organizations can see reports and analysis of call, behavior, and location characteristics in both time and geospatial visualizations. Users are able to interact directly with the visualization in real time to focus on desired characteristics to include timeframes, call types, media types, and other information. Authorized users can also schedule reports for automatic delivery via email.
- **Comtech INSIGHTS™ SmartResponse™:** Provides first responders of all types (fire, police, medical, state, regional emergency communications centers, dispatch centers, emergency management agencies, fusion cells, intelligence centers, etc.) access to real-time 911 call information and related supplemental information for situational awareness in a geospatial, mapped context. Authorized users can view 911 calls and emergency response vehicles/assets in a 3-D map via a single pane of glass view to enhance response. SmartResponse™ is available for use in both emergency centers and response vehicles.
- **Wireless Emergency Alerts ("WEA"):** WEA, also known as Commercial Mobile Alerts System ("CMAS") in the US, enable authorized officials to inform the public about life-threatening events by automatically delivering emergency alerts to mobile devices (including roaming users) via the government alert gateway. Using standardized infrastructure, ensuring compliance with government regulations globally, our patented technology facilitates the origination and accurate delivery of geo-targeted emergency alerts, empowering emergency services providers to better serve the public. Using this technology, for example, MNOs can quickly broadcast emergency communications, such as severe weather alerts, to all devices in a specific geographical area.

Synergies: Opportunities in Convergence

We believe that significant advances in technology have been driving a convergence across multiple aspects of the Terrestrial and Wireless Networks market and the Satellite and Space Communications market. We believe we have an advantage in having identified this convergence, and in combining our native expertise in both to develop innovative new products and solutions to meet growing customer demands. Broadly, the increasing digitization of people and businesses, and the ongoing migration to the cloud, means a growing reliance on communications and connectivity, and a corresponding increase in the volumes of data transmission. We believe this is a long-term secular opportunity for Comtech given our market-leading positions in, and understanding of, the fast-evolving Failsafe Communications markets.

We are watching in real-time as the once clear line separating terrestrial and non-terrestrial communications networks is dissolving. The need for connectivity (more precisely: constant, reliable connectivity) is growing on a worldwide basis. People, devices, and machines need constant connectivity, regardless of whether they are proximate to a cellular tower. Because of this, satellite communications are increasingly bridging gaps created by challenging geographies, or a lack of terrestrial infrastructure altogether. Comtech is increasingly delivering solutions to companies and countries seeking to bridge these gaps, whether across legacy 4G networks, or through the introduction of 5G networks, as operators seek ways to optimize implementation, control costs, and mitigate security risks. We expect the convergence of terrestrial and non-terrestrial networks to continue, leveraging the increasing numbers and density of satellite constellations to meet the growing terrestrial demand to connect and move more data, more quickly, reliably, and efficiently than ever.

Our Diverse Global Customer Base

We have established long-standing relationships with thousands of customers worldwide, including leading system and network suppliers in the global satellite, mobile cellular, defense, broadcast and aerospace industries, as well as the U.S. federal government (including the U.S. Army, Air Force, Marine Corps, and Navy), U.S. state and local governments, and foreign governments. Our global Satellite and Space Communications and Terrestrial and Wireless Networks customers are increasingly seeking integrated solutions to meet their operational needs. We believe that our customers recognize our ability to develop improved technologies and to meet stringent program requirements. We hold prime positions on several key contracts and have had a long history of servicing key programs. A table illustrating representative customers is provided below.

**Satellite and Space Communications Segment
Representative Customers**

Satellite systems integrators, wireless and other communication service providers, and broadcasters, such as DIRECTV Group and EchoStar Corporation

U.S. Army, the U.S. Marine Corps, the U.S. Navy, prime contractors to the U.S. Armed Forces, NATO and foreign governments (i.e., ministries of defense)

Domestic and international defense customers, as well as prime contractors and system suppliers such as General Dynamics Corporation, Lockheed Martin Corporation, L3Harris Technologies, Inc., Northrop Grumman Corporation, Raytheon Technologies Corporation, Telephonics Corporation, The Boeing Company and ViaSat Inc.

Medical equipment companies, such as Varian Medical Systems, Inc., and aviation industry system integrators such as Collins Aerospace (a subsidiary of Raytheon Technologies Corporation)

End-customers also include BT Group plc., China Mobile Limited, Claro Argentina, Intelsat S.A., JAXA, NASA, QUALCOMM Incorporated, SED Systems (a division of Calian Ltd.), SES S.A. and Speedcast International Limited

Oil companies such as Shell Oil Company and PETRONAS

**Terrestrial and Wireless Networks Segment
Representative Customers**

U.S. state and local governments, such as the Commonwealth of Massachusetts, the Commonwealth of Pennsylvania and the states of Arizona, Iowa, Maine, New Hampshire, South Carolina, Vermont and Washington

End-customers also include AT&T Inc., Lumen Technologies, Inc. (formerly CenturyLink, Inc.), Comcast Corporation, Nokia Corporation, T-Mobile USA, Inc. and Verizon Communications Inc.

Different solutions deployed with telephone companies and federal, provincial, and local governments in Australia, Canada, Cayman Islands and New Zealand

Business Results and Challenges: Overview

In fiscal 2022, we achieved consolidated net sales of \$486.2 million and Adjusted EBITDA of \$39.3 million.

As more fully described elsewhere in this Form 10-K, we navigated the challenges of operating our global business during the period where COVID-19 continues to impact many of our customers and suppliers. Like businesses everywhere, we confront one of the most difficult operating environments in memory, as the global economy struggles to find its footing amidst a pandemic, geopolitical conflict, surging inflationary pressures, changes in government spending priorities, and adverse supply chain disruptions. Nevertheless, in fiscal 2022, we continued to strengthen the Comtech brand and its positioning within the key markets that we serve. We believe that as COVID-19 subsides and the global economy recovers, our business performance in future periods will improve from current levels.

Our Business Outlook for Fiscal 2023 is discussed further in *Part II – "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – Business Outlook for Fiscal 2023."* For a definition and explanation of Adjusted EBITDA, see *Part II – "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – Comparison of Fiscal 2022 and 2021 – Adjusted EBITDA."*

More Information and Where to Find It

Our Internet website is www.comtech.com, at which you can find our filings with the Securities and Exchange Commission ("SEC"), including investor letters, press releases, annual reports, quarterly reports, current reports, and any amendments to those filings. We also make announcements regarding company developments and financial and operating performance through our blog, Signals, at www.comtech.com/comtech-signals. We also use our website to disseminate other material information to our investors (on the Home Page and in the "Investor Relations" section). Among other things, we post on our website our press releases and information about our public conference calls (including the scheduled dates, times and the methods by which investors and others can listen to those calls), and we make available for replay webcasts of those calls and other presentations for a limited time.

We also use social media channels to communicate with customers and the public about our Company, our products, services, and other issues, and we use social media and the Internet to communicate with investors, including information about our stockholder meetings. Information and updates about our Annual Meetings will continue to be posted on our website at www.comtech.com in the "Investor Relations" section.

None of the information on our website, blog or any other website identified herein is incorporated by reference in this annual report and such information should not be considered a part of this annual report.

Acquisitions

In order to position ourselves to take advantage of additional growth opportunities and meet our strategic objectives, we have followed, and will continue to follow, a disciplined approach in identifying, executing and capitalizing on acquisitions of businesses and enabling technologies. Material acquisitions in the past several years include:

On January 27, 2020, we completed the acquisition of CGC Technology Limited ("CGC"), a small privately held company located in the United Kingdom. CGC is a leading provider of high-precision full-motion fixed and mobile X/Y satellite tracking antennas, reflectors, RF feeds, radomes and other ground station equipment for customers around the world. The acquisition brought established relationships with several top-tier European aerospace companies and other government entities, and we expect it to allow us to participate in the anticipated growth in the number of LEO and MEO satellite constellations. The aggregate purchase price for accounting purposes for the acquisition of CGC was \$23.7 million and CGC was fully integrated into our Satellite and Space Communications segment.

On March 2, 2021, we completed our acquisition of UHP Networks Inc. ("UHP"), a leading provider of innovative and disruptive satellite ground station technology solutions. With end-markets for high-speed satellite-based networks anticipated to significantly grow, our acquisition allows us to enhance our offerings with TDMA satellite modems. The aggregate purchase price for accounting purposes for the acquisition of UHP was \$37.5 million and UHP was fully integrated into our Satellite and Space Communications segment.

Sales, Marketing and Customer Support

Sales and marketing strategies include direct sales through sales, marketing and engineering personnel, indirect sales through independent representatives, value-added resellers, and sales through a combination of the foregoing. We devote resources to evaluating and responding to requests for proposals by governmental agencies around the world and, as needed, we employ the use of specialized consultants to develop our proposals and bids.

We intend to continue to expand international marketing efforts by engaging additional independent sales representatives, distributors and value-added resellers and by establishing foreign sales offices. In addition, we expect to leverage our relationships with larger companies (such as prime contractors to the U.S. government and large mobile wireless operators) to market our technology solutions. In fiscal 2023, we expect to continue expanding our social media and Internet presence and developing an updated marketing and branding strategy.

We are pre-qualified as an approved vendor for certain government contracts. We collaborate in sales efforts under various arrangements with integrators. Our marketing efforts also include advertising, public relations, speaking engagements and attending and sponsoring industry conferences.

Our management, technical and marketing personnel establish and maintain relationships with customers. Our sales strategies include a commitment to providing ongoing customer support for our systems and equipment. This support involves providing direct access to engineering staff or trained technical representatives to resolve technical or operational issues.

Our products and services in many of our product lines have long sales cycles. Once a product is designed into a system, customers may be reluctant to change the incumbent supplier due to the extensive qualification process and potential redesign required in using alternative sources. In addition, in recent years, we have found that overall sales cycles for each of our product lines have significantly increased.

Sales by geography and customer type, as a percentage of related net sales, are as follows:

	Fiscal Years Ended July 31,								
	2022	2021	2020	2022	2021	2020	2022	2021	2020
	Satellite and Space Communications			Terrestrial and Wireless Networks			Consolidated		
U.S. government	45.6 %	52.8 %	53.7 %	2.4 %	1.4 %	1.2 %	27.2 %	34.6 %	36.2 %
Domestic	18.0 %	15.3 %	15.2 %	88.1 %	89.2 %	90.3 %	47.8 %	41.5 %	40.3 %
Total U.S.	63.6 %	68.1 %	68.9 %	90.5 %	90.6 %	91.5 %	75.0 %	76.1 %	76.5 %
International	36.4 %	31.9 %	31.1 %	9.5 %	9.4 %	8.5 %	25.0 %	23.9 %	23.5 %
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Sales to U.S. government customers include sales to the U.S. Department of Defense ("DoD"), intelligence and civilian agencies, as well as sales directly to or through prime contractors.

Domestic sales include sales to commercial customers, as well as to U.S. state and local governments. Included in domestic sales are sales to Verizon Communications Inc. ("Verizon"), which represented 11.1% and 10.7% of consolidated net sales for fiscal 2022 and 2021, respectively. Except for the U.S. government, there were no customers that represented more than 10.0% of consolidated net sales during fiscal 2020.

International sales for fiscal 2022, 2021 and 2020 (which include sales to U.S. domestic companies for inclusion in products that are sold to international customers) were \$121.4 million, \$138.9 million and \$145.1 million, respectively. When we sell internationally, we denominate most of our contracts in U.S. dollars. Some of our sales to international customers are paid for by letters of credit or on an open account. From time to time, some of our international customers may require us to provide performance guarantees.

Except for the U.S., no individual country (including sales to U.S. domestic companies for inclusion in products that are sold to a foreign country) represented more than 10% of consolidated net sales for fiscal 2022, 2021 and 2020.

Backlog

Our backlog as of July 31, 2022 was \$618.1 million (of which \$192.4 million was attributed to the Satellite and Space Communications segment and \$425.7 million was attributed to the Terrestrial and Wireless Networks segment). We estimate that a substantial portion of the backlog as of July 31, 2022 will be recognized as sales during the next twenty-four month period, with the rest thereafter.

At July 31, 2022, 72.7% of our backlog consisted of orders for use by U.S. commercial customers, 11.6% consisted of U.S. government contracts, subcontracts and government funded programs and 15.7% consisted of orders for use by international customers (including sales to U.S. domestic companies for inclusion in products that will be sold to international customers).

Our backlog is defined as orders (sometimes also referred to herein as bookings) that we believe to be firm. Backlog that is derived from U.S. government orders relates to U.S. government contracts that have been awarded, signed and funded. Backlog for our U.S. government customers also includes amounts appropriated by Congress and allotted to the contract by the procuring government agency. Our backlog does not include the value of options that may be exercised in the future on multi-year contracts, nor does it include the value of additional purchase orders that we may receive under indefinite delivery/indefinite quantity ("IDIQ") contracts or basic ordering agreements. In some cases, such as contracts received from large U.S. based telecommunication companies, our backlog may include the value of customer authorizations to proceed or may be computed by multiplying the most recent month's contract or revenue by the months remaining under the existing long-term agreements, which we consider to be the best available information for anticipating revenue under those agreements. When we acquire a company with existing contracts, we only record bookings for those contracts that meet our definition. Almost all of the contracts in our backlog (including firm orders previously received from the U.S. government) are subject to modification, cancellation at the convenience of the customer, or for default in the event that we are unable to perform under the contract.

Please see Item 1A – "Risk Factors" under Part I of this Form 10-K for more information about risks pertaining to recognition of our backlog.

A significant portion of the backlog from our U.S. commercial customers relates to large, multi-year contracts to provide state and local governments (and their agencies) with 911 public safety and location technology solutions. Although the contracts themselves represent legal, binding obligations of these governments, funding is often subject to the approval of budgets (for example, on an annual or bi-annual basis). Although funding for these multi-year contracts is dependent on future budgets being approved, we include the full estimated value of these large, multi-year contracts in our backlog given the critical nature of the services being provided and the positive historical experience of our state and local government customers passing their respective budgets.

There can be no assurance that our backlog will result in actual revenue in any particular period, or at all, or that any contract included in backlog will be profitable. There is a higher degree of risk in this regard with respect to unfunded backlog. The actual amount and timing of any revenue is subject to various contingencies, many of which are beyond our control. The actual recognition of revenue on contracts included in backlog may never occur or may change because a program schedule could change, a customer may not follow up with order details (e.g., delivery instructions), fluctuations in currency exchange rates after an order is placed could cause our products to become too expensive for a foreign customer, a customer's program could be canceled, a contract could be reduced, modified or terminated early due to changes in a customer's priorities, funding may not be included in future budgets, actual indirect rates being reimbursed on U.S. government contracts may ultimately be less than those indirect rates included in our initial proposals, or an option that we had assumed would be exercised is not exercised. As a result of these contingencies, we may adjust our backlog if we determine that such orders are no longer firm and/or funded. In addition to adjustments from these types of contingencies, variations in backlog from time to time are attributable, in part, to changes in sales mix, the timing of contract proposals, the timing of contract awards, delivery schedules on specific contracts and new bookings obtained through acquisitions. A large majority of the solutions in our satellite ground station technologies product line within our Satellite and Space Communications segment operate under short lead times. Backlog in both our Satellite and Space Communications segment and Terrestrial and Wireless Networks segment and has been, and could be, highly influenced by the nature and timing of orders received from federal, state and local governments and defense-related agencies, causing such orders to be subject to unpredictable funding, deployment and technology decisions by such customers. As a result, we believe our backlog and orders, at any point in time, are not necessarily indicative of the total sales anticipated for any future period.

Research and Development

We have established leading technology positions in our fields through internal and customer-funded research and development activities.

Internal research and development expenses are reported as research and development expenses for financial reporting purposes and were \$52.5 million, \$49.1 million and \$52.2 million in fiscal 2022, 2021 and 2020, respectively, representing 10.8%, 8.4% and 8.5% of total consolidated net sales, respectively, for these periods. Customer-funded research and development activities relate to the adaptation of our basic technology to specialized customer requirements which is recoverable under contracts and is reflected in net sales with the related costs included in cost of sales. Certain of our government customers also contract with us from time to time to conduct research on telecommunications software, equipment and systems. During fiscal 2022, 2021 and 2020, we were reimbursed by customers for such activities in the amounts of \$9.8 million, \$13.6 million and \$11.9 million, respectively. During fiscal 2022 and 2021, we incurred \$1.2 million and \$0.3 million, respectively, of strategic emerging technology costs for next-generation satellite technology to advance our solutions offerings to be used with new broadband satellite constellations. We are evaluating this new market in relation to our long-term business strategies, and likely to incur additional costs in fiscal 2023.

Intellectual Property

We rely upon trade secrets, technical know-how, continuing technological innovation and, with respect to certain key technologies, patents to develop and maintain our competitive position. The products we sell require significant engineering design and manufacturing expertise. For technological capabilities that are not protected by patents or licenses, we generally rely on the expertise of our employees and our learned experiences in both the design and manufacture of our products and the delivery of our services.

Some of our key Satellite and Space Communications segment technology is protected by patents that are significant to protecting our proprietary technology. We have been issued several U.S. patents relating to forward error correction technology that is utilized in our TPC-enabled satellite modems. Due to our market leadership position, we do not expect that upon expiration of these patents, our future results will be negatively impacted.

We have a portfolio of several hundred patents worldwide relating to wireless location services, text messaging, GPS ephemeris data, emergency public safety data routing, electronic commerce and other areas. To-date, our strategy has been to avoid offensive and defensive patent litigation and focus on building meaningful partnerships with other companies through direct licensing, cross licensing, and other forms of agreements. We do not believe that any single patent or group of patents, patent application or patent license agreement is material to our operations.

We have filed additional patent applications for certain apparatus and processes we believe we have invented covering key features of location services, wireless text alerts, SMS Center, mobile-originated data and E911 network software. There is no assurance that any patent application will result in a patent being issued by the U.S. Patent and Trademark Office or other patent offices, nor is there any guarantee that any issued patent will be valid and enforceable. Additionally, foreign patent rights may or may not be available or pursued in any technology area for which U.S. patent applications have been filed.

Almost all the products and services we sell to the U.S. government include technology and other technical know-how that we have internally developed. In past instances where we have provided government-purpose rights, to our knowledge, the U.S. government has not exercised any of these rights. To the extent that we have provided or will provide government-purpose rights in the future, we believe that given the rapidly changing nature of our technology, our future success will depend primarily on the technical competence and creative skill of our personnel, rather than any contractual protection.

Competition

Our businesses are highly competitive and are characterized by rapid technological change. Some of our competitors are substantially larger, have significantly greater financial, marketing, research and development, technological and operating resources and broader product lines than we have. Other companies are developing new technologies and the shift towards open standards such as IP-based satellite networks will likely result in increased competition. A significant technological breakthrough by others, including new companies, our existing competitors and our customers, could have a material adverse effect on our business. Our future success depends on, among other things, our ability to keep pace with such changes and developments and to respond to the increasing variety of electronic equipment users and transmission technologies.

Some large defense-based companies, such as Northrop Grumman Corporation, have subsidiaries or divisions that compete against us in one or more business segments. In addition, new and potential competitors are always emerging. Certain of our customers, such as prime contractors who currently outsource their engineering and manufacturing requirements to us, have technological capabilities in our product areas and could choose to replace our products with products they develop. In some cases, we partner or team with companies (both large and mid-tier) to compete against other teams for large defense programs. In some cases, these same companies may be among our competitors.

Listed below, in alphabetical order, are some of our competitors in each of our two business segments:

Satellite and Space Communications – ACTIA Group, Advantech Co., Ltd., Aethercomm Inc., Agilis Satcom, AMERGINT Technologies, Inc., AnaCom, Inc., Codan Limited, CPI International, Inc., Datum Systems, Inc., dB Control Corp. (a subsidiary of HEICO Corp.), ENENSYS Technologies, ETM Electromatic Inc., Gilat Satellite Networks Ltd., Empower RF Systems, Inc., Envistacom, LLC, General Dynamics Corporation, Hughes Network Systems, LLC (a subsidiary of EchoStar), KVH Industries, Inc., L3Harris Technologies, Inc., Mission Microwave Technologies, LLC, ND Satcom GmbH, Panasonic Corporation, Paradise Datacom Ltd. (a subsidiary of Teledyne Technologies Incorporated), Raytheon Technologies Corporation, SatixFy Israel Ltd., ST Engineering iDirect, Inc. (including Newtec), Terrasat Communications Inc., and ViaSat, Inc.

Terrestrial and Wireless Networks – AT&T Inc., Atos, Bandwidth.com, CalAmp Corp., Carbyne, Central Square Technologies, 8x8, Inc., Everbridge, Inc., Google Inc. (a subsidiary of Alphabet Inc.), Here Technologies, Immersive Labs, INdigital, Intrado Corporation (formerly West Corporation), LM Ericsson, Lumen Technologies, Inc. (formerly CenturyLink, Inc.), Mobile Arts AB, Motorola Solutions, Inc., NGA911, Nokia Networks (a subsidiary of Nokia Corporation), RapidDeploy, Inc., Rave Mobile Safety, Sinch AB (Inteliquent), Synergem Technologies, ThriveDX, and TomTom N.V.

We believe that competition in all our markets is based primarily on technology innovation, product performance, reputation, delivery times, customer support and price. Due to our proprietary know-how, we believe we can develop, produce and deliver products and services on a cost-effective basis faster than many of our competitors.

Corporate Responsibility and Sustainability

We recognize the need for driving corporate responsibility within our organization, throughout our supplier network and in our communities. To drive this responsibility, we will continue to target effective corporate governance, ethical behavior in the workplace and social responsibility, while also updating and enhancing this focus with initiatives, such as:

- refreshing the roles and responsibilities of the committees of our Board of Directors, including with the establishment of an Environment, Social and Governance ("ESG") task force supervised by our Board of Directors,
- developing a company-wide People Strategy to foster and promote workplace talent and diversity, and
- organizing a company-wide strategic sourcing group that will be accountable for tracking and driving resource reduction targets, such as resource-efficient manufacturing, reduction of hazardous substances, and take-back, recycling and reuse of products.

Human Capital

We realize that our employees are one of our most valuable assets and believe our success depends on the talent we attract and retain, which is why we are developing what we call our People Strategy. We are passionate about building meaningful employee engagement and happiness in a variety of ways that will be addressed in our People Strategy, including providing a foundation for a diverse, inclusive and equitable workplace where employees feel they belong; developing and promoting talent; supporting a competitive benefits program; and enforcing the importance of our employees' health, safety and wellness.

Diversity, Equity, Inclusion and Belonging

We believe a diverse, equitable, inclusive workplace is critical to our ability to develop innovative solutions and is key to the future of our success. We encourage employees to be inspired and strive for them to feel like they belong. We focus on expanding our diverse workforce by reaching out to institutions promoting the employment of minorities, attending recruiting events aimed at attracting talent of diverse heritage and veteran backgrounds, as well as by considering diversity of our workforce during our talent, promotion, and succession planning. Through these and other efforts, during fiscal 2022, two additional female executives were hired onto our executive leadership team, including our first female Chief Operating Officer. Three female professionals were also recently appointed to our Board of Directors ("Board") (which currently consists of 37.5% female and 62.5% male Board members). Additionally, in fiscal 2022, a member of our executive leadership team was recognized as an honoree for diversity in business based on such individual's efforts in our organization and the community.

Our leadership team identified several company-wide diversity initiatives such as celebrating Black History Month, Asian American Pacific Islander Heritage Month, International Women's Day and Pride Month, where employees and their families are encouraged to participate, celebrate, and showcase their views, culture, and history on our social media and company-wide communication platforms. When unique stories are celebrated, employees feel connected in meaningful ways and support each other to reach our full potential.

Employee Workforce as of July 31, 2022

Women	People of Color	Veterans	People with Disabilities
23%	36%*	8%	5%

*People of Color include employees who identify with any race other than white.

Talent

To meet and execute our strategic business goals, we are focused on sourcing, attracting, and retaining top talent, especially those with engineering, science, and technical backgrounds. We recognize and reward performance while continually developing, engaging and retaining high-performing employees. We have made significant investments to provide ongoing training and career development by offering courses on our online learning management system. We offer job-specific skills training to promote and develop advancement within the organization and to enhance skills. Training in and compliance with our Standards of Business Conduct and Trade and FCPA compliance is also mandatory among our employees.

Through certain government contracts that we participate in, we partner with our end customer to provide enlisted, active military personnel (whose service is expected to end within 6 months) onsite training to help them with a successful transition to a civilian life. Also, in an effort to retain and attract new talent, we partner with local universities to hire interns throughout our organization. During fiscal 2022, we engaged several interns throughout the company with interests ranging from procurement, engineering, and legal practice.

At July 31, 2022, we had 1,993 employees (including temporary employees and contractors), 1,143 of whom were engaged in production and production support, 498 in research and development and other engineering support, and 352 in marketing and administrative functions. None of our U.S. based employees are represented by a labor union. Of our 1,993 employees, 496 employees are based outside of the United States, including 148 employees in the United Kingdom, 139 employees in India and 138 employees in Canada. We believe that our employee relations are good.

Safety and Wellness

We strive to maintain a robust health, safety and wellness program to ensure a healthy work environment, promote workforce resiliency, and enhance business value. We encourage employee participation to identify opportunities for improvement and review and monitor our performance with safety committees on the local level. Local safety committees identify safety programs and ensure completion of all training and target learning objectives.

We continue to review our business models to support flexible working arrangements, where possible, to meet the needs of our employees and our business. We continue to review CDC guidelines to monitor safety measures in all facilities in light of the continuing COVID-19 pandemic.

Employee wellness is important to Comtech. All employees and their households have access to an employee assistance program, as well as a health advocate program to help with all aspects of benefits, family life, financial concerns, legal issues and transition to retirement. Assistance is available 365 days per year, 24 hours per day.

We rigorously review our benefit and compensation plans to maintain competitive packages that reflect the wellness needs of our workforce and the marketplace. These programs include 401(k) plans, health and welfare benefits, among many others. We support pay equity for all employees within the same geographic area, experience level, and performance standards.

Environment

We encourage our employees to respect our environment. To compound these efforts, we offer recycling bins at our facilities and encourage employees to use environmentally friendly commuting options such as mass transit (providing company sponsored mass transit cards) and share ride programs. Where appropriate, we also consider work from home arrangements to eliminate commuting altogether. In 2022, we celebrated Earth Day in our company by encouraging our global employees to participate in environmentally-focused initiatives and then share their activities on social media.

U.S. Government Contracts and Security Clearances

The U.S. government operates on an October-to-September fiscal year. Generally, in February of each year, the President of the United States presents to the U.S. Congress ("Congress") the proposed budget for the upcoming fiscal year and from February through September of each year, the appropriations and authorization committees of Congress review the President's budget proposals and establish the funding levels for the upcoming fiscal year. Once these levels are enacted into law, the Executive Office of the President administers the funds to the agencies. Thereafter, we can receive orders pursuant to sole-source or competitively awarded contracts, which we describe below.

The U.S. government may be unable to complete its budget process before the end of any given government fiscal year and when the fiscal budget is not approved in a timely manner, the U.S. government is required either to shut down or be funded pursuant to a "continuing resolution" that authorizes agencies of the U.S. government to continue operations but does not authorize new spending initiatives, either of which could result in reduced or delayed orders or payments for products and services we provide.

Sole-source contracts are generally awarded to a single contractor without a formal competition when a single contractor is deemed to have an expertise or technology superior to that of competing contractors or when there is an urgent need by the U.S. government that cannot wait for a full competitive process. Potential suppliers compete informally through research and development and marketing efforts. Competitively-bid contracts are awarded based on a formal proposal evaluation established by the procuring agency and interested contractors prepare bids. Competitively-bid contracts are awarded after a formal bid and proposal competition among suppliers.

The U.S. government has a stated policy direction to reduce the number of sole-source contract awards across all procuring agencies. In addition, the U.S. government is increasing the use of multiple-award IDIQ contracts to increase its procurement options. IDIQ contracts allow the U.S. government to select a group of eligible contractors for the same program. When the government awards IDIQ contracts to multiple bidders under the same program, a company that has already competed to be selected as a participant in the program must subsequently compete for individual delivery orders. As a result of this U.S. government shift toward multiple award IDIQ contracts, we expect to face greater competition for future U.S. government contracts and, at the same time, greater opportunities for us to participate in program areas that we do not currently participate in.

As a U.S. government contractor and subcontractor, we are subject to a variety of rules and regulations, such as the Federal Acquisition Regulations ("FAR"). Individual agencies can also have acquisition regulations. For example, the Department of Defense implements the FAR through the Defense Federal Acquisition Regulation supplement (commonly known as "DFARs"). For all Federal government entities, the FAR regulates the phases of any product or service acquisition, including: acquisition planning, competition requirements, contractor qualifications, protection of source selection and vendor information, and acquisition procedures. In addition, the FAR addresses the allowability of supplier costs, while Cost Accounting Standards address how those costs can be allocated to contracts. The FAR also subjects suppliers to audits and other government reviews. These reviews cover issues such as cost, performance and accounting practices relating to our contracts. The government may challenge a supplier's costs and fees. Suppliers are also required to comply with the National Industrial Security Program Operating Manual which relates to the handling of classified materials and programs and is administered by the Defense Counterintelligence and Security Agency ("DCSA"). Suppliers who do not comply with these various regulations may lose and/or become ineligible for facility security clearances and/or participation in classified programs.

Under firm fixed-price contracts, we perform for an agreed-upon price and we can derive benefits from cost savings, but bear the risk of cost overruns. Our cost-reimbursable type contracts typically provide for reimbursement of allowable costs incurred plus a negotiated fee. Cost-plus-incentive-fee orders typically provide for sharing with the U.S. government savings accrued from orders performed for less than the target costs and costs incurred in excess of targets up to a negotiated ceiling price (which is higher than the target cost), and for the supplier to carry the entire burden of costs exceeding the negotiated ceiling price.

In fiscal 2022, \$132.6 million or 27.2% of our consolidated net sales were to the U.S. government (including sales to prime contractors to the U.S. government). Of this amount, firm fixed-price and cost-reimbursable type contracts (including fixed-fee, incentive-fee and time and material type contracts) accounted for approximately \$105.5 million and \$27.1 million, respectively.

Regulatory Matters

In addition to the rules and regulations that pertain to us as a U.S. government contractor and subcontractor, we are also subject to a variety of local, state and federal governmental regulations.

Our products that are incorporated into wireless communications systems must comply with various government regulations, including those of the FCC. Our manufacturing facilities, which may store, handle, emit, generate and dispose of hazardous substances that are used in the manufacture of our products, are subject to a variety of local, state and federal regulations, including those issued by the Environmental Protection Agency. Our products are also subject to European Union directives related to the recycling of electrical and electronic equipment.

Our international sales are subject to U.S. and foreign regulations such as the Arms Export Control Act, the International Emergency Economic Powers Act ("IEEPA"), the International Traffic in Arms Regulations ("ITAR"), the Export Administration Regulations ("EAR") and the trade sanctions laws and regulations administered by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the Department of Commerce ("DoC") as well as other applicable laws relating to trade, export controls and foreign corrupt practices, the violation of which could adversely affect our operations. We must comply with all applicable export control laws and regulations of the U.S. and other countries. Certain of our products and systems may require licenses from U.S. government agencies for export from the U.S., and some of our products are not permitted to be exported. We cannot be certain that we will be able to obtain necessary export licenses, and such failure would materially adversely affect our operations. If we are unable to receive appropriate export authorizations in the future, we may be prohibited from selling our products and services internationally, which may limit our sales and have a material adverse effect on our business, results of operations and financial condition. In addition, in certain cases, U.S. export controls also severely limit unlicensed technical discussions, such as discussions with any persons who are not U.S. citizens or permanent residents. As a result, in cases where we may need an export license, our ability to compete against a non-U.S. domiciled foreign company that may not be subject to the same U.S. laws may be materially adversely affected. In addition, we are subject to the Foreign Corrupt Practices Act ("FCPA") and other local laws that generally bar bribes or unreasonable gifts to foreign governments or officials. Violations of these laws or regulations could result in significant sanctions, including disgorgement of profits, fines, and criminal sanctions against us, our officers, our directors, or our employees, more onerous compliance requirements, more extensive debasements from export privileges or loss of authorizations needed to conduct aspects of our international business. A violation of any of the regulations enumerated above could materially adversely affect our business, financial condition and results of operations. Additionally, changes in regulatory requirements could further restrict our ability to deliver services to our international customers, including the addition of a country to the list of sanctioned countries under the IEEPA or similar legislation could negatively impact our business.

In the past, we have self-reported violations of export control laws or regulations to the U.S. Department of State, Directorate of Defense Trade Controls ("DDTC"), DoC and OFAC. In addition, we have made various commitments to U.S. government agencies that oversee trade and export matters that we will maintain certain policies and procedures including maintaining a company-wide Office of Trade Compliance and conducting ongoing internal assessments and reporting any future violations to those agencies.

Our financial reporting, corporate governance, public disclosure and compliance practices are governed by laws such as the Sarbanes-Oxley Act of 2002, Dodd-Frank Act of 2010, and rules and regulations issued by the SEC. The SEC has adopted rules which require, among other things, public companies to conduct certain inquiries to determine whether or not Conflict Minerals (as that term is defined in the SEC rules) that are necessary to the functionality of their manufactured products or their product's production processes originated in a Covered Country (as that term is defined in the SEC rules) and ultimately file a report with the SEC. Conflict Minerals are widely used in many industries, including the telecommunications industry and almost all of our products include component parts purchased from third-party suppliers and we must rely heavily on information received from suppliers to determine the origin of those materials. We have implemented a due diligence program consistent with the Organization for Economic Co-operation and Development guidelines to collect information concerning the country of origin of Conflict Minerals and in that regard, have adopted a policy that requires our suppliers (both public and private) to commit to a code of conduct relating to the responsible sourcing of minerals and to establish a policy to reasonably assure that the products they manufacture do not contain Conflict Minerals that originated in a Covered Country. Efforts to comply with this SEC rule have resulted in additional costs to us and, we believe, to our suppliers. As such, the availability of raw materials used in our operations could be negatively impacted and/or raw material prices could increase. Further, if we are unable to certify that our products are conflict free, we may face challenges with our customers, which could place us at a competitive disadvantage and could harm our reputation.

Laws and regulations have been enacted that affect companies conducting business on the Internet, including the European General Data Protection Regulation ("GDPR"). The GDPR imposes certain privacy related requirements on companies that receive or process personal data of residents of the European Union that are currently different than those in the United States and include significant penalties for non-compliance. Similarly, there are several legislative proposals in the United States, at both the federal and state level, that could impose new obligations in areas affecting our business, such as liability for personal data protection. In addition, some countries are considering or have passed legislation implementing data protection requirements or requiring local storage and processing of data or similar requirements that could increase the cost and complexity of delivering our services. Our costs to comply with the GDPR as well as any other similar laws and regulations that emerge may negatively impact our business.

ITEM 1A. RISK FACTORS

The following describes major risks to our business and should be considered carefully. Any of these factors could significantly and negatively affect our business, prospects, financial condition, or operating results, which could cause the trading prices of our equity securities to decline. The risks described below are not the only risks we may face. Additional risks and uncertainties not presently known to us, or risks that we currently consider immaterial, could also negatively affect us.

Summary of Risk Factors

The following is a summary of the principal risks that could significantly and negatively affect our business, prospects, financial conditions, or operating results. For a more complete discussion of the material risks facing our business, please see below:

Global Risks

- We are unable to predict the extent to which the ongoing COVID-19 pandemic and related supply chain constraints will continue to adversely impact our business operations, financial performance, results of operations, financial position and the achievement of our strategic objectives.
- Our business outlook is difficult to forecast and operating results are subject to significant fluctuations and are likely to be volatile.
- If global economic business and political conditions deteriorate as compared to the current environment it could have a material adverse impact on our business outlook and our business, operating results and financial condition.
- New and ongoing challenges relating to current supply chain constraints and impacts from inflation, including for satellite ground station and troposcatter components, could adversely impact our revenue, gross margins and financial results.
- We have significant operations in locations which could be materially and adversely impacted in the event of a terrorist attack or other significant disruptions (including natural disasters).
- The military conflict between Russia and Ukraine, and the global response to it could adversely impact our revenues, gross margins and financial results.

Business Risks

- Our backlog is subject to customer cancellation or modification.
- Contract cost growth on our firm fixed-price contracts exposes us to reduced profitability and the potential loss of future business and other risks.
- Our business is highly dependent on the budgetary decisions of our government customers.
- Our contracts with the U.S. government are subject to unique business, commercial and government audit risks.
- Our dependence on sales to international customers exposes us to unique business, commercial and export compliance audit risks.
- A change in our relationship with our large wireless carrier customers could have a material adverse effect.
- A change by wireless carrier partners in the pricing and other terms by which they offer our products to their end-customers could have a material adverse affect.

Strategic Growth Risks

- We face a number of risks relating to the expected long-term growth of our business.
- Loss of our executive officers or other key personnel or other changes to our management team could disrupt our operations and growth plans or harm our business.
- We must service the debt and maintain compliance with various covenants under a Credit Facility that imposes restrictions on our business.
- Acquisitions of companies and investments could prove difficult to integrate, disrupt our business, dilute stockholder value or adversely affect operating results or the market price of our common stock.
- Our investments in recorded goodwill and other intangible assets could be impaired as a result of future business conditions, a deterioration of the global economy or if we change our reporting unit structure.

Cybersecurity Risks

- We could be negatively impacted by a system failure, breach, attack or intrusion of our IT networks or those we operate for certain customers, or third-party data center facilities, servers and related systems.
- The measures we have implemented to secure information we collect and store or enable access to may be breached.

Legal, Regulatory and Litigation Risks

- Changes in U.S. federal, state and foreign tax law could adversely affect our business and financial condition.
- Our U.S. federal, state and foreign tax returns are subject to audit and a resulting tax assessment or settlement could have a material adverse effect on our business, results of operations and financial condition.
- We may be subject to environmental liabilities.
- The success of our business is dependent on compliance with FCC rules and regulations and similar foreign laws and regulations.
- Regulation of the mobile communications industry and VoIP is evolving, and unfavorable changes or our failure to comply with existing and potential new legislation or regulations could harm our business and operating results.
- Ongoing compliance with the provisions of securities laws, related regulations and financial reporting standards could unexpectedly materially increase our costs and compliance related expenses.
- Indemnification provisions in our contracts could have a material adverse effect on our consolidated results of operations, financial position, or cash flows.
- We are, from time to time, and could become a party to additional litigation or subject to claims.
- Protection of our intellectual property is limited and pursuing infringers of our patents and other intellectual property rights can be costly.
- Third parties may claim we are infringing their intellectual property rights and we could be prevented from selling our products, or suffer significant litigation expense, even if these claims have no merit.

Competitive Risks

- All of our business activities are subject to rapid technological change, new entrants, the introduction of other distribution models and long development and testing periods each of which may harm our competitive position.
- Our business is highly competitive, we are reliant upon the success of our partners, and some of our competitors have significantly greater resources than we do, which could result in a loss of customers, market share and/or market acceptance.
- We rely upon various third-party companies and their technology to provide services to our customers.

- Because our software may contain defects or errors, and our hardware products may incorporate defective components, our sales could decrease if these defects or errors adversely affect our reputation or delay shipments of our products.

Risks Related to our Common Stock

- Our stock price is volatile.
- Future issuances of our shares of common stock could dilute a stockholder's ownership interest in Comtech and reduce the market price of our shares of common stock.
- Actions of activist stockholders could impact the pursuit of our business strategies and adversely affect our results of operations, financial condition and/or share price.
- Provisions in our corporate documents and Delaware law could delay or prevent a change in control of Comtech.
- A disruption in our Common Stock dividend program could negatively impact our stock price.

Global Risks

The ongoing COVID-19 pandemic and related supply chain constraints have impacted our business, operating results and financial condition, as well as the operations and financial performance of many of the customers and suppliers in industries that we serve. We are unable to predict the extent to which the pandemic, supply chain constraints and related effects will adversely impact our business operations, financial performance, results of operations, financial position and the achievement of our strategic objectives.

The COVID-19 pandemic and related disease control measures have significantly impacted the global economy and has created significant supply chain constraints. These issues have had and could continue to have adverse effects on our business, financial position, results of operations and cash flows. Although there has been an increase in vaccinations throughout the United States, vaccinations internationally have progressed at a slower rate and the impact of new strains of the virus are uncertain. The situation is changing rapidly and there may be additional impacts of which we are currently unaware. The extent to which the COVID-19 pandemic impacts our business will depend on future developments, which cannot be predicted.

Poor business conditions due to the COVID-19 pandemic have resulted in the suppression of end-market demand for many of our products such as satellite ground station technologies and other short-lead time products. Because the timing, impact, severity and duration of these conditions are impossible to predict and remain ongoing, there is a risk that such conditions will have an adverse effect on our future consolidated results of operations, in particular in light of ongoing global supply chain disruptions, part shortages and extended lead times for components. The impact of the pandemic on our business has included or could in the future include:

- disruptions to or restrictions on our ability to ensure the continuous manufacture and supply of our products and services, including insufficiency of our existing inventory levels;
- temporary closures or reductions in operational capacity of our facilities or the facilities of our direct or indirect suppliers or customers;
- permanent closures of our direct and indirect suppliers, resulting in adverse effects to our supply chain;
- temporary shortages of skilled employees available to staff manufacturing, production and assembly facilities due to stay at home orders in many markets and travel restrictions within as well as into and out of countries;
- increases in operational expenses and other costs related to requirements implemented to mitigate the impact of the pandemic on our business and workforce;
- supply chain disruptions, including increased freight costs;
- delays or limitations on the ability of our customers to perform or make timely payments;
- cancellations in our backlog;
- reductions in short- and long-term demand for our products, or other disruptions in technology buying patterns;

- adverse effects on economies and financial markets globally or in various markets throughout the world, potentially leading to a prolonged economic downturn or reductions in business and consumer spending, which may adversely affect our results of operations and cause difficulty in managing inventory levels;
- delays to and/or lengthening of our sales or development cycles or qualification activity;
- challenges for us, our direct and indirect suppliers and our customers in obtaining financing due to turmoil in financial markets;
- workforce disruptions due to illness, quarantines, governmental actions, other restrictions, and/or the social distancing measures to mitigate the impact of COVID-19 at certain of our locations around the world in an effort to protect the health and well-being of our employees, customers, suppliers and of the communities in which we operate (including potential returns to restricting the number of employees attending events or meetings in person, limiting the number of people in our buildings and factories at any one time, restricting access to our facilities, suspending employee travel and meeting in person with customers);
- increased vulnerability to cyberattacks due to the significant number of employees working remotely; and
- our management team continuing to commit significant time, attention and resources to monitoring the COVID-19 pandemic and seeking to mitigate its effects on our business and workforce.

The ultimate extent of the impact of COVID-19 and supply chain constraints on our business, financial condition and results of operations will depend on future developments, which are still highly uncertain and cannot be predicted at this time. These impacts, individually or in the aggregate, have had and could continue to have adverse effects on our business, results of operations and financial condition. Such effect may be exacerbated in the event the pandemic, the measures taken in response to it, and their effects, persist for an extended period of time, or if there are periodic resurgences of COVID-19.

New and ongoing challenges relating to current supply chain constraints and impacts from inflation, including for satellite ground station and troposcatter components, could adversely impact our revenue, gross margins and financial results.

The global supply chain for certain raw materials and components, including those used in our satellite ground station and troposcatter equipment, has experienced significant strain in recent periods. The constrained supply environment has adversely affected, and could further affect, availability and lead times of raw materials and components, thereby impeding our ability to meet customer demand in circumstances where we cannot timely secure supply of components that meet our quality standards. Even when raw materials and components are available, they often come with higher prices reflecting an imbalance between supply and demand, as well as inflationary pressures affecting global markets.

The effects of the COVID-19 pandemic, inflation, labor challenges and the ongoing conflict between Russia and Ukraine have caused, and we expect will continue to cause further delays in the supply chain. Despite our attempts to mitigate the impact on our business, constrained supply conditions have and are expected to continue to adversely impact our costs of goods sold and may impact the timing and amount of revenue we realize. During fiscal 2022, we experienced disruptions in our supply chain relating to later-than-expected delivery of certain key components from several suppliers that adversely impacted our revenue in fiscal 2022. In addition, the ongoing supply chain issues have affected the quality of the components we receive. Certain parts received in fiscal 2022 did not meet our quality specifications and we were unable to use them.

We obtain certain components and subsystems from a single source or a limited number of sources. Some of our single source suppliers, particularly those that provide satellite ground station and troposcatter components, have reported to us that they are having disruptions in their respective supply chains. These single source components, which includes items such as cooling fans and power supplies, are in limited supply. In some cases, we have now depleted our stock inventory and we are on waiting lists to obtain additional components. In order to ship certain items during fiscal 2023, we must obtain additional components to produce certain finished goods. We continue to seek new suppliers and inventory elsewhere. In light of current challenges in the supply chain, we may not be able to qualify alternate suppliers for our components.

Heading into our fiscal 2023, we have a significant portion of our targeted revenues in our backlog. However, if shipments from our backlog are delayed or we are unable to obtain expected orders or components, our business outlook will prove to be inaccurate. These aforementioned supply chain constraints, and their related challenges could result in future shortages, increased material costs or use of cash, engineering design changes, and delays in new product introductions, each of which could adversely impact our revenue, gross margins and financial results. There can be no assurance that the impacts of all the aforementioned conditions will not continue, or worsen, in the future.

Our business outlook is difficult to forecast and operating results are subject to significant fluctuations and are likely to be volatile.

Historically, our business outlook is difficult to forecast and backlog (sometimes referred to herein as orders or bookings), net sales and operating results may vary significantly from period to period due to a number of factors including: sales mix; fluctuating market demand; start-up costs associated with the opening of our two new high-volume technology manufacturing centers; price competition; new product introductions by us or our competitors; customer bankruptcies; changing customer partnering procurement strategies; fluctuations in foreign currency exchange rates; unexpected changes in the timing of delivery of components or subsystems; the financial performance and impact of acquisitions; new accounting standards; political instability; regulatory developments; changes in income tax rates or tax credits; the price and expected volatility of our stock (which will impact, among other items, the amount of stock-based compensation expense we may record); general global economic conditions, and the impact of natural disasters or global pandemics.

We have experienced, and will experience in the future, significant fluctuations in bookings, net sales and operating results from period to period. For example, a sudden change in global economic conditions (or a worsening of the COVID-19 pandemic as described above) could have an immediate impact on a large portion of our net sales, a large amount of which are derived from products such as satellite ground station technologies, amplifier products and mission-critical technologies that generally have short order and lead times. Similarly, sales of certain of our public safety and location technologies are subject to sudden changes in wireless carrier procurement strategies, including decisions to sole-source such solutions or to perform such solutions internally. As a result, bookings and backlog related to these solutions are extremely sensitive to short-term fluctuations in customer demand.

In addition, a large portion of our consolidated net sales are derived in part from large U.S. federal and state government programs or large foreign government opportunities that are subject to lengthy sales cycles (including funding requirements) and are therefore difficult to predict.

If global economic business and political conditions deteriorate as compared to the current environment it could have an adverse impact on our business outlook and our business, operating results and financial condition.

Many of the end-markets for our products and services may be significantly impacted for other issues that result in adverse global economic conditions. For example, many of our international end-customers are in emerging and developing countries that are subject to sweeping economic and political changes. Many governments around the world are under pressure to reduce their spending. In recent years, global oil and natural gas prices have been volatile and have significantly impaired the ability of certain of our government customers in the oil and gas producing regions of the world to invest in telecommunications products and infrastructure. Additionally, the relative strength of the U.S. dollar against many international currencies has negatively impacted the purchasing power for many of our international end-customers because most of our sales are denominated in U.S. dollars. We generate significant sales from many emerging and developing countries and any such reduced purchasing power of our customers could adversely impact our sales and backlog.

In addition, many of our international customers (including our Middle Eastern and African customers) rely on European bank or government financing to procure funding for large systems, many of which include our equipment. We believe that European financing has been and will continue to be difficult to obtain. Volatility of financing conditions may cause our customers to be reluctant to spend funds required to purchase our equipment and could cause their projects to be postponed or canceled. In addition, if an adverse economic environment and lack of financing results in insolvencies for our customers, it would adversely impact the recoverability of our accounts receivable and/or inventories which would, in turn, adversely impact our results of operations.

The United Kingdom ("U.K.") exited from the European Union ("E.U.") on January 31, 2020. Such exit, commonly referred to as "Brexit," has created and may continue to create economic and political uncertainties and impacts that could have an adverse effect on our business, operations and profitability. Although the U.K. and E.U. entered a trade agreement for goods that was approved by the European Parliament in April 2021, there is no guarantee that it will remain in force as other cross-border issues remain contested. We maintain production, engineering and sales facilities in the U.K. and adverse consequences of Brexit could result in a deterioration in global economic conditions, instability in global financial markets, political and regulatory uncertainty, volatility in currency exchange rates, or adverse changes in the cross-border agreements currently in place, any of which could have an adverse impact on our financial results in the future.

We believe that the current global economic business environment is unstable and sudden negative changes could result in the immediate suppression of end-market demand for many of our products such as satellite ground station technologies and other short-lead time products. The timing, impact, severity and duration of these conditions are difficult to predict. If U.S. or global economic conditions deteriorate, or political conditions become unstable, or additional economic sanctions are imposed on some of our end-customers, it could adversely impact our business in a number of ways. In the past, our businesses have been negatively affected by uncertain economic environments in the overall market and, more specifically, in the telecommunications sector. Our customers have reduced their budgets for spending on telecommunications equipment and systems and in some cases postponed or reduced the purchase of our products and systems. In the future, our customers may again reduce their spending on telecommunications equipment and systems which would negatively impact both of our operating segments. If this occurs, it would adversely affect our business outlook, net sales, profitability and the recoverability of our assets, including intangible assets such as goodwill.

We have significant operations in Arizona, Florida, California, Washington State, Maryland, New York and other locations which could be materially and adversely impacted in the event of a terrorist attack and government responses thereto or significant disruptions (including natural disasters) to our business.

Terrorist attacks, the U.S. and other governments' responses thereto, and threats of war could adversely impact our business, results of operations and financial condition. For example, our 911 hosted location-based services and satellite teleport services operations depend on our ability to maintain our computer and equipment and systems in effective working order, and to protect our systems against damage from fire, natural disaster, terrorist attack, power loss, telecommunications failure, sabotage, unauthorized access to our system or similar events.

Any unanticipated interruption or delay in our operations or breach of security could have an adverse effect on our business, results of operations and financial condition. Our property and business interruption insurance may not be adequate to compensate us for any losses that may occur in the event of a terrorist attack, threat, system failure or a breach of security. Insurance may not be available to us at all or, if available, may not be available to us on commercially reasonable terms.

We currently, and intend to continue to, operate a high-volume technology manufacturing center located in Arizona. The COVID-19 pandemic, a terrorist attack or similar future event may disrupt our operations or those of our customers or suppliers and may affect the availability of materials needed to manufacture our products or the means to transport those materials to manufacturing facilities and finished products to customers. If a natural disaster or other business interruption occurred with respect to our high-volume technology manufacturing center, we do not have immediate access to other manufacturing facilities and, as a result, our business, results of operations and financial condition could be materially adversely affected. To support our long-term business goals for our satellite earth station product line, in fiscal 2021, we commenced a 15-year lease for a new 146,000 square foot facility in Chandler, Arizona and began shifting production of our satellite earth station products from our existing Tempe, Arizona locations. If we are unable to have a smooth transition to our new facility, production and deliveries of our products may be impacted and we may incur unexpected costs.

We design and manufacture our over-the-horizon microwave equipment and systems in Florida, where major hurricanes have occurred in the past, and amplifiers in Santa Clara, California, an area close to major earthquake fault lines, and also manufacture amplifiers in Melville, New York, an area subject to hurricanes. Additionally, certain of our Terrestrial and Wireless Networks segment activities are conducted in Washington State near a fault line. We maintain operations in Maryland near a U.S. Navy facility which may be more prone to a terrorist attack. Our operations in these and other locations (such as in our high-volume technology manufacturing center located in Arizona and our antenna production facility in the United Kingdom), could be subject to natural disasters or other significant disruptions, including hurricanes, tornadoes, typhoons, tsunamis, floods, earthquakes, fires, water shortages, other extreme weather conditions, medical epidemics, acts of terrorism, power shortages and blackouts, telecommunications failures, and other natural and man-made disasters or disruptions.

We cannot be sure that our systems will operate appropriately if we experience hardware or software failure, intentional disruptions of service by third parties, an act of God or an act of war. A failure in our systems could cause delays in transmitting data, and as a result we may lose customers or face litigation that could involve material costs and distract management from operating our business.

In the event of any such disaster or other disruption, we could experience disruptions or interruptions to our operations or the operations of our suppliers, distributors, resellers or customers; destruction of facilities; and/or loss of life, all of which could materially increase our costs and expenses and adversely affect our business, results of operations and financial condition.

In addition, the COVID-19 pandemic has resulted in travel restrictions and business shutdowns both domestically and globally, including in locations in which we have significant operations. These or any further political, governmental or other actions to contain the spread or treat the impact of COVID-19, and the resulting developments, are highly uncertain and unpredictable and could result in social, economic and labor instability. These uncertainties could have an adverse effect on the continuity of our business and our financial condition, the results of operations and cash flows.

The military conflict between Russia and Ukraine, and the global response to it could adversely impact our revenues, gross margins and financial results.

The U.S. government and other nations have imposed significant restrictions on most companies' ability to do business in Russia. It is not possible to predict the broader or longer-term consequences of this conflict, which could include further sanctions, embargoes, regional instability, geopolitical shifts, adverse effects on macroeconomic conditions, security conditions, currency exchange rates and financial markets. Such geo-political 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 regions based on trade restrictions, embargoes, export control law restrictions, and logistics restrictions including closures of air space, and could increase the costs, risks and adverse impacts from these new challenges. We may also be the subject of increased cyber-attacks as a result of the conflict.

The military conflict between Russia and Ukraine has impacted our sales pipeline and continues to have significant repercussions for our business. Although sales into Russia represented approximately 1% of our consolidated net sales in fiscal 2022 and 2021, consolidated net sales into Russia in fiscal 2023 and beyond were expected to significantly grow. As a result of the economic sanctions against Russia, we are assuming no new sales in Russia in fiscal 2023 and the foreseeable future.

As a result of this conflict, in fiscal 2022, certain customers (including the U.S. and Ukrainian government) paused procurement and deployment of satellite and troposcatter communication systems, and instead began purchasing war-fighting equipment.

For example, we had several opportunities to provide wireless communication systems (including troposcatter systems) to Ukraine for a variety of both defense and communications uses. Funding for these systems was expected to be provided by Ukraine and by the U.S. government and these items were expected to be awarded and shipped in the second half of fiscal 2022. As result of the conflict in Ukraine, it has become difficult to predict the timing or dollar amount of these types of awards. Additionally, funding for opportunities with other customers that we expected to book and ship has also been shifted to other programs and/or temporarily delayed as a result of changes in defense spending priorities.

Prior to this conflict, we maintained a small group of employees in Moscow, Russia who supported certain UHP-branded satellite communications products. We are actively hiring new employees, expanding our Canadian operations and shifting certain commercial software development and support activities outside of Russia. However, as we are currently in an environment where software engineering talent is already in high demand and commands a premium, we expect to incur additional annual expenses in connection with this personnel shift for our UHP products. We may not be able to timely ramp up our operations in Canada or elsewhere on a sufficient scale to support anticipated growth of our UHP products, which could adversely impact future revenues, gross margins and operations.

Business Risks

Our backlog is subject to customer cancellation or modification and such cancellations could result in a decline in sales and increased provisions for excess and obsolete inventory.

We currently have a backlog of orders, mostly under contracts that our customers may modify or terminate. Almost all of the contracts in our backlog (including firm orders previously received from the U.S. government) are subject to cancellation at the convenience of the customer or for default in the event that we are unable to perform under the contract.

In some cases, such as contracts received from large U.S. based telecommunication companies, our backlog is computed by multiplying the most recent month's contract or revenue by the months remaining under the existing long-term agreements, which we consider to be the best available information for anticipating revenue under those agreements. Also, a significant portion of the backlog from our U.S. commercial customers relates to large, multi-year contracts to provide state and local governments (and their agencies) with public safety and location technology solutions. Funding of these contracts is often subject to the approval of budgets (for example, on an annual or bi-annual basis). Although funding for these multi-year contracts are dependent on future budgets being approved, we include the full estimated value of these large, multi-year contracts in our backlog given the critical nature of the services being provided and the positive historical experience of our state and local government customers passing their respective budgets.

There can be no assurance that our backlog will result in actual revenue in any particular period, or at all, particularly during periods of economic instability. Nor can there be any assurance that any contract included in backlog will be profitable. The actual amount and timing of any revenue is subject to various contingencies, many of which are beyond our control. The actual recognition of revenue on contracts included in backlog may never occur or may change because a program schedule could change; a customer may not follow up with order details (e.g., delivery instructions), fluctuations in currency exchange rates after an order is placed could cause our products to become too expensive for a foreign customer; a customer's program could be canceled, a contract could be reduced, modified or terminated early due to changes in a customer's priorities; funding may not be included in future budgets; actual indirect rates being reimbursed on U.S. government contracts may ultimately be less than those indirect rates included in our initial proposals; or an option that we had assumed would be exercised is not exercised.

We record a provision for excess and obsolete inventory based on historical and projected usage trends and other factors, including the consideration of the amount of backlog we have on hand at any particular point in time. If orders in our backlog are canceled or modified, our estimates of future product demand may prove to be inaccurate, in which case we may have understated the provision required for excess and obsolete inventory. In the future, if we determine that our inventory is overvalued, we will be required to recognize such costs in our financial statements at the time of such determination. Any such charges could be materially adverse to our results of operations and financial condition.

Contract cost growth on our firm fixed-price contracts, including most of our government contracts, cost reimbursable type contracts and other contracts that cannot be justified as an increase in contract value due from customers exposes us to reduced profitability and the potential loss of future business and other risks.

A substantial portion of our products and services are sold under firm fixed-price contracts. Firm fixed-price contracts inherently have more risk than flexibly priced contracts. This means that we bear the risk of unanticipated technological, manufacturing, supply or other problems, price increases or other increases in the cost of performance. Future events could result in either upward or downward adjustments to those estimates which could negatively impact our profitability. Operating margin could be materially adversely affected when contract costs that cannot be billed to the customer are incurred. This cost growth can occur if initial estimates used for calculating the contract price were incorrect, or if estimates to complete increase. To a lesser extent, we provide products and services under cost reimbursable type contracts which carry the entire burden of costs exceeding a negotiated contract ceiling price.

The cost estimation process requires significant judgment and expertise. Reasons for cost growth may include unavailability and productivity of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any delays in performance, availability and timing of funding from the customer, natural disasters, and the inability to recover any claims included in the estimates to complete. A significant change in an estimate on one or more programs could have a material adverse effect on our business, results of operations and financial condition.

Our business is highly dependent on the budgetary decisions of our government customers, including the U.S. government (including prime contractors to the U.S. government), and changes in the U.S. government's fiscal policies or budgetary priorities may have a material adverse effect on our business, operating results and financial condition.

During our fiscal years ended July 31, 2022, 2021 and 2020, sales to the U.S. government (including sales to prime contractors to the U.S. government) were \$132.6 million, \$201.1 million and \$223.4 million or 27.2%, 34.6% and 36.2% of our consolidated net sales, respectively. In addition, a large portion of our existing backlog consists of orders related to U.S. government contracts and our Business Outlook for Fiscal 2023 and beyond depends, in part, on significant new orders from the U.S. government, which undergoes extreme budgetary pressures from time to time.

We rely on particular levels of U.S. government spending on our communication solutions, and our receipt of future orders depends in large part on continued funding by the U.S. government for the programs in which we participate. These spending levels are not generally correlated with any specific economic cycle, but rather follow the cycle of general public policy and political support for this type of spending. Government contracts are conditioned upon the continuing availability of congressional appropriations and Congress's failure to appropriate funds, or Congress's actions to reduce or delay spending on, or reprioritize its spending away from, U.S. government programs which we participate in, could negatively affect our results of operations. Because many of the items we sell to the U.S. government are included in large programs realized over a period of several years, it is difficult, if not impossible, to determine specific amounts that are or will be appropriated for our products and services. As such, our assessments relating to the impact of changes in U.S. government spending may prove to be incorrect.

The federal debt limit continues to be actively debated as plans for long-term national fiscal policy are discussed. The outcome of these discussions could have a significant impact on defense spending broadly and programs we support in particular. The failure of Congress to approve future budgets and/or increase the debt ceiling of the U.S. on a timely basis could delay or result in the loss of contracts for the procurement of our products and services and we may be asked or required to continue to perform for some period of time on certain of our U.S. government contracts, even if the U.S. government is unable to make timely payments. A decrease in Department of Defense or Department of Homeland Security expenditures, the elimination or curtailment of a material program in which we are involved (such as the withdrawal of troops from Afghanistan or other parts of the world), or changes in payment patterns of our customers as a result of changes in U.S. government spending could have an adverse effect on our business, results of operations and financial condition.

It is possible that a shutdown of the U.S. government may occur, or interim budgets may be adopted. As such, we may experience delayed orders, delayed payments and adverse impacts on our results of operations. We may experience related supply chain delays, disruptions or other problems associated with financial constraints faced by our suppliers and subcontractors. Moreover, an outbreak of a pandemic such as the COVID-19 pandemic and associated quarantines, closures and travel restrictions may cause temporary or long-term disruptions in our supply chain and distribution systems. All of the aforementioned conditions and factors could, in the aggregate, have a material adverse effect on our business, results of operations and financial condition. Additionally, cost cutting, efficiency initiatives, reprioritization, other affordability analyses, and changes in budgetary priorities by our governmental customers, including the U.S. government, could adversely impact both of our operating segments. We are unable to predict the impact these or similar events could have on our business, financial position, results of operations or cash flows.

Our contracts with the U.S. government are subject to unique business, commercial and government audit risks.

We depend on the U.S. government for a significant portion of our revenues. Our contracts with the U.S. government are subject to unique business and commercial risks, including:

- unexpected contract or project terminations or suspensions;
- unpredictable order placements, reductions, accelerations, delays or cancellations;
- higher than expected final costs, particularly relating to software and hardware development, for work performed under contracts where we commit to specified deliveries for a fixed-price; and
- unpredictable cash collections of unbilled receivables that may be subject to acceptance of contract deliverables by the customer and contract close out procedures, including government audit and approval of final indirect rates.

Although we take steps to mitigate our risk with respect to contracts with the U.S. government, we may not be able to do so in every instance for any of the following reasons, among others:

- Our U.S. government contracts can easily be terminated by the U.S. government - Our U.S. government contracts can be terminated by the U.S. government for its convenience or upon an event of default by us. Termination for convenience provisions provide us with little to no recourse related to: our potential recovery of costs incurred or costs committed, potential settlement expenses and hypothetical profit on work completed prior to termination.

- Our U.S. government contracts are subject to funding by the U.S. Congress - Our U.S. government contracts are conditioned upon the continuing approval by Congress of the necessary funding. Congress usually appropriates funds for a given program on a fiscal year basis even though contract performance may take more than one year. Consequently, at the beginning of a major program, the contract may not be fully funded, and additional monies are normally committed to the contract only if, and when, appropriations are made by Congress for future fiscal years. Delays or changes in funding can impact the timing of awards or lead to changes in program content. We obtain certain of our U.S. government contracts through a competitive bidding process. There can be no assurance that we will win additional contracts or that actual contracts that are awarded will ultimately be profitable.
- We can be disqualified as a supplier to the U.S. government - As a supplier to the U.S. government, we must comply with numerous regulations, including those governing security, contracting practices and classified information. Failure to comply with these regulations and practices could result in fines being imposed against us or our suspension for a period of time from eligibility for bidding on, or for award of, new government contracts. If we are disqualified as a supplier to government agencies, we would lose most, if not all, of our U.S. government customers and revenues from sales of our products would decline significantly.
- Our employees may not be able to obtain and maintain the required security clearances for the facilities in which we perform sensitive government work - Certain of our U.S. government contracts require our employees to maintain various levels of security clearances, and we are required to maintain certain facility security clearances. If we cannot maintain or obtain the required security clearances for our facilities and our employees, or obtain these clearances in a timely manner, we may be unable to perform certain U.S. government contracts. Further, loss of a facility clearance, or an employee's failure to obtain or maintain a security clearance, could result in a U.S. government customer terminating an existing contract or choosing not to renew a contract. Lack of required clearances could also impede our ability to bid on or win new U.S. government contracts. This could damage our reputation and adversely affect our business, financial condition and results of operations.

In addition, all of our U.S. government contracts can be audited by the Defense Contract Audit Agency ("DCAA") and other U.S. government agencies and we can be subject to penalties arising from post-award contract audits (sometimes referred to as a Truth in Negotiations Act or "TINA" audit) or cost audits in which the value of our contracts may be reduced. If costs are found to be improperly allocated to a specific contract, those costs will not be reimbursed, and any such costs already reimbursed would be required to be refunded. TCS underwent audits by the DCAA for periods prior to Comtech's fiscal 2016 acquisition of TCS. The DCAA has informed us that it is proposing retroactive contracts adjustments that, if finalized and issued, would result in the need for us to provide a refund to the U.S. government of approximately \$2.4 million. We disagree with the DCAA's assessment and would vigorously protest any adjustment, but ultimately an adjustment may be issued. Although we record contract revenues based upon costs we expect to realize upon final audit, we cannot predict the outcome of any such future audits and adjustments, and we may be required to materially reduce our revenues or profits upon completion and final negotiation of audits. Negative audit findings could also result in termination of a contract, forfeiture of profits, suspension of payments, fines and suspension or debarment from U.S. government contracting or subcontracting for a period of time.

Our dependence on sales to international customers exposes us to unique business, commercial and export compliance audit risks.

Sales for use by international customers (including sales to U.S. companies for inclusion in products that will be sold to international customers) represented approximately 25.0%, 23.9% and 23.5% of our consolidated net sales for the fiscal years ended July 31, 2022, 2021 and 2020, respectively, and we expect that international sales will continue to be a significant portion of our consolidated net sales for the foreseeable future. These sales expose us to certain risks, including barriers to trade, fluctuations in foreign currency exchange rates (which may make our products less price-competitive), political and economic instability, exposure to public health epidemics, availability of suitable export financing, tariff regulations, and other U.S. and foreign regulations that may apply to the export of our products. Although we take steps to mitigate our risk with respect to international sales, we may not be able to do so in every instance for any of the following reasons, among others:

- We may not be able to continue to structure our international contracts to reduce risk - We attempt to reduce the risk of doing business in foreign countries by seeking subcontracts with large systems suppliers, contracts denominated in U.S. dollars, advance or milestone payments and irrevocable letters of credit in our favor. However, we may not be able to reduce the economic risk of doing business in foreign countries in all instances. In such cases, billed and unbilled receivables relating to international sales are subject to increased collectability risk and may result in significant write-offs, which could have a material adverse effect on our business, results of operations and financial condition. In addition, foreign defense contracts generally contain provisions relating to termination at the convenience of the government.
- We rely on a limited number of international sales agents - In some countries, we rely upon one or a small number of sales agents, exposing us to risks relating to our contracts with, and related performance of, those agents. We attempt to reduce our risk with respect to sales agents by establishing additional foreign sales offices where it is practical and by engaging, where practicable, more than one independent sales representative in a territory. It is our policy to require all sales agents to operate in compliance with applicable laws, rules and regulations. Violations of any of these laws, rules or regulations, and other business practices that are regarded as unethical, could interrupt the sales of our products and services, result in the cancellation of orders or the termination of customer relationships, and could damage our reputation, any of which developments could have a material adverse effect on our business, results of operations and financial condition.
- We must comply with all applicable export control laws and regulations of the U.S. and other countries - Certain of our products and systems may require licenses from U.S. government agencies for export from the U.S., and some of our products are not permitted to be exported. In addition, in certain cases, U.S. export controls also severely limit unlicensed technical discussions, such as discussions with any persons who are not U.S. citizens or permanent residents. As a result, in cases where we may need a license, our ability to compete against a non-U.S. domiciled foreign company that may not be subject to the same U.S. laws may be materially adversely affected. U.S. laws and regulations applicable to us include the Arms Export Control Act, the IEEPA, the ITAR, the EAR and the trade sanctions laws and regulations administered by the U.S. Treasury Department's OFAC.
- We must comply with the FCPA and similar laws elsewhere - We are subject to the FCPA and other foreign laws prohibiting corrupt payments to government officials, which generally bar bribes or unreasonable gifts to foreign governments or officials. Violations of these laws or regulations could result in significant sanctions, including disgorgement of profits, fines, criminal sanctions against us, our officers, our directors, or our employees, more onerous compliance requirements, more extensive debasements from export privileges or loss of authorizations needed to conduct aspects of our international business. A violation of any of the regulations enumerated above could materially adversely affect our business, financial condition and results of operations. Although we have implemented policies and procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our employees, contractors, agents, or subsidiaries will not violate our policies. Additionally, changes in regulatory requirements which could restrict our ability to deliver services to our international customers, including the addition of a country to the list of sanctioned countries under the IEEPA or similar legislation could negatively impact our business. For the fiscal years ended July 31, 2022, 2021 and 2020, we conducted no business with states designated as sponsors of terrorism.

- We must maintain a company-wide Office of Trade Compliance - In the past, we have self-reported violations of export control laws or regulations to the U.S. Department of State, Directorate of Defense Trade Controls ("DDTC"), DoC and OFAC. In addition, we have made various commitments to U.S. government agencies that oversee trade and export matters and have committed that we will maintain certain policies and procedures including maintaining a company-wide Chief Trade Compliance Officer and Office of Trade Compliance and conducting ongoing internal assessment and reporting any future violations to those agencies. Even though we take precautions to avoid engaging in transactions that may violate U.S. export control laws or regulations, including trade sanctions, those measures may not be effective in every instance. If it is determined that we have violated U.S. export control laws or regulations or trade regulations, civil and criminal penalties could apply, and we may suffer reputational harm.
- We are subject to future export compliance audits - We continue to implement policies and procedures to ensure that we comply with all applicable export control laws and regulations. We may be subject to future compliance audits that uncover improper or illegal activities that would subject us to material remediation costs, civil and criminal fines and/or penalties and/or an injunction. In addition, we could suffer serious reputational harm if allegations of impropriety were made against us. Each of these outcomes could, individually or in the aggregate, have a material adverse effect on our business, results of operations and financial condition. The absence of comparable restrictions on competitors in other countries may adversely affect our competitive position. In addition, in order to ship our products into and implement our services in some countries, the products must satisfy the technical requirements of that particular country. If we were unable to comply with such requirements with respect to a significant quantity of our products, our sales in those countries could be restricted, which could have a material adverse effect on our business, results of operations and financial condition.
- We may be affected by the future imposition of tariffs and trade restrictions - The current U.S. administration has generally not amended the trade policies and tariffs on imported products from the prior administration, and has increased sanctions against Russia. Our inability to effectively manage the negative impacts of U.S. and foreign trade policies, including, in connection with our business with customers outside of the United States or with newly sanctioned entities could adversely affect our business and financial results.

A change in our relationship with our large wireless carrier customers could have a material adverse effect on our business, results of operations and financial condition.

Although we have a long history of providing services to many of our wireless carrier partners, a change in purchasing or procurement strategies by a wireless carrier partner could result in the loss of business from that partner. Additionally, from time to time, we routinely perform services without a multi-period contract while we negotiate new and extended contract terms and pricing. These negotiations are complex and may take long periods of time. Even when we successfully negotiate a multi-period contract, our wireless carrier contracts, such as the ones with Verizon which collectively accounted for 11.1% of our sales in fiscal 2022, provide for terminations with notice and provide a mechanism for the wireless carrier to renegotiate lower fees and/or change services. Fee pressure from these carriers is constant and ongoing. Thus, even when we obtain a multi-period contract term, our revenues could be suddenly and materially reduced.

Competitors offer technology that has functionality similar to ours for free, under different business models. Competition from such free offerings may reduce our revenue and harm our business. If our wireless carrier partners or our competition can offer such technology to their subscribers or customers for free, they may elect to cease their relationships with us, alter or reduce the manner or extent to which they market or offer our services or require us to substantially reduce our subscription fees or pursue other business strategies that may not prove successful for us and could have a material adverse effect on our business, results of operations and financial condition.

If our wireless carrier partners change the pricing and other terms by which they offer our products to their end-customers or do not continue to provide our services at all or renegotiate lower fees with us, our business, results of operations, and financial condition could be suddenly and materially adversely affected.

We generate a significant portion of our revenue from customers that are wireless carriers. In addition, a portion of our revenue is derived from subscription fees that we receive from our wireless carrier partners for end-users who subscribe to our service on a standalone basis or in a bundle with other services. Future revenue will depend on the pricing and quality of those services and subscriber demand for those services, which may vary by market, and the level of subscriber turnover experienced by our wireless carrier partners. If subscriber turnover increases more than we anticipate, our financial results could be materially adversely affected.

Poor performance in or disruptions of the services included in our advanced communication solutions could harm our reputation, delay market acceptance of our services and subject us to liabilities (including breach of contract claims brought by our customers and third-party damages claims brought by end-users). Our wireless carrier agreements and certain customers require us to meet specific requirements including operational uptime requirements or be subject to penalties.

If we are unable to meet contractual requirements with our wireless carrier partners, they could terminate our agreements or we may be required to refund a portion of monthly subscriptions fees they have paid us.

Strategic Growth Risks

We face a number of risks relating to the expected long-term growth of our business. Our business and operating results may be negatively impacted if we are unable to manage this growth.

Our business is uniquely subject to certain risks related to its long term growth. These risks include:

- The loss of key technical and/or management personnel could adversely affect our business - Our future success depends on the continued contributions of key technical and management personnel. The management skills that have been appropriate for us in the past may not continue to be appropriate if we grow and diversify. Filling new positions may be difficult in the current competitive labor market. Moreover, many of our key and technical management personnel would be difficult to replace and are not subject to employment or non-competition agreements. We currently have research and development employees in areas that are located a great distance away from our U.S. headquarters and some work out of their respective homes. Managing remote product development operations is difficult and we may not be able to manage the employees in these remote centers successfully. Our expected growth and future success will depend, in large part, upon our ability to attract and retain highly qualified engineering, sales and marketing personnel. Competition for such personnel from other companies, academic institutions, government entities and other organizations is intense. Although we believe that we have been successful to date in recruiting and retaining key personnel, we may not be successful in attracting and retaining the personnel we will need to grow and operate profitably, especially in the current competitive labor market.
- We may not be able to improve our processes and systems to keep pace with anticipated growth - The future growth of our business may place significant demands on our managerial, operational, production and financial resources. In order to manage that growth, we must be prepared to improve and expand our management, operational and financial systems and controls, as well as our production capabilities. We also need to continue to recruit and retain personnel and train and manage our employee base. We must carefully manage research and development capabilities and production and inventory levels to meet product demand, new product introductions and product and technology transitions. Our planned moves to new high volume manufacturing facility in Chandler, Arizona may be delayed and subject to unforeseen costs (both capital and operational), which could impede our ability to complete customer orders and thereby have a material adverse effect on our business, results of operations and financial condition. If we are not able to timely and effectively manage our growth and maintain the quality standards required by our existing and potential customers, it could have an adverse effect on our business, results of operations and financial condition.
- Our markets are highly competitive and there can be no assurance that we can continue to compete effectively - The markets for our products are highly competitive. There can be no assurance that we will be able to continue to compete successfully on price or other terms, or that our competitors will not develop new technologies and products that are more effective than our own. We expect the Department of Defense's increased use of commercial off-the-shelf products and components in military equipment will encourage new competitors to enter the market. Also, although the implementation of advanced telecommunications services is in its early stages in many developing countries, we believe competition will continue to intensify as businesses and foreign governments realize the market potential of telecommunications services. Many of our competitors have financial, technical, marketing, sales and distribution resources greater than ours. Recently, we have seen increased requests for proposals from large wireless carriers for sole-source solutions and have responded to several such requests. In order to induce retention of existing customer contracts and obtain business on a sole-source basis, we may ultimately agree to adjust pricing on a retroactive basis. If our sole-source proposals are rejected in favor of a competitor's proposal, it could result in the termination of existing contracts, which could have a material adverse effect on our business, results of operations and financial condition.

- We may not be able to obtain sufficient components to meet expected demand - Our dependence on component availability, government furnished equipment, subcontractors and key suppliers, including the core manufacturing expertise of our high-volume technology manufacturing center located in Arizona exposes us to risk. Although we obtain certain components and subsystems from a single source or a limited number of sources, we believe that most components and subsystems are available from alternative suppliers and subcontractors. During the past three years, partly driven by the COVID-19 pandemic and as a result of overall increased industry-wide demand, lead times for many components have increased as well as freight costs. In addition, threats of or actual tariffs could limit our ability to obtain certain parts on a cost-effective basis, or at all. A significant interruption in the delivery of such items could have an adverse effect on our business, results of operations and financial condition. Similarly, if our high-volume technology manufacturing center located in Arizona is unable to produce sufficient product or maintain quality, it could have a material adverse effect on our business, results of operations and financial condition.
- Our ability to maintain affordable credit insurance may become more difficult - In the normal course of our business, we purchase credit insurance to mitigate some of our domestic and international credit risk. Although credit insurance remains generally available, upon renewal, it may become more expensive to obtain or may not be available for existing or new customers in certain international markets and it might require higher deductibles than in the past. If we acquire a company with a different customer base, we may not be able to obtain credit insurance for those sales. As such, there can be no assurance that, in the future, we will be able to obtain credit insurance on a basis consistent with our past practices.

Loss of our executive officers or other key personnel or other changes to our management team could disrupt our operations and growth plans or harm our business.

We depend on the efforts of our executive officers and certain key personnel. Any unplanned turnover or our failure to develop an adequate succession plan or business continuity plan for one or more of our executive officers, including our Chief Executive Officer ("CEO"), or other key positions could deplete our institutional knowledge base and erode our competitive advantage. The loss or limited availability of the services of one or more of our executive officers or other key personnel, or our inability to recruit and retain qualified executive officers or other key personnel in the future, could, at least temporarily, have an adverse effect on our operating results and financial condition. Leadership transitions can be inherently difficult to manage, and an inadequate transition may cause disruption to our business and growth plans, including to our relationships with our customers and employees.

We have incurred indebtedness under a Credit Facility, and may incur substantial additional indebtedness in the future, and may not be able to service that debt in the future and we must maintain compliance with various covenants that impose restrictions on our business.

On October 31, 2018, we entered into a First Amended and Restated Credit Agreement (the "Credit Facility") with a syndicate of lenders, replacing our prior Credit Agreement dated as of February 23, 2016. The Credit Facility provides a senior secured loan facility of up to \$550.0 million consisting of: (i) a revolving loan facility with a borrowing limit of \$300.0 million; (ii) an accordion feature allowing us to borrow up to an additional \$250.0 million; (iii) a \$35.0 million letter of credit sublimit; and (iv) a swingline loan credit sublimit of \$25.0 million. The obligations under the Credit Facility are secured by substantially all of our tangible and intangible assets.

As of July 31, 2022, the amount outstanding under our Credit Facility was \$130.0 million, which is reflected in the non-current portion of long-term debt on our Consolidated Balance Sheet. As of July 31, 2022, we also had \$0.6 million of standby letters of credit outstanding under our Credit Facility related to guarantees of future performance on certain customer contracts.

The Credit Facility matures on October 31, 2023. If we do not have sufficient funds to repay our debt when due, it may be necessary to refinance our debt through additional debt or equity financings. If, at the time of any refinancing, prevailing interest rates or other factors result in higher interest rates on such refinancing, increases in interest expense could have a material adverse effect on our business, results of operations and financial condition.

Our Credit Facility contains various affirmative and negative covenants that may restrict our ability to, among other things, permit liens on our property, change the nature of our business, transact business with affiliates and/or merge or consolidate with any other person or sell or convey certain of our assets to any one person.

We anticipate maintaining compliance with the terms and financial covenants in our Credit Facility for the foreseeable future, however, there can be no assurance that we will be able to meet these covenants.

Further, our ability to comply with covenants, terms of and conditions our facility may be affected by events beyond our control. Failure to comply with covenants could result in an event of default, which, if not cured or waived, could accelerate our repayment obligations. Our substantial debt obligations could impede, restrict or delay the implementation of our business strategy or prevent us from entering into transactions that would otherwise benefit our business. For example:

- we may be required to dedicate a substantial portion of our cash flows from operations to payments on our indebtedness, thereby reducing the availability of our cash flows for other purposes, including but not limited to business development efforts, capital expenditures, dividends or strategic acquisitions;
- if we are not able to generate sufficient cash flows to meet our substantial debt service obligations or to fund our other liquidity needs, we may have to take actions such as selling assets or raising additional equity or reducing or delaying capital expenditures, strategic acquisitions, investments and joint ventures, restructuring our debt and other capital-intensive activities;
- we may not be able to fund future working capital, capital investments and other business activities;
- we may not be able to pay dividends or make certain other distributions;
- we may become more vulnerable in the event of a downturn in our business or a worsening of general economic or industry-specific conditions; and
- our flexibility in planning for, or reacting to, changes in our business and industry may be limited, thereby placing us at a competitive disadvantage compared to our competitors that have less indebtedness.

Moreover, we may incur substantial additional indebtedness in the future to fund acquisitions or to fund other activities for general business purposes. If additional new debt is added to the current or planned debt levels, the related risks that we now face could intensify. A substantial increase in our indebtedness could also have a negative impact on our credit ratings. In this regard, failure to maintain our credit ratings could adversely affect the interest rate available to us in future financings, as well as our liquidity, competitive position and access to capital markets. Any decision regarding future borrowings will be based on the facts and circumstances existing at the time, including market conditions and our credit ratings.

The holders of our Series A Preferred Convertible Stock have a majority vote consent right over our ability to amend, restate, or replace the Credit Agreement on terms that are materially different to those of the Credit Agreement or that adversely affect the Company's ability to fulfill its repurchase obligations of the Series A Preferred Convertible Stock. If we need to amend, restate or replace the Credit Agreement on materially different terms or terms adverse to the interests of the holders of our Series A Preferred Convertible Stock, and we are unable to obtain the consent of such holders, we may be unable to obtain required financing or liquidity on favorable terms, or at all.

Acquisitions of companies and investments could prove difficult to integrate, disrupt our business, dilute stockholder value or adversely affect operating results or the market price of our common stock.

We expect to continue to evaluate other acquisitions and investments as part of our growth plans. Such efforts may not result in an acquisition or ultimately be beneficial to us.

Future acquisitions or investments may result in the use of significant amounts of cash, potentially dilutive issuances of equity securities, incurrence of large amounts of debt, increases to amortization expense and future write-offs of the acquired intangibles. Acquisitions and investments involve risks that include failing to:

- properly evaluate the technology;
- accurately forecast the financial impact of the transaction, including accounting charges and transaction expenses;
- integrate the technologies, products and services, research and development, sales and marketing, support and other operations;
- integrate and retain key management personnel and other key employees;
- retain and cross-sell to acquired customers; and

- combine potentially different corporate cultures.

Acquisitions and investments could also:

- divert management's attention away from the operation of our businesses;
- result in significant goodwill and intangibles write-offs in the event an acquisition or investment does not meet expectations; and
- increase expenses, including expenses of managing the growth of such acquired businesses.

There can be no assurance that any future acquisition or investment will be successful within the anticipated time frame, or at all, will be as valuable as the amount we pay to acquire it, and will not adversely affect our business, results of operations or financial condition. In addition, if we consummate future acquisitions using our equity securities or securities convertible into our equity securities, existing stockholders may be diluted, which could have a material adverse effect on the market price of our common stock.

Foreign acquisitions and investments are regularly subject to scrutiny by the U.S. government and its agencies, such as the Committee on Foreign Investment in the United States ("CFIUS") and the Defense Counterintelligence and Security Agency ("DCSA") and our role as a U.S. federal contractor escalates such scrutiny, in particular, with respect to compliance with industrial security requirements. Failure to comply with the requirements of the U.S. government could result in fines being imposed against us or our suspension for a period of time of authority to operate under certain government programs or from eligibility for bidding on, or for award of, new government contracts, which could have a material adverse effect on our business, results of operations and financial condition.

Our investments in recorded goodwill and other intangible assets could be impaired as a result of future business conditions, a deterioration of the global economy or if we change our reporting unit structure.

As of July 31, 2022, goodwill recorded on our Consolidated Balance Sheet aggregated \$347.7 million. Additionally, as of July 31, 2022, net intangibles recorded on our Consolidated Balance Sheet aggregated \$247.3 million.

For purposes of reviewing impairment and the recoverability of goodwill and other intangible assets, our Satellite and Space Communications and Terrestrial and Wireless Networks segments each constitute a reporting unit and we must make various assumptions in determining their estimated fair values. Reporting units are defined by how our Chief Executive Officer ("CEO") manages the business, which includes resource allocation decisions. We may, in the future, change our management approach which in turn may change the way we define our reporting units, as such term is defined by Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 350 "*Intangibles - Goodwill and Other*." A change to our management approach may require us to perform an interim goodwill impairment test and possibly record impairment charges in a future period.

In accordance with FASB ASC 350, "*Intangibles - Goodwill and Other*," we perform a goodwill impairment analysis at least annually (in the first quarter of each fiscal year), unless indicators of impairment exist in interim periods. If we fail the quantitative assessment of goodwill impairment ("quantitative assessment"), we would be required to recognize an impairment loss equal to the amount that a reporting unit's carrying value exceeded its fair value; however, any loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

As a result of our segment restructuring in the fourth quarter of fiscal 2022 from the Commercial Solutions and Government Solutions segments to the Satellite and Space Communications and Terrestrial and Wireless Networks segments, we performed an interim, quantitative assessment as of July 29, 2022 and estimated the fair value of each of our reporting units, both before and after the change, using a combination of the income and market approaches. Based on our quantitative evaluations, we determined that our Satellite and Space Communications and Terrestrial and Wireless Networks reporting units had estimated fair values in excess of their carrying values of at least 18.4% and 11.6%, respectively, and concluded that our goodwill was not impaired and that neither of our two reporting units was at risk of failing the quantitative assessment. Given its proximity to our next regularly scheduled annual goodwill impairment testing date, we utilized our July 29, 2022 interim, quantitative assessment to conclude that our goodwill was not impaired and that neither of our two reporting units was at risk of failing the quantitative assessment as of August 1, 2022.

It is possible that, during fiscal 2023 or beyond, business conditions (both in the U.S. and internationally) could deteriorate from the current state, our current or prospective customers could materially postpone, reduce or even forgo purchases of our products and services to a greater extent than we currently anticipate, or our common stock price could fluctuate. Such fluctuation could be caused by uncertainty about the severity and length of the COVID-19 pandemic, and its impact on global business activity.

A significant decline in our customers' spending that is greater than we anticipate or a shift in funding priorities may also have a negative effect on future orders, sales, income and cash flows and we might be required to perform a quantitative assessment during fiscal 2023 or beyond. If assumed net sales and cash flow projections are not achieved in future periods or our common stock price significantly declines from current levels, our Satellite and Space Communications and Terrestrial and Wireless Networks reporting units could be at risk of failing the quantitative assessment and goodwill and intangibles assigned to the respective reporting units could be impaired.

In any event, we are required to perform the next annual goodwill impairment analysis on August 1, 2023 (the start of our fiscal 2024). If our assumptions and related estimates change in the future, or if we change our reporting unit structure or other events and circumstances change (e.g., a sustained decrease in the price of our common stock (considered on both absolute terms and relative to peers)), we may be required to record impairment charges when we perform these tests, or in other future periods. In addition to our impairment analysis of goodwill, we also review net intangibles with finite lives when an event occurs indicating the potential for impairment. We believe that the carrying values of our net intangibles were recoverable as of July 31, 2022. Any impairment charges that we may record in the future could be material to our results of operations and financial condition.

Cybersecurity Risks

We could be negatively impacted by a system failure, lack of or failure of redundant system components, security breach through cyber-attack, cyber intrusion or otherwise, by other significant disruption of our IT networks or those we operate for certain customers, or third-party data center facilities, servers and related systems. If any such events occur, we may have to reimburse our customers for damages that they may have incurred, pay contract penalties, or provide refunds.

Similar to all companies in our industry, we are under constant cyber-attack and are subject to an ongoing risk of security breaches and disruptions of our IT networks and related systems, including third-party data center facilities, whether through actual breaches, cyber-attacks (including ransomware) or cyber intrusions via the Internet, malware, computer viruses, attachments to e-mails, persons inside our organization or persons with access to systems inside our organization. Actual security breaches or disruption, particularly through cyber-attack or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, have increased in recent years and have become more complex. Our IT networks and systems, as well as third-party data center facilities, have been and, we believe will continue to be under constant attack. We face an added risk of a security breach or other significant disruption to certain of our equipment used on some of our customers' IT networks and related systems which may involve managing and protecting information relating to public safety agencies, wireless carriers as well as national security and other sensitive government functions. Many of our systems have, or are required to have, system redundancies and back-up; in some cases, we may not have sufficient redundancy and/or redundancy and/or back-ups may fail. We may incur significant costs to prevent and respond to system failures, failure of redundant system components, actual breaches, cyber-attacks and other systems disruptions.

As a communications company, and particularly as a government contractor and a provider of public safety and location technologies (including 911 hosted systems), we face a heightened risk of a security breach or disruption from actual breaches, cyber-attacks and other threats to gain unauthorized access to our and our customers' proprietary or classified information on our IT networks, third-party data center facilities and related systems and to certain of our equipment used on some of our customers' IT networks and related systems. These types of information, IT networks and related systems are critical to the operation of our business and essential to our ability to perform day-to-day operations, and, in some cases, are critical to the operations of certain of our customers. There can be no assurance that our security efforts and measures will be effective or that actual security breaches or disruptions will not be successful or damaging. Techniques used in such breaches and cyber-attacks are constantly evolving and generally are not recognized until launched against a target, and in some cases are designed not to be detected and, in fact, may not be detected. In some cases, the resources of foreign governments may be behind such attacks. Accordingly, we may be unable to anticipate these techniques or to implement adequate security barriers or other preventative measures, and thus it is virtually impossible for us to entirely mitigate this risk.

A security breach or other significant disruption (including as a result of a lack of redundancy and/or failure of such redundancy) involving these types of information, IT networks and related systems could:

- Disrupt the proper functionality of these networks, data center facilities and systems and therefore our operations and/or those of certain of our customers;
- Result in the unauthorized access to, and destruction, loss, theft, misappropriation or release of proprietary, confidential, sensitive or otherwise valuable information of ours or our customers, including trade secrets, which others could use to compete against us or for disruptive, destructive or otherwise harmful purposes and outcomes;
- Compromise national security and other sensitive government functions;
- Require significant management attention and resources to remedy the damage that results;
- Require us to make payments to our customers to reimburse them for damages, pay them penalties or provide refunds; and
- Damage our reputation with our customers (particularly agencies of the U.S. government) and the public generally.

In addition, the cost of continually defending against cyber-attacks and actual breaches has increased in recent years and future costs and any or all of the foregoing could have a material adverse effect on our business, results of operations and financial condition.

The measures we have implemented to secure information we collect and store or enable access to may be breached, which could cause us to breach agreements with our partners and expose us to potential investigation and penalties by authorities and potential claims for contract breach, product liability damages, credits, penalties or termination by persons whose information was disclosed.

We take reasonable steps to protect the security, integrity and confidentiality of the information we collect and store and to prevent unauthorized access to third-party data to which we enable access through our products, but there is no guarantee that inadvertent or unauthorized disclosure will not occur or that third parties will not gain unauthorized access despite our efforts. If such unauthorized disclosure or access does occur, we may be required to notify persons whose information was disclosed or accessed under existing and proposed laws. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and are often not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. In the event of such disclosure, we also may be subject to claims of breach of contract, investigation and penalties by regulatory authorities and potential claims by persons whose information was disclosed. If there is a security breach or if there is an inappropriate disclosure of any of these types of information, we could be exposed to investigations, litigation, fines and penalties. Remediation of and liability for loss or misappropriation of end user or employee personal information could have a material adverse effect on our business, results of operations and financial condition. Even if we were not held liable for such event, a security breach or inappropriate disclosure of personal, private or confidential information could harm our reputation and our relationships with current and potential customers and end users. Even the perception of a security risk could inhibit market acceptance of our products and services. We may be required to invest additional resources to protect against damage caused by any actual or perceived disruptions of our services. We may also be required to provide information about the location of an end user's mobile device to government authorities, which could result in public perception that we are providing the government with intelligence information and deter some end users from using our services. Any of these developments could have a material adverse effect on our business, results of operations and financial condition.

Legal, Regulatory and Litigation Risks

Changes in U.S. federal, state and foreign tax law could adversely affect our business and financial condition.

The laws, rules, and regulations dealing with U.S. federal, state, and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have immediate and/or retroactive application) could adversely affect us or holders of our common stock. In recent years, many changes have been made to applicable tax laws and changes are likely to continue to occur in the future. It cannot be predicted whether, when, in what form, or with what effective dates, new tax laws may be enacted, or regulations and rulings may be enacted, promulgated or issued under existing or new tax laws, which could result in an increase in our tax liability or require changes in the manner in which we operate in order to minimize or mitigate any adverse effects of changes in tax law or in the interpretation thereof.

Our U.S. federal, state and foreign tax returns are subject to audit and a resulting tax assessment or settlement could have a material adverse effect on our business, results of operations and financial condition. Significant judgment is required in determining the provision for income taxes.

The final determination of tax examinations and any related litigation could be materially different than what is reflected in historical income tax provisions and accruals.

Our U.S. federal income tax returns for fiscal 2019 through 2021 are subject to potential future Internal Revenue Service ("IRS") audit. None of our state income tax returns prior to fiscal 2018 are subject to audit. In addition to income tax audits, TCS is subject to ongoing state excise tax audits by the Washington State Department of Revenue. Although adjustments relating to past audits of our federal income tax returns were immaterial, a tax assessment or settlement for other periods or other jurisdictions that may be selected for future audit could have a material adverse effect on our business, consolidated results of operations and financial condition.

We may be subject to environmental liabilities.

We engage in manufacturing and are subject to a variety of local, state and federal laws and regulations relating to the storage, discharge, handling, emission, generation, manufacture and disposal of toxic or other hazardous substances used to manufacture our products. We are also subject to the Restriction of Hazardous Substance ("RoHS") directive which restricts the use of lead, mercury and other substances in electrical and electronic products. The failure to comply with current or future environmental requirements could result in the imposition of substantial fines, suspension of production, alteration of our manufacturing processes, cessation of operations or reputational damage that could have a material adverse effect on our business, results of operations and financial condition. In addition, the handling, treatment or disposal of hazardous substances by us or our predecessors may have resulted, or could in the future result, in contamination requiring investigation or remediation, or lead to other liabilities, any of which could have a material adverse effect on our business, results of operations and financial condition.

The success of our business is dependent on compliance with FCC rules and regulations and similar foreign laws and regulations.

Many of our products are incorporated into wireless communications systems that must comply with various U.S. government regulations, including those of the FCC, as well as similar international laws and regulations. As a result, our business faces increased risks including the following:

- We must obtain various licenses from the FCC - We operate FCC licensed teleports that are subject to the Communications Act of 1934, as amended, or the FCC Act, and the rules and regulations of the FCC. We cannot guarantee that the FCC will grant renewals when our existing licenses expire, nor are we assured that the FCC will not adopt new or modified technical requirements that will require us to incur expenditures to modify or upgrade our equipment as a condition of retaining our licenses. We may, in the future, be required to seek FCC or other government approval if foreign ownership of our stock exceeds certain specified criteria. Failure to comply with these policies could result in an order to divest the offending foreign ownership, fines, denial of license renewal and/or license revocation proceedings against the licensee by the FCC, or denial of certain contracts from other U.S. government agencies.

- We are dependent on the allocation and availability of frequency spectrum - Adverse regulatory changes related to the allocation and availability of frequency spectrum and in the military standards and specifications that define the current satellite networking environment, could materially harm our business by: (i) restricting development efforts by us and our customers, (ii) making our current products less attractive or obsolete, or (iii) increasing the opportunity for additional competition. The increasing demand for wireless communications has exerted pressure on regulatory bodies worldwide to adopt new standards and reassign bandwidth for these products and services. The reduced number of available frequencies for other products and services and the time delays inherent in the government approval process of new products and services have caused, and may continue to cause, our customers to cancel, postpone or reschedule their installation of communications systems including their satellite, over-the-horizon microwave, or terrestrial line-of-sight microwave communication systems. This, in turn, could have a material adverse effect on our sales of products to our customers. Changes in, or our failure to comply with, applicable laws and regulations could materially adversely harm our business, results of operations, and financial condition.
- Our future growth is dependent, in part, on developing NG-911 compliant products - The FCC requires that certain location information be provided to network operators for public safety answering points when a subscriber makes a 911 call. Technical failures, greater regulation by federal, state or foreign governments or regulatory authorities, time delays or the significant costs associated with developing or installing improved location technology could slow down or stop the deployment of our mobile location products. If deployment of improved location technology is delayed, stopped or never occurs, market acceptance of our products and services may be materially adversely affected. Because we rely on some third-party location technology instead of developing all of the technology ourselves, we have little or no influence over its improvement. The technology employed with NG-911 services generally anticipates a migration to internet-protocol ("IP") based communication. Since many companies are proficient in IP-based communication protocols, the barriers to entry to providing NG-911 products and services are lower than for traditional switch-based protocols. If we are unable to develop unique and proprietary solutions that are superior to and/or more cost effective than other market offers, our 911 business could get replaced by new market entrants, resulting in a material adverse effect on our business, results of operations and financial condition.
- Under the FCC's mandate, our 911 business is dependent on state and local governments - Under the FCC's mandate, wireless carriers are required to provide 911 services only if state and local governments request the service. As part of a state or local government's decision to request 911, they have the authority to develop cost recovery mechanisms. However, cost recovery is no longer a condition to wireless carriers' obligation to deploy the service. If state and local governments do not widely request that 911 services be provided or we become subject to significant pressures from wireless carriers with respect to pricing of 911 services, our 911 business would be harmed and future growth of our business would be reduced.

Regulation of the mobile communications industry and VoIP is evolving, and unfavorable changes or our failure to comply with existing and potential new legislation or regulations could harm our business and operating results.

As the mobile communications industry continues to evolve, we believe greater regulation by federal, state or foreign governments or regulatory authorities is likely and we face certain risks including:

- We must adhere to existing and potentially new privacy rules - We believe increased regulation is likely in the area of data privacy, and laws and regulations applying to the solicitation, collection, processing or use of personal or consumer information could affect our customers' ability to use and share data, potentially reducing our ability to utilize this information in the resale of certain of our products. In order for mobile location products and services to function properly, wireless carriers must locate their subscribers and store information on each subscriber's location. Although data regarding the location of the wireless user resides only on the wireless carrier's systems, users may not feel comfortable with the idea that the wireless carrier knows and can track their location. Carriers will need to obtain subscribers' permission to gather and use the subscribers' personal information, or they may not be able to provide customized mobile location services which those subscribers might otherwise desire. If subscribers view mobile location services as an annoyance or a threat to their privacy, that could reduce demand for our products and services and have a material adverse effect on our business, results of operations and financial condition.

Over the past several years, there have been a number of laws and regulations enacted that affect companies conducting business on the Internet, including the European General Data Protection Regulation ("GDPR"). The GDPR imposes certain privacy related requirements on companies that receive or process personal data of residents of the European Union that are currently different than those in the United States and include significant penalties for non-compliance. Similarly, there are a number of legislative proposals in the United States, at both the federal and state level, that could impose new obligations in areas affecting our business, such as liability for personal data protection. In addition, some countries are considering or have passed legislation implementing data protection requirements or requiring local storage and processing of data or similar requirements that could increase the cost and complexity of delivering our services. Our costs to comply with the GDPR as well any other similar laws and regulations that emerge may negatively impact our business.

- We may face increased compliance costs in connection with health and safety requirements for mobile devices - If wireless handsets pose health and safety risks, we may be subject to new regulations and demand for our products and services may decrease. Media reports have suggested that certain radio frequency emissions from wireless handsets may be linked to various health concerns, including cancer, and may interfere with various electronic medical devices, including hearing aids and pacemakers. Concerns over radio frequency emissions may have the effect of discouraging the use of wireless handsets, which would decrease demand for our services. In recent years, the FCC and foreign regulatory agencies have updated the guidelines and methods they use for evaluating radio frequency emissions from radio equipment, including wireless handsets. In addition, interest groups have requested that the FCC investigate claims that wireless technologies pose health concerns and cause interference with airbags, hearing aids and other medical devices. There also are some safety risks associated with the use of wireless handsets while driving. Concerns over these safety risks and the effect of any legislation that may be adopted in response to these risks could limit our ability to market and sell our products and services, which could negatively impact our business, consolidated results of operations and financial condition.
- The regulatory environment for VoIP services is developing - The FCC has determined that VoIP services are not subject to the same regulatory scheme as traditional wireline and wireless telephone services. If the regulatory environment for VoIP services evolves in a manner other than the way we anticipate, our 911 business would be significantly harmed and future growth of our business would be significantly reduced. For example, the regulatory scheme for wireless and wireline service providers requires those carriers to allow service providers such as us to have access to certain databases that make the delivery of a 911 call possible. No such requirements exist for VoIP service providers, so carriers could prevent us from continuing to provide VoIP 911 service by denying us access to the required databases.

Ongoing compliance with the provisions of securities laws, related regulations and financial reporting standards could unexpectedly materially increase our costs and compliance related expenses.

Because we are a publicly traded company, we are required to comply with provisions of securities laws, related regulations and financial reporting standards. Because securities laws, related regulations and financial reporting standards pertaining to our business are relatively complex, our business faces increased risks including the following:

- If we identify a material weakness in the future, our costs may unexpectedly increase - Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 and related SEC rules, we are required to furnish a report of management's assessment of the effectiveness of our internal controls as part of our Form 10-K. Our independent registered public accountants are required to attest to and provide a separate opinion. To issue our report, we document our internal control design and the testing processes that support our evaluation and conclusion, and then we test and evaluate the results. There can be no assurance, however, that we will be able to remediate material weaknesses, if any, that may be identified in future periods, or maintain all of the controls necessary for continued compliance. There likewise can be no assurance that we will be able to retain sufficient skilled finance and accounting personnel, especially in light of the increased demand for such personnel among publicly traded companies.

- Stock-based compensation accounting standards could negatively impact our stock - Since our inception, we have used stock-based awards as a fundamental component of our employee compensation packages. We believe that stock-based awards directly motivate our employees to maximize long-term stockholder value and, through the use of long-term vesting, encourage employees to remain with us. We apply the provisions of ASC 718, "*Compensation - Stock Compensation*," which requires us to record compensation expense in our statement of operations for employee and director stock-based awards using a fair value method. In the first quarter of fiscal 2018, we adopted FASB ASU No. 2016-09 which modified certain aspects of ASC 718, including the requirement to recognize excess tax benefits and shortfalls in the income statement. The ongoing application of this standard will have a significant effect on our reported earnings, and could adversely impact our ability to provide accurate guidance on our future reported financial results due to the variability of the factors used to estimate the value of stock-based awards (including long-term performance shares which are subject to the achievement of three-year goals which are based on several performance metrics). The ongoing application of this standard could impact the future value of our common stock and may result in greater stock price volatility. To the extent that this accounting standard makes it less attractive to grant stock-based awards to employees, we may incur increased compensation costs, change our equity compensation strategy or find it difficult to attract, retain and motivate employees, each of which could have a material adverse effect on our business, results of operations and financial condition.

Also, as further discussed in "*Notes to Consolidated Financial Statements - Note (1) - Summary of Significant Accounting and Reporting Policies*" included in "*Part II - Item 8. - Financial Statements and Supplementary Data*," included in this Form 10-K, the accounting rules and regulations that we must comply with are complex and are continually changing in ways that could materially impact our financial statements. We must comply with these new rules on a go-forward basis. Because of the uncertainties of the estimates, judgments and assumptions associated with new accounting standards, as well as with any future guidance or interpretations related to them, we may incur additional costs and cannot provide any assurances that we will be able to comply with such complex rules.

Our costs to comply with the aforementioned and other regulations continue to increase and we may have to add additional accounting staff, engage consultants or change our internal practices, standards and policies which could significantly increase our costs to comply with ongoing or future requirements. In addition, the Nasdaq Stock Market LLC ("Nasdaq") routinely changes its requirements for companies, such as us, that are listed on Nasdaq. These changes (and potential future changes) have increased and may increase our legal and financial compliance costs, including making it more difficult and more expensive for us to obtain director and officer liability insurance or maintain our current liability coverage. We believe that these new and proposed laws and regulations could make it more difficult for us to attract and retain qualified members of our Board of Directors, particularly to serve on our Audit Committee, and qualified executive officers.

Indemnification provisions in our contracts could have a material adverse effect on our consolidated results of operations, financial position, or cash flows.

In the ordinary course of business, we include indemnification provisions in certain of our customer contracts. Pursuant to these agreements, we have agreed to indemnify, hold harmless and reimburse the indemnified party for losses suffered or incurred by the indemnified party, including but not limited to losses related to third-party intellectual property claims. Some customers seek indemnification under their contractual arrangements with us for claims and other costs associated with defending lawsuits alleging infringement of patents through their use of our products and services, and the use of our products and services in combination with products and services of other vendors.

In some cases, we have agreed to assume the defense of the case. In others, we will negotiate with these customers in good faith because we believe our technology does not infringe the cited patents or due to specific clauses within the customer contractual arrangements that may or may not give rise to an indemnification obligation. It is not possible to determine the maximum potential amount we may spend under these agreements due to the unique facts and circumstances involved in each particular agreement.

Our assessments related to indemnification provisions are based on estimates and assumptions that have been deemed reasonable by management, but that may prove to be incomplete or inaccurate, and unanticipated events and circumstances may occur that might cause us to change those estimates and assumptions. Therefore, it is possible that an unfavorable resolution of one or more of these matters could have a material adverse effect on our consolidated financial statements in a future period.

We are, from time to time, and could become a party to additional litigation or subject to claims, including product liability claims, employee claims, government investigations and other proceedings that could cause us to incur unanticipated expenses and otherwise have a material adverse effect on our business, results of operations and financial condition.

We are, from time to time, involved in commercial disputes and civil litigation relating to our businesses.

Our agreements with customers may require us to indemnify such customers. Direct claims against us or claims against our customers may relate to defects in or non-conformance of our products, or our own acts of negligence and non-performance. Occasionally, we are called upon also to provide information in connection with litigation involving other parties or government investigations. Product liability and other forms of insurance are expensive and may not be available in the future.

We cannot be sure that we will be able to maintain or obtain insurance coverage at acceptable costs or in sufficient amounts or that our insurer will not disclaim coverage as to a future claim. In many cases, we are unable to obtain insurance and are self-insured. Any such claim, including any out of pocket payments we are required to make and the costs of the defense against such claim, could result in material costs and have an adverse effect on our business, results of operations and financial condition.

For additional information related to these lawsuits, see *"Notes to Consolidated Financial Statements - Note (12)(a) - Commitments and Contingencies - Legal Proceedings and Other Matters"* included in *"Part II - Item 8.- Financial Statements and Supplementary Data,"* included in this Form 10-K.

Protection of our intellectual property is limited and pursuing infringers of our patents and other intellectual property rights can be costly.

Our businesses rely, in large part, upon our proprietary scientific and engineering know-how and production techniques. We rely on a combination of patent, copyright, trademark, service mark, trade secret and unfair competition laws, restrictions in licensing agreements, confidentiality provisions and various other contractual provisions to protect our intellectual property and related proprietary rights, but these legal means provide only limited protection. We cannot guarantee that our issued and acquired patents will be upheld if challenged by another party. Additionally, with respect to any patent applications which we have filed, we cannot guarantee that any patents will be issued as a result of these applications.

The departure of any of our key management and technical personnel, the breach of their confidentiality and non-disclosure obligations to us or the failure to achieve our intellectual property objectives could have an adverse effect on our business, results of operations and financial condition. Our ability to compete successfully and achieve future revenue growth will depend, in part, on our ability to protect our proprietary technology and operate without infringing upon the rights of others. We may fail to do so. In addition, the laws of certain countries in which our products are or may be sold may not protect our products or intellectual property rights to the same extent as the laws of the U.S.

Our ability to protect our intellectual property rights is also subject to the terms of future government contracts. We cannot assure you that the federal government will not demand greater intellectual property rights or restrict our ability to disseminate intellectual property. We are also a member of standards-setting organizations and have agreed to license some of our intellectual property to other members on fair and reasonable terms to the extent that the license is required to develop non-infringing products.

Pursuing infringers of our proprietary rights could result in significant litigation costs, and any failure to pursue infringers could result in our competitors utilizing our technology and offering similar products, potentially resulting in loss of a competitive advantage and decreased revenues. Despite our efforts to protect our proprietary rights, existing patent, copyright, trademark and trade secret laws afford only limited protection. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the U.S. Protecting our know-how is difficult especially after our employees or those of our third-party contract service providers end their employment or engagement. Attempts may be made to copy or reverse-engineer aspects of our products or to obtain and use information that we regard as proprietary. Accordingly, we may not be able to prevent the misappropriation of our technology or prevent others from developing similar technology. Furthermore, policing the unauthorized use of our products is difficult and expensive. Litigation may be necessary in the future to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. The costs and diversion of resources could significantly harm our business. If we fail to protect our intellectual property, we may not receive any return on the resources expended to create the intellectual property or generate any competitive advantage based on it.

Third parties may claim we are infringing their intellectual property rights and we could be prevented from selling our products, or suffer significant litigation expense, even if these claims have no merit.

Our competitive position is driven in part by our intellectual property and other proprietary rights. Third parties, however, may claim that we, our products, operations or any products or technology we obtain from other parties are infringing their intellectual property rights, and we may be unaware of intellectual property rights of others that may impact some of our assets, technology and products.

From time to time our customers are parties to allegations of intellectual property infringement claims based on our customers' incorporation and use of our products and services, which may lead to demands from our customers for us to indemnify them for costs in defending those allegations. Any litigation regarding patents, trademarks, copyrights or intellectual property rights, even those without merit, and the related indemnification demands of our customers, can be costly and time consuming, and divert our management and key personnel from operating our business. The complexity of the technology involved, and inherent uncertainty and cost of intellectual property litigation increases our risks. If any third party has a meritorious or successful claim that we are infringing its intellectual property rights, we may be forced to change our products or enter into licensing arrangements with third parties, which may be costly or impractical. This also may require us to stop selling our products as currently engineered, which could harm our competitive position. We also may be subject to significant damages or injunctions that prevent the further development and sale of certain of our products or services and may result in a material loss of revenue.

From time to time, there have been claims challenging the ownership of open source software against companies that incorporate open source software into their products. As a result, we could be subject to suits by parties claiming ownership of what we believe to be open source software. Some open source licenses contain requirements that we make available source code for modifications or derivative works under the terms of a particular open source license or other license granting third parties certain rights of further use. If we combine our proprietary software products with open source software in a certain manner, we could under certain of the open source licenses, be required to release our proprietary source code. Open source license terms may be ambiguous and many of the risks associated with usage of open source software cannot be eliminated, and could if not properly addressed, negatively affect our business. If we were found to have inappropriately used open source software, we may be required to release our proprietary source code, re-engineer our products and client applications, discontinue the sale of our products or services in the event re-engineering cannot be accomplished on a timely basis or take other remedial action that may divert resources away from our development efforts, any of which could adversely affect our business, results of operations, and financial condition.

Competitive Risks

All of our business activities are subject to rapid technological change, new entrants, the introduction of other distribution models and long development and testing periods each of which may harm our competitive position, render our product or service offerings obsolete and require us to continuously develop technology and/or obtain licensed technology in order to compete successfully.

We are engaged in business activities characterized by rapid technological change, evolving industry standards, frequent new product announcements and enhancements, and changing customer demands. The introduction of products and services or future industry standards embodying new technologies, such as multi-frequency time division multiple access ("MF-TDMA") based technologies could render any of our products and services obsolete or non-competitive. The successful execution of our business strategy is contingent upon wireless network operators launching and maintaining mobile location services, our ability to maintain a technically skilled development and engineering team, our ability to create new network software products and adapt our existing products to rapidly changing technologies, industry standards and customer needs. As a result of the complexities inherent in our product offerings, new technologies may require long development and testing periods. Additionally, new products may not achieve market acceptance or our competitors could develop alternative technologies that gain broader market acceptance than our products. If we are unable to develop and introduce technologically advanced products that respond to evolving industry standards and customer needs, or if we are unable to complete the development and introduction of these products on a timely and cost effective basis, it could have a material adverse effect on our business, results of operations and financial condition or could result in our technology becoming obsolete.

New entrants seeking to gain market share by introducing new technology and new products may make it more difficult for us to sell our products and services and could create increased pricing pressure, reduced profit margins, increased sales and marketing expenses, or the loss of market share or expected market share, any of which could have a material adverse effect on our business, results of operations and financial condition. For example, many companies are developing new technologies and the shift towards open standards such as IP-based satellite networks will likely result in increased competition and some of our products may become commoditized as a result.

Our Terrestrial and Wireless Networks segment provides various technologies that are utilized on mobile phones. Applications from competitors for location-based or text-based messaging platforms may be preloaded on mobile devices by original equipment manufacturers, or OEMs, or offered by OEMs directly. Increased competition from providers of location-based services which do not rely on a wireless carrier may result in fewer wireless carrier subscribers electing to purchase their wireless carrier's branded location-based services, which could harm our business and revenue. In addition, these location-based or text-based services may be offered for free or on a one-time fee basis, which could force us to reduce monthly subscription fees or migrate to a one-time fee model to remain competitive. We may also lose end users or face erosion in our average revenue per user if these competitors deliver their products without charge to the consumer by generating revenue from advertising or as part of other applications or services.

Our expected growth and our financial position depends on, among other things, our ability to keep pace with such changes and developments and to respond to the increasing variety of electronic equipment users and transmission technologies. We may not have the financial or technological resources to keep pace with such changes and developments or be successful in our research and development and we may not be able to identify and respond to technological improvements made by our competitors in a timely or cost-effective fashion. Any delays could result in increased costs of development or redirect resources from other projects. In addition, we cannot provide assurances that the markets for our products, systems, services or technologies will develop as we currently anticipate. The failure of our products, systems, services or technologies to gain market acceptance could significantly reduce our net sales and harm our business.

Our business is highly competitive, we are reliant upon the success of our partners, and some of our competitors have significantly greater resources than we do, which could result in a loss of customers, market share and/or market acceptance.

Our business is highly competitive. We will continue to invest in research and development for the introduction of new and enhanced products and services designed to improve capacity, data processing rates and features. We must also continue to develop new features and to improve functionality of our software. Research and development in our industry is complex, expensive and uncertain. We believe that we must continue to dedicate a significant amount of resources to research and development efforts to maintain our competitive position. If we continue to expend a significant amount of resources on research and development, but our efforts do not lead to the successful introduction of product and service enhancements more quickly than our competitors that are competitive in the marketplace, our business, results of operations and financial condition could be materially adversely affected.

Several of our potential competitors are substantially larger than we are and have greater financial, technical and marketing resources than we do. In particular, larger competitors have certain advantages over us which could cause us to lose customers and impede our ability to attract new customers, including: larger bases of financial, technical, marketing, personnel and other resources; more established relationships with wireless carriers and government customers; more funds to deploy products and services; and the ability to lower prices of (or not charge any price for) competitive products and services because they are selling larger volumes. Furthermore, we cannot be sure that our competitors will not develop competing products, systems, services or technologies that gain market acceptance in advance of our products, systems, services or technologies, or that our competitors will not develop new products, systems, services or technologies that cause our existing products, systems, services or technologies to become non-competitive or obsolete, which could adversely affect our results of operations.

Our Terrestrial and Wireless Networks segment provides public safety and location technologies to various state and local municipalities and to a large extent, we are reliant on the success of our wireless partners and distributors to meet our growth objectives. In some cases, our wireless partners may have different objectives, or our distributors may not be successful. We also began an evaluation and repositioning of certain of our location technology solutions within our Terrestrial and Wireless Networks segment in order to focus on providing higher-margin solution offerings and increase our penetration into the public safety space. To date, we have ceased offering certain location technology solutions, have worked with customers to wind-down certain legacy contracts and have not renewed certain contracts. Going forward, we intend to continue to work with our partners and expand our direct and indirect sales and distribution channels in this area. If we are not successful in doing so, we may not be able to achieve our long-term business goals.

We rely upon various third-party companies and their technology to provide services to our customers and if we are unable to obtain such services at reasonable prices, or at all, our gross margins and our ability to provide the services of our wireless applications business could be materially adversely affected.

We rely on various third-party companies and their technology in our business. Risks from our reliance with these third parties include:

- **The loss of mapping and third-party content** - The wireless data services provided to our customers are dependent on real-time, continuous feeds from map data, points of interest data, traffic information, gas prices, theater, event and weather information from vendors and others. Any disruption of this third-party content from our satellite feeds or backup landline feeds or other disruption could result in delays in our subscribers' ability to receive information. We obtain this data that we sell to our customers from companies owned by current and potential competitors, who may act in a manner that is not in our best interest. If our suppliers of this data or content were to enter into exclusive relationships with other providers of location-based services or were to discontinue providing such information and we were unable to replace them cost effectively, or at all, our ability to provide the services of our wireless applications business would be materially adversely affected. Our gross margins may also be materially adversely affected if the cost of third-party data and content increases substantially.
- **Third-party data centers or third-party networks may fail** - Many products and services of our advanced communication solutions, in particular our public safety and location technology solutions, are provided through a combination of our servers, which are hosted at third-party data centers, and on the networks, as well as within the data centers of our wireless carrier partners. Our business relies to a significant degree on the efficient and uninterrupted operation of the third-party data centers, customer data centers, and cloud providers we use. Network failures, disruptions or capacity constraints in our third-party data center facilities or in our servers maintained at their location could affect the performance of the products and services of our wireless applications and 911 business and harm our reputation and our revenue. The ability of our subscribers to receive critical location and business information requires timely and uninterrupted connections with our wireless network carriers. Any disruption from our satellite feeds or backup landline feeds could also result in delays in our subscribers' ability to receive information.
- **We must integrate our technologies and routinely upgrade them** - We may not be able to upgrade our location services platform to support certain advanced features and functionality without obtaining technology licenses from third parties. Obtaining these licenses may be costly and may delay the introduction of such features and functionality, and these licenses may not be available on commercially favorable terms, or at all. Problems and delays in development or delivery as a result of issues with respect to design, technology, licensing and patent rights, labor, learning curve assumptions, or materials and components could prevent us from achieving contractual obligations. In addition, our products cannot be tested and proven in all situations and are otherwise subject to unforeseen problems. The inability to offer advanced features or functionality, or a delay in our ability to upgrade our location-based services platform, may materially adversely affect demand for our products and services and, consequently, have a material adverse effect on our business, results of operations and financial condition.
- **We rely upon "open-source" software** - We have incorporated some types of open-source software into our products, allowing us to enhance certain solutions without incurring substantial additional research and development costs. Thus far, we have encountered no unanticipated material problems arising from our use of open-source software. However, as the use of open-source software becomes more widespread, certain open-source technology could become competitive with our proprietary technology, which could cause sales of our products to decline or force us to reduce the fees we charge for our products, which could have a material adverse effect on our business, results of operations and financial condition.

Because our software may contain defects or errors, and our hardware products may incorporate defective components, our sales could decrease if these defects or errors adversely affect our reputation or delay shipments of our products.

Products as complex as ours are likely to contain undetected errors or defects, especially when first introduced or when new versions are released. Software products, such as our 911 call handling software solutions, must meet stringent customer technical requirements and we must satisfy our warranty obligations to our customers. Our hardware products are also subject to warranty obligations and integrate a wide variety of components from different vendors.

Our products including software may not be error or defect free after delivery to customers, which could damage our reputation, cause revenue losses, result in the rejection of our products or services, divert development resources and increase service and warranty costs, each of which could have a material adverse effect on our business, results of operations and financial condition.

Risks Related to our Common Stock

Our stock price is volatile.

The stock market in general and the stock prices of technology-based companies, in particular, experience extreme volatility that often is unrelated to the operating performance of any specific public company. The market price of our common stock has fluctuated significantly in the past and is likely to fluctuate significantly in the future as well. Factors that could have a significant impact on the market price of our stock include, among others:

- strategic transactions, such as acquisitions and divestitures by us and our competitors;
- our ability to successfully integrate and manage recent acquisitions;
- our issuance of potentially dilutive equity or equity-type securities;
- our issuance of debt;
- our ability to successfully access equity and debt capital markets;
- future announcements concerning us or our competitors;
- shareholder activism involving our common stock, board of directors or corporate governance;
- receipt or non-receipt of substantial orders for products and services;
- quality deficiencies in services or products;
- results of technological innovations and new commercial products;
- changes in recommendations of securities analysts;
- government regulations;
- changes in the status or outcome of government audits;
- proprietary rights or product or patent litigation;
- changes in U.S. government policies;
- changes in economic conditions generally, particularly in the terrestrial and wireless networks and satellite and space communications markets;
- changes in securities market conditions, generally;
- changes in prevailing interest rates;
- changes in the status of litigation and legal matters (including changes in the status of export matters);
- cyber attacks;
- energy blackouts;
- acts of terrorism or war;
- inflation or deflation;
- rumors or allegations regarding our financial disclosures or practices; and
- the ongoing and future effects of the COVID-19 pandemic.

Shortfalls in our sales or earnings in any given period relative to the levels expected by securities analysts could immediately, significantly and adversely affect the trading price of our common stock.

Future issuances of our shares of common stock could dilute a stockholder's ownership interest in Comtech and reduce the market price of our shares of common stock.

In addition to potential issuances of our shares of common stock associated with acquisitions, in the future, we may issue additional securities to raise capital. We may also acquire interests in other companies by using a combination of cash and our common stock or just our common stock. We may also issue securities convertible into our common stock. Any of these events may dilute a stockholder's ownership interest in Comtech and have an adverse impact on the price of our common stock.

Actions of activist stockholders could impact the pursuit of our business strategies and adversely affect our results of operations, financial condition and/or share price.

Our Board of Directors and management team value constructive input from investors, regularly engage in dialogue with our stockholders, and are committed to acting in the best interests of all of our stockholders; however, we have been, and may in the future be, subject to actions, campaigns, or proposals that may not align with our business strategies or the interests of our other stockholders. Accordingly, there is no assurance that the actions taken by the Board of Directors and management in seeking to maintain constructive engagement with certain stockholders will be successful in preventing the occurrence of stockholder activist campaigns.

Campaigns by activist stockholders to effect changes at publicly traded companies often demand that companies undertake or pursue financial restructuring, increase debt, issue special dividends, repurchase shares, or undertake sales of assets or other transactions, including strategic transactions. Campaigns may also be initiated by activist stockholders advocating for particular environmental or social causes. Activist stockholders who disagree with the composition of a company's board of directors, or with its strategy and/or management often seek to involve themselves in the governance and strategic direction of a company through various activities. As discussed elsewhere in this report, we have been, and may in the future be, subject to activities and campaigns initiated by activist stockholders.

Responding to proxy contests and other actions by activist stockholders can be costly and time-consuming, and could divert the attention of our Board of Directors, management team and employees from the management of our operations and the pursuit of our business strategies. Further, actions of activist stockholders may cause significant fluctuations in our stock price based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business. Perceived uncertainties as to our future direction, strategy or leadership created as a consequence of activist stockholder campaigns or initiatives may result in the loss of potential business opportunities and make it more difficult to attract and retain investors, customers, employees, and other business partners. Also, we could be required to incur significant expenses related to any activist stockholder matters (included but not limited to legal fees, fees for financial advisors, fees for public relation advisors and proxy solicitation expenses). As a result, activist stockholder campaigns could adversely affect our business, results of operations, financial condition and/or share price in ways that can be difficult to predict or foresee.

Even if we are successful in any proxy contest or in defending against any unsolicited takeover attempt, our business could be adversely affected by any such proxy contest or unsolicited takeover attempt due to:

- perceived uncertainties as to future direction may result in the loss of potential acquisitions, collaborations or other strategic opportunities, and may make it more difficult to attract and retain qualified personnel, customers, suppliers, and other business partners;
- if individuals are elected or appointed to our Board of Directors with a specific agenda or who do not agree with our strategic plan, the ability of our Board of Directors to function effectively could be adversely affected, which could in turn adversely affect our ability to effectively and timely implement our strategic plan and create additional value for our stockholders, and/or adversely affect our business, operating results and financial condition.

We cannot predict, and no guarantees can be given, as to the outcome or timing of any matters relating to the foregoing actions by stockholders and our responses thereto or the ultimate impact on our business, liquidity, financial condition or results of operations. Any of these matters or any further actions by stockholders and our responses thereto may impact and result in volatility or stagnation of our share price.

Provisions in our corporate documents and Delaware law could delay or prevent a change in control of Comtech.

We have taken a number of actions that could have the effect of discouraging, delaying or preventing a merger, acquisition or divestiture involving Comtech that our stockholders may consider favorable.

For example, we currently have a classified board and the employment contract with our CEO and agreements with other of our executive officers provide for substantial payments in certain circumstances or in the event of a change of control of Comtech. In the future, we may adopt a stockholder rights plan which could cause substantial dilution to a stockholder, and substantially increase the cost paid by a stockholder who attempts to acquire us on terms not approved by our Board of Directors.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, this statute provides that, except in certain limited circumstances, a corporation shall not engage in any "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, for purposes of Section 203 of the Delaware General Corporation Law, an "interested stockholder" is a person who, together with affiliates, owns, or within three years did own, 15% or more of the corporation's voting stock. This provision could have the effect of delaying or preventing a change in control of Contech.

A disruption in our Common Stock dividend program could negatively impact our stock price.

We have paid quarterly common stock dividends every quarter since September 2010.

Our ability to continue to pay quarterly dividends with respect to our Common Stock will depend on our ability to generate sufficient cash flows from operations in the future and maintain compliance with our Credit Facility. This ability may be subject to certain economic, financial, competitive and other factors that are beyond our control. Future Common Stock dividends remain subject to compliance with financial covenants under our Credit Facility, as well as Board approval and certain voting rights of holders of our Series A Convertible Preferred Stock. Our Board of Directors may, at its discretion, decrease the targeted annual dividend amount or entirely discontinue the payment of dividends at any time.

Additionally, our ability to declare and pay common stock dividends and make other distributions with respect to our capital stock may also be restricted by the terms of our Credit Facility, and may be restricted by the terms of financing arrangements that we enter into in the future.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We consider our facilities to be well maintained and adequate for current and planned production requirements. All of our manufacturing facilities, including those that serve the military market, must comply with stringent customer specifications. We employ formal quality management programs and other training programs, including the International Standard Organization's quality procedure registration programs.

Historically, we have not owned any material properties or facilities and have relied upon a strategy of leasing. We do not currently own any material properties. The following table lists our primary leased facilities at July 31, 2022:

Location		Property Type	Square Footage	Lease Expiration
<u>Satellite and Space Communications</u>				
Chandler, Arizona	A	Manufacturing and Engineering	146,000	July 2036
Tempe, Arizona	A	Manufacturing and Engineering	136,000	Various
Orlando, Florida	B	Manufacturing and Engineering	99,000	April 2026
Hampshire, UK	C	Manufacturing and Engineering	77,000	November 2030
Santa Clara, California	D	Manufacturing and Engineering	47,000	April 2026
Melville, New York	E	Manufacturing and Engineering	45,000	December 2031
Various facilities	F	Support, Engineering and Sales	22,000	Various
Cypress, California	G	Support, Engineering and Sales	28,000	July 2025
Plano, Texas	G	R&D and Engineering	12,000	August 2025
Saint-Laurent, Canada	H	Manufacturing, Engineering, Sales and General Office	12,000	June 2029
			624,000	
<u>Terrestrial and Wireless Networks</u>				
Seattle, Washington	I	Network Operations, R&D, Engineering and Sales	58,000	October 2033
Stoughton, Massachusetts	J	Network Operations	26,000	March 2025
Lake Forest, California	K	R&D and Engineering	18,000	July 2023
Annapolis, Maryland	K	Support, Engineering and Sales	17,000	July 2026
Gatineau, Canada	L	Network Operations, R&D, Engineering, Sales and General Office	16,000	October 2024
Chicago, Illinois	L	General Office	4,000	September 2024
			139,000	
<u>Corporate</u>				
Annapolis, Maryland	K	General Office and Common Areas	2,000	July 2026
Melville, New York	M	Corporate Headquarters and General Office	9,600	August 2027
			11,600	
Total Square Footage			774,600	

- A. Although primarily used for our satellite ground station equipment product lines, which are part of the Terrestrial and Wireless Networks segment, both of our business segments utilize, from time to time, our high-volume technology manufacturing facilities in Arizona. These manufacturing facilities utilize state-of-the-art design and production techniques, including analog, digital and RF microwave production, hardware assembly and full-service engineering.

To support our long-term business goals, in fiscal 2021, we commenced a 15-year lease for a new 146,000 square foot facility in Chandler, Arizona. In fiscal 2022, we began shifting operations related to the production of our satellite ground station products from our existing manufacturing locations, such as Tempe, Arizona, to this new facility. We also signed a new 10-year lease in the United Kingdom to expand our Satellite and Space segment's international manufacturing capabilities. This facility is expected to support the production of X/Y satellite tracking antennas that can be used in connection with the thousands of new LEO, MEO and large HTS satellite constellations reportedly being launched over the next several years. COVID-19 and global supply chain disruptions have delayed efforts to get our new technology manufacturing centers fully operational and have increased our start-up costs. Relocation to the Chandler, Arizona facility is expected to be completed in fiscal 2023, at which point we will reduce our Tempe, Arizona footprint to approximately 20,000 square feet through January 2027.

- B. Our Satellite and Space Communications segment engineers and manufactures our over-the-horizon microwave systems and mission-critical satellite equipment in a leased facility in Orlando, Florida.
- C. Our Satellite and Space Communications segment currently leases two manufacturing facilities in Hampshire, United Kingdom where we manufacture our high precision full motion fixed and mobile X/Y satellite tracking antennas, RF feeds, reflectors and radomes.
- D. Our Satellite and Space Communications segment manufactures certain amplifiers in a leased manufacturing facility located in Santa Clara, California.
- E. Our Satellite and Space Communications segment manufactures certain of our solid-state, high-power amplifiers in a 45,000 square foot engineering and manufacturing facility on more than two acres of land in Melville, New York and an 8,000 square foot facility in Topsfield, Massachusetts. We lease the New York facility from a partnership controlled by our former CEO. Our Massachusetts lease is currently on a month-to-month basis and therefore excluded from the table above.
- F. Our Satellite and Space Communications segment leases an additional seven facilities, four of which aggregate 16,000 square feet and are located in the U.S. with the remaining three facilities aggregating 6,000 square feet located in Singapore, China and India. All are primarily utilized for engineering, sales, software development, customer support, and general office use.
- G. Our Satellite and Space Communications segment maintains office space in Cypress, California and Plano, Texas used primarily for R&D, engineering, sales and customer support.
- H. Our Satellite and Space Communications segment maintains office space in Saint-Laurent, Canada, used primarily for sales, engineering, manufacturing and general office use.
- I. Our Terrestrial and Wireless Networks segment maintains office space in Seattle, Washington used primarily for servicing and hosting our VoIP and VoWiFi E911 and NG-911 services, and related emerging technologies.
- J. Our Terrestrial and Wireless Networks segment maintains office space in Stoughton, Massachusetts used primarily for servicing certain of our state and local municipality NG-911 customers.
- K. We have leases for facilities in Annapolis, Maryland and Lake Forest, California used primarily for the design and development of our software-based systems and applications and network operations for our Terrestrial and Wireless Networks segment.
- L. Our Terrestrial and Wireless Networks segment maintains office space in Gatineau, Canada and Chicago, Illinois that are utilized for network operations, R&D, engineering, sales of our public safety and location technology solutions and general office use.
- M. Our corporate headquarters are located in an office building complex in Melville, New York.

The terms for all of our leased facilities are generally for multi-year periods and we believe that we will be able to renew these leases or find comparable facilities elsewhere.

Also, in fiscal 2022, as part of our environmental related initiatives, we were able to reduce our total company-wide square footage of our various facilities by 78,000 sq ft. or 9.1%.

ITEM 3. LEGAL PROCEEDINGS

Information regarding legal proceedings is incorporated herein by reference to the "Notes to Consolidated Financial Statements – Note (12)(a) - Commitments and Contingencies – Legal Proceedings and Other Matters" included in "Part II - Item 8.- Financial Statements and Supplementary Data," of this Form 10-K.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

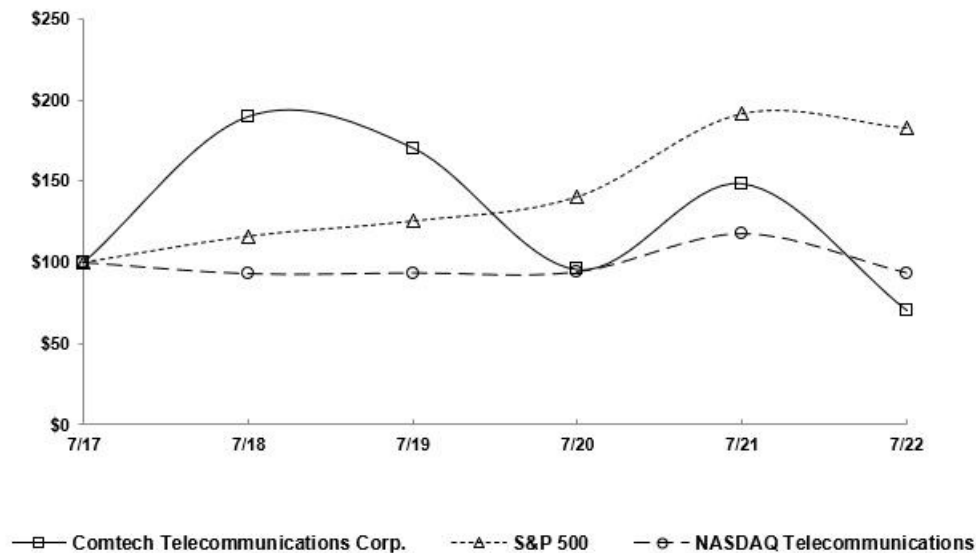
ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Stock Performance Graph and Cumulative Total Return

The graph below compares the cumulative total stockholder return on our common stock with the cumulative total return on the S&P 500 Index and the Nasdaq Telecommunications Index for each of the last five fiscal years ended July 31, assuming an investment of \$100 at the beginning of such period and the reinvestment of any dividends. The comparisons in the graphs below are based upon historical data and are not indicative of, nor intended to forecast, future performance of our common stock.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among Comtech Telecommunications Corp., the S&P 500 Index
and the NASDAQ Telecommunications Index



*\$100 invested on 7/31/17 in stock or index, including reinvestment of dividends.
Fiscal year ending July 31.

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Our common stock trades on the Nasdaq Stock Market LLC ("Nasdaq") under the symbol "CMTL."

Dividends

Since September 2010, we have paid quarterly dividends on shares of our common stock. On October 4, 2021, December 9, 2021, March 10, 2022 and June 9, 2022, our Board of Directors declared a cash dividend of \$0.10 per common share, which was paid on November 12, 2021, February 18, 2022, May 20, 2022 and August 19, 2022, respectively. On September 29, 2022, our Board of Directors declared a cash dividend of \$0.10 per common share, payable on November 18, 2022 to stockholders of record at the close of business on October 19, 2022. Future common stock dividends remain subject to compliance with financial covenants under our Credit Facility, as well as Board approval and certain voting rights of holders of our Series A Convertible Preferred Stock.

The Board of Directors is currently targeting fiscal 2023 quarterly dividend payments of \$0.10 per common share. Future common stock dividends remain subject to compliance with financial covenants under our Credit Facility, as well as Board approval, and certain voting rights of holders of our Series A Convertible Preferred Stock.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

We did not repurchase any of our equity securities during the fiscal year ended July 31, 2022. On September 29, 2020, our Board of Directors authorized a new \$100.0 million stock repurchase program, which replaced our prior program. The new \$100.0 million stock repurchase program has no time restrictions and repurchases may be made from time to time in open-market or privately negotiated transactions, or by other means in accordance with federal securities laws. We had approximately 27.6 million shares of Common Stock outstanding as of July 31, 2022.

Approximate Number of Equity Security Holders

As of September 23, 2022, there were approximately 801 holders of our common stock. Such number of record owners was determined from our stockholder records and does not include beneficial owners whose shares of our common stock are held in the name of various security holders, dealers and clearing agencies.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview of Business

We are a leading global provider of next-generation 911 emergency systems ("NG-911") and secure wireless and satellite communications technologies. We see these two end-markets as part of what Comtech has identified as the "Failsafe Communications Market." This includes the critical communications infrastructure that people, businesses, and governments rely on when durable, trusted connectivity is required, no matter where they are – on land, at sea, or in the air – and no matter what the circumstances – from armed conflict to a natural disaster. Our solutions fulfill our customers' needs for secure wireless communications in the most demanding environments, including those where traditional communications are unavailable or cost-prohibitive, and in mission-critical and other scenarios where performance is crucial. We anticipate future growth in our business due to increasing demand for global voice, video and data usage. We provide our solutions to both commercial and governmental customers.

In the fourth quarter of fiscal 2022, we revised our business segments to better align them with end-markets for our products and services. Our businesses have been re-organized into two new reportable segments: "Satellite and Space Communications" and "Terrestrial and Wireless Networks." All current and prior periods reflected in this Form 10-K have been presented according to these two segments, unless otherwise noted. For more information and for financial information about our business segments, including net sales, operating income, Adjusted EBITDA (a Non-GAAP financial measure), total assets, and our operations outside the United States, refer to "Notes to Consolidated Financial Statements - Note (11) Segment Information" included in "Part II - Item 8 - Financial Statements and Supplementary Data." A description of the segments is provided below:

- Satellite and Space Communications - is organized into four product areas: Satellite Modem and Amplifier Technologies, Troposcatter and SATCOM Solutions, Space Components and Antennas, and High-Power Amplifiers and Switches. This segment offers customers: satellite ground station technologies, services and system integration that facilitate the transmission of voice, video and data over GEO, MEO and LEO satellite constellations, including solid-state and traveling wave tube power amplifiers, modems, VSAT platforms and frequency converters; satellite communications and tracking antenna systems, including high precision full motion fixed and mobile X/Y tracking antennas, RF feeds, reflectors and radomes; over-the-horizon microwave equipment that can transmit digitized voice, video, and data over distances up to 200 miles using the troposphere and diffraction, including the Comtech COMET™; solid-state, RF microwave high-power amplifiers and control components designed for radar, electronic warfare, data link, medical and aviation applications; and procurement and supply chain management of high reliability EEE parts for satellite, launch vehicle and manned space applications.
- Terrestrial and Wireless Networks - is organized into four product areas: Next Generation 911 & Call Delivery, Solacom Call Handling Solutions, Trusted Location and Messaging Solutions, and Cyber Security Training & Services. This segment offers customers SMS Text to 911 services, providing alternate paths for individuals who need to request assistance (via text messaging) a method to reach Public Safety Answering Points; Next Generation 911 solutions, providing emergency call routing, location validation, policy-based routing rules, logging and security functionality; Emergency Services IP Network transport infrastructure for emergency services communications and support of Next Generation 911 services; call handling applications for Public Safety Answering Points; wireless emergency alerts solutions for network operators; software and equipment for location-based and text messaging services for various applications, including for public safety, commercial and government services, and cybersecurity training, skills labs, and competency assessments for both technical and non-technical applications.

Our Quarterly Financial Information

Quarterly and period-to-period sales and operating results may be significantly affected by either short-term or long-term contracts with our customers. In addition, our gross profit is affected by a variety of factors, including the mix of products, systems and services sold, production efficiencies, estimates of warranty expense, price competition and general economic conditions. Our gross profit may also be affected by the impact of any cumulative adjustments to contracts that are accounted for over time.

In particular our contracts with the U.S. government can be terminated for convenience by it at any time and orders are subject to unpredictable funding, deployment and technology decisions by the U.S. government. Some of these contracts are indefinite delivery/indefinite quantity ("IDIQ") contracts and, as such, the U.S. government is not obligated to purchase any equipment or services under these contracts. We have, in the past, experienced and we continue to expect significant fluctuations in sales and operating results from quarter-to-quarter and period-to-period due to these factors. As such, comparisons between periods and our current results may not be indicative of a trend or future performance.

Critical Accounting Policies

We consider certain accounting policies to be critical due to the estimation process involved in each.

Revenue Recognition. In accordance with FASBASC 606 - Revenue from Contracts with Customers ("ASC 606"), we record revenue in an amount that reflects the consideration to which we expect to be entitled in exchange for goods or services promised to customers. Under ASC 606, we follow a five-step model to: (1) identify the contract with our customer; (2) identify our performance obligations in our contract; (3) determine the transaction price for our contract; (4) allocate the transaction price to our performance obligations; and (5) recognize revenue using one of the following two methods:

- **Over time** - We recognize revenue using the over-time method when there is a continuous transfer of control to the customer over the contractual period of performance. This generally occurs when we enter into a long-term contract relating to the design, development or manufacture of complex equipment or technology platforms to a buyer's specification (or to provide services related to the performance of such contracts). Continuous transfer of control is typically supported by contract clauses which allow our customers to unilaterally terminate a contract for convenience, pay for costs incurred plus a reasonable profit and take control of work-in-process. Revenue recognized over time is generally based on the extent of progress toward completion of the related performance obligations. The selection of the method to measure progress requires judgment and is based on the nature of the products or services provided. In certain instances, typically for firm fixed-price contracts, we use the cost-to-cost measure because it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost measure, the extent of progress toward completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion, including warranty costs. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. Costs to fulfill generally include direct labor, materials, subcontractor costs, other direct costs and an allocation of indirect costs. When these contracts are modified, the additional goods or services are generally not distinct from those already provided. As a result, these modifications form part of an existing contract and we must update the transaction price and our measure of progress for the single performance obligation and recognize a cumulative catch-up to revenue and gross profits.

For over time contracts using a cost-to-cost measure of progress, we have an estimate at completion ("EAC") process in which management reviews the progress and execution of our performance obligations. This EAC process requires management judgment relative to assessing risks, estimating contract revenue and costs, and making assumptions for schedule and technical issues. Since certain contracts extend over a long period of time, the impact of revisions in revenue and or cost estimates during the progress of work may impact current period earnings through a cumulative adjustment. Additionally, if the EAC process indicates a loss, a provision is made for the total anticipated loss in the period that it becomes evident. Contract revenue and cost estimates for significant contracts are generally reviewed and reassessed at least quarterly.

The cost-to-cost method is principally used to account for contracts in our Satellite and Space Communications segment and, to a lesser extent, certain location-based and messaging infrastructure contracts within our Terrestrial and Wireless Networks segment. For service-based contracts in our Terrestrial and Wireless Networks segment, we also recognize revenue over time. These services are typically recognized as a series of services performed over the contract term using the straight-line method, or based on our customers' actual usage of the networks and platforms which we provide.

- Point in time - When a performance obligation is not satisfied over time, we must record revenue using the point in time accounting method which generally results in revenue being recognized upon shipment or delivery of a promised good or service to a customer. This generally occurs when we enter into short term contracts or purchase orders where items are provided to customers with relatively quick turn-around times. Modifications to such contracts and or purchase orders, which typically provide for additional quantities or services, are accounted for as a new contract because the pricing for these additional quantities or services are based on standalone selling prices.

Point in time accounting is principally applied to contracts in our Satellite and Space Communications segment, which includes satellite modems, solid-state and traveling wave tube amplifiers and certain contracts for our solid-state, high-power RF amplifiers. The contracts related to these products do not meet the requirements for over time revenue recognition because our customers cannot utilize the equipment for its intended purpose during any phase of our manufacturing process; customers do not simultaneously receive and or consume the benefits provided by our performance; customers do not control the asset (i.e., prior to delivery, customers cannot direct the use of the asset, sell or exchange the equipment, etc.); and, although many of our contracts have termination for convenience clauses and or an enforceable right to payment for performance completed to date, our performance creates an asset with an alternative use through the point of delivery.

In determining that our equipment has alternative use, we considered the underlying manufacturing process. In the early phases of manufacturing, raw materials and work in process (including subassemblies) consist of common parts that are highly fungible among many different types of products and customer applications. Finished products are either configured to our standard configuration or based on our customers' specifications. Finished products, whether built to our standard specification or to a customers' specification, can be sold to a variety of customers and across many different end use applications with minimal rework, if needed, and without incurring a significant economic loss.

When identifying a contract with our customer, we consider when it has approval and commitment from both parties, if the rights of the parties are identified, if the payment terms are identified, if it has commercial substance and if collectability is probable.

When identifying performance obligations, we consider whether there are multiple promises and how to account for them. In our contracts, multiple promises are separated if they are distinct, both individually and in the context of the contract. If multiple promises in a contract are highly interrelated or comprise a series of distinct services performed over time, they are combined into a single performance obligation. In some cases, we may also provide the customer with an additional service-type warranty, which we recognize as a separate performance obligation. Service-type warranties do not represent a significant portion of our consolidated net sales. When service-type warranties represent a separate performance obligation, the revenue is deferred and recognized ratably over the extended warranty period. Our contracts, from time-to-time, may also include options for additional goods and services. To date, these options have not represented material rights to the customer as the pricing for them reflects standalone selling prices. As a result, we do not consider options we offer to be performance obligations for which we must allocate a portion of the transaction price. In many cases, we provide assurance-type warranty coverage for some of our products for a period of at least one year from the date of delivery.

When identifying the transaction price, we typically utilize the contract's stated price as a starting point. The transaction price in certain arrangements may include estimated amounts of variable consideration, including award fees, incentive fees or other provisions that can either increase or decrease the transaction price. We estimate variable consideration as the amount to which we expect to be entitled, and we include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the estimation uncertainty is resolved. The estimation of this variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information (e.g., historical, current and forecasted) that is reasonably available to us.

When allocating the contract's transaction price, we consider each distinct performance obligation. For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. We determine standalone selling price based on the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, we estimate the standalone selling price taking into account available information such as market conditions, including geographic or regional specific factors, competitive positioning, internal costs, profit objectives and internally approved pricing guidelines related to the performance obligations.

Most of our contracts with customers are denominated in U.S. dollars and typically are either firm fixed-price or cost reimbursable type contracts (including fixed-fee, incentive-fee and time-and-material type contracts). In almost all of our contracts with customers, we are the principal in the arrangement and report revenue on a gross basis. Transaction prices for contracts with U.S. domestic and international customers are usually based on specific negotiations with each customer and in the case of the U.S. government, sometimes based on estimated or actual costs of providing the goods or services in accordance with applicable regulations.

The timing of revenue recognition, billings and collections results in receivables, unbilled receivables and contract liabilities on our Consolidated Balance Sheet. Under typical payment terms for our contracts accounted for over time, amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., monthly) or upon achievement of contractual milestones. For certain contracts with provisions that are intended to protect customers in the event we do not satisfy our performance obligations, billings occur subsequent to revenue recognition, resulting in unbilled receivables. Under ASC 606, unbilled receivables constitute contract assets. On large long term contracts, and for contracts with international customers that do not do business with us regularly, payment terms typically require advanced payments and deposits. Under ASC 606, payments received from customers in excess of revenue recognized to date results in a contract liability. These contract liabilities are not considered to represent a significant financing component of the contract because we believe these cash advances and deposits are generally used to meet working capital demands which can be higher in the earlier stages of a contract. Also, advanced payments and deposits provide us with some measure of assurance that the customer will perform on its obligations under the contract. Under the typical payment terms for our contracts accounted for at a point in time, costs are accumulated in inventory until the time of billing, which generally coincides with revenue recognition.

We recognize the incremental costs to obtain or fulfill a contract as an expense when incurred if the amortization period of the asset is one year or less. Incremental costs to obtain or fulfill contracts with an amortization period greater than one year were not material.

As commissions payable to our internal sales and marketing employees or contractors are contingent upon multiple factors, such commissions are not considered direct costs to obtain or fulfill a contract with a customer and are expensed as incurred in selling, general and administrative expenses on our Consolidated Statements of Operations. As for commissions payable to our third-party sales representatives related to long-term contracts, we do consider these types of commissions both direct and incremental costs to obtain and fulfill such contracts. Therefore, such types of commissions are included in total estimated costs at completion for such contracts and expensed over time through cost of sales on our Consolidated Statements of Operations.

Remaining performance obligations represent the transaction price of firm orders for which work has not been performed as of the end of a fiscal period. Remaining performance obligations, which we refer to as backlog, exclude unexercised contract options and potential orders under indefinite delivery / indefinite quantity ("IDIQ") contracts.

Impairment of Goodwill and Other Intangible Assets. As of July 31, 2022, total goodwill recorded on our Consolidated Balance Sheet aggregated \$347.7 million (of which \$173.6 million relates to our Satellite and Space Communications segment and \$174.1 million relates to our Terrestrial and Wireless Networks segment). Additionally, as of July 31, 2022, net intangibles recorded on our Consolidated Balance Sheet aggregated \$247.3 million (of which \$72.4 million relates to our Satellite and Space Communications segment and \$174.9 million relates to our Terrestrial and Wireless Networks segment).

For purposes of reviewing impairment and the recoverability of goodwill and other intangible assets, our Satellite and Space Communications and Terrestrial and Wireless Networks segments each constitute a reporting unit and we must make various assumptions in determining their estimated fair values. Reporting units are defined by how our Chief Executive Officer ("CEO") manages the business, which includes resource allocation decisions. We may, in the future, change our management approach which in turn may change the way we define our reporting units, as such term is defined by Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 350, "*Intangibles - Goodwill and Other*." A change to our management approach may require us to perform an interim goodwill impairment test and possibly record impairment charges in a future period.

In accordance with FASB ASC 350, we perform a goodwill impairment analysis at least annually (in the first quarter of each fiscal year), unless indicators of impairment exist in interim periods. If we fail the quantitative assessment of goodwill impairment ("quantitative assessment"), we would be required to recognize an impairment loss equal to the amount that a reporting unit's carrying value exceeded its fair value; however, any loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

As a result of our segment restructuring in the fourth quarter of fiscal 2022 from the Commercial Solutions and Government Solutions segments to the Satellite and Space Communications and Terrestrial and Wireless Networks segments, we performed an interim quantitative assessment as of July 29, 2022 and estimated the fair value of each of our reporting units, both before and after the change, using a combination of the income and market approaches. Based on our quantitative evaluations, we determined that our Satellite and Space Communications and Terrestrial and Wireless Networks reporting units had estimated fair values in excess of their carrying values of at least 18.4% and 11.6%, respectively, and concluded that our goodwill was not impaired and that neither of our two reporting units was at risk of failing the quantitative assessment. Given its proximity to our next regularly scheduled annual goodwill impairment testing date, we utilized our July 29, 2022 interim quantitative assessment to conclude that our goodwill was not impaired and that neither of our two reporting units was at risk of failing the quantitative assessment as of August 1, 2022.

In making this assessment, we considered, among other things, expectations of projected net sales and cash flows, assumptions impacting the weighted average cost of capital, trends in trading multiples of comparable companies, changes in our stock price and changes in the carrying values of our reporting units with goodwill. We also considered overall business conditions.

The income approach, also known as the discounted cash flow ("DCF") method, utilizes the present value of cash flows to estimate fair value. The future cash flows for our reporting units were projected based on our estimates, at that time, of future revenues, operating income and other factors (such as working capital and capital expenditures). For purposes of conducting our impairment analysis, we assumed revenue growth rates and cash flow projections that are below our actual long-term expectations. The discount rates used in our DCF method were based on a weighted-average cost of capital ("WACC") determined from relevant market comparisons, adjusted upward for specific reporting unit risks (primarily the uncertainty of achieving projected operating cash flows). A terminal value growth rate was applied to the final year of the projected period, which reflects our estimate of stable, perpetual growth. We then calculated a present value of the respective cash flows for each reporting unit to arrive at an estimate of fair value under the income approach. Under the market approach, we estimated a fair value based on comparable companies' market multiples of revenues and earnings before interest, taxes, depreciation and amortization and factored in a control premium. Finally, we compared our estimates of fair values to our total public market capitalization and assessed implied control premiums based on our common stock price of \$11.62 as of the date of testing.

It is possible that, during fiscal 2023 or beyond, business conditions (both in the U.S. and internationally) could deteriorate from the current state, our current or prospective customers could materially postpone, reduce or even forgo purchases of our products and services to a greater extent than we currently anticipate, or our common stock price could fluctuate. Such fluctuation could be caused by uncertainty about the severity and length of the COVID-19 pandemic, and its impact on global activity.

A significant decline in our customers' spending that is greater than we anticipate or a shift in funding priorities may also have a negative effect on future orders, sales, income and cash flows and we might be required to perform a quantitative assessment during fiscal 2023 or beyond. If assumed net sales and cash flow projections are not achieved in future periods or our common stock price significantly declines from current levels, our Satellite and Space Communications and Terrestrial and Wireless Networks reporting units could be at risk of failing the quantitative assessment and goodwill and intangibles assigned to the respective reporting units could be impaired.

In any event, we are required to perform the next annual goodwill impairment analysis on August 1, 2023 (the start of our fiscal 2024). If our assumptions and related estimates change in the future, or if we change our reporting unit structure or other events and circumstances change (e.g., a sustained decrease in the price of our common stock (considered on both absolute terms and relative to peers)), we may be required to record impairment charges when we perform these tests, or in other future periods. In addition to our impairment analysis of goodwill, we also review net intangible assets with finite lives when an event occurs indicating the potential for impairment. We believe that the carrying values of our net intangible assets were recoverable as of July 31, 2022. Any impairment charges that we may record in the future could be material to our results of operations and financial condition.

Provision for Warranty Obligations. We provide warranty coverage for most of our products, including products under long-term contracts, for a period of at least one year from the date of shipment. We record a liability for estimated warranty expense based on historical claims, product failure rates and other factors. Costs associated with some of our warranties that are provided under long-term contracts are incorporated into our estimates of total contract costs. There exist inherent risks and uncertainties in estimating warranty expenses, particularly on larger or longer-term contracts. If we do not accurately estimate our warranty costs, any changes to our original estimates could be material to our results of operations and financial condition.

Accounting for Income Taxes. Our deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax bases of assets and liabilities and applying enacted tax rates expected to be in effect for the year in which we expect the differences to reverse. Our provision for income taxes is based on domestic (including federal and state) and international statutory income tax rates in the tax jurisdictions where we operate, permanent differences between financial reporting and tax reporting and available credits and incentives. We recognize potential interest and penalties related to uncertain tax positions in income tax expense. The U.S. federal government is our most significant income tax jurisdiction.

Significant judgment is required in determining income tax provisions and tax positions. We may be challenged upon review by the applicable taxing authority and positions taken by us may not be sustained. We recognize all or a portion of the benefit of income tax positions only when we have made a determination that it is "more likely than not" that the tax position will be sustained upon examination, based upon the technical merits of the position and other factors. For tax positions that are determined as "more likely than not" to be sustained upon examination, the tax benefit recognized is the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement.

The development of valuation allowances for deferred tax assets and reserves for income tax positions requires consideration of timing and judgments about future taxable income, tax issues and potential outcomes, and are subjective critical estimates. Valuation allowances are established, when necessary, to reduce net deferred tax assets to the amount "more likely than not" expected to be realized. A portion of our deferred tax assets consist of federal research and experimentation tax credit carryforwards, some of which was acquired in connection with prior acquisitions. No valuation allowance has been established on these deferred tax assets based on our evaluation that our ability to realize such assets has met the criteria of "more likely than not." We continuously evaluate additional facts representing positive and negative evidence in determining our ability to realize these deferred tax assets. In certain circumstances, the ultimate outcome of exposures and risks involves significant uncertainties. If actual outcomes differ materially from these estimates, they could have a material impact on our results of operations and financial condition.

Our U.S. federal income tax returns for fiscal 2019 through 2021 are subject to potential future Internal Revenue Service ("IRS") audit. None of our state income tax returns prior to fiscal 2018 are subject to audit. Future tax assessments or settlements could have a material adverse effect on our consolidated results of operations and financial condition.

Research and Development Costs. We generally expense all research and development costs. Research and development expenses include payroll, employee benefits, stock-based compensation expense, and other personnel-related expenses associated with product development. Research and development expenses also include third-party development and programming costs. Costs incurred internally in researching and developing software to be sold are charged to expense until technological feasibility has been established for the software. Judgment is required in determining when technological feasibility of a product is established. Technological feasibility for our advanced communication software solutions is generally reached after all high-risk development issues have been resolved through coding and testing. Generally, this occurs shortly before the products are released to customers and when we are able to validate the marketability of such product. Once technological feasibility is established, all software costs are capitalized until the product is available for general release to customers. To date, capitalized internally developed software costs were not material.

Provisions for Excess and Obsolete Inventory. We record a provision for excess and obsolete inventory based on historical and projected usage trends. Other factors may also influence our provision, including decisions to exit a product line, technological change and new product development. These factors could result in a change in the amount of excess and obsolete inventory on hand. Additionally, our estimates of future product demand may prove to be inaccurate, in which case we may have understated or overstated the provision required for excess and obsolete inventory. In the future, if we determine that our inventory was overvalued, we would be required to recognize such costs in our financial statements at the time of such determination. Any such charge could be material to our results of operations and financial condition.

Allowance for Doubtful Accounts. We perform credit evaluations of our customers and adjust credit limits based upon customer payment history and current creditworthiness, as determined by our review of our customers' current credit information. Generally, we will require cash in advance or payment secured by irrevocable letters of credit before an order is accepted from an international customer that we do not do business with regularly. In addition, we seek to obtain insurance for certain domestic and international customers.

We monitor collections and payments from our customers and maintain an allowance for doubtful accounts based upon our historical experience and any specific customer collection issues that we have identified. In light of ongoing tight credit market conditions, we continue to see requests from our customers for higher credit limits and longer payment terms. Because of our strong cash position and the nominal amount of interest we are earning on our cash and cash equivalents, we have, on a limited basis, approved certain customer requests. We continue to monitor our accounts receivable credit portfolio. To-date, there has been no material changes in our credit portfolio as a result of the effect of the COVID-19 pandemic on worldwide business activities.

Although our overall credit losses have historically been within the allowances we established, we cannot accurately predict our future credit loss experience, given the current poor business environment. Measurement of credit losses requires consideration of historical loss experience, including the need to adjust for changing business conditions, and judgments about the probable effects of relevant observable data, including present economic conditions such as delinquency rates and the financial health of specific customers. Future changes to the estimated allowance for doubtful accounts could be material to our results of operations and financial condition.

Results of Operations

The following table sets forth, for the periods indicated, certain income and expense items expressed as a percentage of our consolidated net sales:

	Fiscal Years Ended July 31,		
	2022	2021	2020
Gross margin	37.0 %	36.8 %	36.8 %
Selling, general and administrative expenses	23.6 %	19.2 %	19.0 %
Research and development expenses	10.8 %	8.4 %	8.5 %
CEO transition costs	2.8 %	— %	— %
Proxy solicitation costs	2.3 %	— %	— %
Acquisition plan expenses	— %	17.2 %	3.4 %
Amortization of intangibles	4.4 %	3.6 %	3.5 %
Operating (loss) income	(6.9)%	(11.7)%	2.5 %
Interest expense (income) and other	0.7 %	1.2 %	1.0 %
(Loss) income before (benefit from) provision for income taxes	(7.6)%	(12.9)%	1.5 %
Net (loss) income	(6.8)%	(12.6)%	1.1 %
Net (loss) income attributable to common stockholders	(8.9)%	(12.6)%	1.1 %
Adjusted EBITDA (a Non-GAAP measure)	8.1 %	13.2 %	12.6 %

For a definition and explanation of Adjusted EBITDA, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Comparison of Fiscal 2022 and 2021 - Adjusted EBITDA."

Fiscal 2022 Highlights and Business Outlook for Fiscal 2023

Our financial highlights for the fiscal year ended July 31, 2022 include:

- Consolidated net sales were \$486.2 million;
- Gross margins improved, year-over-year, twenty basis points to 37.0%;
- GAAP net loss attributable to common stockholders was \$43.3 million, and included \$13.6 million of CEO transition costs, \$11.2 million of proxy solicitation costs, \$6.0 million of restructuring costs, \$1.2 million of strategic emerging technology costs for next-generation satellite technology, and \$1.1 million of COVID-19 related costs, as discussed below;
- GAAP EPS loss of \$1.63 and Non-GAAP EPS loss of \$0.13;
- Adjusted EBITDA (a Non-GAAP financial measure discussed below) of \$39.3 million;
- New bookings (also referred to as orders) of \$445.5 million, resulting in an annual book-to-bill ratio of 0.92x (a measure defined as bookings divided by net sales);
- Backlog of \$618.1 million as of July 31, 2022, compared to \$658.9 million as of July 31, 2021 and \$602.3 million as of April 30, 2022;
- Revenue visibility of approximately \$1.1 billion. We measure this revenue visibility as the sum of our \$618.1 million backlog, plus the total unfunded value of certain multi-year contracts that we have received and from which we expect future orders; and
- Cash flows provided by operating activities of \$2.0 million. Excluding \$15.9 million in aggregate payments for our CEO transition and settled proxy contest, cash flows provided by operating activities would have been \$17.9 million;

Non-GAAP financial measures discussed above are reconciled to the most directly comparable GAAP financial measures in the table included in the below section "*Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Comparison of Fiscal 2022 and 2021.*"

In August 2022, we announced that Ken Peterman was appointed President and CEO. Prior to such appointment, in May 2022, Mr. Peterman joined our Board of Directors as Chairman. With over forty years in the defense sector, Mr. Peterman's significant experience in satellite technology and decades of experience with U.S. government contracting is expected to enhance our efforts to continually improve commercial success and shareholder value.

Also, we progressed on our initiative to enhance our leadership team, welcoming Don Bach as our first ever Vice President of Procurement. In light of ongoing global supply chain disruptions, part shortages and extended lead times for components, Mr. Bach's immediate focus is expected to be on optimizing the end-to-end management of our consolidated inventories, including efforts to enhance our buying power across the various product areas. We also appointed Anirban Chakraborty as our first ever Chief Growth Officer. Mr. Chakraborty has been with Comtech for four years, most recently serving as Senior Vice President of Strategy and Business Development within the Trusted Location and Messaging Solutions product area. Mr. Chakraborty is expected to focus on growth initiatives by seeking meaningful ways to deploy our cutting edge technological innovations in new market areas, as well as fostering centers of engineering excellence across Comtech.

During the fourth quarter, we continued to execute on our plans to deploy the proceeds of our \$100.0 million strategic growth investment and continued to solidify our position as a leading solutions provider in our two key end-markets: Satellite and Space Communications and Terrestrial and Wireless Networks. We believe both are at the beginning of a long-term investment and upgrade cycle, and the demand environment for our products, despite the headwinds discussed below, remains strong.

Considering these trends in our end-markets, we pressed forward during the most recent quarter on our investments in capital equipment and building improvements in connection with the opening of a new 146,000 square-foot facility in Chandler, Arizona, and the establishment of a 56,000 square-foot facility in Basingstoke, United Kingdom. Although COVID-19 and supply chain issues have extended our original build-out schedules, particularly as it relates to our Chandler, Arizona facility, both manufacturing centers are expected to support production of next-generation broadband satellite technology and should be fully operational in fiscal 2023.

Our business continues to face near-term challenges and continued uncertainties, as the repercussions of the military conflict between Russia and Ukraine remain significant. For Comtech, the conflict is directly impacting near-term elements of our sales pipelines. Certain customers have paused procurement and deployment of satellite and troposcatter communication systems, and instead are purchasing war-fighting equipment. The U.S. defense budget, and defense budgets worldwide, are being adjusted in real-time to reflect the priorities of war and changing European geopolitics. Anticipated funding for other expected orders, including for our satellite and space communication products, has been shifted to other programs and/or temporarily delayed as a result of changes in defense spending priorities.

For example, in May 2022, the U.S. authorized a \$40.0 billion military and humanitarian aid package for Ukraine. While there are portions of this spending package that we could expect to benefit from in the future, such as financial support for Ukraine's military and expanded U.S. military operations in Europe, we do not expect such spending for our communications related products and services to be immediate. Nonetheless, at the request of the Ukrainian government, in our third quarter of fiscal 2022, we donated multiple COMET™ troposcatter systems to support Ukraine's urgent need for secure, reliable communications. Shortly thereafter, as announced in September 2022, we were awarded a funded order to supply the Ukrainian government with additional systems. We expect related deliveries to occur in the first half of fiscal 2023.

In late May 2022, at the request of the U.S. Army, we conducted in-field demonstrations of our troposcatter solutions (including the COMET™) for both U.S. and NATO allied government customers. These demonstrations consisted of end-to-end data communications links, showcasing small, medium and large troposcatter terminals. While it is always difficult to predict the timing and amount of future orders, we feel confident that Comtech is well-positioned to participate in the uptick in demand, as conflict and uncertainties present new opportunities for the types of communications solutions we provide.

As we enter fiscal 2023, business conditions have become more challenging, and the operating environment is largely unpredictable, especially now with increasing news reports of inflation, interest rate hikes and a potential global recession. There also continues to be order and production delays, disruptions in component availability, increased pricing both for labor and parts, lower levels of factory utilization and higher logistics and operational costs.

As the business environment relates to our operations in Russia, we are continuing to shift certain commercial software development and related support activities conducted in our Russian office to locations outside of the country. While we continue to seek and implement initiatives to lower such costs, our Business Outlook for Fiscal 2023 reflects additional expenses associated with shifting these development resources.

In light of these business conditions and resulting challenges, for our first quarter of fiscal 2023, we are targeting consolidated net sales to increase between 1.0% and 3.0%, sequentially, and for our consolidated Adjusted EBITDA margin to approximate 8.0%.

On September 29, 2022, our Board of Directors declared a cash dividend of \$0.10 per common share, payable on November 18, 2022 to stockholders of record at the close of business on October 19, 2022. Future common stock dividends remain subject to compliance with financial covenants under our Credit Facility, as well as Board approval and certain voting rights of holders of our Series A Convertible Preferred Stock.

Additional information related to our Business Outlook for Fiscal 2023 and a definition and explanation of Adjusted EBITDA is included in the below section "*Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Comparison of Fiscal 2022 and 2021.*"

Comparison of Fiscal 2022 and 2021

Net Sales. Consolidated net sales were \$486.2 million and \$581.7 million for fiscal 2022 and 2021, respectively, representing a decrease of \$95.5 million, or 16.4%. The period-over-period decrease in net sales primarily reflects lower net sales in our Satellite and Space Communications segment. Net sales by operating segment are discussed below.

Satellite and Space Communications

Net sales in our Satellite and Space Communications segment were \$279.7 million for fiscal 2022 as compared to \$374.9 million for fiscal 2021, a decrease of \$95.2 million, or 25.4%. Our Satellite and Space Communications segment represented 57.5% of consolidated net sales for fiscal 2022 as compared to 64.4% for fiscal 2021. Our book-to-bill ratio (a measure defined as bookings divided by net sales) in this segment for fiscal 2022 was 1.01x. Period-to-period fluctuations in bookings are normal for this segment.

Fiscal 2022 net sales primarily reflect significantly lower sales of our global field support services, advanced VSAT products and other programs to the U.S. Army, as well as of our satellite ground station technologies, partially offset by higher sales of our satellite-based mobile communications and tracking systems and high-reliability EEE satellite-based space components. Fiscal 2021 net sales included revenue related to our performance on our 10-year, \$211.0 million IDIQ contract awarded to us by a prime contractor to provide next-generation troposcatter systems in support of the U.S. Marine Corps. There were nominal corresponding sales in fiscal 2022.

In aggregate, net sales for our Satellite and Space Communications segment were anticipated to be significantly lower than the amount we achieved in fiscal 2021. As discussed in our Form 10-Q filed with the SEC on June 8, 2021, our revenues in fiscal 2022 were expected to decline due to the U.S. government's decision to fully withdraw troops from Afghanistan and make certain program changes. In addition, as a direct result of the Russia/Ukraine military conflict, we no longer expected to receive and ship orders to Ukraine in fiscal 2022. That customer has an immediate need for wireless communication services but had redirected procurement dollars to war-fighting equipment. However, as announced in September 2022, we were awarded a funded order to supply the Ukrainian government with troposcatter systems that we expect to deliver in the first half of fiscal 2023.

The lower sales of our satellite ground station technologies primarily reflects the timing of receipt of, and performance on, orders related to our U.S. government and international customers. Our results for fiscal 2022 and 2021 include nominal sales from our TDMA satellite networking technologies acquired on March 2, 2021. Our satellite ground station product line has been impacted by overall challenging business conditions, including the COVID-19 pandemic's effect on customer demand, particularly in international markets, which historically represents a large majority of end-users for this product line. Although our backlog of our satellite ground station products has increased during fiscal 2022, lead times for components are impacting the timing of shipments. We continue to monitor our inventory needs and navigate supply chain constraints which are impacting the timing of new orders, deliveries and installations. In addition, we do not expect to make any new sales to Russian customers at this time.

Bookings, sales and profitability in our Satellite and Space Communications segment can fluctuate dramatically from period-to-period due to many factors, including unpredictable funding, deployment and technology decisions by our U.S. and international government customers, and changes in the general business environment. As such, period-to-period comparisons of our results may not be indicative of a trend or future performance.

Terrestrial and Wireless Networks

Net sales in our Terrestrial and Wireless Networks segment were \$206.5 million for fiscal 2022, as compared to \$206.8 million for fiscal 2021, a decrease of \$0.3 million, or 0.1%, reflecting slightly higher sales of our trusted location and messaging solutions and cyber security training services, offset by slightly lower sales of our 911 call routing services. Our Terrestrial and Wireless Networks segment represented 42.5% of consolidated net sales for fiscal 2022 as compared to 35.6% for fiscal 2021. Our book-to-bill ratio (a measure defined as bookings divided by net sales) for this segment was 0.79x. Period-to-period fluctuations in bookings are normal for this segment.

Bookings, sales and profitability in our Terrestrial and Wireless Networks segment can fluctuate from period-to-period due to many factors, including changes in the general business environment. As such, period-to-period comparisons of our results may not be indicative of a trend or future performance.

Geography and Customer Type

Sales by geography and customer type, as a percentage of related sales, for the fiscal years ended July 31, 2022 and 2021 are as follows:

	Fiscal Years Ended July 31,					
	2022	2021	2022	2021	2022	2021
	Satellite and Space Communications		Terrestrial and Wireless Networks		Consolidated	
U.S. government	45.6 %	52.8 %	2.4 %	1.4 %	27.2 %	34.6 %
Domestic	18.0 %	15.3 %	88.1 %	89.2 %	47.8 %	41.5 %
Total U.S.	63.6 %	68.1 %	90.5 %	90.6 %	75.0 %	76.1 %
International	36.4 %	31.9 %	9.5 %	9.4 %	25.0 %	23.9 %
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Sales to U.S. government customers include sales to the U.S. Department of Defense ("DoD"), intelligence and civilian agencies, as well as sales directly to or through prime contractors.

Domestic sales include sales to commercial customers, as well as to U.S. state and local governments. Included in domestic sales are sales to Verizon Communications Inc. ("Verizon"), which accounted for 11.1% and 10.7% of consolidated net sales for fiscal 2022 and 2021, respectively.

International sales for fiscal 2022 and 2021 (which include sales to U.S. domestic companies for inclusion in products that are sold to international customers) were \$121.4 million and \$138.9 million, respectively. Except for the U.S., no individual country (including sales to U.S. domestic companies for inclusion in products that are sold to a foreign country) represented more than 10% of consolidated net sales for fiscal 2022 and 2021.

Gross Profit. Gross profit was \$179.8 million and \$214.0 million for fiscal 2022 and 2021, respectively. Gross profit, as a percentage of consolidated net sales, for fiscal 2022 was 37.0% as compared to 36.8% for fiscal 2021. During fiscal 2022, we recorded a \$2.5 million benefit to cost of sales as we reduced a warranty accrual due to lower than expected warranty claims in our NG-911 product line. During fiscal 2021, we recorded a \$2.0 million benefit to cost of sales in our Unallocated segment related to a refund of historical excise tax paid. Excluding such items, gross profit, as a percentage of consolidated net sales, for fiscal 2022 and 2021 was 36.5% and 36.4%, respectively. Gross profit during the most recent period reflects the impact of an overall favorable product mix and a lower provision for warranty obligations during fiscal 2022 in light of the reduced level of sales activity during the period, offset in part by lower consolidated net sales. Our gross profit in both periods also reflects start-up costs associated with the opening of our new high-volume technology manufacturing centers, as well as increased costs resulting from the ongoing impacts of the COVID-19 pandemic and inflationary pressures. Gross profit, as a percentage of related segment net sales, is further discussed below.

Our Satellite and Space Communications segment's gross profit, as a percentage of related segment net sales, for fiscal 2022 decreased in comparison to fiscal 2021. The decrease in gross profit percentage primarily reflects changes in products and services mix, as well as lower levels of factory utilization and higher logistics and operational costs resulting from global supply chain constraints. Also, during fiscal 2022 and 2021, we incurred \$1.1 million and \$1.0 million, respectively, of incremental operating costs related to our antenna facility in the United Kingdom due to the impact of the COVID-19 pandemic. Although operations in the United Kingdom have largely resumed, we continued to experience lingering impacts from COVID-19 and the related facility shut-down in fiscal 2021. We do not expect to incur similar costs in fiscal 2023.

Our Terrestrial and Wireless Networks segment's gross profit, as a percentage of related segment net sales, for fiscal 2022 was comparable to fiscal 2021. The gross profit percentage in fiscal 2022 primarily reflects changes in products and services mix, and lower than expected warranty claims, as discussed above.

Included in consolidated cost of sales for both fiscal 2022 and 2021 are provisions for excess and obsolete inventory of \$4.4 million. As discussed in *"Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Policies - Provisions for Excess and Obsolete Inventory,"* we regularly review our inventory and record a provision for excess and obsolete inventory based on historical and projected usage trends.

Our consolidated gross profit, as a percentage of consolidated net sales, depends on the volume of sales, sales mix and related gross profit for each segment, and therefore is inherently difficult to forecast.

Selling, General and Administrative Expenses. Selling, general and administrative expenses were \$114.9 million and \$111.8 million for fiscal 2022 and 2021, respectively. As a percentage of consolidated net sales, selling, general and administrative expenses were 23.6% and 19.2% for fiscal 2022 and 2021, respectively.

During fiscal 2022 and 2021, we incurred \$6.0 million and \$2.8 million, respectively, of restructuring costs to streamline our operations, including costs related to the ongoing relocation of certain of our satellite ground station production facilities to a new 146,000 square foot facility in Chandler, Arizona. In addition, we received \$3.1 million of legal expense recoveries from insurance in fiscal 2021. Excluding such items, selling, general and administrative expenses for fiscal 2022 and 2021 would have been \$108.9 million or 22.4% and \$112.1 million or 19.3%, respectively, of consolidated net sales. The increase in our selling, general and administrative expenses, as a percentage of consolidated net sales, is primarily due to lower consolidated net sales. Our selling, general and administrative expenses in the most recent period also reflect higher labor costs associated with a tight global labor market, increased investments in marketing, including new social media activities and other investments we are making to achieve our long term business goals. Such spending is expected to continue during fiscal 2023.

Amortization of stock-based compensation expenses recorded as selling, general and administrative expenses was \$6.3 million in fiscal 2022 as compared to \$8.1 million in fiscal 2021. Such amortization for fiscal 2022 includes \$0.8 million related to the retirement, in December 2021, of three, long-standing members of the Board of Directors. Amortization of stock-based compensation is not allocated to our two reportable operating segments.

Research and Development Expenses. Research and development expenses were \$52.5 million and \$49.1 million for fiscal 2022 and 2021, respectively, representing an increase of \$3.4 million, or 6.9%. As a percentage of consolidated net sales, research and development expenses were 10.8% and 8.4% for fiscal 2022 and 2021, respectively.

For fiscal 2022 and 2021, research and development expenses of \$26.5 million and \$28.0 million, respectively, related to our Satellite and Space Communications segment, and \$25.2 million and \$20.1 million, respectively, related to our Terrestrial and Wireless Networks segment. The remaining research and development expenses of \$0.8 million and \$1.0 million in fiscal 2022 and 2021, respectively, related to the amortization of stock-based compensation expense.

During fiscal 2022 and 2021, our Satellite and Space Communications segment incurred \$1.2 million and \$0.3 million, respectively, of strategic emerging technology costs for next-generation satellite technology to advance our solutions offerings to be used with new broadband satellite constellations. As we have stated in the past, we are evaluating this new market in relation to our long-term business strategies, and we may incur additional costs in the future.

Whenever possible, we seek customer funding for research and development to adapt our products to specialized customer requirements. During fiscal 2022 and 2021, customers reimbursed us \$9.8 million and \$13.6 million, respectively, which is not reflected in the reported research and development expenses but is included in net sales with the related costs included in cost of sales.

Amortization of Intangibles. Amortization relating to intangible assets with finite lives was \$21.4 million (of which \$7.3 million was for the Satellite and Space Communications segment and \$14.1 million was for the Terrestrial and Wireless Networks segment) for fiscal 2022 and \$21.0 million (of which \$5.7 million was for the Satellite and Space Communications segment and \$15.3 million was for the Terrestrial and Wireless Networks segment) for fiscal 2021.

Proxy Solicitation Costs. During fiscal 2022, we incurred \$11.2 million of proxy solicitation costs (including legal and advisory fees and costs associated with a related lawsuit) in our Unallocated segment as a result of a now-settled proxy contest initiated by a shareholder during the first quarter of fiscal 2022. There were no similar costs in the prior year. During our first quarter of fiscal 2022, we entered into a Cooperation Agreement with such shareholder.

CEO Transition Costs. On December 31, 2021, our Board of Directors appointed Mr. Porcelain as CEO. Prior to that, Mr. Porcelain served as our President and COO. Transition costs related to our former CEO, Mr. Komberg, were \$13.6 million and all expensed in our Unallocated segment during fiscal 2022. Of such amount, \$10.3 million related to Mr. Komberg's severance payments and benefits upon termination of his employment; the remainder related to Mr. Komberg agreeing to serve as a Senior Technology Advisor for a minimum of two years. There were no similar costs in the prior year.

On August 9, 2022, subsequent to year end, our Board of Directors appointed our Chairman of the Board, Mr. Peterman, as President and CEO. Transition costs related to our former President and CEO, Mr. Porcelain, pursuant to his separation agreement with the Company, were \$7.4 million, of which \$3.8 million related to the acceleration of unamortized stock based compensation, with the remaining \$3.6 million related to his severance payments and benefits upon termination of employment. The cash portion of the transition costs of \$3.6 million is expected to be paid to Mr. Porcelain in October 2022. Also, in connection with Mr. Peterman entering into an employment agreement with the Company, effective as of August 9, 2022, we incurred a \$1.0 million expense related to a cash sign-on bonus. CEO transition costs related to Mr. Porcelain and Mr. Peterman will be expensed in our Unallocated segment during the first quarter of fiscal 2023.

Acquisition Plan Expenses. During fiscal 2021, we incurred \$100.3 million of acquisition plan expenses, of which \$88.3 million related to the previously announced litigation and merger termination with Gilat, including \$70.0 million paid in cash to Gilat. The remaining costs primarily related to the acquisition of TDMA satellite networking technologies and GD NG-911 acquisition-related litigation. These expenses are primarily recorded in our Unallocated segment. There were no similar costs incurred during fiscal 2022.

Operating (Loss) Income. Operating loss for fiscal 2022 and 2021 was \$33.8 million and \$68.3 million, respectively. Operating income (loss) by reportable segment is shown in the table below:

(\$ in millions)	Fiscal Years Ended July 31,							
	2022	2021	2022	2021	2022	2021	2022	2021
	Satellite and Space Communications		Terrestrial and Wireless Networks		Unallocated		Consolidated	
Operating (loss) income	\$ (5.7)	\$ 24.3	\$ 18.9	\$ 25.2	\$ (47.0)	\$ (117.8)	\$ (33.8)	\$ (68.3)
Percentage of related net sales	NA	6.5 %	9.2 %	12.2 %	NA	NA	NA	NA

Our GAAP operating loss of \$33.8 million for fiscal 2022 reflects: (i) \$13.6 million of CEO transition costs; (ii) \$11.2 million of proxy solicitation costs; (iii) \$6.0 million of restructuring costs; (iv) \$1.2 million of strategic emerging technology costs; and (v) \$1.1 million of incremental operating costs due to the lingering impact of COVID-19, as discussed above. Excluding such items, our consolidated operating loss for fiscal 2022 would have been \$0.7 million. Our GAAP operating loss of \$68.3 million for fiscal 2021 reflects: (i) \$100.3 million of acquisition plan expenses; (ii) \$2.8 million of restructuring costs; (iii) \$1.0 million of incremental operating costs due to the impact of COVID-19; and (iv) \$0.3 million of strategic emerging technology costs, as discussed above. Excluding such items, our consolidated operating income for fiscal 2021 would have been \$36.1 million, or 6.2% of consolidated net sales. The decrease in operating income from \$36.1 million for fiscal 2021 to an operating loss of \$0.7 million for fiscal 2022 was primarily due to lower consolidated net sales, as discussed above. Operating income (loss) by reportable segment is further discussed below.

The decrease in our Satellite and Space Communications segment operating income for fiscal 2022 was driven primarily by lower net sales and gross profit percentage and higher restructuring costs and amortization of intangibles, partially offset by lower research and development expenses, as discussed above.

The decrease in our Terrestrial and Wireless Networks segment operating income, both in dollars and as a percentage of the related segment net sales, for fiscal 2022 was driven primarily by higher research and development expenses, as discussed above.

The decrease in unallocated expenses for fiscal 2022 as compared to fiscal 2021 was primarily due to no acquisition plan expenses incurred during the most recent fiscal year, partially offset by CEO transition costs and proxy solicitation costs during fiscal 2022, as discussed above. Amortization of stock-based compensation was \$7.8 million and \$10.0 million, respectively, for fiscal 2022 and 2021. Stock-based compensation expense for fiscal 2022 includes \$0.8 million related to the retirement of three, long-standing Board members, who retired in December 2021. Our unallocated expenses for fiscal 2021 also reflects benefits of \$3.1 million for legal expense recoveries from insurance and \$2.0 million related to a refund of historical excise tax paid. Excluding these items in their respective periods, unallocated expense would have been \$21.4 million and \$21.6 million, respectively, for fiscal 2022 and 2021.

GAAP operating results for fiscal 2023 will be impacted by start-up expenses and restructuring costs associated with the opening of Comtech's new high-volume technology manufacturing centers, as well as the expenses associated with the CEO change that was announced in August 2022.

Interest Expense and Other. Interest expense was \$5.0 million and \$6.8 million for fiscal 2022 and 2021, respectively. Interest expense for fiscal 2021 includes \$1.2 million of incremental interest expense related to a now terminated financing commitment letter. Our effective interest rate (including amortization of deferred financing costs) in fiscal 2022 was approximately 3.4%. Our current cash borrowing rate (which excludes the amortization of deferred financing costs) under our existing Credit Facility is approximately 5.1%.

Interest (Income) and Other. Interest (income) and other for both fiscal 2022 and 2021 was nominal. All of our available cash and cash equivalents are currently invested in bank deposits and money market deposit accounts which, at this time, are currently yielding an immaterial interest rate.

Change in Fair Value of Convertible Preferred Stock Purchase Option Liability. During fiscal 2022, we recorded a \$1.0 million non-cash benefit from the remeasurement of the convertible preferred stock purchase option liability. See "Notes to Condensed Consolidated Financial Statements - Note (15) - Convertible Preferred Stock" for more information.

Benefit from Income Taxes. For fiscal 2022 and 2021, we recorded tax benefits of \$4.0 million and \$1.5 million, respectively. Our effective tax rate (excluding discrete tax items) for fiscal 2022 was 28.0%, as compared to a nominal effective tax rate for fiscal 2021. The increase was primarily due to expected product and geographical mix changes in fiscal 2022.

For purposes of determining our 28.0% annual effective tax rate for fiscal 2022, CEO transition costs and proxy solicitation costs are considered significant, unusual or infrequently occurring discrete tax items and are excluded from the computation of our effective tax rate.

During fiscal 2022, we recorded a net discrete tax benefit of \$0.6 million, primarily related to the deductible portion of CEO transition costs and proxy solicitation costs. These benefits were partially offset by the establishment of a valuation allowance on certain foreign related net deferred tax assets and the settlement of certain stock-based awards during fiscal 2022. During fiscal 2021, we recorded a net discrete tax benefit of \$1.6 million, primarily related to the release of valuation allowances previously established on certain foreign related deferred tax assets, the finalization of certain tax accounts in connection with the filing of our fiscal 2020 federal, state and foreign income tax returns and the settlement of certain stock-based awards during fiscal 2021.

Our U.S. federal income tax returns for fiscal 2019 through 2021 are subject to potential future IRS audit. None of our state income tax returns prior to fiscal 2018 are subject to audit. Future tax assessments or settlements could have a material adverse effect on our consolidated results of operations and financial condition.

Net Loss Attributable to Common Stockholders. During fiscal 2022 and 2021, consolidated net loss attributable to common stockholders was \$43.3 million and \$73.5 million, respectively.

Adjusted EBITDA. Adjusted EBITDA (both in dollars and as a percentage of related net sales) for both fiscal 2022 and 2021 are shown in the table below (numbers in the table may not foot due to rounding):

	Fiscal Years Ended July 31,							
	2022	2021	2022	2021	2022	2021	2022	2021
	Satellite and Space Communications		Terrestrial and Wireless Networks		Unallocated		Consolidated	
(\$ in millions)								
Net (loss) income	\$ (3.9)	24.4	18.8	24.4	(48.0)	(122.2)	\$ (33.1)	(73.5)
(Benefit from) provision for income taxes	(1.1)	(0.4)	—	0.8	(2.9)	(1.9)	(4.0)	(1.5)
Interest (income) and other	(0.8)	0.2	0.1	—	—	(0.4)	(0.7)	(0.1)
Change in fair value of convertible preferred stock option liability	—	—	—	—	(1.0)	—	(1.0)	—
Interest expense	0.1	0.1	—	—	4.9	6.8	5.0	6.8
Amortization of stock-based compensation	—	—	—	—	7.8	10.0	7.8	10.0
Amortization of intangibles	7.3	5.7	14.1	15.3	—	—	21.4	21.0
Depreciation	4.0	3.7	6.1	5.3	0.2	0.3	10.3	9.4
Amortization of cost to fulfill assets	0.5	—	—	—	—	—	0.5	—
CEO transition costs	—	—	—	—	13.6	—	13.6	—
Proxy solicitation costs	—	—	—	—	11.2	—	11.2	—
Restructuring costs	5.7	2.8	—	—	0.3	—	6.0	2.8
Strategic emerging technology costs	1.2	0.3	—	—	—	—	1.2	0.3
COVID-19 related costs	1.1	1.0	—	—	—	—	1.1	1.0
Acquisition plan expenses	—	—	—	(1.1)	—	101.3	—	100.3
Adjusted EBITDA	\$ 14.1	37.8	39.1	44.8	(13.9)	(6.1)	\$ 39.3	76.5
Percentage of related net sales	5.0 %	10.1 %	18.9 %	21.7 %	NA	NA	8.1 %	13.2 %

The decrease in consolidated Adjusted EBITDA, both in dollars and as a percentage of consolidated net sales, for fiscal 2022 as compared to fiscal 2021 is primarily attributable to lower consolidated net sales, as discussed above.

The decrease in our Satellite and Space Communications segment's Adjusted EBITDA, both in dollars and as a percentage of related segment net sales, was driven primarily by lower net sales and gross profit percentage, partially offset by lower research and development expenses, as discussed above.

The decrease in our Terrestrial and Wireless Networks segment's Adjusted EBITDA, both in dollars and as a percentage of related segment net sales, was driven primarily by higher research and development expenses, as discussed above.

Because our consolidated Adjusted EBITDA, as a percentage of consolidated net sales, depends on the volume of sales, sales mix and related gross profit for each segment as well as unallocated spending, it is inherently difficult to forecast.

Reconciliations of our GAAP consolidated operating (loss) income, net (loss) income attributable to common stockholders and net (loss) income per diluted common share for fiscal 2022 and 2021 to the corresponding Non-GAAP measures are shown in the tables below (numbers and per share amounts in the table may not foot due to rounding). Non-GAAP net (loss) income attributable to common stockholders and net (loss) income per diluted common share reflect Non-GAAP provisions for income taxes based on full year results, as adjusted for the Non-GAAP reconciling items included in the tables below. We evaluate our Non-GAAP effective income tax rate on an ongoing basis, and it can change from time to time. Our Non-GAAP effective income tax rate can differ materially from our GAAP effective income tax rate. In addition, due to the GAAP net loss for the period, Non-GAAP EPS for fiscal 2021 was computed using 25,885,000 weighted average diluted shares outstanding during the period.

(\$ in millions, except for per share amounts)	Fiscal 2022		
	Operating Loss	Net Loss Attributable to Common Stockholders	Net Loss per Diluted Common Share
Reconciliation of GAAP to Non-GAAP Earnings:			
GAAP measures, as reported	\$ (33.8)	\$ (43.3)	\$ (1.63)
Adjustments to reflect redemption value of convertible preferred stock	—	10.2	0.39
CEO transition costs	13.6	13.0	0.49
Proxy solicitation costs	11.2	8.7	0.33
Restructuring costs	6.0	4.6	0.17
Strategic emerging technology costs	1.2	0.9	0.03
COVID-19 related costs	1.1	0.8	0.03
Change in fair value of convertible preferred stock purchase option liability	—	(1.0)	(0.04)
Net discrete tax expense	—	2.6	0.10
Non-GAAP measures	<u>\$ (0.7)</u>	<u>\$ (3.5)</u>	<u>\$ (0.13)</u>

(\$ in millions, except for per share amounts)	Fiscal 2021		
	Operating (Loss) Income	Net (Loss) Income	Net (Loss) Income per Diluted Share
Reconciliation of GAAP to Non-GAAP Earnings:			
GAAP measures, as reported	\$ (68.3)	\$ (73.5)	\$ (2.86)
Acquisition plan expenses	100.3	93.3	3.60
Restructuring costs	2.8	2.1	0.08
COVID-19 related costs	1.0	0.8	0.03
Strategic emerging technology costs	0.3	0.3	0.01
Interest expense	—	0.9	0.04
Net discrete tax benefit	—	(1.6)	(0.06)
Non-GAAP measures	<u>\$ 36.1</u>	<u>\$ 22.4</u>	<u>\$ 0.86</u>

Our Adjusted EBITDA is a Non-GAAP measure that represents earnings (loss) before income taxes, interest (income) and other, change in fair value of the convertible preferred stock purchase option liability, write-off of deferred financing costs, interest expense, amortization of stock-based compensation, amortization of intangibles, depreciation expense, amortization of cost to fulfill assets, estimated contract settlement costs, settlement of intellectual property litigation, acquisition plan expenses, restructuring costs, COVID-19 related costs, strategic emerging technology costs (for next-generation satellite technology), facility exit costs, CEO transition costs, proxy solicitation costs, strategic alternatives analysis expenses and other. Our definition of Adjusted EBITDA may differ from the definition of EBITDA or Adjusted EBITDA used by other companies and therefore may not be comparable to similarly titled measures used by other companies. Adjusted EBITDA is also a measure frequently requested by our investors and analysts. We believe that investors and analysts may use Adjusted EBITDA, along with other information contained in our SEC filings, in assessing our performance and comparability of our results with other companies. Our Non-GAAP measures reflect the GAAP measures as reported, adjusted for certain items as described herein and also excludes the effects of our outstanding convertible preferred stock.

These Non-GAAP financial measures have limitations as an analytical tool as they exclude the financial impact of transactions necessary to conduct our business, such as the granting of equity compensation awards, and are not intended to be an alternative to financial measures prepared in accordance with GAAP. These measures are adjusted as described in the reconciliation of GAAP to Non-GAAP in the tables presented herein, but these adjustments should not be construed as an inference that all of these adjustments or costs are unusual, infrequent or non-recurring. Non-GAAP financial measures should be considered in addition to, and not as a substitute for or superior to, financial measures determined in accordance with GAAP. Investors are advised to carefully review the GAAP financial results that are disclosed in our SEC filings. We have not quantitatively reconciled our Q1 fiscal 2023 Adjusted EBITDA target to the most directly comparable GAAP measure because items such as adjustments to the provision for income taxes, and interest expense, which are specific items that impact these measures, have not yet occurred, are out of our control, or cannot be predicted. Accordingly, reconciliations to the Non-GAAP forward looking metrics are not available without unreasonable effort and such unavailable reconciling items could significantly impact our financial results.

Comparison of Fiscal 2021 and 2020

Net Sales. Consolidated net sales were \$581.7 million and \$616.7 million for fiscal 2021 and 2020, respectively, representing a decrease of \$35.0 million, or 5.7%. The decrease in net sales primarily reflects lower net sales in our Satellite and Space Communications segment. Net sales by operating segment are discussed below.

Satellite and Space Communications

Net sales in our Satellite and Space Communications segment were \$374.9 million for fiscal 2021 as compared to \$411.1 million for fiscal 2020, a decrease of \$36.2 million or 8.8%. Our Satellite and Space Communications segment represented 64.4% of consolidated net sales for fiscal 2021 as compared to 66.7% for fiscal 2020. Our book-to-bill ratio (a measure defined as bookings divided by net sales) in this segment for fiscal 2021 was 0.91x. Period-to-period fluctuations in bookings are normal for this segment.

Fiscal 2021 net sales in this segment primarily reflect lower sales of global field support services, advanced VSAT products and other programs for the U.S. Army. Such increase was offset in part by higher sales of our high reliability Electrical, Electronic and Electromechanical ("EEE") satellite-based space components (including incremental sales of X/Y antenna products that we now offer as a result of our January 2020 acquisition of CGC), performance on our 10-year, \$211.0 million IDIQ contract awarded to us by a prime contractor to provide next-generation troposcatter systems in support of the U.S. Marine Corps and a nominal amount of sales related to our acquisition of UHP Networks Inc. ("UHP") on March 2, 2021, which extended our product offerings to include TDMA satellite modems.

Terrestrial and Wireless Networks

Net sales in our Terrestrial and Wireless Networks segment were \$206.8 million for fiscal 2021, as compared to \$205.6 million for fiscal 2020, an increase of \$1.2 million, or 0.6%. Our Terrestrial and Wireless Networks segment represented 35.6% of consolidated net sales for fiscal 2021 as compared to 33.3% for fiscal 2020. Our book-to-bill ratio (a measure defined as bookings divided by net sales) in this segment for fiscal 2021 was 1.37x. Period-to-period fluctuations in bookings are normal for this segment.

Net sales in fiscal 2021 reflect increased sales of our trusted location and messaging solutions, offset in part by the absence of 911 wireless call routing sales to AT&T.

During fiscal 2021, we were awarded several important statewide NG-911 contracts and our strong momentum was acknowledged by Frost & Sullivan, who recognized Comtech for registering the most significant year-over-year market share increase among all NG-911 primary contract holders, growing our market share from an estimated 17.3% in 2019 to 26.2% in 2020, as calculated by Frost & Sullivan.

Geography and Customer Type

Sales by geography and customer type, as a percentage of related sales, for the fiscal years ended July 31, 2021 and 2020 are as follows:

	Fiscal Years Ended July 31,					
	2021	2020	2021	2020	2021	2020
	Satellite and Space Communications		Terrestrial and Wireless Networks		Consolidated	
U.S. government	52.8 %	53.7 %	1.4 %	1.2 %	34.6 %	36.2 %
Domestic	15.3 %	15.2 %	89.2 %	90.3 %	41.5 %	40.3 %
Total U.S.	68.1 %	68.9 %	90.6 %	91.5 %	76.1 %	76.5 %
International	31.9 %	31.1 %	9.4 %	8.5 %	23.9 %	23.5 %
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Sales to U.S. government customers include sales to the DoD, intelligence and civilian agencies, as well as sales directly to or through prime contractors.

Domestic sales include sales to commercial customers, as well as to U.S. state and local governments. Included in domestic sales are sales to Verizon, which accounted for 10.7% of consolidated net sales for fiscal 2021. Except for the U.S. government, there were no customers that represented more than 10.0% of consolidated net sales for fiscal 2020.

International sales for fiscal 2021 and 2020 (which include sales to U.S. domestic companies for inclusion in products that are sold to international customers) were \$138.9 million and \$145.1 million, respectively. Except for the U.S., no individual country (including sales to U.S. domestic companies for inclusion in products that are sold to a foreign country) represented more than 10% of consolidated net sales for fiscal 2021 and 2020.

Gross Profit. Gross profit was \$214.0 million and \$226.8 million for fiscal 2021 and 2020, respectively. The decrease of \$12.8 million primarily reflects the decline in consolidated net sales, as discussed above. Gross profit as a percentage of consolidated net sales was 36.8% for both fiscal periods. Our gross profit in fiscal 2021 reflects a higher percentage of consolidated net sales generated from our Terrestrial and Wireless Networks segment, offset by increased costs due to production delays, supply chain disruptions, lower levels of factory utilization and higher logistics and operational costs resulting from the COVID-19 pandemic. In addition, our gross profit reflects start-up costs associated with the opening of our two new high-volume technology manufacturing centers. Our gross profit for fiscal 2021 also reflects a \$2.0 million benefit from the refund of historical excise tax paid, which was recorded in our Unallocated segment. Gross profit, as a percentage of related segment net sales, is further discussed below.

Our Satellite and Space Communications segment's gross profit, as a percentage of related segment net sales, for fiscal 2021 increased in comparison to fiscal 2020 primarily reflecting changes in products and services mix, as discussed above. Also, during fiscal 2021, we incurred \$1.0 million of incremental operating costs for our antenna facility in the United Kingdom due to the impact of the COVID-19 pandemic.

Our Terrestrial and Wireless Networks segment's gross profit, as a percentage of related segment net sales, for fiscal 2021 decreased in comparison to fiscal 2020 primarily reflecting changes in products and services mix, including the cessation of sales to AT&T for 911 wireless call routing services and an increase in sales related to a recently awarded statewide NG-911 deployment (which has lower margins than our 911 wireless call routing services).

Included in consolidated cost of sales for fiscal 2021 and 2020 are provisions for excess and obsolete inventory of \$4.4 million and \$1.6 million, respectively. As discussed in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Policies - Provisions for Excess and Obsolete Inventory," we regularly review our inventory and record a provision for excess and obsolete inventory based on historical and projected usage trends.

Selling, General and Administrative Expenses. Selling, general and administrative expenses were \$111.8 million and \$117.1 million for fiscal 2021 and 2020, respectively, representing a decrease of \$5.3 million, or 4.5%. As a percentage of consolidated net sales, selling, general and administrative expenses were 19.2% and 19.0% for fiscal 2021 and 2020, respectively.

In fiscal 2021, we incurred \$2.8 million of restructuring costs to streamline our operations, including \$1.8 million related to the ongoing relocation of certain of our satellite ground station production facilities to a new 146,000 square foot facility in Chandler, Arizona, and \$1.0 million for the consolidation of certain administrative and operating functions in our troposcatter and SATCOM solution product line. In addition, we received \$3.1 million of legal expense recoveries from insurance in fiscal 2021. In fiscal 2020, we incurred estimated contract settlement costs of \$0.4 million principally related to the repositioning of our trusted location and messaging solutions offerings in our Terrestrial and Wireless Networks segment. Excluding these costs in both periods, our selling, general and administrative expenses would have been \$112.1 million, or 19.3% of consolidated net sales in fiscal 2021 and \$116.7 million, or 18.9% of consolidated net sales in fiscal 2020. The decrease in our selling, general and administrative expenses, in dollars, is largely attributable to the benefit from our efforts to streamline business operations in our Satellite and Space Communications segment.

Amortization of stock-based compensation expenses recorded as selling, general and administrative expenses was \$8.1 million in fiscal 2021 as compared to \$7.5 million in fiscal 2020. Amortization of stock-based compensation is not allocated to our two reportable operating segments.

Research and Development Expenses. Research and development expenses were \$49.1 million and \$52.2 million for fiscal 2021 and 2020, respectively, representing a decrease of \$3.1 million, or 5.9%. As a percentage of consolidated net sales, research and development expenses were 8.4% and 8.5% for fiscal 2021 and 2020, respectively.

For fiscal 2021 and 2020, research and development expenses of \$28.0 million and \$31.0 million, respectively, related to our Satellite and Space Communications segment, and \$20.1 million and \$20.3 million, respectively, related to our Terrestrial and Wireless Networks segment. The remaining research and development expenses of \$1.0 million and \$0.9 million in fiscal 2021 and 2020, respectively, related to the amortization of stock-based compensation expense.

During fiscal 2021, our Satellite and Space Communications segment incurred \$0.3 million of strategic emerging technology costs for next-generation satellite technology to advance our solutions offerings to be used with new broadband satellite constellations.

Whenever possible, we seek customer funding for research and development to adapt our products to specialized customer requirements. During fiscal 2021 and 2020, customers reimbursed us \$13.6 million and \$11.9 million, respectively, which is not reflected in the reported research and development expenses but is included in net sales with the related costs included in cost of sales.

Amortization of Intangibles. Amortization relating to intangible assets with finite lives was \$21.0 million (of which \$5.7 million was for the Satellite and Space Communications segment and \$15.3 million was for the Terrestrial and Wireless Networks segment) for fiscal 2021 and \$21.6 million (of which \$5.1 million was for the Satellite and Space Communications segment and \$16.5 million was for the Terrestrial and Wireless Networks segment) for fiscal 2020.

Acquisition Plan Expenses. During fiscal 2021 and 2020, we incurred acquisition plan expenses of \$100.3 million and \$20.8 million, respectively. For fiscal 2021, \$88.3 million related to the previously announced litigation and merger termination with Gilat, including \$70.0 million paid in cash to Gilat. The remaining costs in fiscal 2021 primarily related to the April 2021 settlement of litigation associated with our 2019 acquisition of GD NG-911 as well as the March 2021 closing of our acquisition of UHP. These expenses are primarily recorded in our Unallocated segment.

Operating (Loss) Income. Operating loss for fiscal 2021 was \$68.3 million as compared to operating income of \$15.2 million for fiscal 2020. Operating income (loss) by reportable segment is shown in the table below:

(\$ in millions)	Fiscal Years Ended July 31,							
	2021	2020	2021	2020	2021	2020	2021	2020
	Satellite and Space Communications		Terrestrial and Wireless Networks		Unallocated		Consolidated	
Operating income (loss)	\$ 24.3	\$ 25.5	\$ 25.2	\$ 29.3	\$ (117.8)	\$ (39.6)	\$ (68.3)	\$ 15.2
Percentage of related net sales	6.5 %	6.2 %	12.2 %	14.3 %	NA	NA	NA	2.5 %

The decrease in our Satellite and Space Communications segment operating income, in dollars, for fiscal 2021 was driven primarily by lower net sales, \$2.8 million of restructuring costs and \$1.0 million of COVID-19 related costs, partially offset by a higher gross profit percentage and lower research and development expenses, as discussed above.

The decrease in our Terrestrial and Wireless Networks segment operating income, both in dollars and as a percentage of the related segment net sales, for fiscal 2021 was driven primarily by a lower gross profit percentage, partially offset by lower amortization of intangibles, as discussed above.

The increase in unallocated expenses for fiscal 2021 as compared to fiscal 2020 is primarily due to acquisition plan expenses, as discussed above. Amortization of stock-based compensation was \$10.0 million and \$9.3 million, respectively, for fiscal 2021 and 2020.

Excluding (i) \$100.3 million of acquisition plan expenses; (ii) \$2.8 million of restructuring costs; (iii) \$1.0 million of incremental operating costs due to the impact of COVID-19; and (iv) \$0.3 million of strategic emerging technology costs, consolidated operating income for fiscal 2021 would have been \$36.1 million, or 6.2% of consolidated net sales. Excluding \$20.8 million of acquisition plan expenses and \$0.4 million of estimated contract settlement costs, consolidated operating income for fiscal 2020 would have been \$36.4 million, or 5.9% of consolidated net sales. The increase, as a percentage of consolidated net sales, was due primarily to lower selling, general and administrative expenses and lower research and development expenses, offset in part by lower consolidated net sales, as discussed above.

Interest Expense and Other. Interest expense was \$6.8 million and \$6.1 million for fiscal 2021 and 2020, respectively. Interest expense for fiscal 2021 includes \$1.2 million of incremental interest expense related to a now terminated financing commitment letter. Excluding the \$1.2 million, our effective interest rate (including amortization of deferred financing costs) in fiscal 2021 was approximately 2.8%.

Interest (Income) and Other. Interest (income) and other for both fiscal 2021 and 2020 was nominal.

(Benefit from) Provision for Income Taxes. For fiscal 2021, we recorded a tax benefit of \$1.5 million as compared to a tax provision of \$2.3 million for fiscal 2020. Our effective tax rate for fiscal 2021 (excluding discrete tax items) was nominal, as compared to 37.0% for fiscal 2020. The decrease from 37.0% is primarily due to the exclusion of the \$70.0 million of acquisition plan expense paid to Gilat during our first quarter of fiscal 2021, as such amount was considered an unusual and infrequently occurring item. In addition, given the nature of such item, no financial statement benefit was recorded for the \$70.0 million payment to Gilat.

During fiscal 2021, we recorded a net discrete tax benefit of \$1.6 million, primarily related to: (i) the release of valuation allowances previously established on deferred tax assets of one of our foreign subsidiaries; (ii) the finalization of certain tax accounts in connection with the filing of our fiscal 2020 federal, state and foreign income tax returns; and (iii) the settlement of certain stock-based awards during fiscal 2021.

During fiscal 2020, we recorded a net discrete tax benefit of \$1.2 million, primarily related to the finalization of certain tax accounts in connection with the filing of our fiscal 2019 federal and state income tax returns. These benefits were offset, in part, by: (i) the remeasurement of certain foreign deferred taxes resulting from the passage of legislation that increased the statutory tax rate in the United Kingdom from 17.0% to 19.0%; and (ii) the settlement of certain stock-based awards during fiscal 2020.

Net (Loss) Income Attributable to Common Stockholders. During fiscal 2021, our consolidated net loss attributable to common stockholders was \$73.5 million as compared to net income of \$7.0 million during fiscal 2020.

Adjusted EBITDA. Adjusted EBITDA (both in dollars and as a percentage of related net sales) for both fiscal 2021 and 2020 are shown in the table below (numbers in the table may not foot due to rounding):

	Fiscal Years Ended July 31,							
	2021	2020	2021	2020	2021	2020	2021	2020
(\$ in millions)	Satellite and Space Communications		Terrestrial and Wireless Networks		Unallocated		Consolidated	
Net income (loss)	\$ 24.4	25.7	24.4	28.9	(122.2)	(47.6)	\$ (73.5)	7.0
(Benefit from) provision for income taxes	(0.4)	—	0.8	0.3	(1.9)	2.0	(1.5)	2.3
Interest (income) and other	0.2	(0.2)	—	—	(0.4)	—	(0.1)	(0.2)
Interest expense	0.1	—	—	—	6.8	6.0	6.8	6.1
Amortization of stock-based compensation	—	—	—	—	10.0	9.3	10.0	9.3
Amortization of intangibles	5.7	5.1	15.3	16.5	—	—	21.0	21.6
Depreciation	3.7	3.9	5.3	5.9	0.3	0.8	9.4	10.6
Estimated contract settlement costs	—	0.4	—	—	—	—	—	0.4
Acquisition plan expenses	—	0.8	(1.1)	—	101.3	20.0	100.3	20.8
Restructuring costs	2.8	—	—	—	—	—	2.8	—
COVID-19 related costs	1.0	—	—	—	—	—	1.0	—
Strategic emerging technology costs	0.3	—	—	—	—	—	0.3	—
Adjusted EBITDA	\$ 37.8	35.7	44.8	51.7	(6.1)	(9.6)	\$ 76.5	77.8
Percentage of related net sales	10.1 %	8.7 %	21.7 %	25.1 %	NA	NA	13.2 %	12.6 %

The increase in consolidated Adjusted EBITDA, as a percentage of consolidated net sales, for fiscal 2021 as compared to fiscal 2020 is primarily attributable to a higher percentage of consolidated net sales in our Terrestrial and Wireless Networks segment, as well as lower consolidated selling, general and administrative expenses and research and development expenses, as discussed above.

The increase in our Satellite and Space Communications segment's Adjusted EBITDA, both in dollars and as a percentage of related segment net sales, was driven primarily by a higher gross profit percentage and lower research and development expenses, as discussed above.

The decrease in our Terrestrial and Wireless Networks segment's Adjusted EBITDA, both in dollars and as a percentage of related segment net sales, is primarily due to a lower gross profit percentage, as discussed above.

For a definition and explanation of Adjusted EBITDA, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Comparison of Fiscal 2022 and 2021 - Adjusted EBITDA."

Reconciliations of our GAAP consolidated operating (loss) income, net (loss) income and net (loss) income per diluted common share for fiscal 2021 and 2020 to the corresponding Non-GAAP measures are shown in the tables below (numbers and per share amounts in the table may not foot due to rounding). Non-GAAP net income and net income per diluted common share reflect Non-GAAP provisions for income taxes based on full year results, as adjusted for the Non-GAAP reconciling items included in the tables below. We evaluate our Non-GAAP effective income tax rate on an ongoing basis, and it can change from time to time. Our Non-GAAP effective income tax rate can differ materially from our GAAP effective income tax rate. In addition, due to the GAAP net loss for the period, Non-GAAP EPS for fiscal 2021 was computed using 25,885,000 weighted average diluted shares outstanding during the period.

(\$ in millions, except for per share amounts)	Fiscal 2021		
	Operating (Loss) Income	Net (Loss) Income	Net (Loss) Income per Diluted Share
Reconciliation of GAAP to Non-GAAP Earnings:			
GAAP measures, as reported	\$ (68.3)	\$ (73.5)	\$ (2.86)
Acquisition plan expenses	100.3	93.3	3.60
Restructuring costs	2.8	2.1	0.08
COVID-19 related costs	1.0	0.8	0.03
Strategic emerging technology costs	0.3	0.3	0.01
Interest expense	—	0.9	0.04
Net discrete tax benefit	—	(1.6)	(0.06)
Non-GAAP measures	<u>\$ 36.1</u>	<u>\$ 22.4</u>	<u>\$ 0.86</u>

(\$ in millions, except for per share amounts)	Fiscal 2020		
	Operating Income	Net Income	Net Income per Diluted Share
Reconciliation of GAAP to Non-GAAP Earnings:			
GAAP measures, as reported	\$ 15.2	\$ 7.0	\$ 0.28
Estimated contract settlement costs	0.4	0.3	0.01
Acquisition plan expenses	20.8	13.1	0.53
Net discrete tax benefit	—	(1.2)	(0.05)
Non-GAAP measures	<u>\$ 36.4</u>	<u>\$ 19.2</u>	<u>\$ 0.77</u>

Liquidity and Capital Resources

Our cash and cash equivalents were \$21.7 million and \$30.9 million at July 31, 2022 and 2021, respectively. For fiscal 2022, our cash flows reflect the following:

- Net cash provided by operating activities was \$2.0 million for fiscal 2022 as compared to net cash used in operating activities of \$40.6 million for fiscal 2021. During fiscal 2022, we paid \$15.9 million in aggregate payments related to our CEO transition and settled proxy contest. Excluding such payments, net cash provided by operating activities would have been \$17.9 million for fiscal 2022. During fiscal 2021, in connection with an agreement to terminate our acquisition of Gilat, we made a \$70.0 million payment to Gilat. Excluding such payment, net cash provided by operating activities would have been \$29.4 million for fiscal 2021. The period-over-period decrease in cash flow from operating activities (excluding the \$15.9 million and \$70.0 million payments) reflects overall changes in net working capital requirements, principally the timing of shipments, billings and payments.
- Net cash used in investing activities for fiscal 2022 and 2021 was \$19.6 million and \$15.5 million, respectively. Net cash used during fiscal 2022 primarily reflects capital expenditures to build-out cloud-based computer networks to support our recent NG-911 contract wins and capital investments and building improvements in connection with the opening of our new high-volume technology manufacturing centers. Net cash used in both periods also relates to expenditures for property, plant and equipment upgrades and enhancements.
- Net cash provided by financing activities was \$8.4 million and \$39.1 million for fiscal 2022 and 2021, respectively. During fiscal 2022, we received an aggregate of \$100.0 million in proceeds related to the issuance of a new series of Convertible Preferred Stock to certain investors. During fiscal 2022, we also made net payments under our Credit Facility of \$71.0 million as compared to net borrowings under our Credit Facility of \$51.5 million during fiscal 2021, primarily due to the \$70.0 million payment we made to Gilat. During fiscal 2022 and 2021, we paid \$11.0 million and \$10.3 million, respectively, in cash dividends to our common stockholders. We also made \$6.1 million and \$2.8 million of payments to remit employees' statutory tax withholding requirements related to the net settlement of stock-based awards during fiscal 2022 and 2021, respectively.

The Credit Facility is discussed below and in *"Notes to Consolidated Financial Statements - Note (7) - Credit Facility"* included in *"Part II - Item 8. - Financial Statements and Supplementary Data"* included in this Form 10-K.

The Convertible Preferred Stock is discussed below and in *"Notes to Consolidated Financial Statements - Note (15) - Convertible Preferred Stock"* included in *"Part II - Item 8. - Financial Statements and Supplementary Data"* included in this Form 10-K.

Our investment policy relating to our cash and cash equivalents is intended to minimize principal loss and maximize the income we receive without significantly increasing risk. To minimize risk, we generally invest our cash and cash equivalents in money market mutual funds (both government and commercial), certificates of deposit, bank deposits, and U.S. Treasury securities. Many of our money market mutual funds invest in direct obligations of the U.S. government, bank securities guaranteed by the Federal Deposit Insurance Corporation, certificates of deposit and commercial paper and other securities issued by other companies. While we cannot predict future market conditions or market liquidity, we believe our investment policies are appropriate in the current environment. Ultimately, the availability of our cash and cash equivalents is dependent on a well-functioning liquid market.

In addition to making capital investments for our new high-volume manufacturing centers, we have been making significant capital expenditures and building out cloud-based computer networks to support our previously announced NG-911 contract wins for the states of Pennsylvania, South Carolina and Arizona. We expect capital investments for these and other initiatives to continue in fiscal 2023.

As discussed in *"Notes to Consolidated Financial Statements - Note (2) - Acquisitions - UHP Networks Inc."* included in *"Part II - Item 8. - Financial Statements and Supplementary Data"* included in this Form 10-K, we completed our acquisition of UHP on March 2, 2021, substantially all of which was paid for with shares of our common stock.

On July 13, 2022, we filed a \$200.0 million shelf registration statement with the SEC for the sale of various types of securities, including debt. This new shelf registration statement was declared effective by the SEC as of July 25, 2022 and replaces the prior unused \$400.0 million shelf registration statement that expired in December 2021.

On September 29, 2020, our Board of Directors authorized a new \$100.0 million stock repurchase program, which replaced our prior program. The new \$100.0 million stock repurchase program has no time restrictions and repurchases may be made from time to time in open-market or privately negotiated transactions, or by other means in accordance with federal securities laws. There were no repurchases of our common stock during fiscal 2022 and 2021.

As discussed further in "Notes to Consolidated Financial Statements - Note (16) - 'Stockholders' Equity'" included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K, on June 9, 2022, our Board of Directors declared a cash dividend of \$0.10 per common share, which was paid on August 19, 2022.

On September 29, 2022, our Board of Directors declared a cash dividend of \$0.10 per common share, payable on November 18, 2022 to stockholders of record at the close of business on October 19, 2022. Future common stock dividends remain subject to compliance with financial covenants under our Credit Facility, as well as Board approval and certain voting rights of holders of our Series A Convertible Preferred Stock.

Our material cash requirements are for working capital, CEO transition costs expected to be paid in October 2022, capital expenditures, income tax payments, debt service, facilities lease payments, dividends related to our common stock and dividends related to our Convertible Preferred Stock, which are payable in kind or in cash at our election.

We have historically met our cash requirements with funds provided by a combination of cash and cash equivalent balances, cash generated from operating activities and cash generated from equity and debt financing transactions. In our first quarter of fiscal 2022, we secured a \$100.0 million strategic growth investment to enhance our financial flexibility and strengthen our ability to capitalize on large contract awards and growing customer demand by making crucial investments in our satellite and space communications and terrestrial and wireless network solutions. Based on our current revenue visibility, we believe that our existing cash and cash equivalent balances, our cash generated from operating activities and amounts potentially available under our Credit Facility will be sufficient to meet our currently anticipated cash requirements in the next twelve months and beyond.

Our material cash requirements could increase beyond our current expectations due to factors such as general economic conditions, a change in government spending priorities, or larger than usual customer orders. In addition, we may choose to raise additional funds through equity and debt financing transactions to provide additional flexibility or to pursue acquisitions. Although it is difficult in the current economic and credit environment to predict the terms and conditions of financing that may be available in the future, we believe that we would have sufficient access to credit from financial institutions and/or financing from public and private debt and equity markets.

Credit Facility

As discussed further in "Notes to Consolidated Financial Statements - Note (7) - Credit Facility" included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K (which discussion is incorporated herein by reference), on October 31, 2018, we entered into a First Amended and Restated Credit Agreement (the "Credit Facility") with a syndicate of lenders.

As of July 31, 2022, the amount outstanding under our Credit Facility was \$130.0 million, which is reflected in the non-current portion of long-term debt on our Consolidated Balance Sheet. At July 31, 2022, we had \$0.6 million of standby letters of credit outstanding under our Credit Facility related to our guarantees of future performance on certain customer contracts and no outstanding commercial letters of credit. During fiscal 2022, we had outstanding balances under the Credit Facility ranging from \$100.0 million to \$212.0 million.

As of July 31, 2022, our Secured Leverage Ratio was 3.50x trailing twelve months ("TTM") Adjusted EBITDA compared to the maximum allowable Secured Leverage Ratio of 3.75x TTM Adjusted EBITDA. Our Interest Expense Coverage Ratio as of July 31, 2022 was 8.81x TTM Adjusted EBITDA compared to the Minimum Interest Expense Coverage Ratio of 3.25x TTM Adjusted EBITDA. Although we expect our Secured Leverage Ratio to remain elevated during the first quarter of fiscal 2023, as we make payments to various vendors associated with the build-out of our high-volume technology manufacturing facilities, to support our working capital needs for our existing contracts and to make required CEO transition related payments, given our overall expected business performance, we anticipate maintaining compliance with the terms and financial covenants in our Credit Facility for the foreseeable future.

Convertible Preferred Stock

As discussed further in "Notes to Consolidated Financial Statements - Note (15) - Convertible Preferred Stock" included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K (which discussion is incorporated herein by reference), on October 18, 2021, we entered into a Subscription Agreement (the "Subscription Agreement") with certain affiliates and related funds of White Hat Capital Partners LP and Magnetar Capital LLC (collectively, the "Investors"), relating to the issuance and sale of up to 125,000 shares of a new series of the Company's Series A Convertible Preferred Stock, par value \$0.10 per share (the "Convertible Preferred Stock"), for an aggregate purchase price of up to \$125.0 million, or \$1,000 per share. On October 19, 2021 (the "Initial Closing Date"), pursuant to the terms of the Subscription Agreement, the Investors purchased an aggregate of 100,000 shares of Convertible Preferred Stock (the "Initial Issuance") for an aggregate purchase price of \$100.0 million.

Commitments

In the normal course of business, other than as discussed below, we routinely enter into binding and non-binding purchase obligations primarily covering anticipated purchases of inventory and equipment. We do not expect that these commitments, as of July 31, 2022, will materially adversely affect our liquidity. At July 31, 2022, cash payments due under contractual obligations (including estimated interest expense on our Credit Facility), excluding purchase orders that we entered into in our normal course of business, are as follows:

(\$ in thousands)	Total	Due Within 1 Year
Credit Facility - principal payments	\$ 130,000	—
Credit Facility - interest payments	7,914	6,341
Operating and financing lease obligations	62,596	9,953
Dividends payable	2,746	2,746
Contractual cash obligations	<u>\$ 203,256</u>	<u>\$ 19,040</u>

See "Notes to Consolidated Financial Statements - Note (8) - Leases" included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K, for additional information on our lease commitments.

As discussed further in "Notes to Consolidated Financial Statements - Note (15) - Convertible Preferred Stock" included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K, the holders of the Convertible Preferred Stock have the option to redeem such shares for cash commencing in October 2026. As the Convertible Preferred Stock are not mandatorily redeemable for cash, the redemption value of such shares are not presented in the table above.

In the ordinary course of business, we include indemnification provisions in certain of our customer contracts. Pursuant to these agreements, we have agreed to indemnify, hold harmless and reimburse the indemnified party for certain losses suffered or incurred by the indemnified party, including but not limited to losses related to third-party intellectual property claims. It is not possible to determine the maximum potential amount under these agreements due to a history of nominal claims and the unique facts and circumstances involved in each particular agreement.

As discussed further in "Notes to Consolidated Financial Statements - Note (12) - Commitments and Contingencies," included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K (which discussion is incorporated herein by reference), we are subject to a number of indemnification demands and we are incurring ongoing legal expenses in connection with these matters. Our insurance policies may not cover the cost of defending indemnification claims or providing indemnification. As a result, pending or future claims asserted against us by a party that we have agreed to indemnify could result in legal costs and damages that could have a material adverse effect on our consolidated results of operations and financial condition.

We have change in control agreements with certain of our executive officers and certain key employees. All of these agreements may require payments by us, in certain circumstances, including, but not limited to, a change in control of our Company or a termination of the employee.

As further discussed in "Notes to Consolidated Financial Statements – Note (9) - "Income Taxes " included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K (which discussion is incorporated herein by reference), our Consolidated Balance Sheet at July 31, 2022 includes total liabilities of \$10.0 million for uncertain tax positions, including interest, any or all of which may result in a cash payment. The future payments related to uncertain tax positions have not been presented in the table above due to the uncertainty of the amounts and timing of any potential cash settlement with the taxing authorities.

Recent Accounting Pronouncements

We are required to prepare our consolidated financial statements in accordance with the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") which is the source for all authoritative U.S. generally accepted accounting principles, which is commonly referred to as "GAAP." The FASB ASC is subject to updates by the FASB, which are known as Accounting Standards Updates ("ASUs").

As further discussed in "Notes to Consolidated Financial Statements – Note (1)(n) - Adoption of Accounting Standards and Updates" included in "Part II - Item 8. - Financial Statements and Supplementary Data," included in this Form 10-K, during fiscal 2022, we adopted:

- FASB ASU No. 2019-12, which simplifies various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. Our adoption of this ASU on August 1, 2021 did not have a material impact on our consolidated financial statements or disclosures.
- FASB ASU No. 2020-01, which clarifies the interactions between Topics 321, 323 and 815. This ASU clarifies that an entity should consider observable transactions that require it to either apply or discontinue the equity method of accounting for the purposes of applying the measurement alternative in accordance with Topic 321 immediately before applying or upon discontinuing the equity method. In addition, the amendments clarify the accounting for certain forward contracts and purchased options accounted for under Topic 815. Our adoption of this ASU on August 1, 2021 did not impact our consolidated financial statements or disclosures.
- FASB ASU No. 2020-06, which simplifies the accounting for convertible instruments by removing certain separation models (including the cash conversion model and the beneficial conversion feature model) for convertible instruments. As a result, for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815 or that do not result in substantial premiums accounted for as paid-in capital, the embedded conversion features are no longer separated from the host contract. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost, and convertible preferred stock will be accounted for as a single equity instrument measured at its historical cost as long as no other features require bifurcation and recognition as derivatives. On August 1, 2021, we early adopted this ASU. Our early adoption of this ASU did not have any impact on our consolidated financial statements or disclosures.
- FASB ASU No. 2021-08, which requires that an acquirer recognize, and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606, as if it had originated the contracts. Prior to this ASU, an acquirer generally recognized contract assets and contract liabilities assumed that arose from contracts with customers at fair value on the acquisition date. On August 1, 2021, we early adopted this ASU. Our early adoption of this ASU did not have any impact on our consolidated financial statements or disclosures.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our earnings and cash flows are subject to fluctuations due to changes in interest rates primarily from borrowings under our Credit Facility. Based on the amount of outstanding debt under our Credit Facility, a hypothetical change in interest rates by 10% would change interest expense by approximately \$0.6 million over a one-year period. Although we do not currently use interest rate derivative instruments to manage exposure to interest rate changes, we may choose to do so in the future in connection with our Credit Facility.

Our earnings and cash flows are also subject to fluctuations due to changes in interest rates on our investment of available cash balances. As of July 31, 2022, we had cash and cash equivalents of \$21.7 million, which consisted of cash and highly-liquid money market deposit accounts. Many of these investments are subject to fluctuations in interest rates, which could impact our results. Based on our investment portfolio balance as of July 31, 2022, a hypothetical change in interest rates of 10% would have a nominal impact on interest income over a one-year period. Ultimately, the availability of our cash and cash equivalents is dependent on a well-functioning liquid market.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Reports of Independent Registered Public Accounting Firm, Consolidated Financial Statements, Notes to Consolidated Financial Statements and Related Financial Schedule are listed in the Index to Consolidated Financial Statements and Schedule annexed hereto and are hereby incorporated by reference.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this Form 10-K, an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures was carried out by us under the supervision and with the participation of our management, including our President, Chief Executive Officer and Chairman and Chief Financial Officer. Based on that evaluation, our President, Chief Executive Officer and Chairman and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by the report to provide reasonable assurance that the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and is accumulated and communicated to management, as appropriate, to allow timely decisions regarding required disclosure. A system of controls, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the system of controls are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of our internal control over financial reporting as of July 31, 2022. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control – Integrated Framework (2013)*. Based on our assessment, we determined that, as of July 31, 2022, our internal control over financial reporting was effective based on those criteria.

Deloitte and Touche LLP, our independent registered public accounting firm, has performed an audit of our internal control over financial reporting as of July 31, 2022 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the COSO. This audit is required to be performed in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our independent auditors were given unrestricted access to all financial records and related data. Deloitte’s audit reports appear on pages F-2 and F-3 of this annual report.

Changes In Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act that occurred during our fiscal quarter ended July 31, 2022, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Not applicable.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Certain information concerning directors and officers is incorporated by reference to our Proxy Statement for the Annual Meeting of Stockholders (the "Proxy Statement") which will be filed with the Securities and Exchange Commission no more than 120 days after the close of our fiscal year.

ITEM 11. EXECUTIVE COMPENSATION

Information regarding executive compensation is incorporated by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission no more than 120 days after the close of our fiscal year.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information regarding securities authorized for issuance under equity compensation plans and certain information regarding security ownership of certain beneficial owners and management is incorporated by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission no more than 120 days after the close of our fiscal year.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information regarding certain relationships and related transactions is incorporated by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission no more than 120 days after the close of our fiscal year.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information regarding principal accountant fees and services is incorporated by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission no more than 120 days after the close of our fiscal year.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

- (a) (1) The Registrant's financial statements together with a separate index are annexed hereto.
 (2) The Financial Statement Schedule listed in a separate index is annexed hereto.
 (3) Exhibits required by Item 601 of Regulation S-K are listed below.

Exhibit Number	Description of Exhibit	Incorporated By Reference to Exhibit
<u>3(a)(i)</u>	<u>Restated Certificate of Incorporation of the Registrant, dated August 18, 2006</u>	Exhibit 3(a)(i) to the Registrant's 2006 Form 10-K
<u>3(a)(ii)</u>	<u>Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Comtech Telecommunications Corp., dated December 28, 2021</u>	Exhibit 3.1 to the Registrant's Form 8-K, filed December 30, 2021
<u>3(a)(iii)</u>	<u>Third Amended and Restated By-Laws of the Registrant, dated September 26, 2017</u>	Exhibit 3(a)(ii) to the Registrant's 2017 Form 10-K
<u>3(a)(iv)</u>	<u>Certificate of Designations designating the Series A Convertible Preferred Stock, dated October 19, 2021</u>	Exhibit 3.1 to the Registrant's Form 8-K filed October 22, 2021
<u>3(a)(v)</u>	<u>Certificate of Correction of Certificate of Designations of Series A Convertible Preferred Stock, dated November 9, 2021</u>	Exhibit 3.1 to the Registrant's 8-K, filed November 12, 2021
<u>4(a)(vi)</u>	<u>Description of Comtech Telecommunication Corp.'s Securities Registered Pursuant to Section 12 of the Exchange Act</u>	
<u>10(a)(1)*</u>	<u>Seventh Amended and Restated Employment Agreement, dated March 4, 2020, between the Registrant and Fred Komberg</u>	Exhibit 10.1 to the Registrant's Form 8-K, filed March 4, 2020
<u>10(a)(2)*</u>	<u>Lease Agreement, dated September 23, 2011, between TM Squared and Comtech PST Corp. (with respect to the Melville, New York facility)</u>	Exhibit 10(s) to the Registrant's 2011 Form 10-K
<u>10(a)(3)*</u>	<u>Consulting Agreement, dated January 3, 2022, between Comtech and Fred Komberg</u>	Exhibit 10.2 to the Registrant's Form 8-K, filed January 5, 2022
<u>10(a)(4)*</u>	<u>Restricted Stock Award Agreement with Fred Komberg Pursuant to the Comtech Telecommunications Corp. 2000 Stock Incentive Plan</u>	Exhibit 10.1 to the Registrant's Form 10-Q, filed March 10, 2022
<u>10(b)*</u>	<u>Second Amended and Restated 2001 Employee Stock Purchase Plan</u>	Exhibit A to the Registrant's Proxy Statement, filed November 16, 2018
<u>10(c)*</u>	<u>2000 Stock Incentive Plan, Amended and Restated, dated September 9, 2022</u>	
<u>10(d)(1)*</u>	<u>Form of Stock Option Agreement pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10(f)(7) to the Registrant's 2005 Form 10-K
<u>10(d)(2)*</u>	<u>Form of Stock Option Agreement for Non-employee Directors pursuant to the 2000 Stock Incentive Plan - 2020</u>	Exhibit 10(d)(3) to the Registrant's Form 2020 Form 10-K
<u>10(e)*</u>	<u>Form of Performance Share Agreement pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10(s) to the Registrant's 2012 Form 10-K
<u>10(f)(1)*</u>	<u>Form of Long-Term Performance Share Award Agreement pursuant to the 2000 Stock Incentive Plan - 2018</u>	Exhibit 10(f)(2) to the Registrant's 2019 Form 10-K
<u>10(g)(1)*</u>	<u>Form of Restricted Stock Agreement for Employees pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10(y) to the Registrant's 2016 Form 10-K
<u>10(g)(2)*</u>	<u>Form of Restricted Stock Agreement for Non-employee Directors pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10(ab) to the Registrant's 2016 Form 10-K
<u>10(g)(3)*</u>	<u>Form of Restricted Stock Agreement (eligible for dividend equivalents) for Non-employee Directors pursuant to the 2000 Stock Incentive Plan - 2019</u>	Exhibit 10(g)(3) to the Registrant's 2019 Form 10-K

Exhibit Number	Description of Exhibit	Incorporated By Reference to Exhibit
<u>10(g)(4)*</u>	<u>Form of Restricted Stock Agreement (eligible for dividend equivalents) for Non-employee Directors pursuant to the 2000 Stock Incentive Plan - 2022</u>	
<u>10(h)(1)*</u>	<u>Form of Restricted Stock Unit Agreement for Employees pursuant to the 2000 Stock Incentive Plan - 2017</u>	Exhibit 10(h)(1) to the Registrant's 2017 Form 10-K
<u>10(h)(2)*</u>	<u>Form of Restricted Stock Unit Agreement for Employees pursuant to the 2000 Stock Incentive Plan - 2016</u>	Exhibit 10(z) to the Registrant's 2016 Form 10-K
<u>10(h)(3)*</u>	<u>Form of Restricted Stock Unit Agreement for Non-employee Directors pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10.2 to the Registrant's Form 10-Q, filed June 7, 2012
<u>10(h)(4)*</u>	<u>Form of Restricted Stock Unit Agreement (eligible for dividend equivalents) for Non-employee Directors pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10(aa) to the Registrant's 2016 Form 10-K
<u>10(h)(5)*</u>	<u>Form of Restricted Stock Unit Agreement (eligible for dividend equivalents) for Non-employee Directors pursuant to the 2000 Stock Incentive Plan - 2013</u>	Exhibit 10(x) to the Registrant's 2013 Form 10-K
<u>10(h)(6)*</u>	<u>Form of Restricted Stock Unit Agreement (eligible for dividend equivalents) for Non-employee Directors pursuant to the 2000 Stock Incentive Plan - 2020</u>	Exhibit 10.1 to the Registrant's Form 10-Q, filed June 3, 2020
<u>10(h)(7)*</u>	<u>Form of Restricted Stock Unit Agreement (eligible for dividend equivalents) for Non-employee Directors pursuant to the 2000 Stock Incentive Plan - 2022</u>	
<u>10(h)(8)*</u>	<u>Form of Restricted Stock Unit Agreement (eligible for dividend equivalents) for Employees pursuant to the 2000 Stock Incentive Plan - 2022</u>	
<u>10(i)(1)*</u>	<u>Form of Stock Unit Agreement for Non-employee Directors pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10.1 to the Registrant's Form 10-Q, filed June 7, 2012
<u>10(i)(2)*</u>	<u>Form of Stock Unit Agreement (eligible for dividend equivalents) for Non-employee Directors pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10(v) to the Registrant's 2013 Form 10-K
<u>10(j)(1)*</u>	<u>Form of Share Unit Agreement (eligible for dividend equivalents) for Employees pursuant to the 2000 Stock Incentive Plan</u>	Exhibit 10.2 to the Registrant's Form 10-Q, filed December 9, 2013
<u>10(j)(2)*</u>	<u>Form of Share Unit Agreement (eligible for dividend equivalents) for Employees pursuant to the 2000 Stock Incentive Plan - 2018</u>	Exhibit 10(j)(2) to the Registrant's 2018 Form 10-K
<u>10(k)*</u>	<u>Form of Indemnification Agreement between the Registrant and the Named Executive Officers and Certain Other Executive Officers</u>	Exhibit 10.1 to Registrant's Form 8-K, filed on March 8, 2007
<u>10(l)(1)*</u>	<u>Form of Change-in-Control Agreement (Tier 1)</u>	
<u>10(l)(2)*</u>	<u>Form of Change-in-Control Agreement (Tier 2) between the Registrant and Certain Named Executive Officers (other than the CEO) and Certain Other Executive Officers</u>	
<u>10(l)(3)*</u>	<u>Form of Change-in-Control Agreement (Tier 2) between the Registrant and Certain Named Executive Officers (other than the CEO) and Certain Other Executive Officers (California Employees)</u>	Exhibit 10.3 to the Registrant's Form 8-K, filed June 7, 2017

Exhibit Number	Description of Exhibit	Incorporated By Reference to Exhibit
<u>10(l)(4)*</u>	<u>Form of Change-in-Control Agreement (Tier 2) between the Registrant and Certain Named Executive Officers (other than the CEO) and Certain Other Executive Officers (Divisional/Subsidiary Presidents)</u>	Exhibit 10.4 to the Registrant's Form 8-K, filed June 7, 2017
<u>10(l)(5)*</u>	<u>Form of Change-in-Control Agreement (Tier 2) between the Registrant and Certain Named Executive Officers (other than the CEO) and Certain Other Executive Officers (California Divisional/Subsidiary Presidents)</u>	Exhibit 10.5 to the Registrant's Form 8-K, filed June 7, 2017
<u>10(l)(6)*</u>	<u>Form of Change-in-Control Agreement (Tier 3) between the Registrant and Certain Non-Executive Officers</u>	Exhibit 10.6 to the Registrant's Form 8-K, filed June 7, 2017
<u>10(m)*</u>	<u>Retirement and Transition Agreement, dated September 30 2019</u>	Exhibit 10.1 to the Registrant's Form 10-Q, filed December 4, 2019
<u>10(n)</u>	<u>Agreement and Plan of Merger, dated November 22, 2015, among Comtech Telecommunications Corp., Typhoon Acquisition Corp. and TeleCommunication Systems, Inc.</u>	Exhibit 2.1 to the Registrant's Form 8-K, filed November 23, 2015
<u>10(o)</u>	<u>First Amended and Restated Credit Agreement, dated October 31, 2018, among Comtech Telecommunications Corp., the lenders party thereto and Citibank N.A., as administrative agent, issuing bank and swingline lender.</u>	Exhibit 10.1 to the Registrant's Form 8-K, filed November 5, 2018
<u>10(p)(1)</u>	<u>Subscription Agreement, dated October 18, 2021, by and among Comtech Telecommunications Corp. and the Investors named therein</u>	Exhibit 10.1 to the Registrant's Form 8-K filed October 22, 2021
<u>10(p)(2)</u>	<u>Registration Rights Agreement, dated October 19, 2021, by and among Comtech Telecommunications Corp. and the Investors named therein</u>	Exhibit 99.2 to the Registrant's Form 8-K filed October 22, 2021
<u>10(p)(3)</u>	<u>Form of Amended and Restated Voting Agreement</u>	Exhibit 3.1 to the Registrant's Form 8-K, filed November 12, 2021
<u>10(q)</u>	<u>Cooperation Agreement dated December 16, 2021, by and among Comtech Telecommunications Corp., Outerbridge Partners, LP, Outerbridge Capital Management, LLC, Outerbridge Partners GP, LLC, Outerbridge Bartleby Fund, LP, Outerbridge Bartleby GP, LLC, and Rory Wallace</u>	Exhibit 10.1 to the Registrant's Form 8-K, filed December 21, 2021
<u>10(r)(1)*</u>	<u>Employment Agreement, dated December 31, 2021, between Comtech and Michael Porcelain</u>	Exhibit 10.1 to the Registrant's Form 8-K, filed January 5, 2022
<u>10(r)(2)*</u>	<u>Restricted Stock Unit Agreement with Michael Porcelain Pursuant to the Comtech Telecommunications Corp. 2000 Stock Incentive Plan</u>	Exhibit 10.2 to the Registrant's Form 10-Q, filed March 10, 2022
<u>10(r)(3)*</u>	<u>Separation Agreement and General Release with Michael Porcelain, dated August 9, 2022</u>	Exhibit 10.1 to the Registrant's Form 8-K, filed August 10, 2022
<u>10(s)(1)*</u>	<u>CEO Employment Agreement with Ken Peterman, dated September 12, 2022</u>	Exhibit 10.1 to the Registrant's Form 8-K, filed September 13, 2022
<u>10(s)(2)*</u>	<u>Restricted Stock Unit Agreement with Ken Peterman Pursuant to the Comtech Telecommunications Corp. 2000 Stock Incentive Plan</u>	Exhibit 10.2 to the Registrant's Form 8-K, filed September 13, 2022
<u>10(s)(3)*</u>	<u>Long-Term Performance Share Award Agreement with Ken Peterman Pursuant to the Comtech Telecommunications Corp. 2000 Stock Incentive Plan</u>	Exhibit 10.3 to the Registrant's Form 8-K, filed September 13, 2022

Exhibit Number	Description of Exhibit	Incorporated By Reference to Exhibit
<u>10(s)(4)*</u>	<u>Long-Term Performance Share Award (VWAP) Agreement with Ken Peterman Pursuant to the Contech Telecommunications Corp. 2000 Stock Incentive Plan</u>	Exhibit 10.4 to the Registrant's Form 8-K, filed September 13, 2022
<u>21</u>	<u>Subsidiaries of the Registrant</u>	
<u>23.1</u>	<u>Consent of Independent Registered Public Accounting Firm</u>	
<u>31.1</u>	<u>Certification of CEO and Chairman pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>	
<u>31.2</u>	<u>Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>	
<u>32.1</u>	<u>Certification of CEO and Chairman pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>	
<u>32.2</u>	<u>Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>	
101.INS	The following financial statements from the Company's Annual Report on Form 10-K for the fiscal year ended July 31, 2022, formatted in inline XBRL: (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Stockholders' Equity, (iv) Consolidated Statement of Cash Flows, and (v) Notes to Consolidated Financial Statements	
101.SCH	Inline XBRL Taxonomy Extension Schema Document	
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document	
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document	
104	Cover Page Interactive Data File (embedded within the Inline XBRL document and contained in Exhibit 101)	

* Management contract or compensatory plan or arrangement.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

COMTECH TELECOMMUNICATIONS CORP.

September 29, 2022

(Date)

By: /s/Ken Peterman

Ken Peterman, Chairman of the Board
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

	<u>Signature</u>	<u>Title</u>
<u>September 29, 2022</u> (Date)	<u>/s/Ken Peterman</u> Ken Peterman	Chairman of the Board President and Chief Executive Officer (Principal Executive Officer)
<u>September 29, 2022</u> (Date)	<u>/s/Michael A. Bondi</u> Michael A. Bondi	Chief Financial Officer (Principal Financial and Accounting Officer)
<u>September 29, 2022</u> (Date)	<u>/s/Wendi Carpenter</u> Wendi Carpenter	Director
<u>September 29, 2022</u> (Date)	<u>/s/Judy Chambers</u> Judy Chambers	Director
<u>September 29, 2022</u> (Date)	<u>/s/Fred Kornberg</u> Fred Kornberg	Director
<u>September 29, 2022</u> (Date)	<u>/s/Lisa Lesavoy</u> Lisa Lesavoy	Director
<u>September 29, 2022</u> (Date)	<u>/s/Mark Quinlan</u> Mark Quinlan	Director
<u>September 29, 2022</u> (Date)	<u>/s/Dr. Yacov A. Shamash</u> Dr. Yacov A. Shamash	Director
<u>September 29, 2022</u> (Date)	<u>/s/Lawrence J. Waldman</u> Lawrence J. Waldman	Director

COMTECH TELECOMMUNICATIONS CORP. AND SUBSIDIARIES

Index to Consolidated Financial Statements and Schedule

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<u>Reports of Independent Registered Public Accounting Firms (PCAOB ID: 34)</u>	<u>F-2</u>
Consolidated Financial Statements:	
<u>Balance Sheets as of July 31, 2022 and 2021</u>	<u>F-6</u>
<u>Statements of Operations for each of the years in the three-year period ended July 31, 2022</u>	<u>F-7</u>
<u>Statements of Convertible Preferred Stock and Stockholders' Equity for each of the years in the three-year period ended July 31, 2022</u>	<u>F-8</u>
<u>Statements of Cash Flows for each of the years in the three-year period ended July 31, 2022</u>	<u>F-9</u>
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Additional Financial Information Pursuant to the Requirements of Form 10-K:	
<u>Schedule II – Valuation and Qualifying Accounts and Reserves</u>	<u>S-1</u>

Schedules not listed above have been omitted because they are either not applicable or the required information has been provided elsewhere in the consolidated financial statements or notes thereto.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of
Comtech Telecommunications Corp.
Melville, New York

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Comtech Telecommunications Corp. and subsidiaries (the "Company") as of July 31, 2022 and 2021, the related consolidated statements of operations, convertible preferred stock and stockholders' equity, and cash flows, for each of the three years in the period ended July 31, 2022, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of July 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended July 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of July 31, 2022, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated September 29, 2022, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

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

Net Sales – Over Time Accounting Using the Cost-to-Cost Measure for Specific Identified Material Contracts — Refer to Note 1 to the financial statements.

Critical Audit Matter Description

The Company's determination of revenue recognition for specific identified material contracts accounted for over time involves estimating the total costs needed to complete the specific identified contracts and updating those estimates throughout the life of those specific identified contracts. This requires management to make significant estimates related to forecasts of future costs for the identified specific contracts. Changes in these estimates for the identified specific contracts could have a significant impact on the Company's results of operations.

Given the significant judgment and estimates used in management's projections, auditing the Company's estimates at completion and estimates to completion involved especially subjective judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company's determination of revenue recognition for specific identified material contracts accounted for over time included the following, among others:

- We tested the design, implementation, and operating effectiveness of the controls over the development of the initial contract cost to complete estimate and monitoring of estimates at completion and estimates to completion.
- For each specific identified material contract selected, we performed the following:
 - Evaluated whether the contract was properly included in management's calculation of overtime revenue based on the terms and conditions of each contract, including whether continuous transfer of control to the customer occurred as progress was made toward fulfilling the performance obligation.
 - Compared the transaction prices to the consideration expected to be received based on current rights and obligations under the contracts and any modifications that were agreed upon with the customers.
 - Tested management's identification of distinct performance obligations by evaluating whether the underlying goods, services, or both were highly interdependent and interrelated.
 - Evaluated the estimates of total cost and profit for the performance obligation by:
 - Performing a retrospective review by comparing the estimated margins at contract inception to the actual margins as of year-end in order to assess management's ability to accurately estimate costs.
 - Inquiring and corroborating the estimates to complete and the estimates at completion with the Project Manager (i.e., someone outside of Finance/Accounting) to understand significant variances in costs and completeness of the estimates at completion and estimates to completion.
 - Testing the estimates to complete through a combination of tests of details, in which we selected individual costs within the estimate to complete and obtained supporting documentation, and where we developed an expectation of the estimate to complete and compared it to the recorded balance.
 - Tested the accuracy and completeness of costs incurred during the current fiscal year. This testing included agreeing labor costs to employee timesheets and agreeing the labor rate to either rates agreed upon with the customer in the contract or rates from the Company's payroll records.
 - Tested the mathematical accuracy of management's calculation of revenue for the performance obligation.

Goodwill — Refer to Note 13 to the financial statements

Critical Audit Matter Description

The Company's evaluation of goodwill for impairment involves the comparison of the fair value of each reporting unit to its carrying value. The Company used the income approach, also known as the discounted cash flow ("DCF") method, to determine the present value of cash flows to estimate fair value. The future cash flows for the Company's reporting units were projected based on their estimates, at that time, of future revenues, operating income and other factors (such as working capital and capital expenditures). Changes in these assumptions could have a significant impact on either the fair value, the amount of any goodwill impairment charge, or both. The Satellite and Space and Terrestrial and Wireless Networks reporting units had estimated fair values in excess of their carrying values of at least 18.4% and 11.6%, respectively.

We identified goodwill for the reporting units as a critical audit matter because of the significant judgments made by management to estimate the fair values of these reporting units and the differences between their fair value and carrying value. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, when performing audit procedures to evaluate the reasonableness of management's estimates and assumptions related to selection of the discount rate and forecasts of future revenue and operating margins.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the discount rate and forecasts of future revenue and operating margins used by management to estimate the fair values of the reporting units included the following, among others:

- We tested the effectiveness of controls over management's goodwill impairment evaluation, including those over the determination of the fair value of the reporting units, such as controls related to management's selection of the discount rate and forecasts of future revenue and operating margins.

- We evaluated management's ability to accurately forecast future revenues and operating margins by comparing actual results to management's historical forecasts.
- We evaluated the reasonableness of management's revenue forecasts and forecasts of operating margins by comparing the forecasts to:
 - Historical revenues and operating margins.
 - Internal communications to management and the Board of Directors.
 - Forecasted information included in Company press releases as well as in analyst and industry reports for the Company and certain of its peer companies.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodology and (2) discount rate by:
 - Testing the source information underlying the determination of the discount rate and the mathematical accuracy of the calculation.
 - Developing a range of independent estimates and comparing those to the discount rate selected by management.

/s/ DELOITTE & TOUCHE LLP

Jericho, New York
September 29, 2022

We have served as the Company's auditor since 2015.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of
Comtech Telecommunications Corp.
Melville, New York

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Comtech Telecommunications Corp. and subsidiaries (the "Company") as of July 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of July 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements and financial statement schedule as of and for the year ended July 31, 2022, of the Company and our report dated September 29, 2022, expressed an unqualified opinion on those financial statements and financial statement schedule.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

Jericho, New York
September 29, 2022

COMTECH TELECOMMUNICATIONS CORP.
AND SUBSIDIARIES
Consolidated Balance Sheets
As of July 31, 2022 and 2021

Assets	2022	2021
Current assets:		
Cash and cash equivalents	\$ 21,654,000	30,861,000
Accounts receivable, net	123,711,000	158,110,000
Inventories, net	96,317,000	80,358,000
Prepaid expenses and other current assets	21,649,000	18,167,000
Total current assets	263,331,000	287,496,000
Property, plant and equipment, net	50,363,000	35,286,000
Operating lease right-of-use assets, net	49,767,000	44,486,000
Goodwill	347,692,000	347,698,000
Intangibles with finite lives, net	247,303,000	268,699,000
Deferred financing costs, net	1,014,000	1,824,000
Other assets, net	14,827,000	7,622,000
Total assets	<u>\$ 974,297,000</u>	<u>993,111,000</u>
Liabilities, Convertible Preferred Stock and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 44,591,000	36,193,000
Accrued expenses and other current liabilities	72,662,000	89,601,000
Operating lease liabilities, current	8,685,000	8,841,000
Dividends payable	2,746,000	2,601,000
Contract liabilities	64,601,000	66,130,000
Interest payable	172,000	195,000
Total current liabilities	193,457,000	203,561,000
Non-current portion of long-term debt, net	130,000,000	201,000,000
Operating lease liabilities, non-current	44,423,000	39,569,000
Income taxes payable	3,007,000	2,717,000
Deferred tax liability, net	15,355,000	21,230,000
Long-term contract liabilities	9,975,000	9,808,000
Other liabilities	6,291,000	14,507,000
Total liabilities	402,508,000	492,392,000
Commitments and contingencies (See Note 12)		
Convertible preferred stock, par value \$0.10 per share; authorized 125,000 shares; issued 100,000 at July 31, 2022 (includes accrued dividends of \$566,000)	105,204,000	—
Stockholders' equity:		
Preferred stock, par value \$0.10 per share; authorized and unissued 1,875,000 shares	—	—
Common stock, par value \$0.10 per share; authorized 100,000,000 shares; issued 42,672,827 shares and 41,281,812 shares at July 31, 2022 and 2021, respectively	4,267,000	4,128,000
Additional paid-in capital	625,484,000	605,439,000
Retained earnings	278,683,000	333,001,000
	908,434,000	942,568,000
Less:		
Treasury stock, at cost (15,033,317 shares at July 31, 2022 and 2021)	(441,849,000)	(441,849,000)
Total stockholders' equity	466,585,000	500,719,000
Total liabilities, convertible preferred stock and stockholders' equity	<u>\$ 974,297,000</u>	<u>993,111,000</u>

See accompanying notes to consolidated financial statements.

COMTECH TELECOMMUNICATIONS CORP.
AND SUBSIDIARIES
Consolidated Statements of Operations
Fiscal Years Ended July 31, 2022, 2021 and 2020

	2022	2021	2020
Net sales	\$ 486,239,000	581,695,000	616,715,000
Cost of sales	306,403,000	367,737,000	389,882,000
Gross profit	179,836,000	213,958,000	226,833,000
Expenses:			
Selling, general and administrative	114,858,000	111,796,000	117,130,000
Research and development	52,532,000	49,148,000	52,180,000
Amortization of intangibles	21,396,000	21,020,000	21,595,000
CEO transition costs	13,554,000	—	—
Proxy solicitation costs	11,248,000	—	—
Acquisition plan expenses	—	100,292,000	20,754,000
	213,588,000	282,256,000	211,659,000
Operating (loss) income	(33,752,000)	(68,298,000)	15,174,000
Other expenses (income):			
Interest expense	5,031,000	6,821,000	6,054,000
Interest (income) and other	(703,000)	(139,000)	(190,000)
Change in fair value of convertible preferred stock purchase option liability	(1,005,000)	—	—
(Loss) income before (benefit from) provision for income taxes	(37,075,000)	(74,980,000)	9,310,000
(Benefit from) provision for income taxes	(4,023,000)	(1,500,000)	2,290,000
Net (loss) income	\$ (33,052,000)	(73,480,000)	7,020,000
Adjustments to reflect redemption value of convertible preferred stock:			
Convertible preferred stock issuance costs	(4,007,000)	—	—
Establishment of initial convertible preferred stock purchase option liability	(1,005,000)	—	—
Dividend on convertible preferred stock	(5,204,000)	—	—
Net (loss) income attributable to common stockholders	\$ (43,268,000)	(73,480,000)	7,020,000
Net (loss) income per share:			
Basic	\$ (1.63)	(2.86)	0.28
Diluted	\$ (1.63)	(2.86)	0.28
Weighted average number of common shares outstanding—basic	26,506,000	25,685,000	24,798,000
Weighted average number of common and common equivalent shares outstanding—diluted	26,506,000	25,685,000	24,899,000

See accompanying notes to consolidated financial statements.

COMTECH TELECOMMUNICATIONS CORP.
AND SUBSIDIARIES
Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity
Fiscal Years Ended July 31, 2022, 2021 and 2020

	Series A Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Retained Earnings	Treasury Stock		Stockholders' Equity
	Shares	Amount	Shares	Amount			Shares	Amount	
Balance as of July 31, 2019	—	\$ —	39,276,161	\$ 3,928,000	\$ 552,670,000	\$ 420,333,000	15,033,317	\$ (441,849,000)	\$ 535,082,000
Equity-classified stock award compensation	—	—	—	—	9,275,000	—	—	—	9,275,000
Proceeds from exercises of stock options	—	—	16,700	2,000	466,000	—	—	—	468,000
Proceeds from issuance of employee stock purchase plan shares	—	—	52,958	5,000	850,000	—	—	—	855,000
Issuance of restricted stock	—	—	3,319	—	—	—	—	—	—
Net settlement of stock-based awards	—	—	251,797	25,000	(4,913,000)	—	—	—	(4,888,000)
Common stock issued for acquisition of CGC Technology Limited ("CGC")	—	—	323,504	32,000	11,543,000	—	—	—	11,575,000
Cash dividends declared (\$0.40 per share)	—	—	—	—	—	(9,794,000)	—	—	(9,794,000)
Accrual of dividend equivalents, net of reversal (\$0.40 per share)	—	—	—	—	—	(294,000)	—	—	(294,000)
Net income	—	—	—	—	—	7,020,000	—	—	7,020,000
Balance as of July 31, 2020	—	—	39,924,439	3,992,000	569,891,000	417,265,000	15,033,317	(441,849,000)	549,299,000
Equity-classified stock award compensation	—	—	—	—	9,983,000	—	—	—	9,983,000
Proceeds from issuance of employee stock purchase plan shares	—	—	54,762	5,000	804,000	—	—	—	809,000
Issuance of restricted stock, net of forfeiture	—	—	35,495	4,000	(4,000)	—	—	—	—
Net settlement of stock-based awards	—	—	240,549	24,000	(4,024,000)	—	—	—	(4,000,000)
Common stock issued for acquisition of UHP Networks Inc. ("UHP")	—	—	1,026,567	103,000	28,789,000	—	—	—	28,892,000
Cash dividends declared (\$0.40 per share)	—	—	—	—	—	(10,189,000)	—	—	(10,189,000)
Accrual of dividend equivalents, net of reversal (\$0.40 per share)	—	—	—	—	—	(380,000)	—	—	(380,000)
Adoption of current expected credit loss standard	—	—	—	—	—	(215,000)	—	—	(215,000)
Net loss	—	—	—	—	—	(73,480,000)	—	—	(73,480,000)
Balance as of July 31, 2021	—	—	41,281,812	4,128,000	605,439,000	333,001,000	15,033,317	(441,849,000)	500,719,000
Equity-classified stock award compensation	—	—	—	—	7,767,000	—	—	—	7,767,000
CEO transition costs related to equity-classified stock-based awards (See Note 11)	—	—	—	—	7,388,000	—	—	—	7,388,000
Proceeds from issuance of employee stock purchase plan shares	—	—	49,138	5,000	725,000	—	—	—	730,000
Issuance of restricted stock, net of forfeiture	—	—	132,854	13,000	(13,000)	—	—	—	—
Net settlement of stock-based awards	—	—	247,721	25,000	(4,640,000)	—	—	—	(4,615,000)
Common stock issued for settlement of UHP earn-out liability	—	—	961,302	96,000	8,818,000	—	—	—	8,914,000
Issuance of convertible preferred stock	100,000	100,000,000	—	—	—	—	—	—	—
Convertible preferred stock issuance costs	—	(4,007,000)	—	—	—	—	—	—	—
Establishment of initial convertible preferred stock purchase option liability	—	(1,005,000)	—	—	—	—	—	—	—
Adjustment to reflect redemption value of convertible preferred stock (including accrued dividends)	—	10,216,000	—	—	—	(10,216,000)	—	—	(10,216,000)
Cash dividends declared (\$0.40 per share)	—	—	—	—	—	(10,661,000)	—	—	(10,661,000)
Accrual of dividend equivalents, net of reversal (\$0.40 per share)	—	—	—	—	—	(389,000)	—	—	(389,000)
Net loss	—	—	—	—	—	(33,052,000)	—	—	(33,052,000)
Balance as of July 31, 2022	<u>100,000</u>	<u>\$ 105,204,000</u>	<u>42,672,827</u>	<u>\$ 4,267,000</u>	<u>\$ 625,484,000</u>	<u>\$ 278,683,000</u>	<u>15,033,317</u>	<u>\$ (441,849,000)</u>	<u>\$ 466,585,000</u>

See accompanying notes to consolidated financial statements.

COMTECH TELECOMMUNICATIONS CORP.
AND SUBSIDIARIES
Consolidated Statements of Cash Flows
Fiscal Years Ended July 31, 2022, 2021 and 2020

	2022	2021	2020
Cash flows from operating activities:			
Net (loss) income	\$ (33,052,000)	(73,480,000)	7,020,000
Adjustments to reconcile net (loss) income to net cash provided by (used in) operating activities:			
Depreciation and amortization of property, plant and equipment	10,314,000	9,379,000	10,561,000
Amortization of intangible assets with finite lives	21,396,000	21,020,000	21,595,000
Amortization of stock-based compensation	7,767,000	9,983,000	9,275,000
CEO transition costs related to equity-classified stock-based awards	7,388,000	—	—
Amortization of deferred financing costs	811,000	736,000	737,000
Change in fair value of convertible preferred stock purchase option liability	(1,005,000)	—	—
Changes in other liabilities	(4,132,000)	(6,633,000)	(4,133,000)
Loss on disposal of property, plant and equipment	(310,000)	215,000	—
Provision for (benefit from) allowance for doubtful accounts	838,000	(18,000)	(431,000)
Provision for excess and obsolete inventory	4,447,000	4,364,000	1,647,000
Deferred income tax (benefit) expense	(5,856,000)	(3,263,000)	860,000
Other	469,000	(225,000)	444,000
Changes in assets and liabilities, net of effects of business acquisitions:			
Accounts receivable	33,567,000	(31,223,000)	20,929,000
Inventories	(20,406,000)	(2,338,000)	(9,132,000)
Prepaid expenses and other current assets	(3,190,000)	(265,000)	(2,261,000)
Other assets	(6,656,000)	(4,215,000)	(719,000)
Accounts payable	6,833,000	11,016,000	(2,206,000)
Accrued expenses and other current liabilities	(11,081,000)	(7,886,000)	4,292,000
Contract liabilities	(1,362,000)	25,444,000	(6,312,000)
Other liabilities, non-current	(3,690,000)	3,583,000	2,422,000
Interest payable	(22,000)	32,000	(397,000)
Income taxes payable	(1,071,000)	3,136,000	(1,427,000)
Net cash provided by (used in) operating activities	1,997,000	(40,638,000)	52,764,000
Cash flows from investing activities:			
Net cash acquired from acquisition of UHP	—	1,304,000	—
Payment for acquisition of CGC, net of cash acquired	—	(750,000)	(11,165,000)
Payments for acquisition of NG-911 businesses	—	—	(1,794,000)
Purchases of property, plant and equipment	(19,619,000)	(16,037,000)	(7,225,000)
Net cash used in investing activities	(19,619,000)	(15,483,000)	(20,184,000)
Cash flows from financing activities:			
Proceeds from issuance of convertible preferred stock	100,000,000	—	—
Net (payments) borrowings of long-term debt under Credit Facility	(71,000,000)	51,500,000	(15,500,000)
Remittance of employees' statutory tax withholding for stock awards	(6,109,000)	(2,803,000)	(5,276,000)
Cash dividends paid	(11,048,000)	(10,334,000)	(10,020,000)
Payment of convertible preferred stock issuance costs	(4,007,000)	—	—
Repayment of principal amounts under finance lease and other obligations	(15,000)	(38,000)	(805,000)
Payment of deferred financing costs	(140,000)	(30,000)	—
Proceeds from issuance of employee stock purchase plan shares	734,000	809,000	855,000
Proceeds from exercises of stock options	—	—	468,000
Net cash provided by (used in) financing activities	8,415,000	39,104,000	(30,278,000)

(Continued)

COMTECH TELECOMMUNICATIONS CORP.
AND SUBSIDIARIES
Consolidated Statements of Cash Flows (continued)
Fiscal Years Ended July 31, 2022, 2021 and 2020

	2022	2021	2020
Net (decrease) increase in cash and cash equivalents	\$ (9,207,000)	(17,017,000)	2,302,000
Cash and cash equivalents at beginning of year	30,861,000	47,878,000	45,576,000
Cash and cash equivalents at end of year	<u>\$ 21,654,000</u>	<u>30,861,000</u>	<u>47,878,000</u>
Supplemental cash flow disclosure			
Cash paid (received) during the year for:			
Interest	\$ 4,094,000	5,987,000	5,549,000
Income taxes, net	<u>\$ 2,913,000</u>	<u>(1,373,000)</u>	<u>2,875,000</u>
Non-cash investing and financing activities:			
Accrued remittance of employees' statutory tax withholdings for fully-vested share units	\$ 1,102,000	2,596,000	1,399,000
Cash dividends declared on common stock but unpaid (including accrual of dividend equivalents)	<u>\$ 3,135,000</u>	<u>2,981,000</u>	<u>2,762,000</u>
Adjustment to reflect redemption value of convertible preferred stock	<u>10,216,000</u>	<u>—</u>	<u>—</u>
Establishment of initial convertible preferred stock purchase option liability	<u>\$ 1,005,000</u>	<u>—</u>	<u>—</u>
Accrued additions to property, plant and equipment	\$ 5,586,000	2,466,000	1,408,000
Common stock issued for acquisitions	<u>\$ 9,000,000</u>	<u>28,892,000</u>	<u>11,575,000</u>
Fair value of UHP acquisition contingent earn-out consideration	<u>\$ —</u>	<u>8,500,000</u>	<u>—</u>
Accruals related to acquisitions	<u>\$ —</u>	<u>—</u>	<u>1,157,000</u>

See accompanying notes to consolidated financial statements.

(1) Summary of Significant Accounting and Reporting Policies

(a) Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Comtech Telecommunications Corp. and its subsidiaries ("Comtech," "we," "us," or "our"), all of which are wholly-owned. All significant intercompany balances and transactions have been eliminated in consolidation.

(b) Nature of Business

We design, produce and market innovative products, systems and services for advanced communications solutions. We conduct our business through two reportable operating segments: Satellite and Space Communications and Terrestrial and Wireless Networks.

Our business is highly competitive and characterized by rapid technological change. Our growth and financial position depends on our ability to keep pace with such changes and developments and to respond to the sophisticated requirements of an increasing variety of secure wireless communications technology users, among other things. Many of our competitors are substantially larger, and have significantly greater financial, marketing and operating resources and broader product lines than our own. A significant technological or sales breakthrough by others, including smaller competitors or new companies, could have a material adverse effect on our business. In addition, certain of our customers have technological capabilities in our product areas and could choose to replace our products with their own.

International sales expose us to certain risks, including barriers to trade, fluctuations in foreign currency exchange rates (which may make our products less price competitive), political and economic instability, availability of suitable export financing, export license requirements, tariff regulations, and other United States ("U.S.") and foreign regulations that may apply to the export of our products, as well as the generally greater difficulties of doing business abroad. We attempt to reduce the risk of doing business in foreign countries by seeking contracts denominated in U.S. dollars, advance or milestone payments, credit insurance and irrevocable letters of credit in our favor.

Notes to Consolidated Financial Statements, Continued

(c) Revenue Recognition

In accordance with FASB ASC 606 - Revenue from Contracts with Customers ("ASC 606"), we record revenue in an amount that reflects the consideration to which we expect to be entitled in exchange for goods or services promised to customers. Under ASC 606, we follow a five-step model to: (1) identify the contract with our customer; (2) identify our performance obligations in our contract; (3) determine the transaction price for our contract; (4) allocate the transaction price to our performance obligations; and (5) recognize revenue using one of the following two methods:

- Over time - We recognize revenue using the over time method when there is a continuous transfer of control to the customer over the contractual period of performance. This generally occurs when we enter into a long-term contract relating to the design, development or manufacture of complex equipment or technology platforms to a buyer's specification (or to provide services related to the performance of such contracts). Continuous transfer of control is typically supported by contract clauses which allow our customers to unilaterally terminate a contract for convenience, pay for costs incurred plus a reasonable profit and take control of work-in-process. Revenue recognized over time is generally based on the extent of progress toward completion of the related performance obligations. The selection of the method to measure progress requires judgment and is based on the nature of the products or services provided. In certain instances, typically for firm fixed-price contracts, we use the cost-to-cost measure because it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost measure, the extent of progress toward completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion, including warranty costs. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. Costs to fulfill generally include direct labor, materials, subcontractor costs, other direct costs and an allocation of indirect costs. When these contracts are modified, the additional goods or services are generally not distinct from those already provided. As a result, these modifications form part of an existing contract and we must update the transaction price and our measure of progress for the single performance obligation and recognize a cumulative catch-up to revenue and gross profits.

For over time contracts using a cost-to-cost measure of progress, we have an estimate at completion ("EAC") process in which management reviews the progress and execution of our performance obligations. This EAC process requires management judgment relative to assessing risks, estimating contract revenue and costs, and making assumptions for schedule and technical issues. Since certain contracts extend over a long period of time, the impact of revisions in revenue and or cost estimates during the progress of work may impact current period earnings through a cumulative adjustment. Additionally, if the EAC process indicates a loss, a provision is made for the total anticipated loss in the period that it becomes evident. Contract revenue and cost estimates for significant contracts are generally reviewed and reassessed at least quarterly.

The cost-to-cost method is principally used to account for contracts in our Satellite and Space Communications segment and, to a lesser extent, certain location-based and messaging infrastructure contracts in our Terrestrial and Wireless Networks segment. For service-based contracts in our Terrestrial and Wireless Networks segment, we also recognize revenue over time. These services are typically recognized as a series of services performed over the contract term using the straight-line method, or based on our customers' actual usage of the networks and platforms which we provide.

- Point in time - When a performance obligation is not satisfied over time, we must record revenue using the point in time accounting method which generally results in revenue being recognized upon shipment or delivery of a promised good or service to a customer. This generally occurs when we enter into short term contracts or purchase orders where items are provided to customers with relatively quick turn-around times. Modifications to such contracts and or purchase orders, which typically provide for additional quantities or services, are accounted for as a new contract because the pricing for these additional quantities or services are based on standalone selling prices.

Notes to Consolidated Financial Statements, Continued

Point in time accounting is principally applied to contracts in our Satellite and Space Communications segment, which includes satellite modems, solid-state and traveling wave tube amplifiers and to certain contracts for our solid-state, high-power RF amplifiers. The contracts related to these products do not meet the requirements for over time revenue recognition because our customers cannot utilize the equipment for its intended purpose during any phase of our manufacturing process; customers do not simultaneously receive and or consume the benefits provided by our performance; customers do not control the asset (i.e., prior to delivery, customers cannot direct the use of the asset, sell or exchange the equipment, etc.); and, although many of our contracts have termination for convenience clauses and or an enforceable right to payment for performance completed to date, our performance creates an asset with an alternative use through the point of delivery.

In determining that our equipment has alternative use, we considered the underlying manufacturing process. In the early phases of manufacturing, raw materials and work in process (including subassemblies) consist of common parts that are highly fungible among many different types of products and customer applications. Finished products are either configured to our standard configuration or based on our customers' specifications. Finished products, whether built to our standard specification or to a customers' specification, can be sold to a variety of customers and across many different end use applications with minimal rework, if needed, and without incurring a significant economic loss.

When identifying a contract with our customer, we consider when it has approval and commitment from both parties, if the rights of the parties are identified, if the payment terms are identified, if it has commercial substance and if collectability is probable.

When identifying performance obligations, we consider whether there are multiple promises and how to account for them. In our contracts, multiple promises are separated if they are distinct, both individually and in the context of the contract. If multiple promises in a contract are highly interrelated or comprise a series of distinct services performed over time, they are combined into a single performance obligation. In some cases, we may also provide the customer with an additional service-type warranty, which we recognize as a separate performance obligation. Service-type warranties do not represent a significant portion of our consolidated net sales. When service-type warranties represent a separate performance obligation, the revenue is deferred and recognized ratably over the extended warranty period. Our contracts, from time-to-time, may also include options for additional goods and services. To date, these options have not represented material rights to the customer as the pricing for them reflects standalone selling prices. As a result, we do not consider options we offer to be performance obligations for which we must allocate a portion of the transaction price. In many cases, we provide assurance-type warranty coverage for some of our products for a period of at least one year from the date of delivery.

When identifying the transaction price, we typically utilize the contract's stated price as a starting point. The transaction price in certain arrangements may include estimated amounts of variable consideration, including award fees, incentive fees or other provisions that can either increase or decrease the transaction price. We estimate variable consideration as the amount to which we expect to be entitled, and we include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the estimation uncertainty is resolved. The estimation of this variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information (e.g., historical, current and forecasted) that is reasonably available to us.

When allocating the contract's transaction price, we consider each distinct performance obligation. For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. We determine standalone selling price based on the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, we estimate the standalone selling price taking into account available information such as market conditions, including geographic or regional specific factors, competitive positioning, internal costs, profit objectives and internally approved pricing guidelines related to the performance obligations.

Notes to Consolidated Financial Statements, Continued

Most of our contracts with customers are denominated in U.S. dollars and typically are either firm fixed-price or cost reimbursable type contracts (including fixed-fee, incentive-fee and time-and-material type contracts). In almost all of our contracts with customers, we are the principal in the arrangement and report revenue on a gross basis. Transaction prices for contracts with U.S. domestic and international customers are usually based on specific negotiations with each customer and in the case of the U.S. government, sometimes based on estimated or actual costs of providing the goods or services in accordance with applicable regulations. Sales by geography and customer type, as a percentage of consolidated net sales, are as follows:

	Fiscal Years Ended July 31,		
	2022	2021	2020
<u>United States</u>			
U.S. government	27.2 %	34.6 %	36.2 %
Domestic	47.8 %	41.5 %	40.3 %
Total United States	75.0 %	76.1 %	76.5 %
International	25.0 %	23.9 %	23.5 %
Total	100.0 %	100.0 %	100.0 %

Sales to U.S. government customers include sales to the U.S. Department of Defense ("DoD"), intelligence and civilian agencies, as well as sales directly to or through prime contractors. Domestic sales include sales to commercial customers, as well as to U.S. state and local governments. Included in domestic sales are sales to Verizon Communications Inc. ("Verizon"), which were 11.1% and 10.7% of consolidated net sales for fiscal 2022 and 2021, respectively. Except for the U.S. government, there were no customers that represented more than 10.0% of consolidated net sales during fiscal 2020. International sales for fiscal 2022, 2021 and 2020 (which include sales to U.S. domestic companies for inclusion in products that are sold to international customers) were \$121,392,000, \$138,943,000 and \$145,107,000, respectively. Except for the U.S., no individual country (including sales to U.S. domestic companies for inclusion in products that are sold to a foreign country) represented more than 10.0% of consolidated net sales for fiscal 2022, 2021 and 2020.

The following tables summarize our disaggregation of revenue consistent with information reviewed by our Chief Operating Decision Maker ("CODM") for the fiscal years ended July 31, 2022, 2021 and 2020. We believe these categories best depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors which impact our business. See Note (11) - "Segment Information" for more information related to our segments.

	Fiscal Year Ended July 31, 2022		
	Satellite and Space Communications	Terrestrial and Wireless Networks	Total
<u>Geographical region and customer type</u>			
U.S. government	\$ 127,536,000	5,061,000	\$ 132,597,000
Domestic	50,274,000	181,976,000	232,250,000
Total United States	177,810,000	187,037,000	364,847,000
International	101,868,000	19,524,000	121,392,000
Total	\$ 279,678,000	206,561,000	\$ 486,239,000
<u>Contract type</u>			
Firm fixed-price	\$ 249,497,000	206,561,000	\$ 456,058,000
Cost reimbursable	30,181,000	—	30,181,000
Total	\$ 279,678,000	206,561,000	\$ 486,239,000
<u>Transfer of control</u>			
Point in time	\$ 186,052,000	2,633,000	\$ 188,685,000
Over time	93,626,000	203,928,000	297,554,000
Total	\$ 279,678,000	206,561,000	\$ 486,239,000

Notes to Consolidated Financial Statements, Continued

	Fiscal Year Ended July 31, 2021		
	Satellite and Space Communications	Terrestrial and Wireless Networks	Total
<u>Geographical region and customer type</u>			
U.S. government	\$ 198,157,000	2,924,000	\$ 201,081,000
Domestic	57,246,000	184,425,000	241,671,000
Total United States	255,403,000	187,349,000	442,752,000
International	119,448,000	19,495,000	138,943,000
Total	\$ 374,851,000	206,844,000	\$ 581,695,000
<u>Contract type</u>			
Firm fixed-price	\$ 292,044,000	206,844,000	\$ 498,888,000
Cost reimbursable	82,807,000	—	82,807,000
Total	\$ 374,851,000	206,844,000	\$ 581,695,000
<u>Transfer of control</u>			
Point in time	\$ 234,690,000	1,704,000	\$ 236,394,000
Over time	140,161,000	205,140,000	345,301,000
Total	\$ 374,851,000	206,844,000	\$ 581,695,000

	Fiscal Year Ended July 31, 2020		
	Satellite and Space Communications	Terrestrial and Wireless Networks	Total
<u>Geographical region and customer type</u>			
U.S. government	\$ 220,824,000	2,539,000	\$ 223,363,000
Domestic	62,607,000	185,638,000	248,245,000
Total United States	283,431,000	188,177,000	471,608,000
International	127,642,000	17,465,000	145,107,000
Total	\$ 411,073,000	205,642,000	\$ 616,715,000
<u>Contract type</u>			
Firm fixed-price	\$ 322,450,000	205,642,000	\$ 528,092,000
Cost reimbursable	88,623,000	—	88,623,000
Total	\$ 411,073,000	205,642,000	\$ 616,715,000
<u>Transfer of control</u>			
Point in time	\$ 274,614,000	4,352,000	\$ 278,966,000
Over time	136,459,000	201,290,000	337,749,000
Total	\$ 411,073,000	205,642,000	\$ 616,715,000

Notes to Consolidated Financial Statements, Continued

The timing of revenue recognition, billings and collections results in receivables, unbilled receivables and contract liabilities on our Consolidated Balance Sheet. Under typical payment terms for our contracts accounted for over time, amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., monthly) or upon achievement of contractual milestones. For certain contracts with provisions that are intended to protect customers in the event we do not satisfy our performance obligations, billings occur subsequent to revenue recognition, resulting in unbilled receivables. Under ASC 606, unbilled receivables constitute contract assets. There were no material impairment losses recognized on contract assets during the fiscal years ended July 31, 2022, 2021 and 2020, respectively. On large long-term contracts, and for contracts with international customers that do not do business with us regularly, payment terms typically require advanced payments and deposits. Under ASC 606, payments received from customers in excess of revenue recognized to-date results in a contract liability. These contract liabilities are not considered to represent a significant financing component of the contract because we believe these cash advances and deposits are generally used to meet working capital demands which can be higher in the earlier stages of a contract. Also, advanced payments and deposits provide us with some measure of assurance that the customer will perform on its obligations under the contract. Under the typical payment terms for our contracts accounted for at a point in time, costs are accumulated in inventory until the time of billing, which generally coincides with revenue recognition. Of the contract liability balance at July 31, 2021 and July 31, 2020, \$51,762,000 and \$34,545,000 was recognized as revenue during fiscal years 2022 and 2021, respectively.

We recognize the incremental costs to obtain or fulfill a contract as an expense when incurred if the amortization period of the asset is one year or less. Incremental costs to obtain or fulfill contracts with an amortization period greater than one year were not material.

As commissions payable to our internal sales and marketing employees or contractors are contingent upon multiple factors, such commissions are not considered direct costs to obtain or fulfill a contract with a customer and are expensed as incurred in selling, general and administrative expenses on our Consolidated Statements of Operations. As for commissions payable to our third-party sales representatives related to large long-term contracts, we do consider these types of commissions both direct and incremental costs to obtain and fulfill such contracts. Therefore, such commissions are included in total estimated costs at completion for such contracts and expensed over time through cost of sales on our Consolidated Statements of Operations.

Remaining performance obligations represent the transaction price of firm orders for which work has not been performed as of the end of a fiscal period. Remaining performance obligations, which we refer to as backlog, exclude unexercised contract options and potential orders under indefinite delivery / indefinite quantity ("IDIQ") contracts. As of July 31, 2022, the aggregate amount of the transaction price allocated to remaining performance obligations was \$618,138,000 (which represents the amount of our consolidated backlog). We estimate that a substantial portion of our remaining performance obligations at July 31, 2022 will be completed and recognized as revenue during the next twenty-four month period, with the rest thereafter. During fiscal 2022, revenue recognized from performance obligations satisfied, or partially satisfied, in previous periods (for example due to changes in the transaction price) was not material.

(d) Cash and Cash Equivalents

Our cash equivalents are short-term, highly liquid investments that are both readily convertible to known amounts of cash and have insignificant risk of change in value as a result of changes in interest rates. Our cash and cash equivalents, as of July 31, 2022 and 2021, amounted to \$21,654,000 and \$30,861,000, respectively, and primarily consist of bank deposits and money market deposit accounts insured by the Federal Deposit Insurance Corporation. Cash equivalents are carried at cost, which approximates fair value.

(e) Inventories

Our inventories are stated at the lower of cost and net realizable value, the latter of which is defined as the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. Our inventories are reduced to their estimated net realizable value by a charge to cost of sales in the period such excess costs are determined. Our inventories are principally recorded using either average or standard costing methods.

Notes to Consolidated Financial Statements, Continued

Work-in-process (including our contracts-in-progress) and finished goods inventory reflect all accumulated production costs, which are comprised of direct production costs and overhead, and is reduced by amounts recorded in cost of sales as the related revenue is recognized. Indirect costs relating to long-term contracts, which include expenses such as general and administrative, are charged to expense as incurred and are not included in our cost of sales or work-in-process (including our contracts-in-progress) and finished goods inventory.

(f) Long-Lived Assets

Our machinery and equipment, which are recorded at cost, are depreciated or amortized over their estimated useful lives (three to eight years) under the straight-line method. Capitalized values of properties and leasehold improvements under leases are amortized over the life of the lease or the estimated life of the asset, whichever is less.

Goodwill represents the excess cost of a business acquisition over the fair value of the net assets acquired. In accordance with FASB ASC 350 "*Intangibles - Goodwill and Other*" goodwill is not amortized. We periodically, at least on an annual basis in the first quarter of each fiscal year, review goodwill, considering factors such as projected cash flows and revenue and earnings multiples, to determine whether the carrying value of the goodwill is impaired. If we fail the quantitative assessment of goodwill impairment ("quantitative assessment"), we would be required to recognize an impairment loss equal to the amount that a reporting unit's carrying value exceeded its fair value; however, any loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. We define our reporting units to be the same as our operating segments.

We performed our annual goodwill impairment assessment for fiscal 2023 on August 1, 2022 (the first day of our fiscal 2023). See *Note (13) - "Goodwill"* for more information. Unless there are future indicators that the fair value of a reporting unit is more likely than not less than its carrying value, such as a significant adverse change in our future financial performance, our next impairment assessment for goodwill will be performed and completed in the first quarter of fiscal 2024. Any impairment charges that we may record in the future could be material to our results of operations and financial condition.

We assess the recoverability of the carrying value of our other long-lived assets, including identifiable intangible assets with finite useful lives, whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. We evaluate the recoverability of such assets based upon the expectations of undiscounted cash flows from such assets. If the sum of the expected future undiscounted cash flows were less than the carrying amount of the asset, a loss would be recognized for the difference between the fair value and the carrying amount.

(g) Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

We determine the uncertain tax positions taken or expected to be taken in income tax returns in accordance with the provisions of FASB ASC 740-10-25 "*Income Taxes*," which prescribes a two-step evaluation process for tax positions. The first step is recognition based on a determination of whether it is more-likely-than-not that a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The second step is to measure a tax position that meets the more-likely-than-not threshold. The tax position is measured as the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement. If a tax position does not meet the more-likely-than-not recognition threshold, the benefit of that position is not recognized in the financial statements. Our policy is to recognize potential interest and penalties related to uncertain tax positions in income tax expense.

(h) Earnings Per Share

Our basic earnings per share ("EPS") is computed based on the weighted average number of common shares (including vested but unissued stock units, share units, performance shares and restricted stock units ("RSUs")) outstanding during each respective period. Our diluted EPS reflects the dilution from potential common stock issuable pursuant to the exercise of equity-classified stock-based awards, settlement of escrow and earn-out arrangements related to our acquisition of UHP and the assumed conversion of Convertible Preferred Stock, if dilutive, outstanding during each respective period. Pursuant to FASB ASC 260 "*Earnings Per Share*," shares whose issuance is contingent upon the satisfaction of certain conditions are included in diluted EPS based on the number of shares, if any, that would be issuable if the end of the reporting period were the end of the contingency period. When calculating our diluted earnings per share, we consider the amount an employee must pay upon assumed exercise of stock-based awards and the amount of stock-based compensation cost attributed to future services and not yet recognized.

There were no repurchases of our common stock during the fiscal years ended July 31, 2022, 2021 and 2020. See *Note (16) - "Stockholders' Equity"* for more information.

Weighted average stock options, RSUs and restricted stock outstanding of 1,656,000, 1,440,000 and 1,348,000 shares for fiscal 2022, 2021 and 2020, respectively, were not included in our diluted EPS calculation because their effect would have been anti-dilutive.

Our EPS calculations exclude 293,000, 232,000 and 201,000 weighted average performance shares outstanding for fiscal 2022, 2021 and 2020, respectively, as the performance conditions have not yet been satisfied. However, the numerator for EPS calculations for each respective period is reduced by the compensation expense related to these awards.

Weighted average common shares of 591,000 and 82,000 related to our acquisition of UHP in March 2021 were not included in our diluted EPS calculation for fiscal 2022 and 2021, respectively, because their effect would have been anti-dilutive.

Notes to Consolidated Financial Statements, Continued

Weighted average common shares of 3,342,000 underlying the assumed conversion of Convertible Preferred Stock, on an if-converted basis, were not included in our diluted EPS calculation for fiscal 2022 because their effect would have been anti-dilutive. As a result, the numerator for our basic and diluted EPS calculation for fiscal 2022 is the respective net loss attributable to common stockholders.

The following table reconciles the numerators and denominators used in the basic and diluted EPS calculations:

	Fiscal Years Ended July 31,		
	2022	2021	2020
Numerator:			
Net (loss) income	\$ (33,052,000)	(73,480,000)	7,020,000
Convertible preferred stock issuance costs	(4,007,000)	—	—
Establishment of initial convertible preferred stock purchase option liability	(1,005,000)	—	—
Dividend on convertible preferred stock	(5,204,000)	—	—
Net (loss) income attributable to common stockholders	<u>\$ (43,268,000)</u>	<u>(73,480,000)</u>	<u>7,020,000</u>
Denominator:			
Denominator for basic calculation	26,506,000	25,685,000	24,798,000
Effect of dilutive securities:			
Stock-based awards	—	—	101,000
Denominator for diluted calculation	<u>26,506,000</u>	<u>25,685,000</u>	<u>24,899,000</u>

As discussed further in *Note (15) - "Convertible Preferred Stock,"* the Convertible Preferred Stock issued in October 2021 represents a "participating security" as defined in ASC 260. As a result, our EPS calculations for fiscal 2022 were based on the two-class method. Given the net loss attributable to common stockholders for fiscal 2022, there was no impact of applying the two-class method to our reported basic or diluted earnings per common share.

(i) Fair Value Measurements and Financial Instruments

Using the fair value hierarchy described in FASB ASC 820 "*Fair Value Measurements and Disclosures*," we valued our cash and cash equivalents using Level 1 inputs that were based on quoted market prices. We believe that the carrying amounts of our other current financial assets (such as accounts receivable) and other current liabilities (including accounts payable and accrued expenses) approximate their fair values due to their short-term maturities. The fair value of our Credit Facility that we entered into on October 31, 2018 approximates its carrying amount due to its variable interest rate and pricing grid that is dependent upon our leverage ratio as of the end of each fiscal quarter. As of July 31, 2022 and 2021, other than the financial instruments discussed above, we had no other significant assets or liabilities included in our Consolidated Balance Sheets recorded at fair value, as such term is defined by FASB ASC 820.

(j) Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, and disclosure of contingent assets and liabilities, at the date of the consolidated financial statements and the reported amounts of net sales and expenses during the reported period. We make significant estimates in many areas of our accounting, including but not limited to the following: long-term contracts, stock-based compensation, intangible assets and liabilities including goodwill, provision for excess and obsolete inventory, allowance for doubtful accounts, warranty obligations and income taxes. Actual results may differ from those estimates.

Notes to Consolidated Financial Statements, Continued

(k) Comprehensive Income

In accordance with FASB ASC 220 "*Comprehensive Income*," we report all changes in equity during a period, except those resulting from investment by owners and distribution to owners, for the period in which they are recognized. Comprehensive income is the total of net income and all other non-owner changes in equity (or other comprehensive income) such as unrealized gains/losses on securities classified as available-for-sale, foreign currency translation adjustments and minimum pension liability adjustments. Comprehensive income was the same as our net income in fiscal 2022, 2021 and 2020.

(l) Reclassifications

Certain reclassifications have been made to previously reported consolidated financial statements to conform to the fiscal 2022 presentation.

(m) Adoption of Accounting Standards and Updates

We are required to prepare our consolidated financial statements in accordance with the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") which is the source for all authoritative U.S. generally accepted accounting principles, which are commonly referred to as "GAAP." The FASB ASC is subject to updates by the FASB, which are known as Accounting Standards Updates ("ASUs"). During fiscal 2022, we adopted:

- FASB ASU No. 2019-12, which simplifies various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. Our adoption of this ASU on August 1, 2021 did not have a material impact on our consolidated financial statements or disclosures.
- FASB ASU No. 2020-01, which clarifies the interactions between Topics 321, 323 and 815. This ASU clarifies that an entity should consider observable transactions that require it to either apply or discontinue the equity method of accounting for the purposes of applying the measurement alternative in accordance with Topic 321 immediately before applying or upon discontinuing the equity method. In addition, the amendments clarify the accounting for certain forward contracts and purchased options accounted for under Topic 815. Our adoption of this ASU on August 1, 2021 did not impact our consolidated financial statements or disclosures.
- FASB ASU No. 2020-06, which simplifies the accounting for convertible instruments by removing certain separation models (including the cash conversion model and the beneficial conversion feature model) for convertible instruments. As a result, for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815 or that do not result in substantial premiums accounted for as paid-in capital, the embedded conversion features are no longer separated from the host contract. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost, and convertible preferred stock will be accounted for as a single equity instrument measured at its historical cost as long as no other features require bifurcation and recognition as derivatives. On August 1, 2021, we early adopted this ASU. Our early adoption of this ASU did not have any impact on our consolidated financial statements or disclosures.
- FASB ASU No. 2021-08, which requires that an acquirer recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606, as if it had originated the contracts. Prior to this ASU, an acquirer generally recognized contract assets and contract liabilities assumed that arose from contracts with customers at fair value on the acquisition date. On August 1, 2021, we early adopted this ASU. Our early adoption of this ASU did not have any impact on our consolidated financial statements or disclosures.

(2) Acquisitions*UHP Networks Inc.*

On March 2, 2021, we completed our acquisition of UHP Networks Inc. ("UHP"), a leading provider of innovative and disruptive satellite ground station technology solutions, pursuant to a stock purchase agreement initially entered into in November 2019 and last amended on March 1, 2021. With end-markets for high-speed satellite-based networks anticipated to significantly grow, our acquisition allows us to enhance our Satellite and Space Communications segment's offerings with time division multiple access ("TDMA") satellite modems.

The acquisition had a final purchase price for accounting purposes of \$37,470,000, which represents the sum of \$23,979,000 paid at closing, \$4,991,000 paid on August 1, 2021 and \$8,500,000 related to the acquisition date estimated fair value of a \$9,000,000 contingent earn-out payment.

At closing, we funded the \$23,979,000 and \$4,991,000 payments with 1,026,567 shares of our common stock, based on a volume weighted average stock price of approximately \$28.14 per share, plus \$87,000 in cash. As of July 31, 2022, 132,005 of the 1,026,567 shares of our common stock issued at closing were held in escrow to satisfy potential indemnification obligations of the seller.

In addition, the specified sales milestones were met and the full \$9,000,000 earn-out payment was settled on July 12, 2022 with 961,302 newly issued shares of our common stock, based on a volume weighted average stock price of approximately \$9.36 per share. Upon payment, twenty-percent, or 192,260 of the 961,302 newly issued shares were placed into escrow and are anticipated to be released to the seller equally on March 2, 2023 and 2024. The terms of the stock purchase agreement provide an ability for us to substitute cash in lieu of the common stock that was initially placed into escrow.

Notes to Consolidated Financial Statements, Continued

The following table summarizes the final fair value of assets acquired and liabilities assumed in connection with the UHP acquisition:

	Purchase Price Allocation	
Initial upfront payment	\$ 23,979,000	
Hold back amount	4,991,000	
Contingent earn-out consideration	8,500,000	
Purchase price at fair value	<u>\$ 37,470,000</u>	
<u>Allocation of aggregate purchase price:</u>		
Cash and cash equivalents	\$ 1,391,000	
Current assets	1,367,000	
Property, plant and equipment	10,000	
Deferred tax assets	310,000	
Contract liabilities	(648,000)	
Accrued warranty obligations	(750,000)	
Other current liabilities	(1,175,000)	
Non-current liabilities	<u>(160,000)</u>	
Net tangible assets at fair value	\$ 345,000	
<u>Identifiable intangibles, deferred taxes and goodwill:</u>		<u>Estimated Useful Lives</u>
Technology	\$ 15,300,000	15 years
Customer relationships	15,500,000	15 years
Trade name	800,000	20 years
Deferred tax liabilities	(8,374,000)	
Goodwill	<u>13,899,000</u>	Indefinite
Allocation of aggregate purchase price	<u>\$ 37,470,000</u>	

We accounted for the acquisition under the acquisition method of accounting in accordance with FASB ASC 805, "Business Combinations" ("ASC 805"). Acquisition plan expenses were not included as a component of consideration transferred and were expensed in the period incurred. The final purchase price was allocated to the assets acquired and liabilities assumed, based on their fair value as of March 2, 2021 pursuant to the business combination accounting rules. Our consolidated statements of operations for the fiscal years ended July 31, 2022 and 2021 include a nominal amount of revenue contribution from the acquisition. Pro forma financial information is not disclosed, as the acquisition is not material.

Acquisition Plan Expenses

During fiscal 2021 and 2020, we incurred acquisition plan expenses of \$100,292,000 and \$20,754,000, respectively. Of the amount recorded in fiscal 2021, \$88,343,000 related to the previously announced litigation and merger termination with Gilat Satellite Networks, Ltd. ("Gilat"), including \$70,000,000 paid in cash to Gilat. The remaining costs primarily related to the April 2021 settlement of litigation associated with the 2019 acquisition of GD NG-911 as well as our acquisition of UHP, which closed in March 2021. Additionally, during fiscal 2021, we recorded \$1,178,000 of incremental interest expense related to a now terminated financing commitment letter.

Notes to Consolidated Financial Statements, Continued

(3) Accounts Receivable

Accounts receivable consists of the following at July 31, 2022 and 2021:

		2022	2021
Receivables from commercial and international customers	\$	59,922,000	86,890,000
Unbilled receivables from commercial and international customers		39,826,000	36,131,000
Receivables from the U.S. government and its agencies		24,776,000	33,381,000
Unbilled receivables from the U.S. government and its agencies		1,524,000	3,356,000
Total accounts receivable		126,048,000	159,758,000
Less allowance for doubtful accounts		2,337,000	1,648,000
Accounts receivable, net	\$	123,711,000	158,110,000

Unbilled receivables as of July 31, 2022 relate to contracts-in-progress for which revenue has been recognized, but for which we have not yet earned the right to bill the customer for work performed to-date. Under ASC 606, unbilled receivables constitute contract assets. Management estimates that a substantial portion of the amounts not yet billed at July 31, 2022 will be billed and collected within one year.

As of July 31, 2022, 20.9% and 13.4% of total accounts receivable related to U.S. government (and its agencies) and Verizon, respectively.

As of July 31, 2021, 23.0%, 12.7% and 12.1% of total accounts receivable related to the U.S. government (and its agencies), AT&T, Inc. and Verizon, respectively.

(4) Inventories

Inventories consist of the following at July 31, 2022 and 2021:

		2022	2021
Raw materials and components	\$	78,478,000	62,249,000
Work-in-process and finished goods		40,960,000	38,338,000
Total inventories		119,438,000	100,587,000
Less reserve for excess and obsolete inventories		23,121,000	20,229,000
Inventories, net	\$	96,317,000	80,358,000

As of July 31, 2022 and 2021, the amount of inventory directly related to long-term contracts (including contracts-in-progress) was \$4,100,000 and \$7,028,000, respectively, and the amount of inventory related to contracts from third-party commercial customers who outsource their manufacturing to us was \$1,866,000 and \$1,509,000, respectively.

Notes to Consolidated Financial Statements, Continued

(5) Property, Plant and Equipment

Property, plant and equipment consist of the following at July 31, 2022 and 2021:

		2022	2021
Machinery and equipment	\$	186,935,000	170,600,000
Leasehold improvements		14,260,000	15,726,000
		201,195,000	186,326,000
Less accumulated depreciation and amortization		150,832,000	151,040,000
Property, plant and equipment, net	\$	50,363,000	35,286,000

Depreciation and amortization expense on property, plant and equipment amounted to \$10,303,000, \$9,343,000 and \$10,386,000 for the fiscal years ended July 31, 2022, 2021 and 2020, respectively.

(6) Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following at July 31, 2022 and 2021:

		2022	2021
Accrued wages and benefits	\$	25,675,000	26,367,000
Accrued warranty obligations		9,420,000	17,600,000
Accrued contract costs		15,921,000	12,750,000
Accrued acquisition-related costs		—	9,222,000
Accrued commissions and royalties		5,697,000	5,342,000
Accrued legal costs		2,514,000	2,854,000
Other		13,435,000	15,466,000
Accrued expenses and other current liabilities	\$	72,662,000	89,601,000

Accrued contract costs represent direct and indirect costs on contracts as well as estimates of amounts owed for invoices not yet received from vendors or reflected in accounts payable.

Accrued acquisition-related costs for fiscal 2021 include \$8,705,000 of contingent earn-out consideration related to our acquisition of UHP, which was paid in the fourth quarter of fiscal 2022. See *Note (2) - "Acquisitions - UHP Networks Inc."* for further discussion.

Accrued warranty obligations as of July 31, 2022 relate to estimated liabilities for assurance type warranty coverage that we provide to our customers. We generally provide warranty coverage for some of our products for a period of at least one year from the date of delivery. We record a liability for estimated warranty expense based on historical claims, product failure rates, consideration of contractual obligations, future costs to resolve software issues and other factors. Some of our product warranties are provided under long-term contracts, the costs of which are incorporated into our estimates of total contract costs.

Changes in our accrued warranty obligations during the fiscal years ended July 31, 2022 and 2021 were as follows:

		2022	2021
Balance at beginning of year	\$	17,600,000	15,200,000
(Benefit from) provision for warranty obligations		(1,255,000)	4,360,000
Adjustments for changes in estimates		(2,500,000)	—
Charges incurred		(4,425,000)	(2,710,000)
Additions (in connection with acquisitions)		—	750,000
Balance at end of year	\$	9,420,000	17,600,000

Notes to Consolidated Financial Statements, Continued

During the second quarter of fiscal 2022, we recorded a \$2,500,000 benefit to cost of sales in our Terrestrial and Wireless Networks segment due to lower than expected warranty claims associated with previously acquired NG-911 technologies.

(7) Credit Facility

On October 31, 2018, we entered into a First Amended and Restated Credit Agreement (the "Credit Facility") with a syndicate of lenders.

The Credit Facility provides a senior secured loan facility of up to \$550,000,000 consisting of: (i) a revolving loan facility ("Revolving Loan Facility") with a borrowing limit of \$300,000,000; (ii) an accordion feature allowing us to borrow up to an additional \$250,000,000; (iii) a \$35,000,000 letter of credit sublimit; and (iv) a swingline loan credit sublimit of \$25,000,000.

The Credit Facility matures on October 31, 2023 (the "Revolving Maturity Date"). If we issue new unsecured debt in excess of \$5,000,000 with a maturity date that is less than 91 days from October 31, 2023, the Revolving Maturity Date would automatically accelerate so that it would be 91 days earlier than the maturity date of the new unsecured debt.

As of July 31, 2022, the amount outstanding under our Credit Facility was \$130,000,000 which is reflected in the non-current portion of long-term debt on our Consolidated Balance Sheet. At July 31, 2022, we had \$558,000 of standby letters of credit outstanding under our Credit Facility related to guarantees of future performance on certain customer contracts and no outstanding commercial letters of credit. During the fiscal year ended July 31, 2022, we had outstanding balances under the Credit Facility ranging from \$100,000,000 to \$212,000,000.

As of July 31, 2022, total net deferred financing costs related to the Credit Facility were \$1,014,000 and are being amortized over the term of our Credit Facility through October 31, 2023.

Interest expense related to our Credit Facility, including amortization of deferred financing costs, recorded during the fiscal years ended July 31, 2022, 2021 and 2020 was \$4,933,000, \$5,628,000 and \$5,905,000, respectively. Our blended interest rate approximated 3.41%, 2.84% and 3.87%, respectively, for fiscal 2022, 2021 and 2020.

Borrowings under the Credit Facility shall be either: (i) Alternate Base Rate borrowings, which bear interest from the applicable borrowing date at a rate per annum equal to (x) the greatest of (a) the Prime Rate (as defined) in effect on such day, (b) the Federal Funds Effective Rate (as defined) in effect on such day plus 1/2 of 1.00% per annum and (c) the Adjusted LIBO Rate (as defined) on such day (or, if such day is not a business day, the immediately preceding business day) plus 1.00% per annum, plus (y) the Applicable Rate (as defined), or (ii) Eurodollar borrowings, which bear interest from the applicable borrowing date at a rate per annum equal to (x) the Adjusted LIBO Rate for such interest period plus (y) the Applicable Rate. Determination of the Applicable Rate is based on a pricing grid that is dependent upon our Secured Leverage Ratio (as defined) as of the end of each fiscal quarter for which consolidated financial statements have been most recently delivered.

The Credit Facility contains customary representations, warranties and affirmative covenants. The Credit Facility also contains customary negative covenants, subject to negotiated exceptions, including but not limited to: (i) liens, (ii) investments, (iii) indebtedness, (iv) significant corporate changes, including mergers and acquisitions, (v) dispositions, (vi) restricted payments, including stockholder dividends, and (vii) certain other restrictive agreements. The Credit Facility also contains certain financial covenants and customary events of default (subject to grace periods, as appropriate), such as payment defaults, cross-defaults to other material indebtedness, bankruptcy and insolvency, the occurrence of a defined change in control and the failure to observe the negative covenants and other covenants related to the operation of our business. In addition, under certain circumstances, we may be required to enter into amendments to the Credit Facility in connection with any further syndication of the Credit Facility.

Notes to Consolidated Financial Statements, Continued

The Credit Facility provides for, among other things: (i) no scheduled payments of principal until maturity; (ii) a maximum Secured Leverage Ratio of 3.75x trailing twelve months ("TTM") Adjusted Earnings Before Interest, Taxes, Depreciation and Amortization ("Adjusted EBITDA") and a Maximum Total Leverage Ratio of 4.50x TTM Adjusted EBITDA, each with no step downs; and (iii) a Minimum Interest Expense Coverage Ratio of 3.25x TTM Adjusted EBITDA.

As of July 31, 2022, our Secured Leverage Ratio was 3.50x TTM Adjusted EBITDA compared to the maximum allowable Secured Leverage Ratio of 3.75x TTM Adjusted EBITDA. Our Interest Expense Coverage Ratio as of July 31, 2022 was 8.81x TTM Adjusted EBITDA compared to the Minimum Interest Expense Coverage Ratio of 3.25x TTM Adjusted EBITDA. Although we expect our Secured Leverage Ratio to remain elevated during the first quarter of fiscal 2023, as we make payments to various vendors associated with the build-out of our high-volume technology manufacturing facilities, to support our working capital needs for our existing contracts and to make required CEO transition related payments, given our overall expected business performance, we anticipate maintaining compliance with the terms and financial covenants in our Credit Facility for the foreseeable future.

The obligations under the Credit Facility are guaranteed by certain of our domestic and foreign subsidiaries (the "Guarantors"). As collateral security under the Credit Facility and the guarantees thereof, we and the Guarantors have granted to the administrative agent, for the benefit of the lenders, a lien on, and first priority security interest in, substantially all of our tangible and intangible assets.

On December 6, 2018, we entered into an amendment to the Credit Facility to provide for a mechanism to replace the LIBO Rate for Eurodollar borrowings with an alternative benchmark interest rate, should the LIBO Rate generally become unavailable in the future on an other-than-temporary basis. On January 14, 2021, we entered into a further amendment of the Credit Facility to update the LIBO Rate replacement mechanism language and other definitional items. On July 30, 2021, we entered into an amendment to incorporate certain foreign subsidiaries as loan parties and Guarantors into the Credit Facility and added certain definitional items.

Capitalized terms used but not defined herein have the meanings set forth for such terms in the Credit Facility and the Prior Credit Facility, which have been documented and filed with the SEC.

(8) Leases

Our leases historically relate to the leasing of facilities and equipment. In accordance with FASB ASC 842 - "Leases" ("ASC 842"), we determine at inception whether an arrangement is, or contains, a lease and whether the lease should be classified as an operating or a financing lease. At lease commencement, we recognize a right-of-use ("ROU") asset and lease liability based on the present value of the future lease payments over the estimated lease term. We have elected to not recognize a ROU asset or lease liability for any leases with terms of twelve months or less. Instead, for such short-term leases, we recognize lease expense on a straight-line basis over the lease term. Certain of our leases include options to extend the term of the lease or to terminate the lease early. When it is reasonably certain that we will exercise a renewal option or will not exercise a termination option, we include the impact of exercising or not exercising such option, respectively, in the estimate of the lease term. As our lease agreements do not explicitly state the discount rate implicit in the lease, we use our incremental borrowing rate ("IBR") on the commencement date to calculate the present value of future lease payments. Such IBR represents our estimated rate of interest to borrow on a collateralized basis over a term commensurate with the expected lease term.

Some of our leases include payments that are based on the Consumer Price Index ("CPI") or other similar indices. These variable lease payments are included in the calculation of the ROU asset and lease liability using the index as of the lease commencement date. Other variable lease payments, such as common area maintenance, property taxes, and usage-based amounts, are required by ASC 842 to be excluded from the ROU asset and lease liability and expensed as incurred. In addition to the present value of the future lease payments, the calculation of the ROU asset would also consider, to the extent applicable, any deferred rent upon adoption, lease prepayments or initial direct costs of obtaining the lease (e.g., such as commissions).

Notes to Consolidated Financial Statements, Continued

For all classes of leased assets, we elected the practical expedient to not separate lease components (i.e., the actual item being leased, such as the facility or piece of equipment) from non-lease components (i.e., the distinct elements of a contract not related to securing the use of the leased asset, such as common area maintenance and consumable supplies).

Certain of our facility lease agreements (which are classified as operating leases) contain rent holidays or rent escalation clauses. For rent holidays and rent escalation clauses during the lease term, we record rental expense on a straight-line basis over the term of the lease. As of July 31, 2022, none of our leases contained a residual value guarantee and covenants included in our lease agreements are customary for the types of facilities and equipment being leased.

The components of lease expense are as follows:

	Fiscal years ended July 31,		
	2022	2021	2020
Finance lease expense:			
Amortization of ROU assets	\$ 13,000	36,000	175,000
Interest on lease liabilities	1,000	3,000	4,000
Operating lease expense	11,658,000	12,152,000	10,728,000
Short-term lease expense	402,000	819,000	3,045,000
Variable lease expense	4,619,000	4,523,000	4,033,000
Sublease income	(67,000)	(67,000)	(22,000)
Total lease expense	\$ 16,626,000	17,466,000	17,963,000

Additional information related to leases is as follows:

	Fiscal years ended July 31,		
	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating leases - Operating cash outflows	\$ 11,864,000	10,868,000	11,437,000
Finance leases - Operating cash outflows	1,000	3,000	4,000
Finance leases - Financing cash outflows	15,000	38,000	322,000
ROU assets obtained in the exchange for lease liabilities (non-cash):			
Operating leases	\$ 15,233,000	24,987,000	3,561,000

Notes to Consolidated Financial Statements, Continued

The following table is a reconciliation of future cash flows relating to operating and financing lease liabilities presented on our Consolidated Balance Sheet as of July 31, 2022:

	Operating	Finance	Total
Fiscal 2023	\$ 9,953,000	\$ 6,000	\$ 9,959,000
Fiscal 2024	8,798,000	—	8,798,000
Fiscal 2025	8,155,000	—	8,155,000
Fiscal 2026	6,757,000	—	6,757,000
Fiscal 2027	4,715,000	—	4,715,000
Thereafter	24,218,000	—	24,218,000
Total future undiscounted cash flows	62,596,000	6,000	62,602,000
Less: Present value discount	9,488,000	1,000	9,489,000
Lease liabilities	\$ 53,108,000	\$ 5,000	\$ 53,113,000
Weighted-average remaining lease terms (in years)	8.77	0.57	
Weighted-average discount rate	3.43 %	6.59 %	

In fiscal 2022, we modified our existing lease for a facility in Seattle, Washington, increasing the lease term through October 2033. Accordingly, amounts related to the modified lease are reflected as an operating lease right-of-use asset or related operating lease liability in our Consolidated Balance Sheet as of July 31, 2022.

We lease our Melville, New York production facility from a partnership controlled by our former CEO. Lease payments made during the fiscal year ended July 31, 2022 and 2021 were \$675,000 and \$660,000, respectively. The current lease provides for our use of the premises as they exist through December 2031. The annual rent of the facility for calendar year 2023 is \$685,000 and is subject to customary adjustments. We have a right of first refusal in the event of a sale of the facility.

As of July 31, 2022, we do not have any material rental commitments that have not commenced.

(9) Income Taxes

(Loss) income before (benefit from) provision for income taxes consists of the following:

		Fiscal Years Ended July 31,		
		2022	2021	2020
U.S.	\$	(31,772,000)	(73,153,000)	7,226,000
Foreign		(5,303,000)	(1,827,000)	2,084,000
	\$	<u>(37,075,000)</u>	<u>(74,980,000)</u>	<u>9,310,000</u>

Notes to Consolidated Financial Statements, Continued

The (benefit from) provision for income taxes included in the accompanying Consolidated Statements of Operations consists of the following:

		Fiscal Years Ended July 31,		
		2022	2021	2020
Federal – current	\$	287,000	608,000	1,053,000
Federal – deferred		(4,888,000)	(877,000)	721,000
State and local – current		348,000	466,000	1,137,000
State and local – deferred		(442,000)	(598,000)	(1,312,000)
Foreign – current		1,197,000	688,000	298,000
Foreign – deferred		(525,000)	(1,787,000)	393,000
(Benefit from) provision for income taxes	\$	(4,023,000)	(1,500,000)	2,290,000

The (benefit from) provision for income taxes differed from the amounts computed by applying the U.S. Federal income tax rate as a result of the following:

		Fiscal Years Ended July 31,					
		2022		2021		2020	
		Amount	Rate	Amount	Rate	Amount	Rate
Computed "expected" tax expense (benefit)	\$	(7,786,000)	21.0 %	(15,746,000)	21.0 %	1,955,000	21.0 %
Increase (reduction) in income taxes resulting from:							
State and local income taxes, net of federal benefit		227,000	(0.6)	(1,371,000)	1.8	(278,000)	(3.0)
Stock-based compensation		1,049,000	(2.8)	(20,000)	—	308,000	3.3
Research and experimentation credits		(1,484,000)	4.0	(1,018,000)	1.4	(1,210,000)	(13.0)
Foreign-derived intangible income deduction		—	—	164,000	(0.2)	(162,000)	(1.7)
Revaluation of convertible preferred stock option liability		(211,000)	0.6	—	—	—	—
Nondeductible transaction costs		—	—	402,000	(0.5)	301,000	3.2
Nondeductible executive compensation		2,801,000	(7.6)	628,000	(0.8)	595,000	6.4
Fines and penalties		(1,000)	—	—	—	189,000	2.0
Audit settlements		18,000	—	6,000	—	1,000	—
Change in the beginning of the year valuation allowance for deferred tax assets		—	—	(805,000)	1.1	—	—
Change in valuation allowance		2,009,000	(5.4)	15,582,000	(20.8)	—	—
Remeasurement of deferred taxes		(396,000)	1.1	(224,000)	0.3	(135,000)	(1.5)
Foreign income taxes		(478,000)	1.3	676,000	(0.9)	453,000	4.9
Other, net		229,000	(0.7)	226,000	(0.4)	273,000	3.0
(Benefit from) provision for income taxes	\$	(4,023,000)	10.9 %	(1,500,000)	2.0 %	2,290,000	24.6 %

Notes to Consolidated Financial Statements, Continued

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and liabilities at July 31, 2022 and 2021 are presented below:

	2022	2021
Deferred tax assets:		
Inventory and warranty reserves	\$ 5,970,000	6,774,000
Compensation and commissions	4,376,000	4,338,000
Federal, state and foreign research and experimentation credits	19,476,000	19,324,000
Stock-based compensation	3,950,000	4,979,000
Foreign scientific research and experimental development expenditures	1,890,000	1,496,000
Federal, state and foreign net operating losses	14,481,000	5,413,000
Federal and state capital losses	15,582,000	15,582,000
Lease liabilities	12,595,000	10,980,000
Other	5,919,000	4,550,000
Less: valuation allowance	(31,227,000)	(28,384,000)
Total deferred tax assets	53,012,000	45,052,000
Deferred tax liabilities:		
Plant and equipment	(3,489,000)	(1,146,000)
Lease right-of-use assets	(11,801,000)	(10,085,000)
Intangibles	(52,681,000)	(54,635,000)
Total deferred tax liabilities	(67,971,000)	(65,866,000)
Net deferred tax liabilities	<u>\$ (14,959,000)</u>	<u>(20,814,000)</u>

At July 31, 2022, our net deferred tax liability of \$14,959,000 includes \$396,000 of foreign net deferred tax assets that were recorded as other assets, net in our Consolidated Balance Sheets. At July 31, 2021, our net deferred tax liability of \$20,814,000 includes \$416,000 of foreign net deferred tax assets that were recorded as other assets, net in our Consolidated Balance Sheets.

We provide for income taxes under the provisions of ASC 740 which requires an asset and liability based approach in accounting for income taxes. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of them will not be realized. If management determines that it is more likely than not that some or all of its deferred tax assets will not be realized, a valuation allowance will be recorded against such deferred tax assets.

At July 31, 2022, we have federal research and experimentation credits of \$10,571,000 that will begin to expire in 2030. The timing and manner in which we may utilize tax credits in future tax years will be limited by the amounts and timing of future taxable income and by the application of the ownership change rules under Section 383 of the Internal Revenue Code.

Notes to Consolidated Financial Statements, Continued

We have a federal net operating loss carryforward of \$3,822,000, with an indefinite carryforward period. We have state net operating loss carryforwards available of \$4,685,000, which expire through 2042, utilization of which will be limited by the amounts and timing of future taxable income and by the application of the ownership change rules under Section 382 of the Internal Revenue Code. We believe that it is more likely than not that the benefit from certain state net operating loss carryforwards will not be realized. In recognition of this risk, we have provided a valuation allowance of \$3,393,000 on the deferred tax assets relating to these state net operating loss carryforwards. We have state research and experimentation credit carryforwards of \$8,534,000, which expire through 2042. We believe that it is more likely than not that the benefit from certain state research and experimentation credits will not be realized. In recognition of this risk, we have provided a valuation allowance of \$7,828,000 on the deferred tax assets relating to these state credits. In addition, we have provided a valuation allowance of \$1,724,000 on certain other state deferred tax assets. We have federal and state capital loss carryforwards of \$15,582,000, which begin to expire in 2026. We believe that it is more likely than not that the benefit from these capital losses will not be realized. In recognition of this risk, we have provided a valuation allowance of \$15,582,000 on the deferred tax assets relating to these capital losses.

At July 31, 2022, we had foreign deferred tax assets relating to net operating loss carryforwards of \$5,973,000, which will begin to expire in 2029. We believe that it is more likely than not that certain net operating loss carryforwards may not be realized. In recognition of this risk, we have provided a valuation allowance of \$2,700,000 on the deferred tax assets relating to these net operating loss carryforwards. We have foreign deferred tax assets relating to research and experimentation credits of \$371,000, which will begin to expire in 2025. Our foreign earnings and profits are insignificant and, as such, we have not recorded any deferred tax liability on unremitted foreign earnings.

We must generate \$228,700,000 of taxable income in the future to fully utilize our net deferred tax assets as of July 31, 2022. Management believes it is more likely than not that the results of future operations will generate sufficient taxable income to realize the net deferred tax assets.

At July 31, 2022 and 2021, total unrecognized tax benefits were \$10,008,000 and \$9,172,000, respectively, including interest of \$330,000 and \$163,000, respectively. At July 31, 2022 and 2021, \$3,007,000 and \$2,717,000, respectively, of our unrecognized tax benefits were recorded as non-current income taxes payable on our Consolidated Balance Sheets. The remaining unrecognized tax benefits of \$7,001,000 and \$6,455,000 at July 31, 2022 and 2021, respectively, were presented as an offset to the associated non-current deferred tax assets on our Consolidated Balance Sheets. Of the total unrecognized tax benefits, \$9,034,000 and \$8,408,000 at July 31, 2022 and 2021, respectively, net of the reversal of the federal benefit recognized as a deferred tax asset relating to state reserves, would favorably impact our effective tax rate, if recognized. Unrecognized tax benefits result from income tax positions taken or expected to be taken on our income tax returns for which a tax benefit has not been recorded in our consolidated financial statements. We believe it is reasonably possible that the gross unrecognized tax benefits could decrease by as much as \$1,400,000 in the next 12 months due to the expiration of a statute of limitations related to federal, state and foreign tax positions.

Our policy is to recognize potential interest and penalties relating to uncertain tax positions in income tax expense. The following table summarizes the activity related to our unrecognized tax benefits for fiscal years 2022, 2021 and 2020 (excluding interest):

	2022	2021	2020
Balance at beginning of period	\$ 9,009,000	8,270,000	7,203,000
Increase related to current period	598,000	528,000	684,000
Increase related to prior periods	153,000	338,000	464,000
Expiration of statute of limitations	(83,000)	(48,000)	(73,000)
Decrease related to prior periods	(2,000)	(79,000)	(8,000)
Balance at end of period	\$ 9,675,000	9,009,000	8,270,000

Notes to Consolidated Financial Statements, Continued

Our U.S. federal income tax returns for fiscal 2019 through 2021 are subject to potential future Internal Revenue Service ("IRS") audit. None of our state income tax returns prior to fiscal 2018 are subject to audit. Future tax assessments or settlements could have a material adverse effect on our consolidated results of operations and financial condition.

(10) Stock-Based Compensation*Overview*

We issue stock-based awards to certain of our employees and our Board of Directors pursuant to our 2000 Stock Incentive Plan, as amended and/or restated from time to time (the "Plan") and our 2001 Employee Stock Purchase Plan, as amended and/or restated from time to time (the "ESPP"), and recognize related stock-based compensation in our consolidated financial statements. The Plan provides for the granting to employees and consultants of Comtech (including prospective employees and consultants): (i) incentive and non-qualified stock options, (ii) restricted stock units ("RSUs"), (iii) RSUs with performance measures (which we refer to as "performance shares"), (iv) restricted stock, (v) stock units (reserved for issuance to non-employee directors) and share units (reserved for issuance to employees) (collectively, "share units") and (vi) stock appreciation rights ("SARs"), among other types of awards. Our non-employee directors are eligible to receive non-discretionary grants of stock-based awards, subject to certain limitations.

As of July 31, 2022, the aggregate number of shares of common stock which may be issued, pursuant to the Plan, may not exceed 10,962,500. Stock options granted may not have a term exceeding ten years or, in the case of an incentive stock award granted to a stockholder who owns stock representing more than 10.0% of the voting power, no more than five years. We expect to settle all outstanding awards under the Plan and employee purchases under the ESPP with the issuance of new shares of our common stock.

As of July 31, 2022, we had granted stock-based awards pursuant to the Plan representing the right to purchase and/or acquire an aggregate of 9,446,088 shares (net of 5,419,028 expired and canceled awards), of which an aggregate of 7,851,858 have been exercised or settled.

As of July 31, 2022, the following stock-based awards, by award type, were outstanding:

	July 31, 2022
Stock options	483,480
Performance shares	333,987
RSUs, restricted stock and share units	776,763
Total	1,594,230

Our ESPP provides for the issuance of up to 1,050,000 shares of our common stock. Our ESPP is intended to provide our eligible employees the opportunity to acquire our common stock at 85% of fair market value at the date of issuance. Through July 31, 2022, we have cumulatively issued 943,909 shares of our common stock to participating employees in connection with our ESPP.

Notes to Consolidated Financial Statements, Continued

Stock-based compensation for awards issued is reflected in the following line items in our Consolidated Statements of Operations:

	Fiscal Years Ended July 31,		
	2022	2021	2020
Cost of sales	\$ 692,000	929,000	823,000
Selling, general and administrative expenses	6,312,000	8,091,000	7,527,000
Research and development expenses	763,000	963,000	925,000
Stock-based compensation expense	7,767,000	9,983,000	9,275,000
CEO transition costs related to equity-classified stock-based awards	7,388,000	—	—
Total stock-based compensation expense before income tax benefit	15,155,000	9,983,000	9,275,000
Estimated income tax benefit	(2,260,000)	(2,164,000)	(2,042,000)
Net stock-based compensation expense	\$ 12,895,000	7,819,000	7,233,000

Stock-based compensation for equity-classified awards is measured at the date of grant, based on an estimate of the fair value of the award and is generally expensed over the vesting period of the award. At July 31, 2022, unrecognized stock-based compensation of \$8,538,000, net of estimated forfeitures of \$790,000, is expected to be recognized over a weighted average period of 3.0 years. Total stock-based compensation capitalized and included in ending inventory at both July 31, 2022 and 2021 was \$48,000. There are no liability-classified stock-based awards outstanding as of July 31, 2022 or 2021.

Selling, general and administrative expenses included in the table above, for fiscal 2022, includes \$827,000 of amortization of stock-based compensation related to three, long-standing members of our Board of Directors who retired in December 2021.

Stock-based compensation expense, by award type, is summarized as follows:

	Fiscal Years Ended July 31,		
	2022	2021	2020
Stock options	\$ 519,000	370,000	442,000
Performance shares	1,136,000	1,345,000	1,491,000
RSUs, restricted stock and share units	5,912,000	8,060,000	7,120,000
ESPP	200,000	208,000	222,000
Stock based compensation expense	7,767,000	9,983,000	9,275,000
CEO transition costs related to equity-classified stock-based awards	7,388,000	—	—
Total stock-based compensation expense before income tax benefit	15,155,000	9,983,000	9,275,000
Estimated income tax benefit	(2,260,000)	(2,164,000)	(2,042,000)
Net stock-based compensation expense	\$ 12,895,000	7,819,000	7,233,000

ESPP stock-based compensation expense primarily relates to the 15% discount offered to participants in the ESPP.

The estimated income tax benefit as shown in the above table was computed using income tax rates expected to apply when the awards are settled. Such deferred tax asset was recorded net as part of our non-current deferred tax liability on our Consolidated Balance Sheet as of July 31, 2022 and 2021. The actual income tax benefit recognized for tax reporting is based on the fair market value of our common stock at the time of settlement and can significantly differ from the estimated income tax benefit recorded for financial reporting.

Notes to Consolidated Financial Statements, Continued

Stock Options

The following table summarizes the Plan's activity:

	Awards (in Shares)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at July 31, 2019	1,555,555	\$ 28.72		
Granted	327,100	17.88		
Expired/canceled	(174,840)	29.06		
Exercised	(285,790)	28.82		
Outstanding at July 31, 2020	1,422,025	26.17		
Expired/canceled	(348,590)	27.44		
Outstanding at July 31, 2021	1,073,435	25.76		
Expired/canceled	(588,735)	26.86		
Exercised	(1,220)	17.88		
Outstanding at July 31, 2022	483,480	\$ 24.43	4.39	\$ —
Exercisable at July 31, 2022	395,460	\$ 25.88	3.63	\$ —
Vested and expected to vest at July 31, 2022	476,692	\$ 24.52	4.34	\$ —

Stock options outstanding as of July 31, 2022 have exercise prices ranging from \$17.88 - \$33.94, representing the fair market value of our common stock on the date of grant, a contractual term of ten years and a vesting period of five years. The total intrinsic value relating to stock options exercised during the fiscal years ended July 31, 2022 and 2020 was \$7,000 and \$1,869,000, respectively. There were no stock options exercised during the fiscal year ended July 31, 2021.

During fiscal 2022 and 2020, at the election of certain holders of vested stock options, 1,220 and 269,090, respectively, of stock options were net settled upon exercise. As a result, 220 and 27,994 shares of our common stock were issued during the fiscal years ended July 31, 2022 and 2020, respectively, net of shares retained to satisfy the exercise price and minimum statutory tax withholding requirements.

There were no stock options granted during fiscal years ended July 31, 2022 or 2021. The estimated per-share weighted average grant-date fair value of stock options granted during fiscal 2020 was \$5.52, which was determined using the Black-Scholes option pricing model, and included weighted average assumptions as follows: (i) expected dividend yield of 2.24%, (ii) expected volatility of 40.03%, (iii) risk-free interest rate of 0.54%, and (iv) expected life of 6.5 years.

Expected dividend yield is the expected annual dividend as a percentage of the fair market value of our common stock on the date of grant, based on our Board's annual dividend target at the time of grant. We estimate expected volatility by considering the historical volatility of our stock and the implied volatility of publicly-traded call options on our stock. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for an instrument which closely approximates the expected term. The expected term is the number of years we estimate that awards will be outstanding prior to exercise and is determined by employee groups with sufficiently distinct behavior patterns. Assumptions used in computing the fair value of stock-based awards reflect our best estimates, but involve uncertainties relating to market and other conditions, many of which are outside of our control. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by recipients of stock-based awards.

Notes to Consolidated Financial Statements, Continued

Performance Shares, RSUs, Restricted Stock and Share Unit Awards

The following table summarizes the Plan's activity relating to performance shares, RSUs, restricted stock and share units:

	Awards (in Shares)	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value
Outstanding at July 31, 2019	954,676	\$ 22.40	
Granted	560,361	19.93	
Settled	(431,581)	22.02	
Canceled/Forfeited	(83,882)	22.84	
Outstanding at July 31, 2020	999,574	21.15	
Granted	644,272	19.06	
Settled	(455,564)	17.09	
Canceled/Forfeited	(119,912)	18.42	
Outstanding at July 31, 2021	1,068,370	21.93	
Granted	797,771	18.77	
Settled	(641,747)	22.83	
Canceled/Forfeited	(113,644)	22.78	
Outstanding at July 31, 2022	1,110,750	\$ 19.05	\$ 12,907,000
Vested at July 31, 2022	505,187	\$ 15.36	\$ 5,870,000
Vested and expected to vest at July 31, 2022	1,077,958	\$ 18.93	\$ 12,526,000

The total intrinsic value relating to fully-vested awards settled during the fiscal years ended July 31, 2022, 2021 and 2020 was \$12,560,000, \$9,878,000 and \$9,635,000, respectively.

The performance shares granted to employees principally vest over a three-year performance period, if pre-established performance goals are attained, or as specified pursuant to the Plan and related agreements. As of July 31, 2022, the number of outstanding performance shares included in the above table, and the related compensation expense prior to consideration of estimated pre-vesting forfeitures, assume achievement of the pre-established goals at a target level.

RSUs and restricted stock granted to non-employee directors prior to August 12, 2022 have a vesting period of five years and are convertible into shares of our common stock generally at the time of termination, on a one-for-one basis for no cash consideration, or earlier under certain circumstances. RSUs and restricted stock granted to non-employee directors after August 12, 2022 have a vesting period of one year. Also, restricted stock granted to our former non-executive Chairman of the Board of Directors, pursuant to his Senior Technology Advisor consulting agreement, vests 1/12 on the date of grant and in eleven equal monthly installments thereafter.

RSUs granted to employees prior to August 12, 2022 have a vesting period of five years and are convertible into shares of our common stock generally at the time of vesting, on a one-for-one basis for no cash consideration. RSUs granted to employees after August 12, 2022 have a vesting period of three years.

Share units granted prior to July 31, 2017 were vested when issued and are convertible into shares of our common stock, generally at the time of termination, on a one-for-one basis for no cash consideration, or earlier under certain circumstances. Share units granted on or after July 31, 2017 were granted to certain employees in lieu of non-equity incentive compensation and are convertible into shares of our common stock on the one-year anniversary of the respective grant date.

Notes to Consolidated Financial Statements, Continued

On July 28, 2022, 286,000 fully vested share units were granted to certain employees in lieu of fiscal 2022 non-equity incentive compensation. Also, on July 31, 2022, 221,052 fully vested share units (previously granted in lieu of fiscal 2021 non-equity incentive compensation) were settled by delivery of 131,782 shares of our common stock after reduction of share units retained to satisfy employees' statutory tax withholding requirements. Cumulatively, through July 31, 2022, 1,184,851 share units granted have been settled.

The fair value of performance shares, RSUs, restricted stock and share units is determined using the closing market price of our common stock on the date of grant, less the present value of any estimated future dividend equivalents such awards are not entitled to receive and an applicable estimated discount for any post-vesting transfer restrictions. RSUs, performance shares and restricted stock granted since fiscal 2013 are entitled to dividend equivalents unless forfeited before vesting occurs. Share units granted since fiscal 2014 are entitled to dividend equivalents while the underlying shares are unissued.

Dividend equivalents are subject to forfeiture, similar to the terms of the underlying stock-based awards, and are payable in cash generally at the time of settlement of the underlying award. During fiscal 2022, 2021 and 2020, we accrued \$389,000, \$380,000 and \$294,000, respectively, of dividend equivalents (net of forfeitures) and paid out \$531,000, \$279,000 and \$288,000, respectively. Accrued dividend equivalents were recorded as a reduction to retained earnings. As of July 31, 2022 and 2021, accrued dividend equivalents were \$742,000 and \$884,000, respectively.

With respect to the actual settlement of stock-based awards for income tax reporting, during the fiscal year ended July 31, 2022, we recorded an income tax expense of \$924,000, during the fiscal year ended July 31, 2021, we recorded an income tax benefit of \$142,000 and during the fiscal year ended July 31, 2020, we recorded an income tax expense of \$224,000.

Subsequent Events

In the first quarter of fiscal 2023, our Board of Directors authorized the issuance of stock-based awards with a total unrecognized compensation expense, net of estimated forfeitures, of approximately \$7,500,000.

(11) Segment Information

Reportable operating segments are determined based on Comtech's management approach. The management approach, as defined by FASB ASC 280 "*Segment Reporting*" is based on the way that the CODM organizes the segments within an enterprise for making decisions about resources to be allocated and assessing their performance. Our CODM, for purposes of FASB ASC 280, is our Chief Executive Officer.

In the fourth quarter of fiscal 2022, we revised our business segments to better align them with end-markets for our products and services and our CODM began managing our business in two new reportable segments: "Satellite and Space Communications" and "Terrestrial and Wireless Networks." As a result, the segment information for the prior fiscal years has been recast to conform to the current year presentation.

Satellite and Space Communications is organized into four product areas: Satellite Modem and Amplifier Technologies, Troposcatter and SATCOM Solutions, Space Components and Antennas, and High-Power Amplifiers and Switches. This segment offers customers: Satellite ground station technologies, services and system integration that facilitate the transmission of voice, video and data over GEO, MEO and LEO satellite constellations, including solid-state and traveling wave tube power amplifiers, modems, VSAT platforms and frequency converters; Satellite communications and tracking antenna systems, including high precision full motion fixed and mobile X/Y tracking antennas, RF feeds, reflectors and radomes; Over-the-horizon microwave equipment that can transmit digitized voice, video, and data over distances up to 200 miles using the troposphere and diffraction, including the Comtech COMET™; Solid-state, RF microwave high-power amplifiers and control components designed for radar, electronic warfare, data link, medical and aviation applications; and Procurement and supply chain management of high reliability EEE parts for satellite, launch vehicle and manned space applications.

Notes to Consolidated Financial Statements, Continued

Terrestrial and Wireless Networks is organized into four product areas: Next Generation 911 & Call Delivery, Solacom Call Handling Solutions, Trusted Location and Messaging Solutions, and Cyber Security Training & Services. This segment offers customers: SMS Text to 911 services, providing alternate paths for individuals who need to request assistance (via text messaging) a method to reach Public Safety Answering Points; Next Generation 911 solutions, providing emergency call routing, location validation, policy-based routing rules, logging and security functionality; Emergency Services IP Network transport infrastructure for emergency services communications and support of Next Generation 911 services; Call handling applications for Public Safety Answering Points; Wireless emergency alerts solutions for network operators; Software and equipment for location-based and text messaging services for various applications, including for public safety, commercial and government services, and Cybersecurity training, skills labs, and competency assessments for both technical and non-technical applications.

Our CODM primarily uses a metric that we refer to as Adjusted EBITDA to measure an operating segment's performance and to make decisions about resources to be allocated. Our Adjusted EBITDA metric for the Satellite and Space Communications and Terrestrial and Wireless Networks segments do not consider any allocation of indirect expense, or any of the following: income taxes, interest (income) and other, change in fair value of the convertible preferred stock purchase option liability, write-off of deferred financing costs, interest expense, amortization of stock-based compensation, amortization of intangibles, depreciation expense, amortization of cost to fulfill assets, estimated contract settlement costs, settlement of intellectual property litigation, acquisition plan expenses, restructuring costs, COVID-19 related costs, strategic emerging technology costs (for next-generation satellite technology), facility exit costs, CEO transition costs, proxy solicitation costs, strategic alternatives expenses and other. These items, while periodically affecting our results, may vary significantly from period to period and may have a disproportionate effect in a given period, thereby affecting the comparability of results. Any amounts shown in the Adjusted EBITDA calculation for our Satellite and Space Communications and Terrestrial and Wireless Networks segments are directly attributable to those segments. Our Adjusted EBITDA is also used by our management in assessing the Company's operating results. Although closely aligned, the Company's definition of Adjusted EBITDA is different than the Consolidated EBITDA (as such term is defined in our Credit Facility) utilized for financial covenant calculations and also may differ from the definition of EBITDA or Adjusted EBITDA used by other companies and, therefore, may not be comparable to similarly titled measures used by other companies.

COMTECH TELECOMMUNICATIONS CORP. AND SUBSIDIARIES

Notes to Consolidated Financial Statements, Continued

Operating segment information, along with a reconciliation of segment net income (loss) and consolidated net income to Adjusted EBITDA is presented in the tables

	Fiscal Year Ended July 31, 2022			
	Satellite and Space Communications	Terrestrial and Wireless Networks	Unallocated	Total
Net sales	\$ 279,678,000	206,561,000	—	\$ 486,239,000
Operating (loss) income	\$ (5,671,000)	18,925,000	(47,006,000)	\$ (33,752,000)
Net (loss) income	\$ (3,852,000)	18,796,000	(47,996,000)	\$ (33,052,000)
(Benefit from) provision for income taxes	(1,120,000)	19,000	(2,922,000)	(4,023,000)
Interest (income) and other	(797,000)	110,000	(16,000)	(703,000)
Change in fair value of convertible preferred stock purchase option liability	—	—	(1,005,000)	(1,005,000)
Interest expense	98,000	—	4,933,000	5,031,000
Amortization of stock-based compensation	—	—	7,767,000	7,767,000
Amortization of intangibles	7,312,000	14,084,000	—	21,396,000
Depreciation	4,049,000	6,069,000	196,000	10,314,000
Amortization of cost to fulfill assets	469,000	—	—	469,000
CEO transition costs	—	—	13,554,000	13,554,000
Proxy solicitation costs	—	—	11,248,000	11,248,000
Restructuring costs	5,666,000	—	299,000	5,965,000
COVID-19 related costs	1,105,000	—	—	1,105,000
Strategic emerging technology costs	1,197,000	—	—	1,197,000
Adjusted EBITDA	\$ 14,127,000	39,078,000	(13,942,000)	\$ 39,263,000
Purchases of property, plant and equipment	\$ 8,915,000	10,704,000	—	\$ 19,619,000
below: Total assets at July 31, 2022	\$ 487,235,000	461,443,000	25,619,000	\$ 974,297,000

COMTECH TELECOMMUNICATIONS CORP. AND SUBSIDIARIES

Notes to Consolidated Financial Statements, Continued

	Fiscal Year Ended July 31, 2021			
	Satellite and Space Communications	Terrestrial and Wireless Networks	Unallocated	Total
Net sales	\$ 374,850,000	206,845,000	—	\$ 581,695,000
Operating income (loss)	\$ 24,281,000	25,185,000	(117,764,000)	\$ (68,298,000)
Net income (loss)	\$ 24,357,000	24,396,000	(122,233,000)	\$ (73,480,000)
(Benefit from) provision for income taxes	(377,000)	795,000	(1,918,000)	(1,500,000)
Interest (income) and other	235,000	(6,000)	(368,000)	(139,000)
Interest expense	66,000	—	6,755,000	6,821,000
Amortization of stock-based compensation	—	—	9,983,000	9,983,000
Amortization of intangibles	5,695,000	15,325,000	—	21,020,000
Depreciation	3,721,000	5,316,000	342,000	9,379,000
Acquisition plan expenses	—	(1,052,000)	101,344,000	100,292,000
Restructuring costs	2,782,000	—	—	2,782,000
COVID-19 related costs	1,046,000	—	—	1,046,000
Strategic emerging technology costs	315,000	—	—	315,000
Adjusted EBITDA	\$ 37,840,000	44,774,000	(6,095,000)	\$ 76,519,000
Purchases of property, plant and equipment	\$ 8,456,000	7,498,000	83,000	\$ 16,037,000
Long-lived assets acquired in connection with acquisitions	\$ 47,958,000	—	—	\$ 47,958,000
Total assets at July 31, 2021	\$ 507,981,000	462,877,000	22,253,000	\$ 993,111,000

	Fiscal Year Ended July 31, 2020			
	Satellite and Space Communications	Terrestrial and Wireless Networks	Unallocated	Total
Net sales	\$ 411,073,000	205,642,000	—	\$ 616,715,000
Operating income (loss)	\$ 25,492,000	29,316,000	(39,634,000)	\$ 15,174,000
Net income (loss)	\$ 25,714,000	28,932,000	(47,626,000)	\$ 7,020,000
(Benefit from) provision for income taxes	(29,000)	339,000	1,980,000	2,290,000
Interest (income) and other	(218,000)	18,000	10,000	(190,000)
Interest expense	25,000	27,000	6,002,000	6,054,000
Amortization of stock-based compensation	—	—	9,275,000	9,275,000
Amortization of intangibles	5,133,000	16,462,000	—	21,595,000
Depreciation	3,854,000	5,939,000	768,000	10,561,000
Estimated contract settlement costs	476,000	(32,000)	—	444,000
Acquisition plan expenses	751,000	—	20,003,000	20,754,000
Adjusted EBITDA	\$ 35,706,000	51,685,000	(9,588,000)	\$ 77,803,000
Purchases of property, plant and equipment	\$ 3,801,000	3,097,000	327,000	\$ 7,225,000
Long-lived assets acquired in connection with acquisitions	\$ 32,391,000	6,060,000	—	\$ 38,451,000
Total assets at July 31, 2020	\$ 412,704,000	467,312,000	49,631,000	\$ 929,647,000

Notes to Consolidated Financial Statements, Continued

Unallocated expenses result from corporate expenses such as executive compensation, accounting, legal and other regulatory compliance related costs and also includes all of our amortization of stock-based compensation. During fiscal 2021 and 2020, we recorded \$100,292,000 and \$20,754,000 of acquisition plan expenses, respectively, most of which were recorded primarily in our unallocated expenses. See *Note (2) - "Acquisitions"* for further information. During fiscal 2022, we incurred \$11,248,000 of proxy solicitation costs (including legal and advisory fees and costs associated with a related lawsuit) as a result of a now settled proxy contest initiated by a shareholder during the first quarter of fiscal 2022. Also, during fiscal 2022, we expensed \$13,554,000 of transition costs related to our former CEO, Fred Komberg.

During fiscal 2022 and 2021, our Satellite and Space Communications segment recorded \$5,666,000 and \$2,782,000, respectively, of restructuring costs incurred to streamline our operations, including costs related to the ongoing relocation of certain of our satellite ground station production facilities to a new 146,000 square foot facility in Chandler, Arizona, as well as to consolidate certain administrative and operating functions in our troposcatter and SATCOM solutions product line. In addition, during fiscal 2022 and 2021, this segment also recorded \$1,105,000 and \$1,046,000 of incremental operating costs related to our antenna facility located in the United Kingdom due to the impact of the COVID-19 pandemic. There were no such charges recorded in fiscal 2020.

Interest expense in the tables above primarily relates to our Credit Facility, and includes the amortization of deferred financing costs. See *Note (7) - "Credit Facility"* for further discussion. In addition, interest expense for fiscal 2021 includes \$1,178,000 of incremental interest expense related to a now terminated financing commitment letter, as discussed in more detail in *Note (2) - "Acquisitions."*

Intersegment sales in fiscal 2022, 2021 and 2020 between the Satellite and Space Communications segment and the Terrestrial and Wireless Networks segment were nominal. All intersegment sales are eliminated in consolidation and are excluded from the tables above.

Unallocated assets at July 31, 2022 consist principally of cash and cash equivalents, income taxes receivable, corporate property, plant and equipment and deferred financing costs. The large majority of our long-lived assets are located in the U.S.

(12) Commitments and Contingencies(a) Legal Proceedings and Other MattersSettled Litigation Related to the Convertible Preferred Stock Issuance

In October 2021, Anthony Franchi (the "Plaintiff") brought a putative class action in the Court of Chancery of the State of Delaware against the Company's current directors, the Company, White Hat Capital Partners LP ("White Hat") and Magnetar Capital LLC ("Magnetar"), which was fully resolved by the parties and the case dismissed by court order on May 3, 2022. The ultimate resolution of this matters did not result in a material adverse effect on our consolidated results of operations and financial condition.

Other Matters

In the ordinary course of business, we include indemnification provisions in certain of our customer contracts to indemnify, hold harmless and reimburse such customers for certain losses, including but not limited to losses related to third-party claims of intellectual property infringement arising from the customer's use of our products or services. We may also, from time to time, receive indemnification requests from customers related to third-party claims that 911 calls were improperly routed during an emergency. We evaluate such claims as and when they arise. We do not always agree with customers that they are entitled to indemnification and in such cases reject their claims. Despite maintaining that we have properly carried out our duties, we may seek coverage under our various insurance policies; however, we cannot be sure that we will be able to maintain or obtain insurance coverage at acceptable costs or in sufficient amounts or that our insurer will not disclaim coverage as to such claims. Accordingly, pending or future claims asserted against us by a party that we agree to indemnify could result in legal costs and damages that could have a material adverse effect on our consolidated results of operations and financial condition.

Notes to Consolidated Financial Statements, Continued

There are certain other pending and threatened legal actions which arise in the normal course of business. Although the ultimate outcome of litigation is difficult to accurately predict, we believe that the outcome of these other pending and threatened actions will not have a material adverse effect on our consolidated financial condition or results of operations.

(b) Employment Change of Control and Indemnification Agreements

As of July 31, 2022, we had an employment agreement with Michael Porcelain, our President and CEO. The employment agreement generally provided for an annual salary and bonus award. On August 10, 2022, we announced the mutually agreed separation between the Company and Mr. Porcelain as President and CEO and member of the Board of Directors. The Company entered into a separation agreement with Mr. Porcelain.

On August 9, 2022, subsequent to year end, our Board of Directors appointed our Chairman of the Board, Ken Peterman, as President and CEO, and the Company entered an employment agreement with Mr. Peterman generally providing for an annual salary, bonus award, sign-on bonus, equity incentive awards and, under certain termination of employment, severance payment.

Transition costs related to our former President and CEO, Mr. Porcelain, pursuant to his separation agreement with the Company, were approximately \$7.4 million, of which \$3.8 million related to the acceleration of unamortized stock based compensation, with the remaining \$3.6 million related to his severance payments and benefits upon termination of employment. The cash portion of the transition costs of \$3.6 million is expected to be paid to Mr. Porcelain in October 2022. Also, in connection with Mr. Peterman entering into an employment agreement with the Company, effective as of August 9, 2022, we incurred a \$1.0 million expense related to a cash sign-on bonus. CEO transition costs related to Mr. Porcelain and Mr. Peterman will be expensed in our Unallocated segment during the first quarter of fiscal 2023.

We have also entered into change of control agreements with certain of our executive officers and certain key employees. All of these agreements may require payments by us, in certain circumstances, including, but not limited to, a change in control of our Company or termination of the employee.

(13) Goodwill

The following table represents goodwill by reportable operating segment, including the changes in the net carrying value of goodwill as of July 31, 2022:

	Satellite and Space Communications	Terrestrial and Wireless Networks	Total
Balance as of July 31, 2021	\$ 173,608,000	174,090,000	\$ 347,698,000
UHP acquisition	(6,000)	—	(6,000)
Balance as of July 31, 2022	\$ 173,602,000	174,090,000	\$ 347,692,000

In accordance with FASB ASC 350, we perform a goodwill impairment analysis at least annually (in the first quarter of each fiscal year), unless indicators of impairment exist in interim periods. If we fail the quantitative assessment of goodwill impairment ("quantitative assessment"), we would be required to recognize an impairment loss equal to the amount that a reporting unit's carrying value exceeded its fair value; however, any loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

As discussed further in *Note 11 - "Segment Information"*, as a result of our segment restructuring in the fourth quarter of fiscal 2022 from the Commercial Solutions and Government Solutions segments to the Satellite and Space Communications and Terrestrial and Wireless Networks segments, we performed an interim quantitative assessment as of July 29, 2022 and estimated the fair value of each of our reporting units, both before and after the change, using a combination of the income and market approaches.

Notes to Consolidated Financial Statements, Continued

We performed our quantitative assessment using market participant assumptions to determine if the fair value of each of our reporting units with goodwill exceeded its carrying value. In making this assessment, we considered, among other things, expectations of projected net sales and cash flows, assumptions impacting the weighted average cost of capital, trends in trading multiples of comparable companies, changes in our stock price and changes in the carrying values of our reporting units with goodwill. We also considered overall business conditions.

The income approach, also known as the discounted cash flow ("DCF") method, utilizes the present value of cash flows to estimate fair value. The future cash flows for our reporting units were projected based on our estimates, at that time, of future revenues, operating income and other factors (such as working capital and capital expenditures). For purposes of conducting our impairment analysis, we assumed revenue growth rates and cash flow projections that are below our actual long-term expectations. The discount rates used in our DCF method were based on a weighted-average cost of capital ("WACC") determined from relevant market comparisons, adjusted upward for specific reporting unit risks (primarily the uncertainty of achieving projected operating cash flows). A terminal value growth rate was applied to the final year of the projected period, which reflects our estimate of stable, perpetual growth. We then calculated a present value of the respective cash flows for each reporting unit to arrive at an estimate of fair value under the income approach. Under the market approach, we estimated a fair value based on comparable companies' market multiples of revenues and earnings before interest, taxes, depreciation and amortization and factored in a control premium. Finally, we compared our estimates of fair values to our total public market capitalization and assessed implied control premiums based on our common stock price of \$11.62 as of the date of testing.

Ultimately, based on our quantitative evaluations, we determined that our Satellite and Space Communications and Terrestrial and Wireless Networks reporting units had estimated fair values in excess of their carrying values of at least 18.4% and 11.6%, respectively, and concluded that our goodwill was not impaired and that neither of our two reporting units was at risk of failing the quantitative assessment. Also, given its proximity to our next regularly scheduled annual goodwill impairment testing date, we utilized our July 29, 2022 interim quantitative assessment to conclude that our goodwill was not impaired and that neither of our two reporting units was at risk of failing the quantitative assessment as of August 1, 2022. Additionally, the carrying value of goodwill of \$ 347,692,000 was reallocated to our new reporting units based on their respective estimated relative fair value.

It is possible that, during fiscal 2023 or beyond, business conditions (both in the U.S. and internationally) could deteriorate from the current state, our current or prospective customers could materially postpone, reduce or even forgo purchases of our products and services to a greater extent than we currently anticipate, or our common stock price could fluctuate. Such fluctuation could be caused by uncertainty about the severity and length of the COVID-19 pandemic, and its impact on global activity.

A significant decline in our customers' spending that is greater than we anticipate or a shift in funding priorities may also have a negative effect on future orders, sales, income and cash flows and we might be required to perform a quantitative assessment during fiscal 2023 or beyond. If assumed net sales and cash flow projections are not achieved in future periods or our common stock price significantly declines from current levels, our Satellite and Space Communications and Terrestrial and Wireless Networks reporting units could be at risk of failing the quantitative assessment and goodwill assigned to the respective reporting units could be impaired.

In any event, we are required to perform the next annual goodwill impairment analysis on August 1, 2023 (the start of our fiscal 2024). If our assumptions and related estimates change in the future, or if we change our reporting unit structure or other events and circumstances change (e.g., a sustained decrease in the price of our common stock (considered on both absolute terms and relative to peers)), we may be required to record impairment charges when we perform these tests, or in other future periods. Any impairment charges that we may record in the future could be material to our results of operations and financial condition.

Notes to Consolidated Financial Statements, Continued

(14) Intangible Assets

Intangible assets with finite lives as of July 31, 2022 and 2021 are as follows:

July 31, 2022				
	Weighted Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	20.2	\$ 302,058,000	107,500,000	\$ 194,558,000
Technologies	14.8	114,949,000	75,798,000	39,151,000
Trademarks and other	16.7	32,926,000	19,332,000	13,594,000
Total		<u>\$ 449,933,000</u>	<u>202,630,000</u>	<u>\$ 247,303,000</u>

July 31, 2021				
	Weighted Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	20.2	\$ 302,058,000	93,215,000	\$ 208,843,000
Technologies	14.8	114,949,000	70,924,000	44,025,000
Trademarks and other	16.7	32,926,000	17,095,000	15,831,000
Total		<u>\$ 449,933,000</u>	<u>181,234,000</u>	<u>\$ 268,699,000</u>

The weighted average amortization period in the above table excludes fully amortized intangible assets.

Amortization expense for the fiscal years ended July 31, 2022, 2021 and 2020 was \$21,396,000, \$21,020,000 and \$21,595,000, respectively.

The estimated amortization expense consists of the following for the fiscal years ending July 31:

2023	\$ 21,556,000
2024	21,154,000
2025	21,039,000
2026	19,888,000
2027	18,534,000

We review net intangible assets with finite lives for impairment when an event occurs indicating the potential for impairment. Based on our last assessment, we believe that the carrying values of our net intangible assets were recoverable as of July 31, 2022. However, if business conditions deteriorate, we may be required to record impairment losses, and or increase the amortization of intangibles in the future. Any impairment charges that we may record in the future could be material to our results of operations and financial condition.

(15) Convertible Preferred Stock

On October 18, 2021, we entered into a Subscription Agreement (the "Subscription Agreement") with certain affiliates and related funds of White Hat Capital Partners LP and Magnetar Capital LLC (collectively, the "Investors"), relating to the issuance and sale of up to 125,000 shares of a new series of the Company's Series A Convertible Preferred Stock, par value \$0.10 per share (the "Convertible Preferred Stock"), for an aggregate purchase price of up to \$125,000,000, or \$1,000 per share. On October 19, 2021 (the "Initial Closing Date"), pursuant to the terms of the Subscription Agreement, the Investors purchased an aggregate of 100,000 shares of Convertible Preferred Stock (the "Initial Issuance") for an aggregate purchase price of \$100,000,000. The Investors have a one-time option exercisable at any time on or prior to March 31, 2023 to purchase additional shares of Convertible Preferred Stock for an aggregate purchase price of \$25,000,000. This purchase option is commonly referred to as a "Green Shoe" and together with the Initial Issuance, is collectively referred to as the "Issuance."

Notes to Consolidated Financial Statements, Continued

The adjusted conversion price for the shares issued in the Initial Issuance is \$23.97, and the adjusted conversion price for the Green Shoe is \$31.21, subject to certain adjustments set forth in the Certificate of Designations filed with the Secretary of the State of Delaware.

The Convertible Preferred Stock ranks senior to the shares of our common stock, with respect to the payment of dividends and the distribution of assets upon a liquidation, dissolution or winding up of the Company. The Convertible Preferred Stock initially had a liquidation preference of \$1,000 per share with each share entitled to a cumulative dividend (the "Dividend") at the rate of 6.5% per annum, compounding quarterly, paid-in-kind or paid in cash, at our election. For any quarter in which we elect not to pay the Dividend in cash with respect to a share of Convertible Preferred Stock, such Dividend becomes part of the liquidation preference of such share. In addition, no dividend or other distribution on our common stock in excess of our \$0.10 per share per quarter will be declared or paid on the common stock unless, at the time of such declaration and payment, an equivalent dividend or distribution is declared and paid on the Convertible Preferred Stock (the "Participating Dividend"), provided that in the case of any such dividend in the form of cash, in lieu of a cash payment, such Participating Dividend will become part of the liquidation preference of the shares of the Convertible Preferred Stock. Such Participating Dividend results in the Convertible Preferred Stock meeting the definition of a "participating security" for purposes of our earnings per share calculations.

As of September 29, 2022, the Convertible Preferred Stock is convertible into shares of common stock at the option of the holders. At any time after October 19, 2024, we have the right to mandate the conversion of the Convertible Preferred Stock, subject to certain restrictions, based on the price of the common stock in the preceding thirty trading days.

Holders of the Convertible Preferred Stock are entitled to vote with the holders of the common stock on an as-converted basis, as well as are entitled to a separate class vote with respect to, among other things, amendments to our organizational documents that have an adverse effect on the Convertible Preferred Stock, authorizations or issuances of securities of the Company, the payment of dividends other than dividends on common stock in the ordinary course consistent with past practice on a quarterly basis in an amount not to exceed our current dividend rate of \$0.10 per share per quarter, related party transactions, repurchases or redemptions of securities of the Company (other than the repurchase of up to \$25,000,000 of shares of common stock), dispositions of businesses or assets, the incurrence of certain indebtedness and certain amendments or extensions of our existing Credit Facility.

Holders will have the right to require the Company to repurchase such holder's Convertible Preferred Stock on a date occurring either (a) on or after October 19, 2026 (the "Optional Repurchase Trigger Date") at a price equal to the liquidation preference or (b) in connection with a conversion of Convertible Preferred Stock, pursuant to which the number of shares of common stock issuable upon such conversion would exceed 19.99% of the issued and outstanding shares of common stock as of October 18, 2021 (such excess shares, "Excess Conversion Shares"), at any time after the date that is 91 days after the maturity date of the Company's existing Credit Facility, at a price per share equal to the number of Excess Conversion Shares multiplied by the Last Reported Sales Price (as defined) of common stock on the applicable conversion date. In addition, each holder will have the right to cause the Company to repurchase its shares of Convertible Preferred Stock in connection with a Change of Control, at a price equal to the liquidation preference.

We determined that our obligation to issue the Green Shoe at any time on or prior to March 31, 2023 meets the definition of a freestanding financial instrument that should be accounted for as a liability. As such, we established an initial convertible preferred stock purchase option liability of \$1,005,000 and reduced the proceeds from the Initial Issuance by such amount. The liability will be remeasured to its estimated fair value each reporting period until such instrument is exercised or expires. Changes in its estimated fair value are recognized as a non-cash charge or benefit and presented on the consolidated statement of operations. The estimated fair value of the convertible preferred stock purchase option liability was nominal as of July 31, 2022. During fiscal 2022, we recorded a benefit \$1,005,000 for the remeasurement of the convertible preferred stock purchase option liability.

Notes to Consolidated Financial Statements, Continued

In accordance with ASC 480, "*Distinguishing Liabilities from Equity*," specifically ASC 480-10-S99-3A(2), SEC *Staff Announcement: Classification and Measurement of Redeemable Securities*, we have classified the Convertible Preferred Stock outside of permanent equity as temporary equity since the redemption of such shares is not solely within our control and we could be required by the holder to redeem the shares for cash or other assets, at their option. Upon the Initial Issuance, we recorded the Convertible Preferred Stock, net of issuance costs of \$4,007,000 and net of the portion of such proceeds allocated to the convertible preferred stock purchase option liability described above, which resulted in an initial carrying value of the Convertible Preferred Stock less than its initial redemption value of \$100,000,000. We have elected to adjust the carrying value of the Convertible Preferred Stock to its current redemption value of \$105,204,000, which includes \$4,638,000 of dividends paid in kind and \$566,000 of accumulated and unpaid dividends. As such, an adjustment of \$10,216,000 to increase the carrying value of the Convertible Preferred Stock was recorded against retained earnings during fiscal 2022.

(16) Stockholders' Equity

Sale of Common Stock

On March 3, 2021, in connection with our acquisition of UHP, we filed a shelf registration statement with the SEC for the sale by the selling stockholder of UHP of up to 1,381,567 shares of our common stock. The shelf registration statement was declared effective by the SEC as of March 15, 2021. On July 13, 2022, we filed a shelf registration statement with the SEC for the sale of 606,302 additional shares of our common stock by the selling stockholder of UHP. The shelf registration statement was declared effective by the SEC as of July 25, 2022. To-date, we have issued all 1,987,869 shares pursuant to these shelf registration statements to satisfy payment and escrow arrangements under the terms of the stock purchase agreement. See *Note (2) - "Acquisitions - UHP Networks Inc."* for further information.

On July 13, 2022, we filed a \$200,000,000 shelf registration statement with the SEC for the sale of various types of securities, including debt. The shelf registration was declared effective by the SEC as of July 25, 2022. To-date, we have not issued any securities pursuant to our \$200,000,000 shelf registration statement.

Common Stock Repurchase Program

On September 29, 2020, our Board of Directors authorized a new \$100,000,000 stock repurchase program, which replaced our prior program. The new \$100,000,000 stock repurchase program has no time restrictions and repurchases may be made from time to time in open-market or privately negotiated transactions, or by other means in accordance with federal securities laws. There were no repurchases made during the fiscal years ended July 31, 2022 or 2021.

Dividends on Common Stock

Since September 2010, we have paid quarterly cash dividends pursuant to an annual targeted dividend amount that was established by our Board of Directors. On October 4, 2021, December 9, 2021, March 10, 2022 and June 9, 2022, our Board of Directors declared a dividend of \$0.10 per common share, which were paid on November 12, 2021, February 18, 2022, May 20, 2022 and August 19, 2022, respectively.

On September 29, 2022, our Board of Directors declared a cash dividend of \$0.10 per common share, payable on November 18, 2022 to stockholders of record at the close of business on October 19, 2022. Future common stock dividends remain subject to compliance with financial covenants under our Credit Facility, as well as Board approval and certain voting rights of holders of our Series A Convertible Preferred Stock.

Schedule II

COMTECH TELECOMMUNICATIONS CORP.
AND SUBSIDIARIES

Valuation and Qualifying Accounts and Reserves

Fiscal Years Ended July 31, 2022, 2021 and 2020

Column A	Column B	Column C Additions		Column D	Column E
Description	Balance at beginning of period	Charged to cost and expenses	Charged to other accounts - describe	Transfers (deductions) - describe	Balance at end of period
Allowance for doubtful accounts receivable:					
Year ended July 31,					
2022	\$ 1,648,000	838,000 (A)	—	(149,000) (B)	\$ 2,337,000
2021	1,769,000	(18,000) (A)	215,000 (C)	(318,000) (B)	1,648,000
2020	1,867,000	45,000 (A)	—	(143,000) (B)	1,769,000
Inventory reserves:					
Year ended July 31,					
2022	\$ 20,229,000	4,447,000 (D)	—	(1,555,000) (E)	\$ 23,121,000
2021	19,076,000	4,364,000 (D)	—	(3,211,000) (E)	20,229,000
2020	19,696,000	1,647,000 (D)	—	(2,267,000) (E)	19,076,000
Valuation allowance for deferred tax assets:					
Year ended July 31,					
2022	\$ 28,384,000	2,947,000 (F)	—	(104,000) (F)	\$ 31,227,000
2021	11,471,000	17,750,000 (F)	—	(837,000) (F)	28,384,000
2020	12,568,000	750,000 (F)	—	(1,847,000) (F)	11,471,000

(A) Provision for doubtful accounts.

(B) Write-off of uncollectible receivables.

(C) Increase due to our August 1, 2020 adoption of FASB ASU No. 2016-13, on a modified-retrospective basis, which requires companies to utilize an impairment model (current expected credit loss ("CECL")) for most financial assets measured at amortized cost and certain other financial instruments, which include, but are not limited to trade receivables and contract assets.

(D) Provision for excess and obsolete inventory.

(E) Write-off of inventory.

(F) Change in valuation allowance. See Note (9) - "Income Taxes" for further discussion.

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

Comtech Telecommunications Corp. ("we," "our," or the "Company") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): our common stock, par value \$0.10 per share ("common stock").

DESCRIPTION OF COMMON STOCK

The following description of our common stock is intended as a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Restated Certificate of Incorporation (which we refer to as our "charter"), our Third Amended and Restated By-Laws (the "Bylaws"), and to the applicable provisions of the Delaware General Corporation Law (the "DGCL"). Each of the charter and the Bylaws are included as an exhibit to the Annual Report on Form 10-K of which this Exhibit is a part. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to the charter and the Bylaws.

General

Our charter authorizes 100,000,000 shares of common stock, \$0.10 par value per share, and 2,000,000 shares of preferred stock, \$0.10 par value per share.

Common Stock

Common Stock Outstanding. As of July 12, 2022, we had 27,510,310 shares of our common stock issued and outstanding.

Voting Rights. Each holder of our common stock is entitled to one vote for each share of common stock on all matters submitted to a vote of stockholders.

Dividend Rights. Holders of our common stock are entitled to receive, as and when declared by our board of directors, dividends payable either in cash or in property, including securities of our Company, out of assets of our Company that are legally available therefor.

Rights upon Liquidation. Holders of our common stock are entitled to share pro rata, upon any liquidation, dissolution or winding up of our Company, in all remaining assets available for distribution to stockholders after payment of or provision for our liabilities and the liquidation preference of any of our outstanding preferred stock.

Preemptive Rights. Holders of our common stock have no preemptive rights to purchase, subscribe for or otherwise acquire any unissued or treasury shares or other securities.

Preferred Stock

As discussed in more detail below, we are authorized under our charter to issue up to 2,000,000 shares of preferred stock. We have currently designated two series of our preferred stock: (1) 200,000 shares of our preferred stock designated as Series A Junior Participating Cumulative Preferred Stock, none of which are outstanding, and (2) Series A Convertible Preferred Stock, 100,000 shares of which are currently outstanding.

Blank Check Preferred Stock. Under our charter, our board of directors has the authority, without stockholder approval, to designate one or more series of preferred stock, to issue shares of preferred stock in such series up to the maximum number of shares of the relevant series of preferred stock authorized, and to determine the preferences, rights, privileges, qualifications, restrictions and limitations of any such series, including the number of shares constituting any such series and the designation of such series, dividend rights, voting rights, the rights and terms of conversion, the rights and terms of redemption, the terms of any sinking fund, retirement fund or purchase fund to be provided with such series and liquidation preferences. Acting under this authority, our board of directors could designate and issue a series of preferred stock with preferences, rights, privileges, qualifications, restrictions or limitations, and adopt a stockholder rights plan, having the effect of discriminating against an existing or prospective holder of securities as a result of such stockholder beneficially owning or commencing a tender offer for a substantial amount of our common stock. One of the effects of authorized but unissued and unreserved shares of capital stock may be to render more difficult or discourage an attempt by a potential acquirer to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of the Company's management. The issuance of such shares of capital stock may have the effect of delaying, deferring or preventing a change in control of the Company without any further action by our stockholders. We have no present intention to adopt a stockholder rights plan, but could do so without stockholder approval at any future time.

Series A Junior Participating Cumulative Preferred Stock. As of the date of this prospectus, we have designated 200,000 shares of our preferred stock as Series A Junior Participating Cumulative Preferred Stock, par value \$0.10 per share, none of which are outstanding.

Series A Convertible Preferred Stock. As of the date of this prospectus, we have designated 125,000 shares of our preferred stock as Series A Convertible Preferred Stock, par value \$0.10 per share, and currently have 100,000 of such shares outstanding. The Investors (as defined below) have the right to purchase their pro rata portion of an aggregate of an additional 25,000 shares of Series A Convertible Preferred Stock.

Designation of Series A Convertible Preferred Stock.

The Series A Convertible Preferred Stock ranks senior to the shares of the Company's common stock, with respect to the payment of dividends and the distribution of assets upon a liquidation, dissolution or winding up of the Company. The Series A Convertible Preferred Stock has an initial liquidation preference of \$1,000 per share. Holders of the Series A Convertible Preferred Stock are entitled to a cumulative dividend (the "Dividend") at the rate of 6.5% per annum, compounding quarterly, paid-in-kind or paid in cash, at the Company's election. For any quarter in which the Company elects not to pay the Dividend in cash with respect to a share of Series A Convertible Preferred Stock, such Dividend will become part of the liquidation preference of such share, as set forth in the Certificate of Designations designating the Series A Convertible Preferred Stock. In addition, no dividend or other distribution on the common stock will be declared or paid on the common stock unless, at the time of such declaration and payment, an equivalent dividend or distribution is declared and paid on the Series A Convertible Preferred Stock (the "Participating Dividend"), provided that in the case of any such dividend in the form of cash, in lieu of a cash payment, such Participating Dividend will become part of the liquidation preference of the shares of Series A Convertible Preferred Stock, as set forth in the Certificate of Designations filed with the Secretary of State of the State of Delaware (as amended, the "Certificate of Designations"). However, the Participating Dividend will not apply to any dividends on Common Stock in the ordinary course consistent with past practice on a quarterly basis in an amount not to exceed the Company's current dividend rate of \$0.10 per share per quarter.

Conversion Rights and Mandatory Redemption.

The Series A Convertible Preferred Stock is convertible into shares of common stock at the option of the holders thereof at or following the earlier to occur of (a) the filing of the Company's Annual Report on Form 10-K for the fiscal year ending July 31, 2022 but no later than October 19, 2022, or (b) immediately prior to (and conditioned upon) the consummation of a Change of Control (as defined in the Certificate of Designations). At any time after October 19, 2024, the Company has the right to mandate the conversion of the Series A Convertible Preferred Stock, subject to certain restrictions, based on the price of the Common Stock in the preceding thirty (30) trading days. The adjusted conversion price for the shares issued in the Initial Issuance is \$23.97, subject to an increase in the conversion price to \$26.00 upon the achievement of \$76.0 million of Adjusted EBITDA (as defined in the Subscription Agreement) for the Company's 2022 fiscal year, and the adjusted conversion price for the shares issued in any Subsequent Issuance is \$31.21, subject to certain adjustments set forth in the Certificate of Designations.

Voting and Consent Rights.

Holders of the Series A Convertible Preferred Stock are entitled to vote with the holders of the common stock on an as-converted basis. Holders of the Series A Convertible Preferred Stock will be entitled to a separate class vote with respect to, among other things, amendments to the Company's organizational documents that have an adverse effect on the Series A Convertible Preferred Stock, authorizations or issuances of securities of the Company, the payment of dividends other than dividends on common stock in the ordinary course consistent with past practice on a quarterly basis in an amount not to exceed the Company's current dividend rate of \$0.10 per share per quarter, related party transactions, repurchases or redemptions of securities of the Company (other than the repurchase of up to \$25,000,000 of shares of Common Stock), dispositions of businesses or assets, the incurrence of indebtedness and certain amendments or extensions of the Company's existing credit facility, in each case, subject to the exceptions and qualifications set forth in the Certificate of Designations.

Repurchase Rights.

Each initial investor ("Investor") of Series A Convertible Preferred Stock will have the right to require the Company to repurchase such Investor's Series A Convertible Preferred Stock on a date occurring either (a) on or after October 19, 2026 (the "Optional Repurchase Trigger Date") at a price equal to the liquidation preference or (b) in connection with a conversion of Series A Convertible Preferred Stock, pursuant to which the number of shares of Common Stock issuable upon such conversion would exceed 19.99% of the issued and outstanding shares of Common Stock as of October 18, 2021 (such excess shares, "Excess Conversion Shares"), at any time after the date that is 91 days after the maturity date of the Company's existing credit facility, at a price per share equal to the number of Excess Conversion Shares multiplied by the Last Reported Sales Price (as defined) of common stock on the applicable conversion date. In addition, each Investor will have the right to cause the Company to repurchase its shares of Series A Convertible Preferred Stock in connection with a Change of Control, at a price equal to the liquidation preference.

Right to Nominate Director.

For so long as the Investors (or their permitted transferees) own beneficially and of record at least fifty percent (50%) of the shares of Series A Convertible Preferred Stock purchased pursuant to the Subscription Agreement (including any shares of Series A Convertible Preferred Stock previously held that were subsequently converted into shares of common stock for so long as the Investors (or their permitted transferees) continue to own beneficially and of record such shares of common stock), the Investors representing at least a majority of the outstanding shares of Series A Convertible Preferred Stock then outstanding have the right to nominate one person to serve on the Board of Directors of the Company (the "Board"), with the initial nominee to be nominated no later than the date that is six months after the Initial Issuance. If there is no vacancy on the Board at such time, the Company will expand the size of the Board to create a vacancy. Subject to the qualifications set forth in the Certificate of Designations, the initial nominee of the holders of Series A Convertible Preferred Stock will be appointed to the Board for a term expiring at the next succeeding annual meeting of the Company's stockholders and until his or her successor is duly elected and qualified.

Standstill.

Until the one year anniversary of the Voting Rights Expiration Date (as defined in the Certificate of Designations), subject to the qualifications set forth in the Subscription Agreement, the Investors will be subject to certain standstill restrictions pursuant to which the Investors will be restricted, among other things and subject to certain customary exceptions, from (1) acquiring more than a specified amount of the Company's outstanding common stock or securities exchangeable for or convertible into the Common Stock, (2) making, participating in or encouraging any proxy solicitation or submitting any shareholder proposal to the Company, (3) publicly proposing any change of control or other material transaction involving the Company, (4) seeking representation on the Board (beyond the representation provided for above), (5) seeking to control or influence the management, board of directors or business of the Company, (6) encouraging or entering into any agreements with any person with respect to any of the foregoing, or (7) taking any action that would require the Company to make a public announcement regarding any of the foregoing.

Transfer Restrictions.

Prior to the second anniversary of the Initial Issuance, the Investors will be restricted from transferring the Series A Convertible Preferred Stock, subject to certain specified exceptions.

Our Board of Directors

Our Board of Directors is divided currently into three classes, with each class holding office for staggered three-year terms. On December 28, 2021, we amended our charter to start phasing out the classified Board structure by our fiscal 2024 annual meeting of stockholders. Until such time, the classification of directors may have the effect of making it more difficult for our stockholders to change the composition of the Board of Directors in a relatively short period of time. In addition, the classified board provision could have the effect of discouraging a third party from attempting to gain control of us, even though such an attempt might be beneficial to us and our stockholders. Accordingly, the classified board provision, if effective, could delay, defer or prevent a change in control of our company.

Certain Provisions of Delaware Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, or the DGCL, an anti-takeover law. In general, this statute provides that, except in certain limited circumstances, a corporation shall not engage in any "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, for purposes of Section 203 of the DGCL, an "interested stockholder" is a person who, together with affiliates, owns, or within three years did own, 15% or more of the corporation's voting stock. This provision could have the effect of delaying or preventing a change in control of our company.

Liability of Directors and Officers

As permitted by Delaware law, our charter contains a provision that eliminates the personal liability of the directors to us and our stockholders for monetary damages for breaches of fiduciary duties as directors, except that such provision does not apply to any breach that involves:

- a breach of a director's duty of loyalty to our company;
- any act or omission not in good faith or which involves intentional misconduct or a knowing violation of law;
- a transaction from which the director derives an improper personal benefit; or
- the payment of dividends or the approval of stock repurchases or redemptions that are unlawful under the DGCL.

Our by-laws provide that we shall indemnify (a) any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of our company) by reason of the fact that he is or was one of our directors, officers or employees, or is or was serving at our request as a director, officer or employee of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement, actually and reasonably incurred by him or her in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was illegal, and (b) any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by us or in our name to procure a judgment in its favor by reason of the fact that he or she is or was one of our directors, officers or employees, or is or was serving at our request as a director, officer or employee of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable for negligence or misconduct in the performance of his or her duty to us unless and only to the extent that the Court of Chancery of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

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

THE COMTECH TELECOMMUNICATIONS CORP.

2000 STOCK INCENTIVE PLAN

AMENDED AND RESTATED

EFFECTIVE NOVEMBER 15, 2019

AS AMENDED EFFECTIVE AUGUST 4, 2020,

AS FURTHER AMENDED THROUGH SEPTEMBER 9, 2022

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THE COMTECH TELECOMMUNICATIONS CORP.

2000 STOCK INCENTIVE PLAN

AMENDED AND RESTATED

EFFECTIVE NOVEMBER 15, 2019

ARTICLE I

PURPOSE

The purpose of The Comtech Telecommunications Corp. 2000 Stock Incentive Plan is to enhance the profitability and value of the Company for the benefit of its stockholders by enabling the Company: (i) to offer employees of, and Consultants to, the Company and its Affiliates stock-based incentives and other equity interests in the Company and cash-based incentive Awards, thereby creating a means to attract, retain, motivate and reward such individuals and, through awards with a value based on the value of Company stock, to strengthen the mutuality of interests between such individuals and the Company's stockholders; and (ii) to make equity based awards to Non-Employee Directors, thereby creating a means to attract, retain and reward such Non-Employee Directors and strengthen the mutuality of interests between Non-Employee Directors and the Company's stockholders.

ARTICLE II

DEFINITIONS

For purposes of this Plan, the following terms shall have the following meanings:

2.1 "Acquisition Event" has the meaning set forth in Section 4.2(d).

2.2 "Affiliate" means each of the following: (i) any Subsidiary; (ii) any Parent; (iii) any corporation, trade or business (including without limitation, a partnership or limited liability company) which is directly or indirectly controlled 50% or more (whether by ownership of stock, assets or an equivalent ownership interest or voting interest) by the Company or one of its Affiliates; and (iv) any other entity in which the Company or any of its Affiliates has a material equity interest and which is designated as an "Affiliate" by resolution of the Committee.

2.3 "Award" means any award under this Plan of any: (i) Stock Option; (ii) Stock Appreciation Right; (iii) Restricted Stock; (iv) Performance Share; (v) Performance Unit;

(vi) Restricted Stock Unit; (vii), Stock Unit, (viii) Other Stock-Based Award; (ix) other award providing benefits similar to (i) through (viii) designed to meet the requirements of a Foreign Jurisdiction; or (x) cash incentive Award awarded under Section 10.1. An Award other than a cash incentive Award is referred to as an "Equity Award."

2.4 "Board" means the Board of Directors of the Company.

2.5 "Cause" means, with respect to a Participant's Termination of Employment or Termination of Consultancy: (i) in the case where there is no employment agreement, consulting agreement, change in control agreement or similar agreement in effect between the Company or an Affiliate and the Participant at the time of the grant of the Award (or where there is such an agreement but it does not define "cause" (or words of like import)), termination due to a Participant's commission of a fraud or a felony in connection with his or her duties as an employee of the Company or an Affiliate, willful misconduct or any act of disloyalty, dishonesty, fraud, breach of trust or confidentiality as to the Company or an Affiliate or any other act which is intended to cause or may reasonably be expected to cause economic or reputational injury to the Company or an Affiliate; or (ii) in the case where there is an employment agreement, consulting agreement, change in control agreement or similar agreement in effect between the Company or an Affiliate and the Participant at the time of the grant of the Award that defines "cause" (or words of like import), as defined under such agreement; provided, however, that with regard to any agreement that conditions "cause" on occurrence of a change in control, such definition of "cause" shall not apply until a change in control actually takes place and then only with regard to a termination thereafter. With respect to a Participant's Termination of Directorship, "cause" shall mean an act or failure to act that constitutes cause for removal of a director under applicable Delaware law.

2.6 "Change in Control" has the meaning set forth in Article XIV.

2.7 "Code" means the Internal Revenue Code of 1986, as amended. Any reference to any section of the Code shall also be a reference to any successor provision.

2.8 "Committee" means: (a) with respect to the application of this Plan to Eligible Employees and Consultants, a committee or subcommittee of the Board appointed from time to time by the Board, which committee or subcommittee shall consist of two or more Non-Employee Directors, each of whom is intended to be, (i) to the extent required by Rule 16b-3, a "non-employee director" as defined in Rule 16b-3, (ii) to the extent required by Section 162(m) of the Code and any regulations thereunder, an "outside director" as defined under Section 162(m) of the Code, (iii) an "independent director" under applicable stock exchange rules, and (iv) as may be applicable, "independent" as provided pursuant to the rules promulgated by the Securities and Exchange Commission under The Dodd-Frank Wall Street Reform and Consumer Protection Act; provided, however, that if and to the extent that no Committee exists which has the authority to administer this Plan, the functions of the Committee shall be exercised by the Board and all references herein to the Committee shall be deemed to be references to the Board; and (b) with respect to the application of this Plan to Non-Employee Directors, the Board. If for any reason the appointed Committee does not meet any of the requirements of clauses (a)(i) – (iv) above, such noncompliance shall not affect the validity of Awards, grants, interpretations or other actions of the Committee.

2.9 "Common Stock" means the common stock, \$.10 par value per share, of the Company.

2.10 "Company" means Contech Telecommunications Corp., a Delaware corporation, and its successors by operation of law.

2.11 "Consultant" means any advisor or consultant to the Company or its Affiliates.

2.12 "Detrimental Activity" means (a) the disclosure to anyone outside the Company or its Affiliates, or the use in any manner other than in the furtherance of the Company's or its Affiliate's business, without written authorization from the Company, of any confidential information or proprietary information, relating to the business of the Company or its Affiliates, acquired by a Participant prior to the Participant's Termination; (b) activity while employed by, or otherwise providing services to, the Company or its Affiliates that results, or if known could result, in the Participant's Termination that is classified by the Company as a Termination for Cause; (c) any attempt, directly or indirectly, to solicit, induce or hire (or the identification for solicitation, inducement or hire of) any non-clerical employee of the Company or its Affiliates to be employed by, or to perform services for, the Participant or any person or entity with which the Participant is associated (including, but not limited to, due to the Participant's employment by, consultancy for, directorship with, equity interest in, or creditor relationship with such person or entity) or any person or entity from which the Participant receives direct or indirect compensation or fees as a result of such solicitation, inducement or hire (or the identification for solicitation, inducement or hire) without, in all cases, written authorization from the Company; (d) any attempt, directly or indirectly, to solicit in a competitive manner any current or prospective customer of the Company or its Affiliates without, in all cases, written authorization from the Company; (e) the Participant's Disparagement or inducement of others to do so, of the Company or its Affiliates or their past and present officers, directors, employees or products; (f) without written authorization from the Company, the rendering of services for any organization, or engaging, directly or indirectly, in any business, which is competitive with the Company or its Affiliates, or which organization or business, or the rendering of services to such organization or business, is otherwise prejudicial to or in conflict with the interests of the Company or its Affiliates, (g) breach of any agreement between the Participant and the Company or an Affiliate (including, without limitation, any employment agreement or non-competition or non-solicitation agreement), or (h) for Awards granted on or after September 21, 2011, a violation of the Company's Standards of Business Conduct as adopted by the Company from time to time and as in effect on the date the Award is granted. Unless otherwise determined by the Committee at grant, Detrimental Activity shall not be deemed to occur after the end of the one-year period following the Participant's Termination. For purposes of subsections (a), (c), (d) and (f) above, the Chief Executive Officer and the General Counsel of the Company shall each have authority to provide the Participant with written authorization to engage in the activities contemplated thereby and no other person shall have authority to provide the Participant with such authorization.

2.13 "Disparagement" means making comments or statements to the press, the Company's or its Affiliates' employees, consultants or any individual or entity with whom the Company or its Affiliates has a business relationship which would adversely affect in any manner: the conduct of the business of the Company or its Affiliates (including, without limitation, any products or business plans or prospects), or the business reputation of the Company or its Affiliates, or any of their products, or their past or present officers, directors or employees.

2.14 "Disability" means, with respect to an Eligible Employee, Consultant or Non-Employee Director, a permanent and total disability, as determined by the Committee in its sole discretion, provided that in no event shall any disability that is not a permanent and total disability, as defined in Section 22(e)(3) of the Code, shall be treated as a Disability. A Disability shall only be deemed to occur at the time of the determination by the Committee of the Disability. Notwithstanding the foregoing, for Awards that are subject to Section 409A of the Code, Disability shall mean that a Participant is disabled under Section 409A(a)(2)(C)(i) of the Code.

2.15 "Effective Date" means the effective date of this Plan as defined in Article XVIII.

2.16 "Eligible Employee" means each employee of the Company or an Affiliate.

2.17 "Exchange Act" means the Securities Exchange Act of 1934, as amended. Any references to any section of the Exchange Act shall also be a reference to any successor provision.

2.18 "Family Member" shall mean "family member" as defined in Section A1(a)(5) of the general instructions of Form S-8.

2.19 "Fair Market Value" means, unless otherwise required by any applicable provision of the Code or any regulations issued thereunder, as of any date, the last sales price for the Common Stock or the average of trading prices for Common Stock on the applicable date, as specified by the Committee: (i) as reported on the principal national securities exchange on which it is then traded or The Nasdaq Stock Market LLC or (ii) if not traded on any such national securities exchange or The Nasdaq Stock Market LLC as quoted on an automated quotation system sponsored by the Financial Industry Regulatory Authority. If the Common Stock is not readily tradable on a national securities exchange, The Nasdaq Stock Market LLC or any automated quotation system sponsored by the Financial Industry Regulatory Authority, its Fair Market Value shall be set in good faith by the Committee. Notwithstanding anything herein to the contrary, "Fair Market Value" means the price for Common Stock set by the Committee in good faith based on reasonable methods set forth under Section 422 of the Code or Section 409A of the Code, as applicable, and the regulations thereunder including, without limitation, a method utilizing the average of prices of the Common Stock reported on the principal national securities exchange on which it is then traded during a reasonable period designated by the Committee. For purposes of the grant of any Stock Option or Stock Appreciation Right, the applicable date shall be the date of grant of the Stock Option or Stock Appreciation Right (which must be at or after the date on which such grant is duly authorized) or, if so specified by the Committee, the latest trading date for which the last sales price or average trading price is available at the time of grant, provided that for purposes of the exercise of any Stock Option or Stock Appreciation Right, the applicable date shall be the date a notice of exercise is received by the Secretary of the Company or, if not a day on which the applicable market is open, the next day that it is open. For purposes of the conversion of a Performance Unit to shares of Common Stock for reference purposes, the applicable date shall be the date determined by the Committee in accordance with Section 10.2.

2.20 "Foreign Jurisdiction" means any jurisdiction outside of the United States including, without limitation, countries, states, provinces and localities.

2.21 "Incentive Stock Option" means any Stock Option awarded to an Eligible Employee under this Plan intended to be an Incentive Stock Option within the meaning of Section 422 of the Code.

2.22 "Limited Stock Appreciation Right" means an Award of a limited Tandem Stock Appreciation Right or a Non-Tandem Stock Appreciation Right made pursuant to Section 7.5 of this Plan.

2.23 "Non-Employee Director" means a director of the Company who is not an active employee of the Company or an Affiliate and who is not an officer, director or employee of the Company or any Affiliate.

2.24 "Non-Qualified Stock Option" means any Stock Option awarded under this Plan that is not an Incentive Stock Option.

2.25 "Non-Tandem Stock Appreciation Right" means a Stock Appreciation Right entitling a Participant to receive an amount in cash or Common Stock (as determined by the Committee in its sole discretion) equal to the excess of: (i) the Fair Market Value of a share of Common Stock as of the date such right is exercised, over (ii) the aggregate exercise price of such right.

2.26 "Other Stock-Based Award" means an Award of Common Stock and other Awards made pursuant to Article XI that are valued in whole or in part by reference to, or are payable in or otherwise based on, Common Stock, including, without limitation, an Award valued by reference to performance of an Affiliate.

2.27 "Ownership Guidelines" means the guidelines adopted by the Board from time to time setting forth the minimum amount of Company stock that Non-Employee Directors are required to own.

2.28 "Parent" means any parent corporation of the Company within the meaning of Section 424(e) of the Code.

2.29 "Participant" means any Eligible Employee or Consultant to whom an Award has been made under this Plan and each Non-Employee Director of the Company; provided, however, that a Non-Employee Director shall be a Participant for purposes of the Plan solely with respect to awards of Stock Options, Restricted Stock, Stock Units or Restricted Stock Units pursuant to Article XIII.

2.30 "Performance Criteria" has the meaning set forth in Exhibit A.

2.31 "Performance Cycle" has the meaning set forth in Section 10.1.

2.32 "Performance Goal" means the objective performance goals established by the Committee in accordance with Section 162(m) of the Code and based on one or more Performance Criteria.

2.33 "Performance Period" has the meaning set forth in Section 9.1.

2.34 "Performance Share" means an Award made pursuant to Article IX of this Plan of the right to receive Common Stock or, as determined by the Committee in its sole discretion, cash of an equivalent value at the end of the Performance Period or thereafter.

2.35 "Performance Unit" means an Award made pursuant to Article X of this Plan of the right to receive a fixed dollar amount, payable in cash or Common Stock (or a combination of both) as determined by the Committee in its sole discretion, at the end of a specified Performance Unit Cycle or thereafter.

- 2.36 "Performance Unit Cycle" has the meaning set forth in Section 10.2.
- 2.37 "Plan" means The Comtech Telecommunications Corp. 2000 Stock Incentive Plan.
- 2.38 "Reference Stock Option" has the meaning set forth in Section 7.1.
- 2.39 "Restricted Stock" means an Award of shares of Common Stock under this Plan that is subject to restrictions under Article VIII or Article XIII.
- 2.40 "Restricted Stock Unit" or "RSU" means an Award of a restricted stock unit under this Plan that is granted in accordance with and subject to restrictions under Article XI with respect to Eligible Employees and Consultants, and Article XIII with respect to Non-Employee Directors, which is a unit of measurement equivalent to one share of Common Stock but with none of the attendant rights of a holder of a share of Common Stock until a share of Common Stock is ultimately distributed in payment of the obligation (other than a right to receive dividend equivalent amounts as determined by the Committee).
- 2.41 "Restriction Period" has the meaning set forth in Section 8.3(a) with respect to Restricted Stock.
- 2.42 "Retirement" means a Termination of Employment or Termination of Consultancy other than a termination for Cause or due to death or Disability by a Participant at or after age 65 or such earlier date after age 50 as may be approved by the Committee with regard to such Participant. With respect to a Participant's Termination of Directorship, Retirement shall mean the failure to stand for reelection or the failure to be reelected at or after a Participant has attained age 65 or, with the consent of the Board, before age 65 but after age 50.
- 2.43 "Rule 16b-3" means Rule 16b-3 under Section 16(b) of the Exchange Act as then in effect or any successor provisions.
- 2.44 "Section 162(m) of the Code" means Section 162(m) of the Code and any Treasury regulations thereunder.
- 2.45 "Section 409A of the Code" means Section 409A of the Code and any Treasury regulations thereunder.
- 2.46 "Securities Act" means the Securities Act of 1933, as amended. Any reference to any section of the Securities Act shall also be a reference to any successor provision.
- 2.47 "Stock Appreciation Right" or "SAR" means the right pursuant to an Award granted under Article VII.

2.48 "Stock Option" or "Option" means any option to purchase shares of Common Stock granted to Eligible Employees or Consultants under Article VI or to Non-Employee Directors under Article XIII.

2.49 "Stock Unit" means an Award of a stock unit under this Plan that is granted in accordance with and subject to restrictions under Article XI with respect to Eligible Employees and Consultants, and Article XIII with respect to Non-Employee Directors, which is unit of measurement equivalent to one share of Common Stock but with none of the attendant rights of a holder of a share of Common Stock until a share of Common Stock is ultimately distributed in payment of the obligation (other than a right to receive dividend equivalent amounts as determined by the Committee).

2.50 "Subsidiary" means any subsidiary corporation of the Company within the meaning of Section 424(f) of the Code.

2.51 "Tandem Stock Appreciation Right" means a Stock Appreciation Right entitling the holder to surrender to the Company all (or a portion) of a Stock Option in exchange for an amount in cash or Common Stock (as determined by the Committee in its sole discretion) equal to the excess of: (i) the Fair Market Value, on the date such Stock Option (or such portion thereof) is surrendered, of the Common Stock covered by such Stock Option (or such portion thereof), over (ii) the aggregate exercise price of such Stock Option (or such portion thereof).

2.52 "Ten Percent Stockholder" means a person owning stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, its Subsidiaries or its Parent.

2.53 "Termination" means a Termination of Consultancy, Termination of Directorship or Termination of Employment, as applicable.

2.54 "Termination of Consultancy" means, with respect to a Consultant, that the Consultant is no longer acting as a consultant to the Company or an Affiliate. In the event an entity shall cease to be an Affiliate, there shall be deemed a Termination of Consultancy of any individual who is not otherwise a Consultant to the Company or another Affiliate at the time the entity ceases to be an Affiliate. In the event that a Consultant becomes an Eligible Employee or a Non-Employee Director upon the termination of his consultancy, the Committee, in its sole and absolute discretion, may determine that no Termination of Consultancy shall be deemed to occur until such time as such Consultant is no longer a Consultant or an Eligible Employee.

2.55 "Termination of Directorship" means, with respect to a Non-Employee Director, that the Non-Employee Director has ceased to be a director of the Company. In the event that a Non-Employee Director becomes an Eligible Employee or a Consultant upon the termination of his directorship, the Committee, in its sole and absolute discretion, may determine that no Termination of Directorship shall be deemed to occur until such time as such Non-Employee Director is no longer an Eligible Employee or Consultant.

2.56 "Termination of Employment" means: (i) a termination of employment (for reasons other than a military or personal leave of absence granted by the Company) of a Participant from the Company and its Affiliates; or (ii) when an entity which is employing a Participant ceases to be an Affiliate, unless the Participant otherwise is, or thereupon becomes, employed by the Company or another Affiliate. In the event that an Eligible Employee becomes a Consultant or Non-Employee Director upon the termination of his employment, the Committee, in its sole and absolute discretion, may determine that no Termination of Employment shall be deemed to occur until such time as such Eligible Employee is no longer an Eligible Employee or a Consultant.

2.57 "Transfer" means anticipate, alienate, attach, sell, assign, pledge, encumber, charge, hypothecate or otherwise transfer and "Transferred" has a correlative meaning.

2.58 "Treasury Rate" means the interest rate payable on three-year notes issued by the United States Treasury with an issuance date that is closest to the first day of the relevant fiscal year, as reported by the U.S. Department of the Treasury on its website, <http://www.treasurydirect.gov> or such other official website maintained by the U.S. Department of the Treasury at such time.

ARTICLE III

ADMINISTRATION

3.1 The Committee. The Plan shall be administered and interpreted by the Committee. If for any reason the appointed Committee does not meet the requirements of Rule 16b-3 or Section 162(m) of the Code, such noncompliance with the requirements of Rule 16b-3 and Section 162(m) of the Code shall not affect the validity of Awards, grants, interpretations or other actions of the Committee.

3.2 Grants of Awards. The Committee shall have full authority to grant to Eligible Employees and Consultants, pursuant to the terms of this Plan: (i) Stock Options; (ii) Tandem Stock Appreciation Rights and Non-Tandem Stock Appreciation Rights; (iii) Restricted Stock; (iv) Performance Shares; (v) Performance Units; (vi) Restricted Stock Units; (vii) Stock Units; (viii) Other Stock-Based Award; (ix) other awards providing benefits similar to (i) through (viii) designed to meet the requirements of Foreign Jurisdictions; and (x) cash incentive Awards under Section 10.1. All Equity Awards shall be granted by, confirmed by, and subject to the terms of, a written agreement executed by the Company and the Participant. In particular, the Committee shall have the authority:

- (a) to select the Eligible Employees and Consultants to whom Awards may from time to time be granted hereunder;
- (b) to determine whether and to what extent Awards, including any combination of two or more Awards, are to be granted hereunder to one or more Eligible Employees or Consultants;

(c) to determine, in accordance with the terms of this Plan, the number of shares of Common Stock to be covered by each Equity Award granted hereunder;

(d) to determine the terms and conditions, not inconsistent with the terms of this Plan, of any Award granted hereunder (including, but not limited to, the exercise or purchase price (if any), any restriction or limitation, any vesting schedule or acceleration thereof and any forfeiture restrictions or waiver thereof, regarding any Award and the shares of Common Stock relating thereto, based on such factors, if any, as the Committee shall determine, in its sole discretion);

(e) to determine whether and under what circumstances a Stock Option may be settled in cash, Common Stock and/or Restricted Stock under Section 6.3(d) or, with respect to Stock Options granted to Non-Employee Directors, Section 13.4(d);

(f) to the extent permitted by law, to determine whether, to what extent and under what circumstances to provide loans (which shall bear interest at the rate the Committee shall provide) to Eligible Employees and Consultants in order to exercise Stock Options under this Plan or to purchase Awards under this Plan (including shares of Common Stock);

(g) to determine whether a Stock Option is an Incentive Stock Option or Non-Qualified Stock Option, whether a Stock Appreciation Right is a Tandem Stock Appreciation Right or Non-Tandem Stock Appreciation Right or whether an Award is intended to satisfy Section 162(m) of the Code;

(h) to determine whether to require an Eligible Employee or Consultant, as a condition of the granting of any Award, not to sell or otherwise dispose of shares of Common Stock acquired pursuant to the exercise of an Option or an Award for a period of time as determined by the Committee, in its sole discretion, following the date of the acquisition of such Option or Award;

(i) to modify, extend or renew an Award, subject to Article XV herein, provided, however, that if an Award is modified, extended or renewed and thereby deemed to be the issuance of a new Award under the Code or the applicable accounting rules, the exercise price of an Award may continue to be the original exercise price even if less than the Fair Market Value of the Common Stock at the time of such modification, extension or renewal; provided further, however, that such Award may be restructured to comply with Section 409A of the Code to avoid any adverse tax consequences, to the extent applicable;

(j) to determine the form of any Award agreement or other document or notice related to this Plan, and whether that document, including signatures, may be in electronic form in accordance with Section 17.16 herein; and

(k) to determine, subject to Sections 12.1 and 17.11, whether and under what circumstances (consistent with the terms of the Plan) a Participant shall be entitled to designate a beneficiary to receive the Participant's outstanding Award(s) or exercise the Participant's rights under the Participant's outstanding Award(s) following the death of the Participant.

3.3 Guidelines. Subject to Article XV hereof, the Committee shall have the authority to adopt, alter and repeal such administrative rules, guidelines and practices governing this Plan and perform all acts, including the delegation of its administrative responsibilities, as it shall, from time to time, deem advisable; to construe and interpret the terms and provisions of this Plan and any Award issued under this Plan (and any agreements relating thereto); and to otherwise supervise the administration of this Plan. The Committee may correct any defect, supply any omission or reconcile any inconsistency in this Plan or in any agreement relating thereto in the manner and to the extent it shall deem necessary to effectuate the purpose and intent of this Plan. The Committee may adopt special guidelines and provisions for persons who are residing in, or subject to, the taxes of, Foreign Jurisdictions to comply with applicable tax and securities laws and may impose any limitations and restrictions that it deems necessary to comply with the applicable tax and securities laws of such Foreign Jurisdictions. To the extent applicable, this Plan is intended to comply with Section 162(m) of the Code and the applicable requirements of Rule 16b-3 and shall be limited, construed and interpreted in a manner so as to comply therewith.

3.4 Decisions Final. Any decision, interpretation or other action made or taken in good faith by or at the direction of the Company, the Board or the Committee (or any of its members) arising out of or in connection with this Plan shall be within the absolute discretion of all and each of them, as the case may be, and shall be final, binding and conclusive on the Company and all employees and Participants and their respective heirs, executors, administrators, successors and assigns.

3.5 Reliance on Counsel. The Company, the Board or the Committee may consult with legal counsel, who may be counsel for the Company or other counsel, with respect to its obligations or duties hereunder, or with respect to any action or proceeding or any question of law, and shall not be liable with respect to any action taken or omitted by it in good faith pursuant to the advice of such counsel.

3.6 Procedures. If the Committee is appointed, the Board shall designate one of the members of the Committee as chairman and the Committee shall hold meetings, subject to the By-Laws of the Company, at such times and places as it shall deem advisable. A majority of the Committee members shall constitute a quorum. All determinations of the Committee shall be made by a majority of its members. Any decision or determination reduced to writing and signed by all the Committee members in accordance with the By-Laws of the Company, shall be fully as effective as if it had been made by a vote at a meeting duly called and held. The Committee shall keep minutes of its meetings and shall make such rules and regulations for the conduct of its business as it shall deem advisable.

3.7 Designation of Consultants/Liability.

(a) The Committee may designate employees of the Company and professional advisors to assist the Committee in the administration of this Plan and may grant authority to officers to execute agreements or other documents on behalf of the Committee.

(b) The Committee may employ such legal counsel, consultants and agents as it may deem desirable for the administration of this Plan and may rely upon any opinion received from any such counsel or consultant and any computation received from any such consultant or agent. Expenses incurred by the Committee in the engagement of any such counsel, consultant or agent shall be paid by the Company. The Committee, its members and any employee of the Company designated pursuant to paragraph (a) above shall not be liable for any action or determination made in good faith with respect to this Plan. To the maximum extent permitted by applicable law, no officer of the Company or member or former member of the Committee shall be liable for any action or determination made in good faith with respect to this Plan or any Award granted under it. To the maximum extent permitted by applicable law or the Certificate of Incorporation or By-Laws of the Company and to the extent not covered by insurance, each officer and member or former member of the Committee shall be indemnified and held harmless by the Company against any cost or expense (including reasonable fees of counsel reasonably acceptable to the Company) or liability (including any sum paid in settlement of a claim with the approval of the Company), and advanced amounts necessary to pay the foregoing at the earliest time and to the fullest extent permitted, arising out of any act or omission to act in connection with this Plan, except to the extent arising out of such officer's, member's or former member's own fraud or bad faith. Such indemnification shall be in addition to any rights of indemnification the officers, directors or members or former officers, directors or members may have under applicable law or under the Certificate of Incorporation or By-Laws of the Company or any Affiliate. Notwithstanding anything else herein, this indemnification will not apply to the actions or determinations made by an individual with regard to Awards granted to him or her under this Plan.

ARTICLE IV

SHARE AND OTHER LIMITATIONS

4.1 Shares.

(a) *General Limitation.* The aggregate number of shares of Common Stock which may be issued or used for reference purposes under this Plan or with respect to which Equity Awards may be granted shall not exceed 10,962,500 shares of Common Stock (subject to any increase or decrease pursuant to Section 4.2) with respect to all types of Equity Awards (such aggregate number of shares includes shares already issued pursuant to Equity Awards granted under the Plan since its original inception). The shares of Common Stock available under this Plan may be either authorized and unissued Common Stock or Common Stock held in or acquired for the treasury of the Company.

(b) *Share Recycling (subject to Section 4.1(c) Limitations on Share Recycling).*

If any Stock Option or Stock Appreciation Right granted under this Plan expires, terminates or is canceled for any reason without having been exercised in full or, with respect to Stock Options, the Company repurchases any Stock Option, the number of shares of Common Stock underlying such unexercised or repurchased Stock Option or any unexercised Stock Appreciation Right shall again be available for the purposes of Equity Awards under this Plan. If any shares of Restricted Stock, Performance Shares, Performance Units, Restricted Stock Units or Stock Units awarded under this Plan to a Participant are forfeited or repurchased by the Company for any reason, the number of forfeited or repurchased shares of Restricted Stock, or shares of Common Stock underlying any Performance Share, Performance Unit, Restricted Stock Unit or Stock Unit Awards shall again be available for the purposes of Equity Awards under this Plan. If a Tandem Stock Appreciation Right is granted or a Limited Stock Appreciation Right is granted in tandem with a Stock Option, such grant shall only apply once against the maximum number of shares of Common Stock which may be issued under this Plan.

(c) *Limitations on Share Recycling.*

Notwithstanding anything else herein, (i) the total number of Stock Options, Stock Appreciation Rights or Other Stock-Based Awards (subject to exercise) that have been exercised, regardless of whether any of the shares of Common Stock underlying such Awards are not actually issued to the Participant as the result of a net settlement, (ii) the total number of shares of Common Stock underlying any stock-settled Stock Appreciation Right that has been exercised regardless of whether a lesser number of shares of Common Stock have been delivered, (iii) any shares of Common Stock used to pay any exercise price on any Award granted under the Plan that is subject to exercise (including, without limitation, any Stock Options, Stock Appreciation Rights or Other Stock-Based Awards (subject to exercise) and (iv) any shares of Common Stock used to satisfy tax withholding obligation with respect to any and all Awards granted under the Plan, shall in each case be counted against the limits set forth in Section 4.1(a) and shall no longer be available for purposes of granting Equity Awards under this Plan. In addition, shares of Common Stock repurchased by the Company on the open market using proceeds from the exercise of any Award shall not increase the number of shares available for future grant of Awards hereunder.

(d) *Individual Participant Limitations* (i) The maximum number of shares of Common Stock subject to any Award of Stock Options, Stock Appreciation Rights, Performance Shares or shares of Restricted Stock for which the grant of such Award or the lapse of the relevant Restriction Period is subject to the attainment of Performance Goals in accordance with Section 8.3(a)(ii) herein which may be granted under this Plan during any fiscal year of the Company to each Eligible Employee or Consultant shall be 375,000 shares per type of Award (which shall be subject to any increase or decrease pursuant to Section 4.2), provided that the maximum number of shares of Common Stock for all types of Equity Awards does not exceed 375,000 (which shall be subject to any increase or decrease pursuant to Section 4.2) during any fiscal year of the Company. If a Tandem Stock Appreciation Right is granted or a Limited Stock Appreciation Right is granted in tandem with a Stock Option, it shall apply against the Eligible Employee's or Consultant's individual share limitations for both Stock Appreciation Rights and Stock Options.

(ii) There are no annual individual Eligible Employee or Consultant share limitations on Restricted Stock for which the grant of such Award or the lapse of the relevant Restriction Period is not subject to attainment of Performance Goals in accordance with Section 8.3(a)(ii) hereof.

(iii) Performance Units payable solely in cash shall be deemed to be cash incentive awards subject to the limitation in Section 4.1(d)(v), and Performance Units payable in cash or in shares of Common Stock shall be subject to the limitation in Section 4.1(d)(i) unless the Committee has, no later than the time performance goals are specified for the Performance Units, designated such Performance Units as cash incentive awards potentially settleable in shares, in which case the Performance Units shall be subject to the limitation in Section 4.1(d)(v).

(iv) The individual Participant limitations set forth in this Section 4.1(d)(i) – (iv) shall be cumulative; that is, to the extent that shares of Common Stock for which Equity Awards are permitted to be granted to an Eligible Employee or a Consultant during a fiscal year are not covered by an Award to such Eligible Employee or Consultant in a fiscal year, the number of shares of Common Stock available for Equity Awards to such Eligible Employee or Consultant shall automatically increase in the subsequent fiscal years during the term of the Plan until used.

(v) The maximum potential amount earnable under all cash incentive Awards granted under this Plan for any fiscal year of the Company to each Eligible Employee shall be such Eligible Employee's "Annual Limit," which in each fiscal year shall be \$1 million plus the amount of the Eligible Person's unused Annual Limit as of the close of the previous fiscal year. This limitation is separate and not affected by the number of Awards granted during such fiscal year subject to the limitations under Section 4.1(d)(i) – (iv). For this purpose, (i) the potential amount earnable means the maximum amount potentially payable, without regard to whether it is to be paid currently or on a deferred basis or continues to be subject to any service requirement or other non-performance condition, (ii) a Participant's Annual Limit is used to the extent an amount may be potentially earned or paid under a cash incentive Award, regardless of whether such amount is in fact earned or paid, and (iii) a cash incentive Award is "granted" for the earliest fiscal year included in the Performance Cycle for that Award, regardless of whether the terms of the Award do or do not create a legal right on the part of the Participant ultimately to receive a payment with respect to such Award.

4.2 Changes.

(a) The existence of this Plan and the Awards granted hereunder shall not affect in any way the right or power of the Board or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company or any Affiliate, any issue of bonds, debentures, preferred or prior preference stock ahead of or affecting Common Stock, the dissolution or liquidation of the Company or any Affiliate, any sale or transfer of all or part of the assets or business of the Company or any Affiliate or any other corporate act or proceeding.

(b) Subject to the provisions of Section 4.2(d), in the event of any such change in the capital structure or business of the Company by reason of any stock split, reverse stock split, stock dividend, combination or reclassification of shares, recapitalization, or other change in the capital structure of the Company, merger, consolidation, spin-off, reorganization, partial or complete liquidation, issuance of rights or warrants to purchase any Common Stock or securities convertible into Common Stock, or any other corporate transaction or event having an effect similar to any of the foregoing and effected with or without receipt of consideration by the Company, then the aggregate number and kind of shares which thereafter may be issued under this Plan, the number and kind of shares or other property (including cash) to be issued upon exercise of an outstanding Stock Option or other Awards granted under this Plan and the purchase price thereof, the per share performance goals established under any Award, the number and kind of shares to be issued to Non-Employee Directors pursuant to Article XIII, and the individual participation limits set forth in Section 4.1(d) (other than those based on cash limitations) shall be appropriately adjusted consistent with such change in such manner as the Committee deems equitable to prevent substantial dilution or enlargement of the rights granted to, or available for, Participants under this Plan, and any such adjustment shall be final, binding and conclusive on the Company and all Participants and employees and their respective heirs, executors, administrators, successors and assigns. In furtherance of the foregoing, each outstanding Award shall confer on the Participant a legal right to an appropriate adjustment of the Award in the event of an "equity restructuring" within the meaning of FASB ASC Topic 718. Notwithstanding the foregoing, the Committee shall not make any adjustments pursuant to this Section 4.2 that would subject a Participant to additional tax or penalties under Section 409A of the Code without the Participant's consent.

(c) Fractional shares of Common Stock resulting from any adjustment in Options or Awards pursuant to Section 4.2(a) or (b) shall be aggregated until, and eliminated at, the time of exercise by rounding-down for fractions less than one-half and rounding-up for fractions equal to or greater than one-half. No cash settlements shall be made with respect to fractional shares eliminated by rounding. Notice of any adjustment shall be given by the Committee to each Participant whose Award has been adjusted and such adjustment (whether or not such notice is given) shall be effective and binding for all purposes of this Plan.

(d) In the event of a merger or consolidation in which the Company is not the surviving entity or in the event of any transaction that results in the acquisition of substantially all of the Company's outstanding Common Stock by a single person or entity or by a group of persons and/or entities acting in concert, or in the event of the sale or transfer of all or substantially all of the Company's assets (all of the foregoing being referred to as "Acquisition Events"), then the Committee may, in its sole discretion, terminate all outstanding Stock Options and Stock Appreciation Rights, effective as of the date of the Acquisition Event, by delivering notice of termination to each Participant at least 30 days prior to the date of consummation of the Acquisition Event, in which case during the period from the date on which such notice of termination is delivered to the consummation of the Acquisition Event, each such Participant shall have the right to exercise in full all of his or her Stock Options and Stock Appreciation Rights that are then outstanding (without regard to any limitations on exercisability otherwise contained in the Stock Option or Award Agreements), but any such exercise shall be contingent upon and subject to the occurrence of the Acquisition Event, and, provided that, if the Acquisition Event does not take place within a specified period after giving such notice for any reason whatsoever, the notice and exercise pursuant thereto shall be null and void.

If an Acquisition Event occurs but the Committee does not terminate the outstanding Stock Options and Stock Appreciation Right pursuant to this Section 4.2(d), then the provisions of Section 4.2(b) shall apply.

4.3 Minimum Purchase Price. Notwithstanding any provision of this Plan to the contrary, if authorized but previously unissued shares of Common Stock are issued under this Plan, such shares shall not be issued for a consideration which is less than as permitted under applicable law.

4.4 Assumption of Awards. Awards that were granted prior to the Effective Date under the (i) Comtech Telecommunications Corp. 1982 Incentive Stock Option Plan (the "1982 Plan"), and (ii) the Comtech Telecommunications Corp. 1993 Incentive Stock Option Plan, as amended, shall be transferred and assumed by this Plan as of the Effective Date. Notwithstanding the foregoing, such Awards shall continue to be governed by the terms of the applicable agreement in effect prior to the Effective Date.

4.5 Minimum Restriction and Vesting Period. Notwithstanding any other provision of the Plan to the contrary, effective September 21, 2011, with respect to any Award of Restricted Stock, Performance Shares, Performance Units, Restricted Stock Units, or Other Stock-Based Award which by its terms does not require the recipient of the Award to pay a per share exercise price or purchase price equal to the Fair Market Value of the underlying Common Stock at the grant date (collectively, "Full-Value Awards"), (i) the Restriction Period with respect to any such Award of Restricted Stock, (ii) the Performance Period with respect to any such Award of Performance Shares, (iii) the Performance Unit Cycle with respect to any such Award of Performance Units and (iv) the vesting period with respect to any such Restricted Stock Unit or any such Other Stock-Based Award that is payable in shares of Common Stock granted on or after such date shall be no less than one year; provided, that, subject to the terms of the Plan, the Committee may (at the time of grant or thereafter) provide for the earlier lapsing of restrictions or the vesting of the Full-Value Award in the event of a Change of Control or a Participant's Retirement, death or Disability; and provided further, that, subject to the limitations set forth in Section 4.1(a), Full-Value Awards with respect to up to five percent (5%) of the total number of Shares reserved for Awards under the Plan may be granted that are not subject to the foregoing limitations.

4.6 Dividends and Dividend Equivalents. Notwithstanding any other provision of the Plan to the contrary, any rights granted hereunder to a Participant under an Award granted on or after September 21, 2011 to receive or retain dividends or dividend equivalents with respect to the shares of Common Stock underlying any Full-Value Award (with respect to which the lapsing of the restrictions subject thereto or the vesting thereof is based (in whole or in part) on the attainment of one or more Performance Goals), shall be subject to the same vesting and/or forfeiture conditions (performance-based, service-based or otherwise) as are applicable to such Full-Value Award.

ARTICLE V

ELIGIBILITY

5.1 General Eligibility. All Eligible Employees and Consultants and prospective employees of and Consultants to the Company and its Affiliates are eligible to be granted Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock, Performance Shares, Performance Units, Restricted Stock Units, Stock Units, Other Stock-Based Awards, awards providing benefits similar to each of the foregoing designed to meet the requirements of Foreign Jurisdictions under this Plan, and cash incentive Awards. Eligibility for the grant of an Award and actual participation in this Plan shall be determined by the Committee in its sole discretion. The vesting and exercise of Awards granted to a prospective employee or Consultant are conditioned upon such individual actually becoming an Eligible Employee or Consultant.

5.2 Incentive Stock Options. All Eligible Employees of the Company, its Subsidiaries and its Parent (if any) are eligible to be granted Incentive Stock Options under this Plan. Eligibility for the grant of an Award and actual participation in this Plan shall be determined by the Committee in its sole discretion.

5.3 Non-Employee Directors. Non-Employee Directors are only eligible to receive an Award of Stock Options, Restricted Stock, Restricted Stock Units and Stock Units in accordance with Article XIII of the Plan.

5.4 Service Recipient Stock. Notwithstanding anything herein to the contrary, no Option or SAR under which a Participant may receive Common Stock may be granted under the Plan to an Eligible Employee, prospective employee, Consultant or Non-Employee Director of the Company or any of its Affiliates if such Common Stock does not constitute "service recipient stock" for purposes of Section 409A of the Code with respect to such Eligible Employee, prospective employee, Consultant or Non-Employee Director, unless such Option or SAR is structured in a manner intended to comply with, or be exempt from, Section 409A of the Code.

ARTICLE VI

STOCK OPTIONS

6.1 **Stock Options.** Each Stock Option granted hereunder shall be one of two types: (i) an Incentive Stock Option intended to satisfy the requirements of Section 422 of the Code; or (ii) a Non-Qualified Stock Option.

6.2 **Grants.** The Committee shall have the authority to grant to any Eligible Employee one or more Incentive Stock Options, Non-Qualified Stock Options or both types of Stock Options (in each case with or without Stock Appreciation Rights). To the extent that any Stock Option does not qualify as an Incentive Stock Option (whether because of its provisions or the time or manner of its exercise or otherwise), such Stock Option or the portion thereof which does not qualify, shall constitute a separate Non-Qualified Stock Option. The Committee shall have the authority to grant any Consultant one or more Non-Qualified Stock Options (with or without Stock Appreciation Rights). Notwithstanding any other provision of this Plan to the contrary or any provision in an agreement evidencing the grant of a Stock Option to the contrary, any Stock Option granted to an Eligible Employee of an Affiliate (other than an Affiliate which is a Parent or a Subsidiary) shall be a Non-Qualified Stock Option.

6.3 **Terms of Stock Options.** Stock Options granted under this Plan shall be subject to the following terms and conditions, and shall be in such form and contain such additional terms and conditions, not inconsistent with the terms of this Plan, as the Committee shall deem desirable:

(a) *Exercise Price.* The exercise price per share of Common Stock purchasable under a Stock Option shall be determined by the Committee at the time of grant, but shall not be less than 100% of the Fair Market Value of the share of Common Stock at the time of grant provided, however, that if an Incentive Stock Option is granted to a Ten Percent Stockholder, the exercise price shall be no less than 110% of the Fair Market Value of the Common Stock.

(b) *Stock Option Term.* The term of each Stock Option shall be fixed by the Committee; provided, however, that no Stock Option shall be exercisable more than 10 years after the date such Stock Option is granted; and further provided that the term of an Incentive Stock Option granted to a Ten Percent Stockholder shall not exceed 5 years.

(c) *Exercisability.* Stock Options shall be exercisable at such time or times and subject to such terms and conditions as shall be determined by the Committee at grant. If the Committee provides, in its discretion, that any Stock Option is exercisable subject to certain limitations (including, without limitation, that such Stock Option is exercisable only in installments or within certain time periods), the Committee may waive such limitations on the exercisability at any time at or after grant in whole or in part (including, without limitation, waiver of the installment exercise provisions or acceleration of the time at which such Stock Option may be exercised), based on such factors, if any, as the Committee shall determine, in its sole discretion.

(d) *Method of Exercise.* Subject to whatever installment exercise and waiting period provisions apply under subsection (c) above, Stock Options may be exercised in whole or in part at any time and from time to time during the Stock Option term by giving written notice of exercise to the Secretary of the Company specifying the number of shares to be purchased. Such notice shall be accompanied by payment in full of the purchase price as follows: (i) in cash or by check, bank draft or money order payable to the order of the Company; (ii) to the extent permitted by law, if the Common Stock is traded on a national securities exchange, The Nasdaq Stock Market LLC or quoted on national quotation system sponsored by the Financial Industry Regulatory Authority, through a "cashless exercise" procedure whereby the Participant delivers irrevocable instructions to a broker satisfactory to the Company to deliver promptly to the Company an amount equal to the purchase price; or (iii) on such other terms and conditions as may be acceptable to the Committee (including, without limitation, the relinquishment of Stock Options or by payment in full or in part in the form of Common Stock owned by the Participant (and for which the Participant has good title free and clear of any liens and encumbrances) based on the Fair Market Value of the Common Stock on the payment date as determined by the Committee). No shares of Common Stock shall be issued until payment therefore, as provided herein has been made or provided for.

(e) *Incentive Stock Option Limitations* To the extent that the aggregate Fair Market Value (determined as of the time of grant) of the Common Stock with respect to which Incentive Stock Options are exercisable for the first time by an Eligible Employee during an calendar year under this Plan and/or any other stock option plan of the Company, any Subsidiary or any Parent exceeds \$100,000, such Options shall be treated as Non-Qualified Stock Options. In addition, if an Eligible Employee does not remain employed by the Company any Subsidiary or any Parent at all times from the time an Incentive Stock Option is granted until 3 months prior to the date of exercise thereof (or such other period as required by applicable law), such Stock Option shall be treated as a Non-Qualified Stock Option. Should any provision of this Plan not be necessary in order for the Stock Options to qualify as Incentive Stock Options, or should any additional provisions be required, the Committee may amend this Plan accordingly, without the necessity of obtaining the approval of the stockholders of the Company.

(f) *Form, Modification, Extension and Renewal of Stock Options.* Subject to the terms and conditions and within the limitations of this Plan, Stock Options shall be evidenced by such form of agreement or grant as is approved by the Committee, and the Committee may (i) modify, extend or renew outstanding Stock Options granted under this Plan; provided that the rights of a Participant are not reduced without his consent; provided further, that any such modification, extension or renewal is intended to be structured to comply with Section 409A of the Code, to the extent applicable, and (ii) accept the surrender of outstanding Stock Options (up to the extent not theretofore exercised) and authorize the granting of new Stock Options in substitution therefor (to the extent not theretofore exercised). Notwithstanding the foregoing, unless approved by stockholders of the Company, (i) an outstanding Option or SAR may not be modified to reduce the exercise price thereof; (ii) no new Option or SAR at a lower exercise price or base price may be substituted for a surrendered Option or SAR, and (iii) no other Award may be issued or cash may be paid in exchange for the surrender of an Option or SAR at a time that the exercise or base price of such Option or SAR exceeds the current Fair Market Value of a share of Common Stock or if such new Award or cash has a value in excess of the then in-the-money value of the surrendered Option or SAR, provided that adjustments or substitutions in accordance with Section 4.2 are not subject to this stockholder approval requirement.

(g) *Other Terms and Conditions.* Stock Options may contain such other provisions, which shall not be inconsistent with any of the terms of this Plan, as the Committee shall deem appropriate; provided, however, that Stock Options shall not provide for the automatic grant of the same number of Stock Options as the number of shares of Common Stock used to pay for the exercise price of Stock Option or shares of Common Stock used to pay withholding taxes (*i.e.* , "reloads").

(h) *Detrimental Activity.* Unless otherwise determined by the Committee at grant, (i) in the event the Participant engages in Detrimental Activity prior to any exercise of the Stock Option, all Stock Options (whether vested or unvested) held by the Participant shall thereupon terminate and expire, (ii) as a condition of the exercise of a Stock Option, the Participant shall be required to certify (or shall be deemed to have certified) at the time of exercise in a manner acceptable to the Company that the Participant is in compliance with the terms and conditions of the Plan and that the Participant has not engaged in, and does not intend to engage in, any Detrimental Activity, and (iii) in the event the Participant engages in Detrimental Activity during the one year period following the later of (x) Participant's Termination of Employment or (y) the date the Stock Option is exercised, that any Stock Options shall be immediately forfeited (whether or not then vested) and the Company shall be entitled to recover from the Participant at any time within one year after the later of (x) or (y), and the Participant shall pay over to the Company, an amount equal to any gain realized as a result of the exercise of any Stock Options (whether at the time of exercise or thereafter).

ARTICLE VII

STOCK APPRECIATION RIGHTS

7.1 **Tandem Stock Appreciation Rights.** Stock Appreciation Rights may be granted in conjunction with all or part of any Stock Option (a "Reference Stock Option") granted under this Plan ("Tandem Stock Appreciation Rights"). In the case of a Non-Qualified Stock Option, such rights may be granted either at or after the time of the grant of such Reference Stock Option. In the case of an Incentive Stock Option, such rights may be granted only at the time of the grant of such Reference Stock Option. Consultants shall not be eligible for a grant of Tandem Stock Appreciation Rights granted in conjunction with all or part of an Incentive Stock Option.

7.2 **Terms and Conditions of Tandem Stock Appreciation Rights.** Tandem Stock Appreciation Rights shall be subject to such terms and conditions, not inconsistent with the provisions of this Plan, as shall be determined from time to time by the Committee, including Article XII and the following:

(a) *Term.* A Tandem Stock Appreciation Right or applicable portion thereof granted with respect to a Reference Stock Option shall terminate and no longer be exercisable upon the termination or exercise of the Reference Stock Option, except that, unless otherwise determined by the Committee, in its sole discretion, at the time of grant, a Tandem Stock Appreciation Right granted with respect to less than the full number of shares covered by the Reference Stock Option shall not be reduced until and then only to the extent the exercise or termination of the Reference Stock Option causes the number of shares covered by the Tandem Stock Appreciation Right to exceed the number of shares remaining available and unexercised under the Reference Stock Option.

(b) *Exercisability.* Tandem Stock Appreciation Rights shall be exercisable only at such time or times and to the extent that the Reference Stock Options to which they relate shall be exercisable in accordance with the provisions of Article VI and this Article VII.

(c) *Method of Exercise.* A Tandem Stock Appreciation Right may be exercised by a Participant by surrendering the applicable portion of the Reference Stock Option. Upon such exercise and surrender, the Participant shall be entitled to receive an amount determined in the manner prescribed in this Section 7.2. Stock Options which have been so surrendered, in whole or in part, shall no longer be exercisable to the extent the related Tandem Stock Appreciation Rights have been exercised.

(d) *Payment.* Upon the exercise of a Tandem Stock Appreciation Right, a Participant shall be entitled to receive up to, but not more than, an amount in Common Stock equal in value to the excess of the Fair Market Value of one share of Common Stock over the option price per share specified in the Reference Stock Option, multiplied by the number of shares in respect of which the Tandem Stock Appreciation Right shall have been exercised.

(e) *Deemed Exercise of Reference Stock Option* Upon the exercise of a Tandem Stock Appreciation Right, the Reference Stock Option or part thereof to which such Stock Appreciation Right is related shall be deemed to have been exercised for the purpose of the limitation set forth in Article IV of this Plan on the number of shares of Common Stock to be issued under this Plan.

(f) *Detrimental Activity.* Unless otherwise determined by the Committee at grant, (i) in the event the Participant engages in Detrimental Activity prior to any exercise of Tandem Stock Appreciation Rights, all Tandem Stock Appreciation Rights (whether vested or unvested) held by the Participant shall thereupon terminate and expire, (ii) as a condition of the exercise of a Tandem Stock Appreciation Right, the Participant shall be required to certify (or shall be deemed to have certified) at the time of exercise in a manner acceptable to the Company that the Participant is in compliance with the terms and conditions of the Plan and that the Participant has not engaged in, and does not intend to engage in, any Detrimental Activity, and (iii) in the event the Participant engages in Detrimental Activity during the one year period following the later of (x) Participant's Termination of Employment or (y) the date the Tandem Stock Appreciation Right is exercised, that any Tandem Stock Appreciation Rights shall be immediately forfeited (whether or not then vested) and the Company shall be entitled to recover from the Participant at any time within one year after the later of (x) or (y), and the Participant shall pay over to the Company, an amount equal to any gain realized as a result of the exercise (whether at the time of exercise or thereafter).

7.3 Non-Tandem Stock Appreciation Rights. Non-Tandem Stock Appreciation Rights may also be granted without reference to any Stock Option granted under this Plan.

7.4 Terms and Conditions of Non-Tandem Stock Appreciation Rights. Non-Tandem Stock Appreciation Rights shall be subject to such terms and conditions, not inconsistent with the provisions of this Plan, as shall be determined from time to time by the Committee, including Article XII and the following:

(a) *Term.* The term of each Non-Tandem Stock Appreciation Right shall be fixed by the Committee, but shall not be greater than ten (10) years after the date the right is granted.

(b) *Exercisability.* Non-Tandem Stock Appreciation Rights shall be exercisable at such time or times and subject to such terms and conditions as shall be determined by the Committee at grant. If the Committee provides, in its discretion, that any such right is exercisable subject to certain limitations (including, without limitation, that it is exercisable only in installments or within certain time periods), the Committee may waive such limitation on the exercisability at any time at or after grant in whole or in part (including, without limitation, waiver of the installment exercise provisions or acceleration of the time at which rights may be exercised), based on such factors, if any, as the Committee shall determine, in its sole discretion.

(c) *Method of Exercise.* Subject to whatever installment exercise and waiting period provisions apply under subsection (b) above, Non-Tandem Stock Appreciation Rights may be exercised in whole or in part at any time and from time to time during the term, by giving written notice of exercise to the Company specifying the number of Non-Tandem Stock Appreciation Rights to be exercised.

(d) *Payment.* Upon the exercise of a Non-Tandem Stock Appreciation Right a Participant shall be entitled to receive, for each right exercised, up to, but no more than, an amount in cash and/or Common Stock (as chosen by the Committee in its sole discretion at grant, or thereafter if no rights of a Participant are reduced) equal in value to the excess of the Fair Market Value of one share of Common Stock on the date the right is exercised over the Fair Market Value of one share of Common Stock on the date the right was awarded to the Participant; provided, that if payment is made in cash such payment shall be structured to comply with Section 409A of the Code, to the extent applicable.

(e) *Detrimental Activity.* Unless otherwise determined by the Committee at grant, (i) in the event the Participant engages in Detrimental Activity prior to any exercise of Non-Tandem Stock Appreciation Rights, all Non-Tandem Stock Appreciation Rights (whether vested or unvested) held by the Participant shall thereupon terminate and expire, (ii) as a condition of the exercise of a Tandem Stock Appreciation Right, the Participant shall be required to certify (or shall be deemed to have certified) at the time of exercise in a manner acceptable to the Company that the Participant is in compliance with the terms and conditions of the Plan and that the Participant has not engaged in, and does not intend to engage in, any Detrimental Activity, and (iii) in the event the Participant engages in Detrimental Activity during the one year period following the later of (x) Participant's Termination of Employment or (y) the date the Non-Tandem Stock Appreciation Right is exercised, that any Non-Tandem Stock Appreciation Rights shall be immediately forfeited (whether or not then vested) and the Company shall be entitled to recover from the Participant at any time within one year after the later of (x) or (y), and the Participant shall pay over to the Company, an amount equal to any gain realized as a result of the exercise (whether at the time of exercise or thereafter).

7.5 *Limited Stock Appreciation Rights.* The Committee may, in its sole discretion, grant a Tandem Stock Appreciation Right or a Non-Tandem Stock Appreciation Right as a Limited Stock Appreciation Right. Limited Stock Appreciation Rights may be exercised only upon the occurrence of a Change in Control or such other event as the Committee may, in its sole discretion, designate at the time of grant or thereafter. Upon the exercise of limited Stock Appreciation Rights, except as otherwise provided in an Award agreement, the Participant shall receive in cash or Common Stock, as determined by the Committee, an amount equal to the amount (i) set forth in Section 7.2(d) with respect to Tandem Stock Appreciation Rights, or (ii) set forth in Section 7.4(d) with respect to Non-Tandem Stock Appreciation Rights, as applicable.

ARTICLE VIII

RESTRICTED STOCK

8.1 Awards of Restricted Stock. Shares of Restricted Stock may be issued to Eligible Employees or Consultants either alone or in addition to other Awards granted under this Plan. The Committee shall determine the eligible persons to whom, and the time or times at which, grants of Restricted Stock will be made, the number of shares to be awarded, the price (if any) to be paid by the recipient (subject to Section 8.2), the time or times within which such Awards may be subject to forfeiture, the vesting schedule and rights to acceleration thereof, and all other terms and conditions of the Awards. The Committee may condition the grant or vesting of Restricted Stock upon the attainment of specified performance goals, including established Performance Goals in accordance with Section 162(m) of the Code, or such other factors as the Committee may determine, in its sole discretion.

8.2 Awards and Certificates. An Eligible Employee or Consultant selected to receive Restricted Stock shall not have any right with respect to such Award, unless and until such Participant has delivered to the Company a fully executed copy of the applicable Award agreement relating thereto and has otherwise complied with the applicable terms and conditions of such Award. Further, such Award shall be subject to the following conditions:

(a) *Purchase Price.* The purchase price of Restricted Stock shall be fixed by the Committee. Subject to Section 4.3, the purchase price for shares of Restricted Stock may be zero to the extent permitted by applicable law, and, to the extent not so permitted, such purchase price may not be less than par value.

(b) *Acceptance.* Awards of Restricted Stock must be accepted within a period of 90 days (or such shorter period as the Committee may specify at grant) after the Award date by executing a Restricted Stock Award agreement and by paying whatever price (if any) the Committee has designated thereunder.

(c) *Legend.* Each Participant receiving shares of Restricted Stock shall be issued a stock certificate in respect of such shares of Restricted Stock, unless the Committee elects to use another system, such as book entries by the transfer agent, as evidencing ownership of shares of Restricted Stock. Such certificate shall be registered in the name of such Participant, and shall bear an appropriate legend referring to the terms, conditions, and restrictions applicable to such Award, substantially in the following form:

"The anticipation, alienation, attachment, sale, transfer, assignment, pledge, encumbrance or charge of the shares of stock represented hereby are subject to the terms and conditions (including forfeiture) of The Comtech Telecommunications Corp. 2000 Stock Incentive Plan (the "Plan") and an Agreement entered into between the registered owner and the Company dated _____. Copies of such Plan and Agreement are on file at the principal office of the Company."

(d) *Custody.* The Committee may require that any stock certificates evidencing such shares be held in custody by the Company until the restrictions thereon shall have lapsed and that, as a condition to the grant of such Award of Restricted Stock, the Participant shall have delivered a duly signed stock power, endorsed in blank, relating to the Common Stock covered by such Award.

8.3 Restrictions and Conditions on Restricted Stock Awards. Subject to Section 4.5, shares of Restricted Stock awarded pursuant to this Plan shall be subject to Article XII and the following restrictions and conditions:

(a) *Restriction Period; Vesting and Acceleration of Vesting.* (i) The Participant shall not be permitted to Transfer shares of Restricted Stock awarded under this Plan during the period or periods set by the Committee (the "Restriction Period") commencing on the date of such Award, as set forth in the Restricted Stock Award agreement and such agreement shall set forth a vesting schedule and any events which would accelerate vesting of the shares of Restricted Stock. Within these limits, based on service, attainment of Performance Goals pursuant to Section 8.3(a)(ii) below and/or such other factors or criteria as the Committee may determine in its sole discretion, the Committee may provide for the lapse of such restrictions in installments in whole or in part, or may accelerate the vesting of all or any part of any Restricted Stock Award and/or waive the deferral limitations for all or any part of any Restricted Stock Award.

(ii) *Objective Performance Goals, Formulae or Standards* If the grant of shares of Restricted Stock or the lapse of restrictions is based on the attainment of Performance Goals, the Committee shall establish the Performance Goals and the applicable vesting percentage of the Restricted Stock Award applicable to each Participant or class of Participants in writing prior to the beginning of the applicable fiscal year or at such later date as otherwise determined by the Committee and while the outcome of the Performance Goals are substantially uncertain. Such Performance Goals may incorporate provisions for disregarding (or adjusting for) changes in accounting methods, corporate transactions (including, without limitation, dispositions and acquisitions) and other similar type events or circumstances. With regard to a Restricted Stock Award that is intended to comply with Section 162(m) of the Code, to the extent any such provision would create impermissible discretion under Section 162(m) of the Code or otherwise violate Section 162(m) of the Code, such provision shall be of no force or effect. The applicable Performance Goals shall be based on one or more of the Performance Criteria set forth in Exhibit A hereto.

(b) *Rights as Stockholder.* Except as provided in this subsection (b) and subsection (a) above and as otherwise determined by the Committee, the Participant shall have, with respect to the shares of Restricted Stock, all of the rights of a holder of shares of Common Stock of the Company including, without limitation, the right to receive any dividends, the right to vote such shares and, subject to and conditioned upon the full vesting of shares of Restricted Stock, the right to tender such shares. The Committee may, in its sole discretion, determine at the time of grant that the payment of dividends shall be deferred until, and conditioned upon, the expiration of the applicable Restriction Period.

(c) *Lapse of Restrictions.* If and when the Restriction Period expires without a prior forfeiture of the Restricted Stock subject to such Restriction Period, the certificates for such shares shall be delivered to the Participant. All legends shall be removed from said certificates at the time of delivery to the Participant except as otherwise required by applicable law.

(d) *Detrimental Activity.* Unless otherwise determined by the Committee at grant, each Award of Restricted Stock shall provide that in the event the Participant engages in Detrimental Activity prior to, or during the one year period following the later of Termination of Employment or any vesting of Restricted Stock, the Committee may direct (at any time within one year thereafter) that all unvested Restricted Stock shall be immediately forfeited to the Company and that the Participant shall pay over to the Company an amount equal to the gain realized at the time of vesting of any Restricted Stock.

ARTICLE IX

PERFORMANCE SHARES

9.1 Award of Performance Shares. Performance Shares may be awarded either alone or in addition to other Awards granted under this Plan. Subject to Section 4.5, the Committee shall, in its sole discretion, determine the Eligible Employees and Consultants to whom and the time or times at which such Performance Shares shall be awarded, the duration of the period (the "Performance Period"), during which, and the conditions under which, a Participant's right to Performance Shares will be vested and the other terms and conditions of the Award in addition to those set forth in Section 9.2.

Each Performance Share awarded shall be referenced to one share of Common Stock. Except as otherwise provided herein, the Committee shall condition the right to payment of any Performance Share Award upon the attainment of objective Performance Goals established pursuant to Section 9.2(c) below and such other non-performance based factors or criteria as the Committee may determine in its sole discretion.

9.2 Terms and Conditions. A Participant selected to receive Performance Shares shall not have any rights with respect to such Awards, unless and until such Participant has delivered a fully executed copy of a Performance Share Award agreement evidencing the Award to the Company and has otherwise complied with the following terms and conditions:

(a) *Earning of Performance Share Award.* At the expiration of the applicable Performance Period, the Committee shall determine the extent to which the Performance Goals established pursuant to Section 9.2(c) are achieved and the percentage of each Performance Share Award that has been earned.

(b) *Payment.* Following the Committee's determination in accordance with subsection (a) above, shares of Common Stock or, as determined by the Committee in its sole discretion, the cash equivalent of such shares shall be delivered to the Participant, in an amount equal to such Participant's earned Performance Share Award. Notwithstanding the foregoing, except as may be set forth in the agreement covering the Award, the Committee may, in its sole discretion and in accordance with Section 162(m) of the Code, award an amount less than the earned Performance Share Award and/or subject the payment of all or part of any Performance Share Award to additional vesting and forfeiture conditions as it deems appropriate.

(c) *Objective Performance Goals, Formulae or Standards.* The Committee shall establish the objective Performance Goals for the earning of Performance Shares based on a Performance Period applicable to each Participant or class of Participants in writing prior to the beginning of the applicable Performance Period or at such later date as permitted under Section 162(m) of the Code and while the outcome of the Performance Goals are substantially uncertain. Such Performance Goals may incorporate, if and only to the extent permitted under Section 162(m) of the Code, provisions for disregarding (or adjusting for) changes in accounting methods, corporate transactions (including, without limitation, dispositions and acquisitions) and other similar type events or circumstances. To the extent any such provision would create impermissible discretion under Section 162(m) of the Code or otherwise violate Section 162(m) of the Code, such provision shall be of no force or effect. The applicable Performance Goals shall be based on one or more of the Performance Criteria set forth in Exhibit A hereto.

(d) *Dividends and Other Distributions* At the time of any Award of Performance Shares, the Committee may, in its sole discretion, award an Eligible Employee or Consultant the right to receive the cash value of any dividends and other distributions that would have been received as though the Eligible Employee or Consultant had held each share of Common Stock referenced by the earned Performance Share Award from such date as the Committee may specify (but not earlier than the beginning of the Performance Period) until the actual distribution to such Participant of the related share of Common Stock or cash value thereof. Such amounts, if awarded, shall be paid to the Participant as and when the shares of Common Stock or cash value thereof are distributed to such Participant and, at the discretion of the Committee, may be paid with interest from the applicable dividend payment date until such amounts and any earnings thereon are distributed. The applicable rate of interest shall be determined by the Committee in its sole discretion; provided, however, that for each fiscal year or part thereof, the applicable interest rate shall not be greater than the Treasury Rate. Alternatively, the Committee may provide that any cash dividend equivalents shall be converted to additional Performance Shares as of the applicable dividend payment date, to be settled by delivery of shares of Common Stock or cash value thereof.

(e) *Detrimental Activity* Unless otherwise determined by the Committee at grant, each Award of Performance Shares shall provide that in the event the Participant engages in Detrimental Activity prior to, or during the one year period following the later of Termination of Employment or any vesting of Performance Shares, the Committee may direct (at any time within one year thereafter) that all unvested Performance Shares shall be immediately forfeited to the Company and that the Participant shall pay over to the Company an amount equal to the gain realized at the time of vesting of any Performance Shares.

ARTICLE X

CASH INCENTIVE AWARDS AND PERFORMANCE UNITS

10.1 *Cash Incentive Awards* Cash incentive Awards may be awarded either alone or in addition to other Awards granted under this Plan. The Committee shall, in its sole discretion, determine the Eligible Employees and Consultants to whom and the time or times at which such cash incentive Awards shall be awarded, the duration of the period (the "Performance Cycle") during which, and the conditions under which, a Participant shall earn the cash incentive Award and the other terms and conditions of the Award in addition to those set forth in Section 10.3. Cash incentive Awards granted with a Performance Cycle of one year shall be designated as "Annual Incentive Awards."

Cash incentive Awards shall be awarded in a dollar amount or a formula that will ultimately yield a dollar amount, as determined by the Committee. Except as otherwise provided herein, the Committee shall condition the right to payment of any cash incentive Award upon the attainment of at least one objective Performance Goal established pursuant to Section 10.3(a) and such other factors or criteria as the Committee may determine in its sole discretion.

Cash incentive Awards under this Section 10.1 may be settled and paid only if stockholders of the Company previously have approved the amendment and restatement of the Plan containing the authorization of cash incentive Awards in this Section 10.1.

10.2 Awards of Performance Units. Performance Units may be awarded either alone or in addition to other Awards granted under this Plan. Subject to Section 4.5, the Committee shall, in its sole discretion, determine the Eligible Employees and Consultants to whom and the time or times at which such Performance Units shall be awarded, the duration of the period (the "Performance Unit Cycle" during which, and the conditions under which, a Participant's right to Performance Units will be vested and the other terms and conditions of the Award in addition to those set forth in Section 10.3.

Performance Units shall be awarded in a dollar amount determined by the Committee and shall be converted to a referenced number of shares of Common Stock based on the Fair Market Value of shares of Common Stock at the conversion date designated by the Committee (such designation may occur at any time, but no conversion may reference a market price from a date preceding the designation date).

Upon conversion, each Performance Unit shall be referenced to one share of Common Stock. Except as otherwise provided herein, the Committee shall condition the right to payment of any Performance Unit Award upon the attainment of objective Performance Goals established pursuant to Section 10.3(a) and such other non-performance based factors or criteria as the Committee may determine in its sole discretion. The cash value of any fractional Performance Unit Award subsequent to conversion to shares of Common Stock shall be treated as a dividend or other distribution under Section 10.3(e) to the extent any portion of the Performance Unit Award is earned.

10.3 Terms and Conditions. The cash incentive Awards or Performance Units awarded pursuant to this Article X shall be subject to the following terms and conditions:

(a) *Performance Goals.* The Committee shall establish the objective Performance Goal or Goals for the earning of cash incentive Awards or Performance Units based on a Performance Cycle or Performance Unit Cycle applicable to each Participant or class of Participants in writing prior to the beginning of the applicable Performance Cycle or Performance Unit Cycle or at such later date as permitted under Section 162(m) of the Code and while the outcome of the Performance Goal or Goals is substantially uncertain. Such Performance Goals may incorporate, if and only to the extent permitted under Section 162(m) of the Code, provisions for disregarding (or adjusting for) changes in accounting methods, corporate transactions (including, without limitation, dispositions and acquisitions) and other similar type events or circumstances. To the extent any such provision would create impermissible discretion under Section 162(m) of the Code or otherwise violate Section 162(m) of the Code, such provision shall be of no force or effect. The applicable Performance Goals shall be based on one or more of the Performance Criteria set forth in Exhibit A hereto.

(b) *Vesting.* At the expiration of the Performance Cycle or Performance Unit Cycle, the Committee shall determine and certify in writing the extent to which the Performance Goals have been achieved, and the corresponding extent to which a cash incentive Award or a Performance Unit has been earned in respect of each Participant.

(c) *Payment.* Subject to the applicable provisions of the Award agreement and this Plan, at the expiration of the Performance Cycle or Performance Unit Cycle or any vesting period extending beyond the Performance Cycle or Performance Unit Cycle, cash or, with respect to Performance Units, shares of Common Stock (as the Committee may determine in its sole discretion at grant, or thereafter if no rights of a Participant are reduced), shall be delivered to the Participant in payment of any earned and vested cash incentive Award or any earned and vested Performance Units covered by the Performance Unit Award. Notwithstanding the foregoing, except as may be set forth in the agreement covering the Award, the Committee may, in its sole discretion, and to the extent applicable and permitted under Section 162(m) of the Code, award an amount less than the earned cash incentive Award or earned Performance Unit Award and/or subject the payment of all or part of any such Award to additional vesting and forfeiture conditions or conditions mandating the deferral of settlement of the Award as it deems appropriate. If an Award is deferred such Award shall not increase (between the date on which the Award is credited to any deferred compensation program applicable to such Participant and the payment date) by an amount that would result in such deferral being deemed as an "increase in the amount of compensation" under Section 162(m) of the Code.

(d) *Accelerated Vesting.* Subject to Section 4.5, based on service, performance and/or such other factors or criteria, if any, as the Committee may determine, the Committee may, at or after grant, accelerate the date of earning or vesting of all or any part of any cash incentive Award or Performance Unit Award and/or waive the deferral limitations for all or any part of such Award, except that no acceleration or waiver may affect the time of settlement of an Award that constitutes a deferral of compensation under Section 409A of the Code except as permitted under applicable regulations and guidance under Section 409A.

(e) *Dividends and Other Distributions* At the time of any Award of Performance Units, the Committee may, in its sole discretion, award an Eligible Employee or Consultant the right to receive the cash value of any dividends and other distributions that would have been received as though the Eligible Employee or Consultant had held each share of Common Stock referenced by the earned Performance Unit Award from such date as the Committee may specify (but not earlier than the beginning of the Performance Cycle or Performance Unit Cycle) until the actual distribution to such Participant of the related share of Common Stock or cash value thereof. Such amounts, if awarded, shall be paid to the Participant as and when the shares of Common Stock or cash value thereof are distributed to such Participant and, at the discretion of the Committee, may be paid with interest from the applicable dividend payment date until such amounts and any earnings thereon are distributed. The applicable rate of interest shall be determined by the Committee in its sole discretion; provided, however, that for each fiscal year or part thereof, the applicable interest rate shall not be greater than the Treasury Rate.

(f) *Detrimental Activity*. Unless otherwise determined by the Committee at grant, each Award of Performance Units shall provide that in the event the Participant engages in Detrimental Activity prior to, or during the one year period following the later of Termination of Employment or any vesting of Performance Units, the Committee may direct (at any time within one year thereafter) that all unvested Performance Units shall be immediately forfeited to the Company and that the Participant shall pay over to the Company an amount equal to the gain realized at the time of vesting of any Performance Units which had vested in the period referred to above.

ARTICLE XI

OTHER STOCK-BASED AWARDS

11.1 Other Awards. Other Stock-Based Awards (including, without limitation, Restricted Stock Units and Stock Units) may be granted either alone or in addition to or in tandem with Stock Options, Stock Appreciation Rights, Restricted Stock, Performance Share or Performance Units.

Subject to the provisions of this Plan, the Committee shall have authority to determine the persons to whom and the time or times at which such Awards shall be made, the number of shares of Common Stock to be awarded pursuant to such Awards, and all other conditions of the Awards. The Committee may also provide for the grant of Common Stock under such Awards upon the completion of a specified performance period.

11.2 Terms and Conditions. Subject to Section 4.5, Other Stock-Based Awards made pursuant to this Article XI shall be subject to the following terms and conditions:

(a) *Non-Transferability.* Subject to the applicable provisions of the Award agreement and this Plan, shares of Common Stock subject to Awards made under this Article XI may not be Transferred prior to the date on which the shares are issued, or, if later, the date on which any applicable restriction, performance or deferral period lapses.

(b) *Dividends.* Unless otherwise determined by the Committee at the time of Award, subject to the provisions of the Award agreement and this Plan, the recipient of an Award under this Article XI shall be entitled to receive, currently or on a deferred basis, dividends or dividend equivalents with respect to the number of shares of Common Stock covered by the Award, as determined at the time of the Award by the Committee, in its sole discretion. Dividend equivalents shall confer upon the recipient the right to be credited, as of dividend payment dates, with the equivalent value (in cash or shares) of any dividends and other distributions that would have been received as though the Eligible Employee or Consultant had held each share of Common Stock referenced by the Award under this Article XI from such date as the Committee may specify (but not earlier than the Grant Date of the Award) until the date such Award vests, is distributed or expires. Dividend equivalents accrued as a cash obligation and to be paid to the Participant after the dividend payment date may, at the discretion of the Committee, be paid with interest from the applicable dividend payment date until such amounts and any earnings thereon are distributed. The applicable rate of interest shall be determined by the Committee in its sole discretion; provided, however, that for each fiscal year or part thereof, the applicable interest rate shall not be greater than the Treasury Rate. Alternatively, the Committee may provide any cash dividend equivalents shall be converted to additional Other Stock-Based Awards as of the applicable dividend payment date, to be settled by delivery of shares of Common Stock or cash value thereof.

(c) *Vesting.* Any Award under this Article XI and any Common Stock covered by any such Award shall vest or be forfeited to the extent so provided in the Award agreement, as determined by the Committee, in its sole discretion.

(d) *Waiver of Limitation.* The Committee may, in its sole discretion, waive in whole or in part any or all of the limitations imposed hereunder (if any) with respect to any or all of an Award under this Article XI.

(e) *Price.* Common Stock or Other Stock-Based Awards issued on a bonus basis under this Article XI may be issued for no cash consideration; Common Stock or Other Stock-Based Awards purchased pursuant to a purchase right awarded under this Article XI shall be priced as determined by the Committee. Subject to Section 4.3, the purchase price of shares of Common Stock or Other Stock-Based Awards may be zero to the extent permitted by applicable law, and, to the extent not so permitted, such purchase price may not be less than par value. The purchase of shares of Common Stock or Other Stock-Based Awards may be made on either an after-tax or pre-tax basis, as determined by the Committee; provided, however, that if the purchase is made on a pre-tax basis, such purchase shall be made pursuant to a deferred compensation program established by the Committee, which will be deemed a part of this Plan.

(f) *Detrimental Activity.* Other Stock-Based Awards under this Article XI and any Common Stock covered by any such Award shall be forfeited in the event the Participant engages in Detrimental Activity under such conditions set forth by the Committee in the Award agreement.

ARTICLE XII

NON-TRANSFERABILITY AND TERMINATION OF EMPLOYMENT/CONSULTANCY

12.1 Non-Transferability. Except as otherwise specifically provided by this Section 12.1 and by applicable law, no Award may be Transferred by the Participant other than by will or by the laws of descent and distribution, and any such purported Transfer shall be void and unenforceable against the Company or any of its Affiliates; provided, that the designation of a beneficiary shall not constitute a Transfer.

(a) Each Award, to the extent exercisable, shall be exercisable only by the Participant during the Participant's lifetime, or, if permissible under applicable law, by the Participant's legal guardian or representative.

(b) Notwithstanding the foregoing, the Committee may in its sole discretion permit Awards (other than Incentive Stock Options) to be transferred by the Participant, without consideration, subject to such rules as the Committee may adopt, to (i) any person who is a Family Member of the Participant; (ii) a trust solely for the benefit of the Participant or the Participant's Family Members; (iii) a partnership or limited liability company whose only partners or members are the Participant and the Participant's Family Members and where such persons hold more than 50 percent of the voting interests; or (iv) any other transferee as may be approved either (A) by the Board or the Committee, or (B) as provided in the applicable Award agreement (each transferee described in clause (i), (ii), (iii) or (iv) above is hereinafter referred to as a "Permitted Transferee"); provided, that the Participant provides the Committee advance written notice describing the terms and conditions of the proposed transfer and the Committee notifies the Participant in writing that such transfer would comply with the requirements of the Plan; and provided, further, an Award that is a 409A Covered Award (as defined in Section 17.13(b)) (including, for example, Stock Units or Restricted Stock Units granted to Non-Employee Directors or Share Units or Long-Term Performance Shares granted to Eligible Employees) shall not be transferred more than 30 days prior to the date such Award is settled.

(c) The terms of any Award transferred in accordance with Section 12.1(b) shall apply to the Permitted Transferee, and any reference in the Plan or in any applicable Award Agreement to the "Participant" shall be deemed to refer to the Permitted Transferee (including, but not limited to, the ability to exercise an Award, if applicable), except that (i) no Permitted Transferee shall be entitled to Transfer any Award, other than by will or the laws of descent and distribution; (ii) neither the Committee nor the Company shall be required to provide any notice to a Permitted Transferee, whether or not such notice is or would otherwise have been required to be given to the Participant under the Plan or otherwise; (iii) the consequences of the Termination of the Participant under the terms of the Plan and the applicable Award agreement shall continue to apply with respect to the transferred Award, including, without limitation, that a Stock Option or Stock Appreciation Right shall be exercisable by the Permitted Transferee only to the extent, and for the periods, specified in the Plan and the applicable Award agreement; and (iv) any non-competition, non-solicitation, non-disparagement, non-disclosure, or other restrictive covenants contained in any Award agreement or other agreement between the Participant and the Company or any Affiliate shall continue to apply to the Participant and the consequences of the violation of such covenants shall continue to be applied with respect to the transferred Award, including, without limitation, any forfeiture provisions as may be set forth in the Plan or the applicable Award

agreement and the terms of any recoupment or clawback policy of the Company as may be in effect from time to time.

12.2 Termination of Employment or Termination of Consultancy. The following rules apply with regard to the Termination of Employment or Termination of Consultancy of a Participant:

(a) *Rules Applicable to Stock Options and Stock Appreciation Rights* Unless otherwise determined by the Committee at grant or, if no rights of the Participant are reduced, thereafter:

(i) *Termination by Reason of Death, Disability or Retirement.* If a Participant's Termination of Employment or Termination of Consultancy is by reason of death, Disability or Retirement, all Stock Options and Stock Appreciation Rights held by such Participant may be exercised, to the extent exercisable at the Participant's Termination of Employment or Termination of Consultancy, by the Participant (or, in the case of death, by the legal representative of the Participant's estate) at any time within a period of one year from the date of such Termination of Employment or Termination of Consultancy, but in no event beyond the expiration of the stated terms of such Stock Options and Stock Appreciation Rights; provided, however, that, in the case of Retirement, if the Participant dies within such exercise period, all unexercised Stock Options and Non-Tandem Stock Appreciation Rights held by such Participant shall thereafter be exercisable, to the extent to which they were exercisable at the time of death, for a period of one year from the date of such death, but in no event beyond the expiration of the stated term of such Stock Options and Non-Tandem Stock Appreciation Rights.

(ii) *Involuntary Termination Without Cause.* If a Participant's Termination of Employment or Termination of Consultancy is by involuntary termination without Cause, all Stock Options and Stock Appreciation Rights held by such Participant may be exercised, to the extent exercisable at Termination of Employment or Termination of Consultancy, by the Participant at any time within a period of 90 days from the date of such Termination of Employment or Termination of Consultancy, but in no event beyond the expiration of the stated term of such Stock Options and Stock Appreciation Rights.

(iii) *Voluntary Termination.* If a Participant's Termination of Employment or Termination of Consultancy is voluntary (other than a voluntary termination described in Section 12.2(a)(iv)(B) below), all Stock Options and Stock Appreciation Rights held by such Participant may be exercised, to the extent exercisable at Termination of Employment or Termination of Consultancy, by the Participant at any time within a period of 30 days from the date of such Termination of Employment or Termination of Consultancy, but in no event beyond the expiration of the stated terms of such Stock Options and Stock Appreciation Rights. Notwithstanding the foregoing, effective for Stock Options and Stock Appreciation Rights granted on or after October 19, 2000, if a Participant's Termination of Employment or Termination of Consultancy is voluntary, all Stock Options and Stock Appreciation Rights held by such Participant shall thereupon terminate and expire as of the date of such Termination of Employment or Termination of Consultancy.

(iv) *Termination for Cause.* If a Participant's Termination of Employment or Termination of Consultancy (A) is for Cause or (B) is a voluntary termination (as provided in subsection (iii) above) within 90 days after an event which would be grounds for a Termination of Employment or Termination of Consultancy for Cause, all Stock Options and Stock Appreciation Rights held by such Participant shall thereupon terminate and expire as of the date of such Termination of Employment or Termination of Consultancy.

(b) *Rules Applicable to Restricted Stock.* Subject to the applicable provisions of the Restricted Stock Award agreement and this Plan, upon a Participant's Termination of Employment or Termination of Consultancy for any reason during the relevant Restriction Period, all Restricted Stock still subject to restriction will vest or be forfeited in accordance with the terms and conditions established by the Committee at grant or thereafter.

(c) *Rules Applicable to Performance Shares and Performance Units.* Subject to the applicable provisions of the Award agreement and this Plan, upon a Participant's Termination of Employment or Termination of Consultancy for any reason during the Performance Period, the Performance Unit Cycle or other period or restriction as may be applicable for a given Award, the Performance Shares or Performance Units in question will vest (to the extent applicable and to the extent permissible under Section 162(m) of the Code) or be forfeited in accordance with the terms and conditions established by the Committee at grant or thereafter.

(d) *Rules Applicable to Other Stock-Based Awards.* Subject to the applicable provisions of the Award agreement and this Plan, upon a Participant's Termination of Employment or Termination of Consultancy for any reason during any period or restriction as may be applicable for a given Award, the Other Stock-Based Awards in question will vest or be forfeited in accordance with the terms and conditions established by the Committee at grant or thereafter.

ARTICLE XIII

NON-EMPLOYEE DIRECTOR GRANTS

13.1 Awards. The terms of this Article XIII shall apply only to Awards of Stock Options, Restricted Stock Units, Restricted Stock and Stock Units granted to Non-Employee Directors.

13.2 Stock Option Grants. Without further action by the Board or the stockholders of the Company, each Non-Employee Director shall, subject to the terms of the Plan, be granted:

(a) Initial Option Grant.

(i) Effective January 13, 2012 through December 10, 2015 (the "December Effective Date"), Stock Options to purchase shares of Common Stock as of the date the Non-Employee Director begins service as a Non-Employee Director on the Board (such date, the "Service Commencement Date"), provided that the Non-Employee Director began service on or after the Effective Date, in an amount determined as follows (subject to increase or decrease pursuant to Section 4.2): the number of shares of Common Stock subject to such Stock Options shall be equal to the product of 15,000 and a fraction, the numerator of which shall be equal to 365 minus the number of days that have elapsed since the previous "NED Grant Date" (as defined below), and the denominator of which is 365; and

(ii) Effective after the December Effective Date, Stock Options to purchase shares of Common Stock as of the Service Commencement Date, provided that the Non-Employee Director began service after the Effective Date, in an amount (subject to increase or decrease pursuant to Section 4.2) that is the product of (A) Stock Options to purchase that number of shares of Common Stock having a Black-Scholes value of \$100,000 as of the Service Commencement Date, and (B) a fraction, the numerator of which shall be equal to 365 minus the number of days that have elapsed since the previous NED Grant Date, and the denominator of which is 365 (with any fractional share rounded down to the nearest whole share), provided, however, effective on and after August 9, 2016 (the "August Effective Date"), Stock Options to purchase shares of Common Stock as of the Service Commencement Date, provided that the Non-Employee Director began service on or after the August Effective Date, in an amount (subject to increase or decrease pursuant to Section 4.2) that is the product of (A) Stock Options to purchase that number of shares of Common Stock having a Black-Scholes value of \$120,000 as of the Service Commencement Date, and (B) a fraction, the numerator of which shall be equal to 365 minus the number of days that have elapsed since the previous NED Grant Date, and the denominator of which is 365 (with any fractional share rounded down to the nearest whole share); and

(b) Annual Option Grant.

(i) Subject to Sections 13.5(a), 13.5(b) and 13.6(a), effective January 13, 2012 through the December Effective Date, in addition to Stock Options granted pursuant to (a) above, Stock Options to purchase 15,000 shares of Common Stock (subject to increase or decrease pursuant to Section 4.2) as of June 2 of each calendar year or, if a different date, the date the Company grants annual equity awards under the Plan to the employees of the Company (such date, the "NED Grant Date") commencing June 2, 2011 through the December Effective Date, provided he or she has not, as of such NED Grant Date, experienced a Termination of Directorship; and

(ii) Subject to Sections 13.5(a), 13.5(b) and 13.6(a), (x) effective after the December Effective Date, in addition to Stock Options granted pursuant to (a) above, Stock Options to purchase that number of shares of Common Stock having a Black-Scholes value of \$100,000 (subject to increase or decrease pursuant to Section 4.2) as of June 2 of each calendar year or, if a different date, the NED Grant Date commencing after the December Effective Date, provided he or she has not, as of such NED Grant Date, experienced Termination of Directorship and (y) effective from and after the August Effective Date, in addition to Stock Options granted pursuant to (a) above, Stock Options to purchase that number of shares of Common Stock having a Black-Scholes value of \$120,000 (subject to increase or decrease pursuant to Section 4.2) as of June 2 of each calendar year or, if a different date, the NED Grant Date commencing on or after the August Effective Date, provided that, with respect to each calendar year commencing with the 2020 calendar year, each Non-Employee Director shall be granted Stock Options to purchase that number of shares of Common Stock having a Black-Scholes value of up to \$220,000 (subject to increase or decrease pursuant to Section 4.2) pursuant to this Section 13.2(b)(ii), as determined by the Committee, and provided further, that he or she has not, as of such NED Grant Date, experienced a Termination of Directorship. The applicable number of Stock Options granted each calendar year to a Non-Employee Director pursuant to Section 13.2(b)(i) or (ii) is hereinafter referred to as an "Annual Option."

13.3 Non-Qualified Stock Option. Stock Options granted under this Article XIII shall be Non-Qualified Stock Options.

13.4 Terms of Stock Options. Stock Options granted under this Article XIII shall be subject to the following terms and conditions, and shall be in such form and contain such additional terms and conditions, not inconsistent with the terms of this Plan, as the Board shall deem desirable:

(a) *Stock Option Price* The Stock Option price per share of Common Stock purchasable under a Stock Option shall equal 100% of the Fair Market Value of the share of Common Stock on the NED Grant Date.

(b) *Stock Option Term*. The term of each Stock Option granted (i) prior to August 1, 2005, shall be ten (10) years, (ii) on or after August 1, 2005 and prior to the December Effective Date, shall be five (5) years, and (iii) on or after the December Effective Date, shall be five (5) years unless otherwise determined by the Committee at or prior to grant, provided that in no event shall the term of any Stock Option exceed ten (10) years.

(c) *Exercisability.* Stock Options granted to Non-Employee Directors pursuant to Section 13.2 shall vest and become exercisable (i) for Stock Options granted prior to August 1, 2005, on the first anniversary of the NED Grant Date, (ii) for Stock Options granted on or after August 1, 2005 and prior to the December Effective Date, in installments over a three (3) year period commencing on the NED Grant Date at the rate of 25% effective on the first and second anniversaries of the NED Grant Date and 50% on the third anniversary of the NED Grant Date, (iii) for Stock Options granted on or after the December Effective Date, and prior to August 9, 2022 (the "August 2022 Effective Date"), unless otherwise determined by the Committee at or prior to grant, in installments over a three (3) year period commencing on the NED Grant Date at the rate of 25% effective on the first and second anniversaries of the NED Grant Date and 50% on the third anniversary of the NED Grant Date, and (iv) for Stock Options granted on or after the August 2022 Effective Date, as determined by the Committee at or prior to grant; in each case, provided that, except as otherwise determined by the Committee at or prior to grant with respect to any Stock Option granted on or after the December Effective Date, or except as otherwise specifically provided herein, the Stock Option may become vested only during the period prior to his or her Termination of Directorship.

(d) *Method of Exercise.* Subject to whatever waiting period provisions apply under subsection (c) above, Stock Options may be exercised in whole or in part at any time and from time to time during the Stock Option term, by giving written notice of exercise to the Company specifying the number of shares to be purchased. Such notice shall be accompanied by payment in full of the purchase price as follows: (i) in cash or by check, bank draft or money order payable to the Company; (ii) to the extent permitted by law, if the Common Stock is traded on a national securities exchange, through a "cashless exercise" procedure whereby the Participant delivers irrevocable instructions to a broker satisfactory to the Company to deliver promptly to the Company an amount equal to the purchase price; or (iii) such other arrangement for the satisfaction of the purchase price, as the Board may accept. If and to the extent determined by the Board in its sole discretion at or after grant, payment in full or in part may also be made in the form of Common Stock owned by the Participant (and for which the Participant has good title free and clear of any liens and encumbrances) based on the Fair Market Value of the Common Stock on the payment date. No shares of Common Stock shall be issued until payment, as provided herein, therefore has been made or provided for.

(e) *Form, Modification, Extension and Renewal of Stock Options* Subject to the terms and conditions and within the limitations of this Plan, Stock Options granted under this Article XIII shall be evidenced by such form of agreement or grant as is approved by the Committee, and the Committee may (i) modify, extend or renew outstanding Stock Options granted under this Section XIII; provide that the rights of a Participant are not reduced without his consent; provided further, that any such modification, extension or renewal is intended to be structured to comply with Section 409A of the Code, to the extent applicable, and (ii) accept the surrender of outstanding Stock Options (up to the extent not theretofore exercised) and authorize the granting of new Stock Options in substitution therefor (to the extent not theretofore exercised). Notwithstanding the foregoing, unless approved by stockholders of the Company, (i) an outstanding Option may not be modified to reduce the exercise price thereof, (ii) no new Option at a lower exercise price or base price may be substituted for a surrendered Option, and (iii) no other Award may be issued or cash may be paid in exchange for the surrender of an Option at a time that the exercise or base price of such Option exceeds the current Fair Market Value of a share of Common Stock or if such new Award or cash has a value in excess of the then in-the-money value of the surrendered Option, provided that adjustments or substitutions in accordance with Section 4.2 are not subject to this stockholder approval requirement.

(f) *Termination of Directorship.* The following rules apply with regard to Stock Options upon the Termination of Directorship:

(i) *Termination of Directorship by Reason of Death, Disability or Otherwise Ceasing to be a Director.* Except as otherwise provided herein, upon the Termination of Directorship by reason of death, Disability, resignation, failure to stand for reelection or failure to be reelected or otherwise, all outstanding Stock Options exercisable and not exercised shall remain exercisable to the extent exercisable on such date of Termination of Directorship by the Participant or, in the case of death, by the Participant's estate or by the person given authority to exercise such Stock Options by his or her will or by operation of law, at any time prior to the expiration of the stated term of such Stock Option.

(ii) *Cancellation of Options.* Except as provided herein or in Section 13.4(g), no Stock Options that were not exercisable as of the date of Termination of Directorship shall thereafter become exercisable upon a Termination of Directorship for any reason or no reason whatsoever, and such Stock Options shall terminate and become null and void upon a Termination of Directorship. Notwithstanding the foregoing, the Committee shall be authorized, in its sole discretion, at any time on or prior to the date of the Termination of Directorship, to provide, based on such factors, if any, as the Committee may determine, that any outstanding Stock Options that are not exercisable as of the date of Termination of Directorship shall thereafter continue to become exercisable in accordance with the original terms of such Stock Options as if a Termination of Directorship never occurred. Notwithstanding anything herein to the contrary, if a Non-Employee Director's Termination of Directorship is for Cause, all Stock Options held by the Non-Employee Director shall thereupon terminate and expire as of the date of termination.

(g) *Acceleration of Exercisability.* (i) All Stock Options granted to a Non-Employee Director and not previously exercisable shall become fully exercisable upon such Director's death, (ii) all Stock Options granted to Non-Employee Directors prior to November 15, 2017, and not previously exercisable shall become fully exercisable immediately upon a Change in Control (as defined in Section 14.2), and (iii) all Stock Options granted to Non-Employee Directors on or following November 15, 2017, and not previously exercisable shall become fully exercisable immediately upon the Non-Employee Director's Termination of Directorship due to a failure to stand for reelection, failure to be reelected, or removal or resignation at the request or instruction of a person or entity effecting the Change in Control, in each case occurring or on after the occurrence of a Change in Control. In addition, the Committee may accelerate the vesting and exercisability of any such Stock Option at any time at or after grant in whole or in part, based on such factors, if any, as the Committee shall determine, in its sole discretion.

(h) *Detrimental Activity.* For Stock Options granted to Non-Employee Directors on or after September 21, 2011, unless otherwise determined by the Committee at grant, (i) in the event the Non-Employee Director engages in Detrimental Activity prior to any exercise of the Stock Option, all such Stock Options (whether vested or unvested) held by the Non-Employee Director shall thereupon terminate and expire, (ii) as a condition of the exercise of a Stock Option, the Non-Employee Director shall be required to certify (or shall be deemed to have certified) at the time of exercise in a manner acceptable to the Company that the Non-Employee Director is in compliance with the terms and conditions of the Plan and that the Non-Employee Director has not engaged in, and does not intend to engage in, any Detrimental Activity, and (iii) in the event the Non-Employee Director engages in Detrimental Activity during the one year period following the later of (x) Non-Employee Director's Termination of Directorship or (y) the date the Stock Option is exercised, any such Stock Options shall be immediately forfeited (whether or not then vested) and the Company shall be entitled to recover from the Non-Employee Director at any time within one year after the later of (x) or (y), and the Non-Employee Director shall pay over to the Company, an amount equal to any gain realized as a result of the exercise of any Stock Options (whether at the time of exercise or thereafter).

13.5 *Terms of Restricted Stock Units.* RSUs granted under this Article XIII shall be subject to the following terms and conditions, and shall be in such form and contain such additional terms and conditions, not inconsistent with the terms of this Plan, as the Board shall deem desirable:

(a) *Automatic Grant.* Effective as of September 21, 2011, a Non-Employee Director who as of the December 31 of the calendar year prior to a NED Grant Date (the "Determination Date") has not satisfied his minimum Company stock ownership requirement under the Ownership Guidelines shall be automatically granted, without further action by the Non-Employee Director, Committee or the stockholder of the Company, in lieu of all or a portion of the Annual Option that otherwise would have been granted to the Non-Employee Director on such NED Grant Date, a number of RSUs determined by the Committee in its sole discretion by converting the Stock Options that the Non-Employee Director would otherwise have received on the NED Grant Date to RSUs by dividing the Black-Scholes value of such Stock Options on the NED Grant Date by the Fair Market Value of a share of Common Stock on the NED Grant Date up to the number of RSUs equal to the number of shares of Common Stock necessary for the Non-Employee Director to have satisfied his minimum stock ownership requirement under the Ownership Guidelines as of the Determination Date. Any fractional Stock Options or RSUs, as applicable, resulting from the foregoing calculations shall be eliminated by rounding-down for fractions less than one-half and rounding-up for fractions equal to or greater than one-half. No cash settlements or other Award shall be made with respect to fractional Stock Options or RSUs, as applicable, eliminated by rounding. Any Stock Options that remain following the foregoing calculations shall, subject to Sections 13.5(b) and 13.6(a), be granted to the Non-Employee Director on the NED Grant Date in accordance with Section 13.2(b).

(b) *Election.* Effective as of September 21, 2011, a Non-Employee Director may elect, without further action by the Committee or the stockholders of the Company, to be granted, in lieu of all or a portion of the Annual Option that, subject to Section 13.5(a), otherwise would have been granted to the Non-Employee Director on such NED Grant Date, the number of RSUs equal to the Black-Scholes value on the NED Grant Date of the Stock Options that the Non-Employee Director has elected not to receive on the NED Grant Date divided by the Fair Market Value of the Common Stock on the NED Grant Date, as determined by the Committee in its sole discretion. Any fractional RSU resulting from the foregoing calculation shall be eliminated by rounding-down for fractions less than one-half and rounding-up for fractions equal to or greater than one-half. No cash settlements or other Award shall be made with respect to fractional RSUs eliminated by rounding. Any election pursuant to this Section 13.5(b) shall be in writing delivered to the Committee on an election form prescribed by, and acceptable to, the Committee and in accordance with the procedures established by the Committee, and must be delivered by the Non-Employee Director by either (i) no later than the December 31 of the calendar year prior to the calendar year in which the relevant NED Grant Date is scheduled to occur, (ii) within thirty (30) days of his first becoming a Non-Employee Director, or (iii) by such other deadline, approved in advance by the Committee, that is compliant with Section 409A of the Code and does not result in constructive receipt of income by the Non-Employee Director.

(c) *Vesting.* RSUs granted to Non-Employee Directors pursuant to this Section 13.5 (i) prior to the December Effective Date shall vest in installments over a three (3) year period, commencing on the NED Grant Date, at the rate of 25% effective on the first and second anniversaries of the NED Grant Date and 50% on the third anniversary of the NED Grant Date, (ii) on or after the December Effective Date and prior to the August 2022 Effective Date, shall vest, unless otherwise determined by the Committee at or prior to grant, in installments over a three (3) year period, commencing on the NED Grant Date, at the rate of 25% effective on the first and second anniversaries of the NED Grant Date and 50% on the third anniversary of the NED Grant Date, and (iii) on or after the August 2022 Effective Date, shall vest as determined by the Committee at or prior to grant; in each case, provided that, except as otherwise determined by the Committee at or prior to grant with respect to any RSUs granted on or after the December Effective Date, or except as otherwise specifically provided herein, the RSUs may become vested only during the period prior to his or her Termination of Directorship.

(d) *Acceleration of Vesting.* All unvested RSUs granted to a Non-Employee Director shall become fully vested upon (i) such Non-Employee Director's death, (ii) solely with respect to RSUs granted to a Non-Employee Director prior to November 15, 2017, Change in Control, or (iii) solely with respect to RSUs granted to a Non-Employee Director on or following November 15, 2017, upon such Non-Employee Director's Termination of Directorship due to a failure to stand for reelection, failure to be reelected, or removal or resignation at the request or instruction of a person or entity effecting the Change in Control, in each case occurring on or after the occurrence of a Change in Control. In addition, the Committee may accelerate the vesting of any such RSU at any time at or after grant in whole or in part, based on such factors, if any, as the Committee shall determine, in its sole discretion.

Within thirty (30) days following the Non-Employee Director's Termination of Directorship for any reason other than a Termination of Directorship for Cause, the Non-Employee Director shall receive one share of Common Stock for each vested RSU held by the Non-Employee Director as of the date of the Non-Employee Director's Termination of Directorship, the ownership of which shall be recognized by the Company through an uncertificated book entry credited to a book entry account maintained by the Company (or its designee) on behalf of the Non-Employee Director or such other method (including the issuance of stock certificate) as determined by the Company in its sole discretion.

(e) *Form and Modification of Restricted Stock Units* Subject to the terms and conditions and within the limitations of this Plan, RSUs granted under this Article XIII shall be evidenced by such form of agreement or grant as is approved by the Committee, and the Committee may modify outstanding RSUs granted under this Section XIII; provided that the rights of a Participant are not reduced without his consent; provided further, that any such modification is intended to be structured to comply with Section 409A of the Code, to the extent applicable.

(f) *Termination of Directorship.* Except as otherwise provided in Section 13.5(d) hereof, RSUs that are not vested as of the date of a Non-Employee Director's Termination of Directorship for any reason shall terminate and be forfeited in their entirety as of the date of such Termination of Directorship. Notwithstanding anything herein to the contrary, in the event of a Non-Employee Director's Termination of Directorship for Cause, the Non-Employee Director's RSUs (whether vested or unvested) shall terminate and be forfeited in their entirety as of the date of such Termination of Directorship.

(g) *Detrimental Activity.* Unless otherwise determined by the Committee at grant, each Award of RSUs shall provide that in the event the Non-Employee Director engages in Detrimental Activity prior to, or during the one year period following the later of Termination of Directorship or any vesting of RSUs, the Committee may direct (at any time within one year thereafter) that all unvested RSUs and all vested but unpaid RSUs shall be immediately forfeited to the Company and that the Non-Employee Director shall pay over to the Company the amount realized from any RSUs or any Common Stock paid in connection therewith.

(h) *Dividends.* Unless otherwise determined by the Committee at the time of Award, subject to the provisions of the Award agreement and this Plan, the recipient of RSUs under this Section 13.5 shall be entitled to receive, currently or on a deferred basis, dividend or dividend equivalents with respect to the number of shares of Common Stock covered by the Award, as determined at the time of the Award by the Committee, in its sole discretion. Dividend equivalents shall confer upon the recipient the right to receive the cash value of any dividends and other distributions that would have been received as though the Non-Employee Director had held each share of Common Stock referenced by the RSU from such date as the Committee may specify (but not earlier than the Grant Date of the Award) until the actual distribution to such Participant of the related share of Common Stock or cash value thereof. Such amounts, if awarded and to be paid to the Participant as and when the shares of Common Stock or cash value thereof are distributed to such Participant, may, at the discretion of the Committee, be paid with interest from the applicable dividend payment date until such amounts and any earnings thereon are distributed. The applicable rate of interest shall be determined by the Committee in its sole discretion; provided, however, that for each fiscal year or part thereof, the applicable interest rate shall not be greater than the Treasury Rate. Alternatively, the Committee may provide that such cash dividend equivalents will be deemed reinvested in additional RSUs as of the applicable dividend payment date, to be settled by delivery of shares of Common Stock or cash value thereof at the same time as such deferred cash dividend equivalents would have been settled hereunder.

13.6 *Terms of Restricted Stock Awards.* Restricted Stock granted under this Article XIII shall be subject to the following terms and conditions, and shall be in such form and contain such additional terms and conditions, not inconsistent with the terms of this Plan, as the Board shall deem desirable:

(a) *Election.* Effective as of September 21, 2011, a Non-Employee Director may elect, without further action by the Committee or the stockholders of the Company, to be granted, in lieu of all or a portion of the Annual Option that, subject to Section 13.5(a), otherwise would have been granted to the Non-Employee Director on such NED Grant Date, the number of shares of Restricted Stock equal to the Black-Scholes value on the NED Grant Date of the Stock Options that the Non-Employee Director has elected not to receive on the NED Grant Date divided by the Fair Market Value of the Common Stock on the NED Grant Date, as determined by the Committee in its sole discretion. Any fractional share of Restricted Stock resulting from the foregoing calculation shall be eliminated by rounding-down for fractions less than one-half and rounding-up for fractions equal to or greater than one-half. No cash settlements or other Award shall be made with respect to fractional shares of Restricted Stock eliminated by rounding. Any election pursuant to this Section 13.6(a) shall be in writing delivered to the Committee on an election form prescribed by, and acceptable to, the Committee and in accordance with the procedures established by the Committee, and must be delivered by the Non-Employee Director by either (i) no later than the December 31 of the calendar year prior to the calendar year in which the relevant NED Grant Date is scheduled to occur, (ii) within thirty (30) days of his first becoming a Non-Employee Director, or (iii) effective as of June 5, 2013, by such other deadline, approved in advance by the Committee that is compliant with Section 409A of the Code and does not result in constructive receipt of income by the Non-Employee Director.

A Non-Employee Director who elects to receive Restricted Stock shall not have any rights with respect to such Award, unless and until such Participant has delivered to the Company a fully executed copy of the applicable Award agreement relating thereto and has otherwise complied with the applicable terms and conditions of such Award. Further, such Award shall be subject to the following conditions:

(i) *Purchase Price.* The purchase price for shares of Restricted Stock shall be zero to the extent permitted by applicable law, and, to the extent not so permitted, such be the lowest permissible price.

(ii) *Acceptance.* Awards of Restricted Stock must be accepted within a period of 90 days (or such shorter period as the Committee may specify at grant) after the Award date by executing a Restricted Stock Award agreement and by paying whatever price (if any) required by law.

(iii) *Legend.* Each Participant receiving shares of Restricted Stock shall be issued a stock certificate in respect of such shares of Restricted Stock, unless the Committee elects to use another system, such as book entries by the transfer agent, as evidencing ownership of shares of Restricted Stock. Such certificate shall be registered in the name of such Participant, and shall bear an appropriate legend referring to the terms, conditions, and restrictions applicable to such Award, substantially in the following form:

"The anticipation, alienation, attachment, sale, transfer, assignment, pledge, encumbrance or charge of the shares of stock represented hereby are subject to the terms and conditions (including forfeiture) of The Comtech Telecommunications Corp. 2000 Stock Incentive Plan (the "Plan") and an Agreement entered into between the registered owner and the Company dated _____. Copies of such Plan and Agreement are on file at the principal office of the Company."

(iv) *Custody.* The Committee may require that any stock certificates evidencing such shares be held in custody by the Company until the restrictions thereon shall have lapsed and that, as a condition to the grant of such Award of Restricted Stock, the Participant shall have delivered a duly signed stock power, endorsed in blank, relating to the Common Stock covered by such Award.

(b) *Restrictions and Conditions.* Shares of Restricted Stock awarded pursuant to this Plan shall be subject to the following restrictions and conditions:

(i) *Vesting.* Shares of Restricted Stock granted to Non-Employee Directors pursuant to Section 13.6(a) (i) prior to the December Effective Date, shall vest in installments over a three (3) year period, commencing on the NED Grant Date, at the rate of 25% effective on the first and second anniversaries of the NED Grant Date and 50% on the third anniversary of the NED Grant Date, (ii) on or after the December Effective Date and prior to the August 2022 Effective Date, shall vest, unless otherwise determined by the Committee at or prior to grant, in installments over a three (3) year period, commencing on the NED Grant Date at the rate of 25% effective on the first and second anniversaries of the NED Grant Date and 50% on the third anniversary of the NED Grant Date, and (iii) on or after the August 2022 Effective Date, shall vest as determined by the Committee at or prior to grant; provided that, except as otherwise determined by the Committee at or prior to grant with respect to any shares of Restricted Stock granted on or after the December Effective Date, or except as otherwise specifically provided herein, the shares of Restricted Stock may become vested only during the period prior to his or her Termination of Directorship. Notwithstanding the foregoing, all unvested shares of Restricted Stock granted to Non-Employee Directors pursuant to Section 13.6(a) shall become fully vested upon (i) such Non-Employee Director's death, (ii) solely with respect to shares of Restricted Stock granted to a Non-Employee Director prior to November 15, 2017, a Change in Control, or (iii) solely with respect to shares of Restricted Stock granted to a Non-Employee Director on or following November 15, 2017, upon such Non-Employee Director's Termination of Directorship due to: failure to stand for reelection, failure to be reelected, or removal or resignation at the request or instruction of a person or entity effecting the Change in Control, in each case occurring on or after the occurrence of a Change in Control. In addition, the Committee may accelerate the vesting of any such shares of Restricted Stock at any time at or after grant in whole or in part, based on such factors, if any, as the Committee shall determine, in its sole discretion. The Participant shall not be permitted to Transfer shares of Restricted Stock awarded under Section 13.6(a) prior to vesting.

(ii) *Rights as Stockholder.* Except as otherwise determined by the Committee, the Participant shall have, with respect to the shares of Restricted Stock, all of the rights of a holder of shares of Common Stock of the Company including, without limitation the right to receive any dividends, the right to vote such shares and, subject to and conditioned upon the full vesting of shares of Restricted Stock, the right to tender such shares. The Committee may, in its sole discretion, determine at the time of grant that the payment of dividends shall be deferred until, and conditioned upon, the vesting of the underlying shares of Restricted Stock.

(iii) *Lapse of Restrictions.* If and when shares of Restricted Stock vest, the certificates for such shares shall be delivered to the Participant. All legends shall be removed from said certificates at the time of delivery to the Participant except as otherwise required by applicable law.

(iv) *Form and Modification of Restricted Stock Awards.* Subject to the terms and conditions and within the limitations of this Plan, shares of Restricted Stock granted under this Article XIII shall be evidenced by such form of agreement or grant as is approved by the Committee, and the Committee may modify outstanding Restricted Stock Awards granted under this Section XIII provided that the rights of a Participant are not reduced without his consent; provided further, that any such modification is intended to be structured to comply with Section 409A of the Code, to the extent applicable.

(v) *Termination of Directorship.* Except as otherwise provided herein and in Section 13.6(b)(i) hereof, shares of Restricted Stock that are not vested as of the date of a Non-Employee Director's Termination of Directorship for any reason shall terminate and be forfeited in their entirety as of the date of such Termination of Directorship. Notwithstanding the foregoing, the Committee shall be authorized, in its sole discretion, at any time on or prior to the date of the Termination of Directorship, to provide, based on such factors as the Committee may determine, in its sole discretion, that any shares of Restricted Stock that are not vested as of the date of Termination of Directorship shall thereafter continue to vest in accordance with the original terms of such shares of Restricted Stock as if a Termination of Directorship never occurred. Notwithstanding anything herein to the contrary, in the event of a Non-Employee Director's Termination of Directorship for Cause, the Non-Employee Director's shares of Restricted Stock (whether vested or unvested) shall be forfeited in their entirety as of the date of such Termination of Directorship.

(c) *Detrimental Activity.* Unless otherwise determined by the Committee at grant, each Award of Restricted Stock shall provide that in the event the Non-Employee Director engages in Detrimental Activity prior to, or during the one year period following the later of Termination of Directorship or any vesting of Restricted Stock, the Committee may direct (at any time within one year thereafter) that all unvested Restricted Stock shall be immediately forfeited to the Company and that the Non-Employee Director shall pay over to the Company the amount realized at the time of vesting of any Restricted Stock.

13.7 *Terms of Stock Units.* Stock Units granted under this Article XIII shall be subject to the following terms and conditions, and shall be in such form and contain such additional terms and conditions, not inconsistent with the terms of this Plan, as the Board shall deem desirable:

(a) *Election.* Effective as of September 21, 2011, a Non-Employee Director may elect, without further action by the Committee or the stockholders of the Company, to be granted on the date the relevant cash retainer payment was scheduled to be paid (the "Retainer Payment Date"), in lieu of all or a portion of the Non-Employee Director's annual cash retainer that would have been paid to the Non-Employee Director, the number of Stock Units equal to the amount of the cash retainer that the Non-Employee Director has elected not to receive divided by the Fair Market Value of the Common Stock on the Retainer Payment Date, as determined by the Committee in its sole discretion. Any fractional Stock Unit resulting from the foregoing calculation shall be eliminated by rounding-down for fractions less than one-half and rounding-up for fractions equal to or greater than one-half. No cash settlements or other Award shall be made with respect to fractional Stock Units eliminated by rounding. Any election pursuant to this Section 13.7(a) shall be in writing delivered to the Committee on an election form prescribed by, and acceptable to, the Committee and in accordance with the procedures established by the Committee, and must be delivered by the Non-Employee Director by either (i) no later than the December 31 of the calendar year prior to the calendar year in which the relevant cash retainer payment is scheduled to be paid, (ii) within thirty (30) days of his first becoming a Non-Employee Director or (iii) by such other deadline, approved in advance by the Committee, that is compliant with Section 409A of the Code and does not result in constructive receipt of income by the Non-Employee Director.

(b) *Vesting.* Prior to the December Effective Date, Stock Units granted to Non-Employee Directors pursuant to Section 13.7(a) shall be fully vested on the date of grant. Stock Units granted to Non-Employee Directors pursuant to Section 13.7(a) on or after the December Effective Date and prior to the August 2022 Effective Date shall be fully vested on the date of grant unless otherwise provided by the Committee at or prior to grant. Stock Units granted to Non-Employee Directors pursuant to Section 13.7(a) on or after the August 2022 Effective Date shall vest as determined by the Committee at or prior to grant.

(c) *Payment.* Within thirty (30) days following the Non-Employee Director's Termination of Directorship for any reason other than a Termination of Directorship for Cause, the Non-Employee Director shall receive one share of Common Stock for each Stock Unit held by the Non-Employee Director as of the date of the Non-Employee Director's Termination of Directorship, the ownership of which shall be recognized by the Company through an uncertificated book entry credited to a book entry account maintained by the Company (or its designee) on behalf of the Non-Employee Director or such other method (including the issuance of stock certificate) as determined by the Company in its sole discretion.

(d) *Form and Modification of Stock Units.* Subject to the terms and conditions and within the limitations of this Plan, Stock Units granted under this Article XIII shall be evidenced by such form of agreement or grant as is approved by the Committee, and the Committee may modify outstanding Stock Units granted under this Section XIII; provided that the rights of a Participant are not reduced without his consent; provided further, that any such modification is intended to be structured to comply with Section 409A of the Code, to the extent applicable.

(e) *Termination of Directorship.* Notwithstanding anything herein to the contrary, in the event of a Non-Employee Director's Termination of Directorship for Cause, the Non-Employee Director's Stock Units shall terminate and be forfeited in their entirety as of the date of such Termination of Directorship.

(f) *Detrimental Activity.* Unless otherwise determined by the Committee at grant, each Award of Stock Units shall provide that in the event the Non-Employee Director engages in Detrimental Activity prior to, or during the one year period following the later of Termination of Directorship or any grant of Stock Units, the Committee may direct (at any time within one year thereafter) that all Stock Units shall be immediately forfeited to the Company and that the Non-Employee Director shall pay over to the Company the amount realized from any Stock Units or any Common Stock paid in connection therewith.

(g) *Dividends.* Unless otherwise determined by the Committee at the time of Award, subject to the provisions of the Award agreement and this Plan, the recipient of Stock Units under this Section 13.7 shall be entitled to receive, currently or on a deferred basis dividends or dividend equivalents with respect to the number of shares of Common Stock covered by the Award, as determined at the time of the Award by the Committee, in its sole discretion. Dividend equivalents shall confer upon the recipient the right to receive the cash value of any dividends and other distributions that would have been received as though the Non-Employee Director had held each share of Common Stock referenced by the Stock Unit from such date as the Committee may specify (but not earlier than the Grant Date of the Award) until the actual distribution to such Participant of the related share of Common Stock or cash value thereof. Such amounts, if awarded and to be paid to the Participant as and when the shares of Common Stock or cash value thereof are distributed to such Participant may, at the discretion of the Committee, be paid with interest from the applicable dividend payment date until such amounts and any earnings thereon are distributed. The applicable rate of interest shall be determined by the Committee in its sole discretion; provided, however, that for each fiscal year or part thereof, the applicable interest rate shall not be greater than the Treasury Rate. Alternatively, the Committee may provide that such cash dividend equivalents will be deemed reinvested in additional Stock Units as of the applicable dividend payment date, to be settled by delivery of shares of Common Stock or cash value thereof at the same time as such deferred cash dividend equivalents would have been settled hereunder.

13.8 Changes.

(a) The Awards to a Non-Employee Director shall be subject to Sections 4.2(a), (b) and (c) of the Plan and this Section 13.8, but shall not be subject to Section 4.2(d).

(b) If the Company shall not be the surviving corporation in any merger or consolidation, or if the Company is to be dissolved or liquidated, then, unless the surviving corporation assumes the Stock Options or substitutes new Stock Options which are determined by the Board in its sole discretion to be substantially similar in nature and equivalent in terms and value for Stock Options then outstanding, upon the effective date of such merger, consolidation, liquidation or dissolution, any unexercised Stock Options shall expire without additional compensation to the holder thereof; provided, that, the Board shall deliver notice to each Non-Employee Director at least 30 days prior to the date of consummation of such merger, consolidation, dissolution or liquidation which would result in the expiration of the Stock Options and during the period from the date on which such notice of termination is delivered to the consummation of the merger, consolidation, dissolution or liquidation, such Participant shall have the right to exercise in full, effective as of such consummation, all Stock Options that are then outstanding (without regard to limitations on exercise otherwise contained in the Stock Options) but contingent on occurrence of the merger, consolidation, dissolution or liquidation, and, provided that, if the contemplated transaction does not take place within a 90 day period after giving such notice for any reason whatsoever, the notice, accelerated vesting and exercise shall be null and void and, if and when appropriate, new notice shall be given as aforesaid.

ARTICLE XIV

CHANGE IN CONTROL PROVISIONS

14.1 Benefits. In the event of a Change in Control of the Company, except as otherwise provided by the Committee upon the grant of an Award, the Participant shall be entitled to the following benefits:

(a) Awards granted to Participants prior to November 15, 2017, shall be treated in accordance with the terms of the Plan as in effect prior to such date.

(b) Except to the extent provided in the applicable Award agreement, the Participant's employment agreement with the Company or an Affiliate, as approved by the Committee, or other written agreement approved by the Committee (as such agreement may be amended from time to time), with respect to any Award granted to a Participant other than a Non-Employee Director on or after November 15, 2017, if such Participant has an involuntary Termination without Cause at any time during the two (2) year period commencing on a Change in Control, then all outstanding Awards of such Participant that were granted to such Participant on or after November 15, 2017, but prior to the Change in Control (including any Alternative Option granted to such Participant in substitution of any Stock Option pursuant to Section 14.1(d) below) shall be fully vested on the date of such Termination and any such Awards that provide for Participant elected exercise shall be immediately exercisable in their entirety on the date of such Termination.

(c) The Committee, in its sole discretion, may provide for the purchase of any Stock Option by the Company or an Affiliate for an amount of cash equal to the excess of the Change in Control Price (as defined below) of the shares of Common Stock covered by such Stock Options, over the aggregate exercise price of such Stock Options. For purposes of this Section 14.1, Change in Control Price shall mean the higher of (i) the highest price per share of Common Stock paid in any transaction related to a Change in Control of the Company or (ii) the highest Fair Market Value per share of Common Stock at any time during the sixty (60) day period preceding a Change in Control provided, however, that for the avoidance of doubt the Change in Control price shall not exceed the fair market value of the Common Stock at the time of purchase as determined in accordance Section 409A of the Code.

(d) Notwithstanding anything to the contrary herein, unless the Committee provides otherwise at the time a Stock Option is granted hereunder or thereafter, no acceleration of exercisability shall occur with respect to such Stock Options if the Committee reasonably determines in good faith, prior to the occurrence of the Change in Control, that the Stock Options shall be honored or assumed, or new rights substituted therefore (each such honored, assumed or substituted stock option hereinafter called an "Alternative Option"), by a Participant's employer (or the parent or a subsidiary of such employer) immediately following the Change in Control, provided that any such Alternative Option must meet the following criteria:

(i) the Alternative Option must be based on stock which is traded on an established securities market, or which will be so traded within 30 days of the Change in Control;

(ii) the Alternative Option must provide such Participant with rights and entitlements substantially equivalent to or better than the rights, terms and conditions applicable under such Stock Option, including, but not limited to, an identical or better exercise schedule;

(iii) the Alternative Option must have economic value substantially equivalent to the value of such Stock Option (determined at the time of the Change in Control); and

(iv) the Alternate Option must be structured in a manner intended to comply with Section 409A of the Code to avoid any adverse tax consequences thereunder, to the extent applicable.

For purposes of Incentive Stock Options, any assumed or substituted Stock Option shall comply with the requirements of Treasury Regulation § 1.424-1 (and any amendments thereto).

(e) Notwithstanding anything else herein, the Committee may, in its sole discretion, provide for accelerated lapsing of restrictions on an Award or accelerated vesting of an Award, as applicable, at any time.

14.2 Change in Control. A "Change in Control" shall be deemed to have occurred:

(a) upon any "person" as such term is used in Sections 13(d) and 14(d) of the Exchange Act (other than the Company, any trustee or other fiduciary holding securities under any employee benefit plan of the Company, or any company owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of Common Stock of the Company), becoming the owner (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 30% or more of the combined voting power of the Company's then outstanding securities;

(b) during any period of two (2) consecutive years (the "Board Measurement Period"), individuals who at the beginning of such period constitute the Board of Directors, and any new director (other than a director designated by a person who has entered into an agreement with the Company to effect a transaction described in paragraph (a), (c), or (d) of this section) or a director whose initial assumption of office occurs as a result of either an actual or threatened election contest (as such term is used in Rule 14a-11 of Regulation 14A promulgated under the Exchange Act) or other actual or threatened solicitation of proxies or consents by or on behalf of a person other than the Board of Directors of the Company whose election by the Board of Directors or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute at least a majority of the Board of Directors; provided, that with respect to any payment pursuant to an Award granted under this Plan on or after September 21, 2011 that is triggered upon a Change in Control and that constitutes "non-qualified deferred compensation" pursuant to Section 409A of the Code, the Board Measurement Period shall be reduced from any period of two consecutive years to any period of twelve consecutive months;

(c) upon a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than 50% of the combined voting power of the voting securities of the Company or such surviving entity outstanding immediately after such merger or consolidation; provided, however, that a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no person (other than those covered by the exceptions in (a) above) acquires more than 50% of the combined voting power of the Company's then outstanding securities shall not constitute a Change in Control of the Company; or

(d) upon approval by the stockholders of the Company of a plan of complete liquidation of the Company or an agreement for (or for Awards granted on or after September 21, 2011, the consummation of) the sale or disposition by the Company of all or substantially all of the Company's assets other than the sale or disposition of all or substantially all of the assets of the Company to a person or persons who beneficially own, directly or indirectly, at least 50% or more of the combined voting power of the outstanding voting securities of the Company at the time of the sale; provided, that with respect to any payment pursuant to an Award granted under this Plan on or after September 21, 2011 that is triggered upon a Change in Control and that constitutes "non-qualified deferred compensation" pursuant to Section 409A of the Code, stockholder approval of a plan of liquidation of the Company shall not constitute a Change in Control.

ARTICLE XV

TERMINATION OR AMENDMENT OF PLAN

Notwithstanding any other provision of this Plan, the Board or the Committee may at any time, and from time to time, amend, in whole or in part, any or all of the provisions of this Plan (including any amendment deemed necessary to ensure that the Company may comply with any regulatory requirement referred to in Article XVII), or suspend or terminate it entirely, retroactively or otherwise; provided, however, that, unless otherwise required by law or specifically provided herein, the rights of a Participant with respect to Awards granted prior to such amendment, suspension or termination, may not be impaired without the consent of such Participant and, provided further, without the approval of the shareholders of the Company in accordance with the laws of the State of Delaware, to the extent required by the applicable provisions of Rule 16b-3 or Section 162(m) of the Code, or, to the extent applicable to Incentive Stock Options, Section 422 of the Code, no amendment may be made which would (i) increase the aggregate number of shares of Common Stock that may be issued under this Plan; (ii) increase the maximum individual Participant limitations for a fiscal year under Section 4.1(d); (iii) change the classification of employees, directors or Consultants eligible to receive Awards under this Plan; (iv) decrease the minimum option price of any Stock Option or Stock Appreciation Right; (v) extend the maximum option period under Section 6.3; (vi) materially alter the Performance Criteria for the Award of Restricted Stock Performance Units, Performance Shares or cash incentive Awards as set forth in Exhibit A; or (vii) require stockholder approval in order for this Plan to continue to comply with the applicable provisions of Section 162(m) of the Code or, to the extent applicable to Incentive Stock Options, Section 422 of the Code. In no event may this Plan be amended without the approval of the stockholders of the Company in accordance with the applicable laws of the State of Delaware to increase the aggregate number of shares of Common Stock that may be issued under this Plan, decrease the minimum exercise price of any Stock Option or Stock Appreciation Right, or to make any other amendment that would require stockholder approval under the rules of any exchange or system on which the Company's securities are listed or traded at the request of the Company.

The Committee may amend the terms of any Award theretofore granted, prospectively or retroactively, but, subject to Article IV above or as otherwise specifically provided herein, no such amendment or other action by the Committee shall impair the rights of any holder without the holder's consent.

ARTICLE XVI

UNFUNDED PLAN

16.1 Unfunded Status of Plan. This Plan is intended to constitute an "unfunded" plan for incentive and deferred compensation. With respect to any payments as to which a Participant has a fixed and vested interest but which are not yet made to a Participant by the Company, nothing contained herein shall give any such Participant any rights that are greater than those of a general unsecured creditor of the Company.

ARTICLE XVII

GENERAL PROVISIONS

17.1 Legend. The Committee may require each person receiving shares pursuant to an Award under this Plan to represent to and agree with the Company in writing that the Participant is acquiring the shares without a view to distribution thereof. In addition to any legend required by this Plan, the certificates for such shares may include any legend which the Committee deems appropriate to reflect any restrictions on Transfer.

All certificates for shares of Common Stock delivered under this Plan shall be subject to such stop transfer orders and other restrictions as the Committee in its sole discretion may deem advisable under the rules, regulations and other requirements of the Securities and Exchange Commission, any stock exchange upon which the Common Stock is then listed or any national securities exchange system upon whose system the Common Stock is then quoted, any applicable Federal or state securities law, and any applicable corporate law, and the Committee may cause a legend or legends to be put on any such certificates to make appropriate reference to such restrictions.

17.2 Other Plans. Nothing contained in this Plan shall prevent the Board from adopting other or additional compensation arrangements, subject to stockholder approval if such approval is required; and such arrangements may be either generally applicable or applicable only in specific cases.

17.3 Right to Employment/Directorship/Consultancy. Neither this Plan nor the grant of any Award hereunder shall give any Participant or other employee, Non-Employee Director or Consultant any right with respect to continuance of employment, directorship or Consultancy by the Company or any Affiliate, nor shall they be a limitation in any way on the right of the Company or any Affiliate by which an employee is employed or a Non-Employee Director or Consultant is retained to terminate his employment, directorship or Consultancy at any time.

17.4 Withholding of Taxes. The Company shall have the right to deduct from any payment to be made to a Participant, or to otherwise require, prior to the issuance or delivery of any shares of Common Stock or the payment of any cash hereunder, payment by the Participant of, any Federal, state or local taxes required by law to be withheld. Upon the vesting of Restricted Stock (or other Award that is taxable upon vesting), or upon making an election under Code Section 83(b), a Participant shall pay all required withholding to the Company.

Any such withholding obligation with regard to any Participant may be satisfied, subject to the consent of the Committee, by reducing the number of shares of Common Stock otherwise deliverable or by delivering shares of Common Stock already owned. Any fraction of a share of Common Stock required to satisfy such tax obligations shall be disregarded and the amount due shall be paid instead in cash by the Participant.

17.5 Listing and Other Conditions.

(a) As long as the Common Stock is listed on a national securities exchange or system sponsored by a national securities association, the issue of any shares of Common Stock pursuant to an Award shall be conditioned upon such shares being listed on such exchange or system. The Company shall have no obligation to issue such shares unless and until such shares are so listed, and the right to exercise any Stock Option with respect to such shares shall be suspended until such listing has been effected.

(b) If at any time counsel to the Company shall be of the opinion that any sale or delivery of shares of Common Stock pursuant to an Award is or may in the circumstances be unlawful or result in the imposition of excise taxes on the Company under the statutes, rules or regulations of any applicable jurisdiction, the Company shall have no obligation to make such sale or delivery, or to make any application or to effect or to maintain any qualification or registration under the Securities Act or otherwise with respect to shares of Common Stock or Awards, and the right to exercise any Stock Option shall be suspended until, in the opinion of said counsel, such sale or delivery shall be lawful or will not result in the imposition of excise taxes on the Company.

(c) Upon termination of any period of suspension under this Section 17.5, any Award affected by such suspension which shall not then have expired or terminated shall be reinstated as to all shares available before such suspension and as to shares which would otherwise have become available during the period of such suspension, but no such suspension shall extend the term of any Stock Option.

(d) A Participant shall be required to supply the Company with any certificates, representations and information that the Company requests and otherwise cooperate with the Company in obtaining any listing, registration, qualification, exemption, consent or approval the Company deems necessary or appropriate.

17.6 Governing Law. This Plan and actions taken in connection herewith shall be governed and construed in accordance with the laws of the State of Delaware (regardless of the law that might otherwise govern under applicable Delaware principles of conflict of laws).

17.7 Construction. Wherever any words are used in this Plan in the masculine gender they shall be construed as though they were also used in the feminine gender in all cases where they would so apply, and wherever any words are used herein in the singular form they shall be construed as though they were also used in the plural form in all cases where they would so apply.

17.8 Other Benefits. No Award payment under this Plan shall be deemed compensation for purposes of computing benefits under any retirement plan of the Company or its subsidiaries nor affect any benefits under any other benefit plan now or subsequently in effect under which the availability or amount of benefits is related to the level of compensation, unless otherwise specifically stated in such other benefit plan.

17.9 Costs. The Company shall bear all expenses included in administering this Plan, including expenses of issuing Common Stock pursuant to any Awards hereunder.

17.10 No Right to Same Benefits. The provisions of Awards need not be the same with respect to each Participant, and such Awards to individual Participants need not be the same in subsequent years.

17.11 Death/Disability. The Committee may in its discretion require the transferee of a Participant to supply it with written notice of the Participant's death or Disability and to supply it with a copy of the will (in the case of the Participant's death) or such other evidence as the Committee deems necessary to establish the validity of the transfer of an Award. The Committee may also require that the agreement of the transferee to be bound by all of the terms and conditions of this Plan.

17.12 Section 16(b) of the Exchange Act. All elections and transactions under this Plan by persons subject to Section 16 of the Exchange Act involving shares of Common Stock are intended to comply with any applicable exemptive condition under Rule 16b-3. The Committee may establish and adopt written administrative guidelines, designed to facilitate compliance with Section 16(b) of the Exchange Act, as it may deem necessary or proper for the administration and operation of this Plan and the transaction of business thereunder.

17.13 Section 409A of the Code

(a) Although the Company does not guarantee the particular tax treatment of an Award granted under the Plan, Awards made under the Plan are intended to comply with, or be exempt from, the applicable requirements of Section 409A of the Code and the Plan and any Award agreement hereunder shall be limited, construed and interpreted in accordance with such intent. Notwithstanding anything herein to the contrary, any provision in this Plan that is inconsistent with Section 409A of the Code shall be deemed to be amended to comply with Section 409A of the Code and to the extent such provision cannot be amended to comply therewith, such provision shall be null and void. In no event whatsoever shall the Company or any of its Affiliates be liable for any additional tax, interest or penalties that may be imposed on a Participant by Section 409A of the Code or any damages for failing to comply with Section 409A of the Code.

(b) Notwithstanding anything in the Plan or in an Award to the contrary, the following provisions shall apply to any Award granted under the Plan that constitutes "non-qualified deferred compensation" pursuant to Section 409A of the Code (a "409A Covered Award"):

(i) A termination of employment shall not be deemed to have occurred for purposes of any provision of a 409A Covered Award providing for payment upon or following a termination of the Participant's employment unless such termination is also a "Separation from Service" within the meaning of Code Section 409A and, for purposes of any such provision of the 409A Covered Award, references to a "termination," "termination of employment" or like terms shall mean Separation from Service. Notwithstanding any provision to the contrary in the Plan or the Award, if the Participant is deemed on the date of the Participant's Termination to be a "specified employee" within the meaning of that term under Section 409A(a)(2)(B) of the Code and using the identification methodology selected by the Company from time to time, or if none, the default methodology set forth in Code Section 409A, then with regard to any such payment under a 409A Covered Award, to the extent required to be delayed in compliance with Section 409A(a)(2)(B) of the Code, such payment shall not be made prior to the earlier of (i) the expiration of the six (6)-month period measured from the date of the Participant's Separation from Service, and (ii) the date of the Participant's death. All payments delayed pursuant to this Section 13.13(b)(i) shall be paid to the Participant on the first day of the seventh month following the date of the Participant's Separation from Service or, if earlier, on the date of the Participant's death.

(ii) Whenever a payment under a 409A Covered Award specifies a payment period with reference to a number of days, the actual date of payment within the specified period shall be within the sole discretion of the Company.

17.14 Severability of Provisions. If any provision of this Plan shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof, and this Plan shall be construed and enforced as if such provisions had not been included.

17.15 Headings and Captions. The headings and captions herein are provided for reference and convenience only, shall not be considered part of this Plan, and shall not be employed in the construction of this Plan.

17.16 Electronic Communications. Notwithstanding anything else herein to the contrary, any Award agreement, notice of exercise of an Option or Non-Tandem Stock Appreciation Right, or other document or notice required or permitted by this Plan that is required to be delivered in writing may, to the extent determined by the Committee, be delivered and accepted electronically. Signatures may also be electronic if permitted by the Committee. The term "written agreement" as used in the Plan shall include any document that it is delivered and/or accepted electronically.

ARTICLE XVIII

EFFECTIVE DATE OF PLAN

The Plan was originally adopted by the Board and effective on October 19, 1999, subject to approval by the stockholders of the Company (which was obtained at the stockholders meeting held on December 14, 1999). The Plan was thereafter amended and restated in accordance with the requirements of the laws of the State of Delaware. The Board approved the amendment and restatement of the Plan on October 9, 2006 and such amended and restated plan became effective on October 9, 2006, subject to approval of the provisions of this Plan adding a cash incentive Award and re-approval of the Performance Criteria for performance-based Equity Awards by the stockholders of the Company in accordance with the requirements of the laws of the State of Delaware or such later date as provided in the adopting resolution. The stockholders of the Company approved the amendments that were subject to stockholder approval at the stockholder meeting held on December 5, 2006. A further restatement of the Plan was approved by the Board on December 6, 2007 which incorporated amendments effective on November 9, 2007 (deleting the Plan provision authorizing the Committee with the authority to buy out previously granted stock options based on terms and conditions established by the Committee) and on December 6, 2007 (increasing the number of shares available for grant of Awards under the Plan by 850,000). A further restatement of the Plan was approved by the Board on June 2, 2009 which incorporated amendments effective on June 2, 2009 (changing the date of grant of the annual grants of Stock Options to Non-Employee Directors). A further restatement of the Plan was approved by the Board on September 22, 2009 and incorporates amendments effective on October 18, 2009 (increasing the number of shares available for grant of Awards under the Plan by 2,375,000, adjusting the maximum annual grant of Performance Units and the maximum annual potential amount earnable under Performance Units, limiting the Committee's authority to amend or substitute a SAR or to issue Awards or cash in exchange for an Option or SAR in certain circumstances without stockholder approval, changing the conversion method for Performance Units, clarifying Plan provisions in compliance with Section 409A of the Code, and prohibiting any transfers or dispositions of Non-Qualified Stock Options to Family Members for value), certain of which were subject to the approval by the stockholders of the Company. The stockholders of the Company approved the amendments that were subject to stockholder approval at the stockholder meeting held on December 9, 2009. A further restatement of the Plan was approved by the Board on June 2, 2010 and incorporates amendments effective on June 2, 2010 (changing the date of grant and the amount of the annual grants of Stock Options to Non-Employee Directors).

A further restatement of the Plan was approved by the Board and effective on September 21, 2011 and incorporates amendments effective on September 21, 2011 and, as approved by stockholders, on January 13, 2012 (including setting minimum vesting terms for Full-Value Awards and the right in certain cases to receive or retain dividends and dividend equivalents thereunder, providing the Committee the discretion to permit a Participant to designate a beneficiary to receive outstanding Awards or exercise rights thereunder following death, changing the amount of the initial and annual grants of Stock Options to Non-Employee Directors, providing Non-Employee Directors with the opportunity to elect to receive RSUs and/or shares of Restricted Stock in lieu of an Annual Option, providing Non-Employee Directors with the opportunity to elect to receive Stock Units in lieu of their annual cash retainer, providing for the automatic grant of RSUs to Non-Employee Directors in lieu of their Annual Options in order to satisfy minimum Company stock ownership requirements, providing the Committee the discretion to accelerate the vesting of Awards granted to Non-Employee Directors or to continue the vesting thereof beyond Termination of Directorship, and clarifying certain Plan provisions), with the provisions relating to the grant of RSUs, Restricted Stock and Stock Units to Non-Employee Directors subject to stockholder approval. A further restatement of the Plan was approved by the Board and is effective June 5, 2013 and incorporates amendments effective on June 5, 2013 with respect to Section 13.6(a) of the Plan to provide that the Committee may permit elections by Non-Employee Directors at any time. A further restatement of the Plan was approved by the Board and effective on October 2, 2013 and incorporates amendments effective on October 2, 2013 (including authorizing dividend equivalents from the beginning date of any Performance Period, clarifying that dividend equivalents on certain Awards can be either cash or in additional Awards, adding more specific provisions regarding the grant of dividend equivalents on RSUs or Stock Units granted to Non-Employee Directors, and specifying that elections by Non-Employee Directors relating to type of award can be allowed by the Committee at any time compliant with Section 409A and other applicable provision of the Code). A further restatement of the Plan was approved by the Board and effective on December 10, 2015, and incorporates amendments effective on December 10, 2015 with respect to Section 13.2 of the Plan to change the method for determining the initial and annual grants of Stock Options to Non-Employee Directors and to provide the Committee with discretion over the vesting of Non-Employee Director grants and the term of Stock Options. A further amendment to the Plan was approved by the Board so that effective as of August 9, 2016, the grant date fair value of Non-Employee Director annual equity Awards was set at \$120,000. A further restatement of the Plan was approved by the Board effective on November 18, 2016, increasing the number of shares of Common Stock available for Awards under the Plan, re-approving the material terms of the Performance Criteria under the Plan, extending the term of the Plan for an additional 10 years, clarifying the provisions of the Plan relating to share counting and reducing the number of Shares subject to Full-Value Awards that may be granted without being subject to minimum vesting requirements, with the provisions relating to the increase in the number of shares available under the Plan, the re-approval of the material terms of the Performance Criteria and extending the term of the Plan for an additional 10 years being approved by stockholders on December 8, 2016. A further restatement of the Plan was approved by the Board and effective on November 15, 2017 and incorporates amendments effective on November 15, 2017 and, as approved by stockholders, on December 5, 2017 (including increasing the number of shares of Common Stock available for Awards under the Plan and providing that Awards made to participants on or after November 15, 2017, unless otherwise determined by the Committee, shall not automatically vest and become exercisable upon a Change in Control, but instead such Awards shall automatically vest and become fully exercisable if the Participant experiences an involuntary Termination without Cause within two years following a Change in Control), with the provisions relating to the increase in the number of shares available under the Plan being subject to stockholder approval.

A further restatement of the Plan was approved by the Board and effective March 6, 2018, and provides that, for Awards granted on and after March 6, 2018, adjustments pursuant to Section 4.2(b) of the Plan may be made in respect of transactions effected with receipt of consideration by the Company rather than only in respect of transactions effected without receipt of consideration by the Company. A further restatement of the Plan, increasing the number of shares of Common Stock available for Awards under the Plan, was approved by the Board effective as of November 15, 2019, and was approved by stockholders on December 3, 2019. A further amendment of the Plan, increasing, with respect to each calendar year commencing with the 2020 calendar year, the Black-Scholes value of the grant of Annual Options to up to \$220,000, was approved by the Board effective August 4, 2020. A further amendment of the Plan under Section 12.1 herein, explicitly permitting certain transfers of Awards by Participants, was approved by the Board effective August 10, 2021. The amendments to the Plan (i) requiring that the minimum vesting criteria applicable to Full-Value Awards under Section 4.5 of the Plan to be not less than one year for all Full-Value Awards (subject to certain exceptions set forth in Section 4.5), and (ii) amending Sections 13.4(c), 13.5(c), 13.6(b)(i), and 13.7(b) to provide that the vesting terms of all Awards granted to Non-Employee Directors on or after the August 2022 Effective Date shall be as determined by the Committee on or prior to grant date, were approved by the Committee and Board effective August 12, 2022. The amendment to the Plan raising the individual participant limit in Section 4.1(d) to 375,000 shares per fiscal year was approved by the Committee effective September 9, 2022.

ARTICLE XIX

TERM OF PLAN

No Award shall be granted pursuant to this Plan on or after November 18, 2026, but Awards granted prior to such date may extend beyond that date. The foregoing notwithstanding, any Awards, the vesting or payment of which is conditioned on the satisfaction of Performance Criteria intended to qualify as "performance-based compensation" under Section 162(m) of the Code may be granted until the date of the first Annual Meeting of Stockholders that occurs in the fifth year following the year in which the Company's stockholders last previously re-approved the Performance Criteria or approved other designated performance goals (even if this deadline extends past the date at which other Awards may be granted under the Plan).

EXHIBIT A

PERFORMANCE CRITERIA

Performance Goals established for purposes of conditioning the grant of an Award of Restricted Stock based on performance or the vesting of performance-based Awards of Restricted Stock, Performance Units, Performance Shares and/or cash incentive Awards shall be based on one or more of the following performance criteria ("Performance Criteria"): (i) the attainment of certain target levels of, or a specified percentage increase in, revenues, income before income taxes and extraordinary items, net income, income before income tax and stock based compensation expense, earnings before income tax, earnings before interest, taxes, depreciation and amortization or a combination of any or all of the foregoing; (ii) the attainment of certain target levels of, or a percentage increase in, after-tax or pre-tax profits including, without limitation, that attributable to continuing and/or other operations; (iii) the attainment of certain target levels of, or a specified increase in, operational cash flow; (iv) the achievement of a certain level of, reduction of, or other specified objectives with regard to limiting the level of increase in, all or a portion of, the Company's bank debt or other long-term or short-term public or private debt or other similar financial obligations of the Company, which may be calculated net of such cash balances and/or other offsets and adjustments as may be established by the Committee; (v) the attainment of target levels of or a specified percentage increase in earnings per share or earnings per share from continuing operations; (vi) the attainment of certain target levels of, or a specified increase in return on capital employed or return on invested capital; (vii) the attainment of certain target levels of, or a percentage increase in, after-tax or pre-tax return on stockholders' equity; (viii) the attainment of certain target levels of, or a specified increase in, economic value added targets based on a cash flow return on investment formula; (ix) the attainment of certain target levels of or specified increases in the fair market value of the shares of the Company's common stock; and (x) the growth in the value of an investment in the Company's common stock assuming the reinvestment of dividends. For purposes of item (i) above, "extraordinary items" shall mean all items of gain, loss or expense for the fiscal year determined to be extraordinary or unusual in nature or infrequent in occurrence or related to a corporate transaction (including, without limitation, a disposition or acquisition) or related to a change in accounting principle, all as determined in accordance with standards established by Opinion No. 30 of the Accounting Principles Board. The Committee may specify that specific items of income or expense may be included or excluded from the calculation of achievement of any of the foregoing Performance Criteria.

In addition, such Performance Criteria may be based upon the attainment of specified levels of Company (or subsidiary, division or other operational unit of the Company) performance under one or more of the measures described above relative to the performance of other corporations. To the extent permitted under Code Section 162(m), but only to the extent permitted under Code Section 162(m) (including, without limitation, compliance with any requirements for stockholder approval), the Committee may: (i) designate additional business criteria on which the Performance Criteria may be based or (ii) adjust, modify or amend the aforementioned business criteria.

[GRANT NUMBER]

**RESTRICTED STOCK AWARD AGREEMENT
PURSUANT TO THE
COMTECH TELECOMMUNICATIONS CORP.
2000 STOCK INCENTIVE PLAN**

Dear [Director Name]:

Preliminary Statement

As a non-employee director of Comtech Telecommunications Corp. (the "Company"), and pursuant to your election made in accordance with Section 13.6(a) of The Comtech Telecommunications Corp. 2000 Stock Incentive Plan, as amended (the "Plan"), you were automatically granted on [Date] (the "Grant Date"), pursuant to the terms of the Plan and this Restricted Stock Award Agreement (this "Agreement"), the number of shares of Restricted Stock set forth below.

The terms of the grant are as follows:

1. **Grant of Restricted Stock** Subject in all respects to the Plan and the terms and conditions set forth herein and therein, on the Grant Date you were automatically granted [#] shares of Restricted Stock (the "Award"). To the extent required by law, you shall pay to the Company the par value (\$0.10) for each share of Restricted Stock awarded to you simultaneously with the execution of this Agreement.

2. **Vesting**. The Award shall vest in full on the one-year anniversary of the Grant Date; provided that you have not incurred a Termination of Directorship (as defined below) prior to such vesting date. Notwithstanding the foregoing, the Award shall become fully vested prior to your Termination of Directorship upon (i) your death or (ii) a Change in Control. Each applicable date that a share of Restricted Stock becomes vested shall be referred to herein as the "**Vesting Date**".

There shall be no proportionate or partial vesting in the periods prior to each Vesting Date and all vesting shall occur only on the appropriate Vesting Date.

3. **Dividends**. Any dividends which would have been paid on shares of Restricted Stock but for the restrictions thereon prior to the Vesting Date shall be credited to a dividend book entry account on your behalf (any such credited amount, a "Dividend Equivalent"). Any cash Dividend Equivalents shall not be deemed to be reinvested in shares of Common Stock and will be held uninvested and without interest. Your right to receive any Dividend Equivalents with respect to cash dividends shall vest only if and when the related Restricted Stock vests, and an amount equal to such cash dividends shall be paid to you in cash on the applicable Vesting Date on which the Restricted Stock vests. Your right to receive any Dividend Equivalents with respect to dividends other than cash dividends shall vest only if and when the related Restricted Stock vests, and on the applicable Vesting Date you will be paid an amount in cash equal to the Fair Market Value of the property underlying such dividend as of the applicable Vesting Date. Prior to the payment thereof, any Dividend Equivalents will be encompassed within the term "Award" with respect to the relevant shares of Restricted Stock.

4. **Termination.** Except as otherwise provided in Section 2 hereof, any shares of Restricted Stock (including any Dividend Equivalent credited thereupon) that are not vested upon your Termination of Directorship shall, upon such Termination of Directorship, terminate and be forfeited in their entirety as of the date of such Termination of Directorship. For the purposes of this Agreement, "Termination of Directorship" means that you have ceased to be a director of the Company; provided, that in the event that you become an Eligible Employee or a Consultant upon your ceasing to be a director, a Termination of Directorship shall not be deemed to occur until such time as such you are no longer an Eligible Employee or Consultant.

5. **Restriction on Transfer.** Unless otherwise approved by the Committee, the Award is not transferable other than by will or by the laws of descent and distribution. In addition, unless otherwise approved in writing by the Committee, the Award shall not be assigned, negotiated, pledged or hypothecated in any way (whether by operation of law or otherwise), and the Award shall not be subject to execution, attachment or similar process. Upon any attempt to transfer, assign, negotiate, pledge or hypothecate all or part of the Award or in the event of any levy upon the Award by reason of any execution, attachment or similar process contrary to the provisions hereof not otherwise approved in writing by the Committee, the Award shall immediately become null and void. In addition, you shall not be permitted to Transfer the shares of Restricted Stock (including any Dividend Equivalents credited thereupon) awarded to you prior to vesting.

6. **Legend.** You shall be issued your shares of Restricted Stock as book entries by the transfer agent, as evidencing ownership of shares of Restricted Stock. Any such book entry shares shall be registered in your name, and shall bear an appropriate legend referring to the terms, conditions, and restrictions applicable to such Award, substantially in the following form:

"The anticipation, alienation, attachment, sale, transfer, assignment, pledge, encumbrance or charge of the shares of stock represented hereby are subject to the terms and conditions (including forfeiture) of The Comtech Telecommunications Corp. 2000 Stock Incentive Plan (the "Plan") and : Restricted Stock Award Agreement (the "Agreement") entered into between the registered owner and the Company dated [Date]. Copies of such Plan and Agreement are on file at the principal office of the Company."

7. **Rights as a Stockholder.** You shall have, with respect to your shares of Restricted Stock, all of the rights of a holder of shares of Common Stock of the Company including, without limitation, the right to vote such shares and, subject to and conditioned upon the full vesting of shares of Restricted Stock, the right to tender such shares; provided, however, that except as expressly provided herein, you shall not have the right to receive any dividends with respect to your shares of Restricted Stock unless and until your shares of Restricted Stock vest and all Dividend Equivalents shall be paid in cash. If and when your shares of Restricted Stock vest, the certificates for such shares shall be delivered to you. All legends shall be removed from said certificates at the time of delivery to you except as otherwise required by applicable law.

8. **Provisions of Plan Control** This grant is subject to all the terms, conditions and provisions of the Plan, including, without limitation, the amendment provisions of the Plan, and to such rules, regulations and interpretations relating to the Plan as may be adopted by the Board of Directors of the Company and as may be in effect from time to time. Any capitalized term used but not defined herein shall have the meaning ascribed to such term in the Plan. The Plan is incorporated herein by reference. If and to the extent that this grant conflicts or is inconsistent with the terms, conditions and provisions of the Plan the Plan shall control, and this grant shall be deemed to be modified accordingly.

9. **Notices.** Any notice or communication given hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, or by United States mail, to the appropriate party at the address set forth below (or such other address as the party shall from time to time specify):

If to the Company, to:

Comtech Telecommunications Corp.
68 South Service Road, Suite 230 Melville, NY 11747
Attention: Secretary If to you, to the address indicated after your signature at the end of this Agreement.

10. **Securities Representations.** The grant of the Award and the issuance of shares of Restricted Stock pursuant hereto shall be subject to, and in compliance with, all applicable requirements of federal, state or foreign securities law. No shares of Restricted Stock may be issued hereunder if the issuance of such shares would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which such shares may then be listed. As a condition to the grant of the Award, the Company may require you to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation.

The shares of Restricted Stock are being issued to you and this Agreement is being made by the Company in reliance upon the following express representations and warranties. By accepting this Award, you acknowledge, represent and warrant that:

(a) you have been advised that you may be an "affiliate" within the meaning of Rule 144 under the Securities Act of 1933, as amended (the "Act") and in this connection the Company is relying in part on your representations set forth in this section.

(b) if you are deemed to be an affiliate within the meaning of Rule 144 of the Act, the shares issued to you must be held indefinitely unless an exemption from any applicable resale restrictions is available or the Company files an additional registration statement (or a "re-offer prospectus") with regard to such shares and the Company is under no obligation to register the shares (or to file a "re-offer prospectus").

(c) if you are deemed to be an affiliate within the meaning of Rule 144 of the Act, you understand that the exemption from registration under Rule 144 will not be available unless (i) a public trading market then exists for the shares, (ii) adequate information concerning the Company is then available to the public, and (iii) other terms and conditions of Rule 144 or any exemption therefrom are complied with; and that any sales of the shares may be made only in limited amounts in accordance with such terms and conditions.

11. **Power of Attorney.** The Company, its successors and assigns, is hereby appointed the attorney-in-fact, with full power of substitution, of you for the purpose of carrying out the provisions of this Agreement and taking any action and executing any instruments which such attorney-in-fact may deem necessary or advisable to accomplish the purposes hereof, which appointment as attorney-in-fact is irrevocable and coupled with an interest. The Company, as attorney-in-fact for you, may in your name and stead, make and execute all conveyances, assignments and transfers of Common Stock and property provided for herein, and you hereby ratify and confirm that which the Company, as said attorney-in-fact, shall do by virtue hereof. Nevertheless, you shall, if so requested by the Company, execute and deliver to the Company all such instruments as may, in the judgment of the Company, be advisable for this purpose.

12. **Detrimental Activity.** In the event you engage in Detrimental Activity prior to, or during the one year period following your Termination of Directorship, the Board may direct (at any time within one year thereafter) that all shares of Common Stock delivered to you pursuant to this Agreement shall be immediately forfeited to the Company and you shall pay over to the Company an amount equal to the gain realized at the time of vesting of any the shares of Restricted Stock.

13. **Right to Terminate Directorship.** Neither the Plan nor the grant of the Award hereunder shall impose any obligations on the Company and/or the stockholders of the Company to retain you as a director, nor shall it impose any obligation on your part to remain as a director of the Company.

14. **Miscellaneous.**

(d) This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, personal legal representatives, successors, trustees, administrators, distributees, devisees and legatees. The Company may assign to, and require, any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company or any affiliate to which you are rendering services to expressly assume and agree in writing to perform this Agreement. Notwithstanding the foregoing, you may not assign this Agreement other than with respect to shares of Common Stock Transferred in compliance with the terms hereof.

(e) This Award shall not affect in any way the right or power of the Board or stockholders of the Company to make or authorize an adjustment, recapitalization or other change in the capital structure or the business of the Company, any merger or consolidation of the Company or subsidiaries, any issue of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock, the dissolution or liquidation of the Company, any sale or transfer of all or part of its assets or business or any other corporate act or proceeding. The shares of Restricted Stock granted hereunder shall be subject to adjustment in accordance with Section 4.2(b) of the Plan.

(f) No modification or waiver of any of the provisions of this Agreement shall be effective unless in writing and signed by the party against whom it is sought to be enforced.

(g) The failure of any party hereto at any time to require performance by another party of any provision of this Agreement shall not affect the right of such party to require performance of that provision, and any waiver by any party of any breach of any provision of this Agreement shall not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself, or a waiver of any right under this Agreement.

(h) The headings of the sections of this Agreement have been inserted for convenience of reference only and shall in no way restrict or modify any of the terms or provisions hereof.

(i) This Agreement shall be construed, interpreted and governed and the legal relationships of the parties determined in accordance with the internal laws of the State of Delaware without reference to rules relating to conflicts of law.

15. **Agreement and Grant Not Effective Unless Accepted** By selecting the "Accept" button below you agree (i) to enter into this Agreement electronically, and (ii) to the terms and conditions of the Agreement. Until you select the "Accept" button below and accept the corresponding Irrevocable Stock Power (the "Power"), this Award shall not be effective and if you do not select the "Accept" button and accept the corresponding Power within 14 days from the date the Agreement is made available to you electronically this Award shall be null and void.

IRREVOCABLE STOCK POWER

KNOW ALL MEN BY THESE PRESENTS, that [Director Name] (the "Transferor"), for value received, has assigned and transferred, and by these presents does assign and transfer unto Comtech Telecommunications Corp., a Delaware corporation, (the "Company") [#] shares of the common stock, par value \$0.10 per share, of the Company standing in the Transferor's name on the books of the Company, and does hereby constitute and appoint the Secretary of the Company, his true and lawful attorney, irrevocable for him and in his name and stead, to assign, transfer and set over said stock, and for that purpose, to make and execute all necessary acts of assignment and transfer, and one or more persons to substitute with like full power, hereby ratifying and confirming all that his said attorney, or the substitute or substitutes, shall lawfully do by virtue hereof.

By selecting the "Accept" button below you, [Director Name], agree (i) to execute this Irrevocable Stock Power (the "Power") electronically, and (ii) to the terms and conditions of the Power. Until you select the "Accept" button below, this Power shall not be effective and if you do not select the "Accept" button and accept the corresponding Restricted Stock Award within 14 days from the date the Power is made available to you electronically this Power shall be null and void.

[GRANT NUMBER]

RESTRICTED STOCK UNIT AGREEMENT
PURSUANT TO THE
COMTECH TELECOMMUNICATIONS CORP.
2000 STOCK INCENTIVE PLAN

Dear [Director Name]:

Preliminary Statement

As a non-employee director of Comtech Telecommunications Corp. (the "Company"), pursuant to (i) Section 13.5(a) of The Comtech Telecommunications Corp. 2000 Stock Incentive Plan, as amended (the "Plan") and/or (ii) your election made in accordance with Section 13.5(b) of the Plan, you were automatically granted on [Date] (the "Grant Date"), pursuant to the terms of the Plan and this Restricted Stock Unit Agreement (this "Agreement"), the number of restricted stock units (the "RSUs") set forth below. Each RSU represents one (1) share of the Company's common stock, \$0.10 par value per share (the "Common Stock").

The terms of the grant are as follows:

1. **Grant of RSUs** Subject in all respects to the Plan and the terms and conditions set forth herein and therein, on the Grant Date you were automatically granted [#] RSUs (the "Award").

2. **Vesting**. The Award shall vest in full on the one-year anniversary of the Grant Date; provided that you have not incurred a Termination of Directorship (as defined below) prior to the such vesting date. Notwithstanding the foregoing, the Award shall become fully vested prior to your Termination of Directorship upon (i) your death or (ii) a Change in Control. Each applicable date that an RSU becomes vested shall be referred to herein as the "Vesting Date".

There shall be no proportionate or partial vesting in the periods prior to each Vesting Date and all vesting shall occur only on the appropriate Vesting Date.

3. **Payment**. Subject to the terms of this Agreement and the Plan, you shall receive one share of Common Stock with respect to each vested RSU subject to the Award within thirty (30) days of your Termination of Directorship (such date of settlement, the "Settlement Date"). For purposes of this Agreement, "Termination of Directorship" means, subject to Section 17.13 of the Plan, that you have ceased to be a director of the Company; provided, that in the event that you become an Eligible Employee or a Consultant upon your ceasing to be a director, a Termination of Directorship shall not be deemed to have occurred until such time as you have "separated from service" as defined in Section 409A of the Code.

4. **Dividend Equivalents.** Any cash or Common Stock dividends paid on shares of Common Stock underlying an RSU prior to the Settlement Date for such RSU shall be credited to a dividend book entry account on your behalf (any such credited amount, a "Dividend Equivalent"). Any cash Dividend Equivalents shall not be deemed to be reinvested in shares of Common Stock and will be held uninvested and without interest. Your right to receive any Dividend Equivalents with respect to cash dividends shall vest only if and when the related RSU vests, and an amount equal to such cash dividend shall be paid to you in cash on the applicable Settlement Date on which the related RSU is settled. Your right to receive any Dividend Equivalents with respect to dividends of Common Stock shall vest only if and when the related RSU vests, and on the applicable Settlement Date on which the related RSU is settled you will be paid an amount in cash equal to the Fair Market Value of the Common Stock underlying such dividend as of the applicable Settlement Date. Prior to the payment thereof, any Dividend Equivalents will be encompassed within the term "Award" with respect to the relevant RSUs.

5. **Termination.** Except as otherwise provided in Section 2 hereof, any RSUs (including any Dividend Equivalents credited thereupon) that are not vested upon your Termination of Directorship shall, upon such Termination of Directorship, terminate and be forfeited in their entirety as of the date of such Termination of Directorship.

6. **Detrimental Activity.** In the event you engage in Detrimental Activity prior to, or during the one year period following the later of your Termination of Directorship or any vesting of RSUs, the Committee may direct (at any time within one year thereafter) that all unvested RSUs and all vested but unpaid RSUs (including any Dividend Equivalents credited thereupon) shall be immediately forfeited to the Company and that you shall pay over to the Company the amount realized from any RSUs or any Common Stock or Dividend Equivalents paid in connection therewith.

7. **Restriction on Transfer.** Unless otherwise approved by the Committee, the Award is not transferable other than by will or by the laws of descent and distribution. In addition, unless otherwise approved in writing by the Committee, the Award shall not be assigned, negotiated, pledged or hypothecated in any way (whether by operation of law or otherwise), and the Award shall not be subject to execution, attachment or similar process. Upon any attempt to transfer, assign, negotiate, pledge or hypothecate all or part of the Award or in the event of any levy upon the Award by reason of any execution, attachment or similar process contrary to the provisions hereof not otherwise approved in writing by the Committee, the Award shall immediately become null and void.

8. **Rights as a Stockholder.** Except as otherwise specifically provided herein, you shall have no rights as a stockholder with respect to any shares of Common Stock covered by the Award unless and until you have become the holder of record of the shares of Common Stock.

9. **Provisions of Plan Control** This grant is subject to all the terms, conditions and provisions of the Plan, including, without limitation, Section 17.13 of the Plan (Section 409A of the Code) and the amendment provisions of the Plan, and to such rules, regulations and interpretations relating to the Plan as may be adopted by the Board of Directors of the Company and as may be in effect from time to time. Any capitalized term used but not defined herein shall have the meaning ascribed to such term in the Plan. The Plan is incorporated herein by reference. If and to the extent that this grant conflicts or is inconsistent with the terms, conditions and provisions of the Plan, the Plan shall control, and this grant shall be deemed to be modified accordingly.

10. **Notices.** Any notice or communication given hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, or by United States mail, to the appropriate party at the address set forth below (or such other address as the party shall from time to time specify):

If to the Company, to:

Comtech Telecommunications Corp.
68 South Service Rd, Suite 230 Melville, NY 11747
Attention: Secretary

If to you, to the address indicated at the end of this Agreement.

11. **Securities Representations.** The grant of the Award and issuance of shares of Common Stock upon settlement of the Award shall be subject to, and in compliance with, all applicable requirements of federal, state or foreign securities law. No shares of Common Stock may be issued hereunder if the issuance of such shares would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which such shares may then be listed. As a condition to the settlement of the Award, the Company may require you to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation.

The shares of Common Stock are being issued to you and this Agreement is being made by the Company in reliance upon the following express representations and warranties. By accepting this Award, you acknowledge, represent and warrant that:

(a) You have been advised that you may be an "affiliate" within the meaning of Rule 144 under the Securities Act of 1933, as amended (the "Act") and in this connection the Company is relying in part on your representations set forth in this section.

(b) If you are deemed to be an affiliate within the meaning of Rule 144 of the Act, the shares of Common Stock issued to you must be held indefinitely unless an exemption from any applicable resale restrictions is available or the Company files an additional registration statement (or a "re-offer prospectus") with regard to such shares of Common Stock and the Company is under no obligation to register the shares (or to file a "re-offer prospectus").

(c) If you are deemed to be an affiliate within the meaning of Rule 144 of the Act, you understand that the exemption from registration under Rule 144 will not be available unless (i) a public trading market then exists for the Common Stock, (ii) adequate information concerning the Company is then available to the public, and (iii) other terms and conditions of Rule 144 or any exemption therefrom are complied with; and that any sales of the shares of Common Stock may be made only in limited amounts in accordance with such terms and conditions.

12. **Right to Terminate Directorship.** Neither the Plan nor the grant the Award hereunder shall impose any obligations on the Company and/or the stockholders of the Company to retain you as a director, nor shall it impose any obligation on your part to remain as a director of the Company.

12. **Miscellaneous.**

(d) This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, personal legal representatives, successors, trustees, administrators, distributees, devisees and legatees. The Company may assign to, and require, any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company or any affiliate to which you are rendering services to expressly assume and agree in writing to perform this Agreement. Notwithstanding the foregoing, you may not assign this Agreement other than with respect to shares of Common Stock Transferred in compliance with the terms hereof.

(e) This Award shall not affect in any way the right or power of the Board or stockholders of the Company to make or authorize an adjustment, recapitalization or other change in the capital structure or the business of the Company, any merger or consolidation of the Company or subsidiaries, any issue of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock, the dissolution or liquidation of the Company, any sale or transfer of all or part of its assets or business or any other corporate act or proceeding. The RSUs granted hereunder shall be subject to adjustment in accordance with Section 4.2(b) of the Plan.

(f) No modification or waiver of any of the provisions of this Agreement shall be effective unless in writing and signed by the party against whom it is sought to be enforced.

(g) The failure of any party hereto at any time to require performance by another party of any provision of this Agreement shall not affect the right of such party to require performance of that provision, and any waiver by any party of any breach of any provision of this Agreement shall not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself, or a waiver of any right under this Agreement.

(h) The headings of the sections of this Agreement have been inserted for convenience of reference only and shall in no way restrict or modify any of the terms or provisions hereof.

(i) This Agreement shall be construed, interpreted and governed and the legal relationships of the parties determined in accordance with the internal laws of the State of Delaware without reference to rules relating to conflicts of law.

14. **Agreement and Grant Not Effective Unless Accepted** By selecting the "Accept" button below you agree (i) to enter into this Agreement electronically, and (ii) to the terms and conditions of the Agreement. Until you select the "Accept" button below, this Award shall not be effective and if you do not select the "Accept" button within 14 days from the date the Agreement is made available to you electronically this Award shall be null and void.

**RESTRICTED STOCK UNIT AGREEMENT
PURSUANT TO THE
COMTECH TELECOMMUNICATIONS CORP.
2000 STOCK INCENTIVE PLAN**

Dear [Employee Name]:

Preliminary Statement

As an employee of Comtech Telecommunications Corp. (the "Company") or an Affiliate, pursuant to Section 11.1 of The Comtech Telecommunications Corp. 2000 Stock Incentive Plan, as amended (the "Plan"), you were granted on [Date] (the "Grant Date"), pursuant to the terms of the Plan and this Restricted Stock Unit Agreement (this "Agreement"), the number of restricted stock units (the "RSUs") set forth below. Each RSU represents the right to receive one (1) share of the Company's common stock, \$.10 par value per share (the "Common Stock"), subject to the terms and conditions of the Plan and this Agreement.

The terms of the grant are as follows:

1. **Grant of RSUs** Subject in all respects to the Plan and the terms and conditions set forth herein and therein, on the Grant Date you were granted [●] RSUs (the "Award").

2. **Vesting.**

a. The Award shall vest in equal installments over a three (3) year period, commencing on the Grant Date, at the rate of 33 1/3% effective on each of the first through third anniversaries of the Grant Date; provided that you have not incurred a Termination of Employment (as defined below) prior to the applicable vesting date. The date that an RSU becomes vested shall be referred to herein as the "Vesting Date" with the period between the Grant Date and the third anniversary of the Grant Date referred to as the "Service Period". Except as otherwise set forth herein, upon any Termination of Employment, all unvested RSUs shall be forfeited on the date of such Termination of Employment for no consideration and there shall be no proportionate or partial vesting in the periods prior to each Vesting Date and all vesting shall occur only on the appropriate Vesting Date.

b. Notwithstanding the foregoing, if on the Grant Date, you have three or more years of qualifying service with the Company (as determined by the Committee in its sole discretion) and you undergo a Termination of Employment without Cause (other than due to death or Disability) during the Service Period, then upon such Termination of Employment, in addition to the number of RSUs that have vested in accordance with Section 2(a) above (if any), you will vest in a number of RSUs (rounded down to the nearest whole RSU) equal to (i) the number of unvested RSUs as of such Termination of Employment (assuming no vesting occurs pursuant to this paragraph), multiplied by (ii) a fraction, (x) the numerator of which is the number of days elapsed from the Vesting Date immediately preceding such Termination of Employment (or, if no Vesting Date has occurred, then the number of days elapsed from the Grant Date) through the date of such Termination of Employment and (y) the denominator of which is the number of days from the Vesting Date immediately preceding such Termination of Employment (or, if no Vesting Date has occurred, then the number of days elapsed from the Grant Date) through the end of the Service Period. The resulting number of RSUs shall be distributed to you in accordance with Section 3 hereof, subject to your timely execution and non-revocation of a release agreement prior to the Settlement Date in a form required by the Company.

3. **Payment.** Subject to the terms of this Agreement and the Plan, you shall receive one share of Common Stock with respect to each vested RSU subject to the Award within thirty (30) days following the applicable Vesting Date (such date of settlement, the "Settlement Date") except for those shares of Common Stock that may be used to pay any applicable taxes.

4. **Dividend Equivalents.** Any cash or Common Stock dividends paid on shares of Common Stock underlying an RSU prior to the Settlement Date for such RSU shall be credited to a dividend book entry account on your behalf (any such credited amount, a "Dividend Equivalent"). Any cash Dividend Equivalents shall not be deemed to be reinvested in shares of Common Stock and will be held uninvested and without interest. Your right to receive any Dividend Equivalents with respect to cash dividends shall vest only if and when the related RSU vests, and an amount equal to such cash dividend shall be paid to you in cash on the applicable Settlement Date on which the related RSU is settled. Your right to receive any Dividend Equivalents with respect to dividends of Common Stock shall vest only if and when the related RSU vests, and on the applicable Settlement Date on which the related RSU is settled you will be paid an amount in cash equal to the Fair Market Value of the Common Stock underlying such dividend as of the applicable Settlement Date. Prior to the payment thereof, any Dividend Equivalents will be encompassed within the term "Award" with respect to the relevant RSUs.

5. **Termination.** Any RSUs (including any Dividend Equivalents credited thereupon) that are not vested upon your Termination of Employment shall, upon such Termination of Employment, terminate and be forfeited in their entirety as of the date of such Termination of Employment.

6. **Detrimental Activity.** In the event you engage in Detrimental Activity prior to, or during the one year period following the vesting of any RSUs, the Committee may direct that all unvested RSUs and all vested but unpaid RSUs (including any Dividend Equivalents credited thereupon) shall be immediately forfeited to the Company and that you shall pay over to the Company an amount equal to the amount realized at the time of vesting of any RSU or any Common Stock or Dividend Equivalents paid in connection therewith which had vested in the period referred to above.

7. **Restriction on Transfer.** Unless otherwise approved by the Committee, the Award is not transferable other than by will or by the laws of descent and distribution. In addition, unless otherwise approved by the Committee, the Award shall not be assigned, negotiated, pledged or hypothecated in any way (whether by operation of law or otherwise), and the Award shall not be subject to execution, attachment or similar process. Upon any attempt to transfer, assign, negotiate, pledge or hypothecate all or part of the Award or in the event of any levy upon the Award by reason of any execution, attachment or similar process contrary to the provisions hereof not otherwise approved by the Committee, the Award shall immediately become null and void.

8. **Rights as a Stockholder.** Except as otherwise specifically provided herein, you shall have no rights as a stockholder with respect to any shares of Common Stock covered by the Award unless and until you have become the holder of record of the shares of Common Stock.

9. **Provisions of Plan Control** This grant is subject to all the terms, conditions and provisions of the Plan, including, without limitation, Section 17.13 of the Plan (Section 409A of the Code) and the amendment provisions of the Plan, and to such rules, regulations and interpretations relating to the Plan as may be adopted by the Board of Directors of the Company and as may be in effect from time to time. Any capitalized term used but not defined herein shall have the meaning ascribed to such term in the Plan. The Plan is incorporated herein by reference. If and to the extent that this grant conflicts or is inconsistent with the terms, conditions and provisions of the Plan, the Plan shall control, and this grant shall be deemed to be modified accordingly.

10. **Notices.** Any notice or communication given hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, or by United States mail, to the appropriate party at the address set forth below (or such other address as the party shall from time to time specify):

If to the Company, to:

Comtech Telecommunications Corp.
68 South Service Road, Suite 230
Melville, NY 11747
Attention: Secretary

If to you, to the address indicated after your signature at the end of this Agreement.

11. **Withholding.** You shall be solely responsible for all applicable foreign, federal, state, and local taxes with respect to the RSUs and the payment of Common Stock thereunder; provided, however, that at any time the Company is required to withhold any such taxes, you shall pay, or make arrangements to pay, in a manner satisfactory to the Company, an amount equal to the amount of all applicable federal, state and local or foreign taxes that the Company is required or permitted to withhold at any time, including, if then permitted by the Company, by electing to reduce the number of shares of Common Stock otherwise then deliverable to you under this Award. Unless you have informed the Company of your intent to make alternate arrangements to satisfy your withholding obligations at least 60 days in advance of the applicable tax date (unless otherwise determined by the Company) and at a time when you are not otherwise precluded from trading Common Stock by law, the Company or one of its Affiliates shall have the automatic right to withhold such taxes from any payments that the Company would otherwise make to you (including salary, wages, any expenses reimbursable to you under the Company policies and any other compensation), including, but not limited to, the right to withhold shares otherwise deliverable to you under this Award. The Company will withhold taxes (e.g., federal, state and local taxes, including payroll taxes) in an amount at least equal to the minimum statutory taxes required to be withheld; provided, however, at your advanced election you may request the Company withhold additional amounts up to your maximum statutory individual tax rate in each relevant jurisdiction applicable to you at such time of withholding; and provided, further, that if the shares of Common Stock to be delivered to you under this Award are required to be retained by you to satisfy stock ownership guidelines, the Company shall withhold taxes in an amount equal to your maximum statutory individual tax rate in each relevant jurisdiction applicable to you at such time of withholding, in all cases, so long as the withholdings do not result in this Award being classified as a liability-based award in accordance with applicable accounting standards.

12. **Securities Representations.** The grant of the Award and issuance of shares of Common Stock upon settlement of the Award shall be subject to, and in compliance with, all applicable requirements of federal, state or foreign securities law. No shares of Common Stock may be issued hereunder if the issuance of such shares would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which such shares may then be listed. As a condition to the settlement of the Award, the Company may require you to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation.

The shares of Common Stock are being issued to you and this Agreement is being made by the Company in reliance upon the following express representations and warranties. You acknowledge, represent and warrant that:

c. you have been advised that you may be an "affiliate" within the meaning of Rule 144 under the Securities Act of 1933, as amended (the "Act") and in this connection the Company is relying in part on your representations set forth in this section.

d. If you are deemed to be an affiliate within the meaning of Rule 144 of the Act, the shares of Common Stock issued to you must be held indefinitely unless an exemption from any applicable resale restrictions is available or the Company files an additional registration statement (or a "re-offer prospectus") with regard to such shares of Common Stock and the Company is under no obligation to register the shares (or to file a "re-offer prospectus").

e. If you are deemed to be an affiliate within the meaning of Rule 144 of the Act, you understand that the exemption from registration under Rule 144 will not be available unless (i) a public trading market then exists for the Common Stock, (ii) adequate information concerning the Company is then available to the public, and (iii) other terms and conditions of Rule 144 or any exemption therefrom are complied with; and that any sales of the shares of Common Stock may be made only in limited amounts in accordance with such terms and conditions.

13. **Miscellaneous.**

f. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, personal legal representatives, successors, trustees, administrators, distributees, devisees and legatees. The Company may assign to, and require, any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company or any affiliate by which you are employed to expressly assume and agree in writing to perform this Agreement. Notwithstanding the foregoing, you may not assign this Agreement other than with respect to shares of Common Stock Transferred in compliance with the terms hereof.

g. This Award shall not affect in any way the right or power of the Board or stockholders of the Company to make or authorize an adjustment, recapitalization or other change in the capital structure or the business of the Company, any merger or consolidation of the Company or subsidiaries, any issue of bonds, debentures, preferred or prior preference stock ahead of or affecting the Common Stock, the dissolution or liquidation of the Company, any sale or transfer of all or part of its assets or business or any other corporate act or proceeding. The RSUs granted hereunder shall be subject to adjustment in accordance with Section 4.2(b) of the Plan.

h. You agree that the award of the RSUs hereunder and payment of Common Stock and any Dividend Equivalents credited thereunder is special incentive compensation that will not be taken into account as "salary" or "compensation" or "bonus" in determining the amount of any payment under any pension, retirement or profit-sharing plan of the Company or any life insurance, disability or other benefit plan of the Company.

i. No modification or waiver of any of the provisions of this Agreement shall be effective unless in writing and signed by the party against whom it is sought to be enforced.

j. The failure of any party hereto at any time to require performance by another party of any provision of this Agreement shall not affect the right of such party to require performance of that provision, and any waiver by any party of any breach of any provision of this Agreement shall not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself, or a waiver of any right under this Agreement.

k. The headings of the sections of this Agreement have been inserted for convenience of reference only and shall in no way restrict or modify any of the terms or provisions hereof.

l. This Agreement shall be construed, interpreted and governed and the legal relationships of the parties determined in accordance with the internal laws of the State of Delaware without reference to rules relating to conflicts of law.

14. **Right to Terminate Employment** Neither the Plan nor the grant of the Award hereunder shall impose any obligations on the Company or an Affiliate and/or the stockholders of the Company to retain you as an employee, nor shall it impose any obligation on your part to remain as an employee of the Company or an Affiliate.

15. **Agreement and Grant Not Effective Unless Accepted** By selecting the "Accept" button below you agree (i) to enter into this Agreement electronically, and (ii) to the terms and conditions of the Agreement. Until you select the "Accept" button below, this Award shall not be effective and if you do not select the "Accept" button within 14 days from the date the Agreement is made available to you electronically this Award shall be null and void.

CHANGE-IN-CONTROL AGREEMENT

Tier 1

Dated: [Date]

PERSONAL AND CONFIDENTIAL

[Name]

[Title]

[Company Name]

Dear [Name]:

Comtech Telecommunications Corp. considers it essential to the best interests of its stockholders to foster the continued employment of its key management personnel and the key management personnel of its subsidiaries (such subsidiaries, together with Comtech Telecommunications Corp., collectively referred to as the "Company"). In addition, our Board of Directors (the "Board") recognizes that the possibility of a change in ownership or control of the Company may result in the departure or distraction of key personnel to the detriment of the Company and our stockholders. Therefore, the Board has determined to enter into this agreement with you (i) to encourage and reinforce your attention and dedication to your assigned duties without distraction, including in the face of the disruptive circumstances that can arise from a possible change in control of the Company, (ii) to enhance our ability to retain you, and (iii) to provide you with fair and reasonable protection, including protection from the risks of a change in ownership and control so that you will be in a position to help the Company in a manner that would be beneficial to stockholders.

You and the Company agree as follows:

1. Term of Agreement and Protected Period.

(a) Term of Agreement. The period during which this Agreement shall be in effect (the "Term") shall be the period commencing on [Date] (the "Effective Date") through the close of business on the second anniversary of the Effective Date; *provided, however*, that the Term shall be automatically renewed for successive two-year periods unless either party hereto gives written notice of non-renewal to the other party at least sixty (60) days prior to the expiration of the then current Term; and *provided further*, that if the Company (i) has entered into an agreement the consummation of which will constitute a Change in Control (a "Control Agreement") or (ii) a Change in Control has occurred, in either case prior to expiration of the then current Term, the Term shall continue until the date that is twenty-four (24) months after the

occurrence of such Change in Control. The foregoing notwithstanding, during your employment with the Company prior to the beginning and after the end of the Protected Period (as defined below), the Company's obligations under Section 3(g) (and related provisions) will continue during the defined "Extended Protection Period" unless specifically terminated in accordance with Section 3(g).

(b) Protected Period. The "Protected Period" is the period from the time of occurrence of a Change in Control until the date that is twenty-four (24) months after the occurrence of the Change in Control. Notwithstanding the preceding sentence, the introductory text to Section 3 provides that certain events occurring before a Change in Control shall be deemed to have occurred during the Protected Period.

2. Change in Control. "Change in Control" shall mean the occurrence during the Term of a Change in Control as defined in Section 14.2 of the 2000 Stock Incentive Plan, as such Plan may be amended from time to time (the "2000 Plan") prior to the occurrence of a Change in Control.

3. Termination and Resulting Payments.

If you are Terminated within 90 days prior to a Change in Control by the Company without Cause at the direction of a Person who has entered into a Control Agreement with the Company, or if you Terminate with Good Reason within 90 days prior to a Change in Control (treating the entry by such a Person into such an agreement as a Change in Control in applying the definition of Good Reason) if the circumstance or event which constitutes Good Reason occurs at the direction of such Person, then your Termination shall be deemed to have been during the Protected Period and following a Change in Control and shall qualify for the CIC Payments specified in Section 3(b), with payments thereunder (in addition to any payments already provided under Section 3(g)) to occur on the business day following the 52nd day after the Change in Control (subject to the legal effectiveness of your release), except that, if a payment is deemed to be a deferral of compensation for purposes of Section 409A of the Internal Revenue Code (the "Code") and the Change in Control did not constitute a change in the ownership of the Company, a change in effective control of the Company, or a change in the ownership of a substantial portion of the assets of the Company, each as defined in Treasury Regulation § 1.409A-3(i)(5), then settlement shall occur at the date that is six months after your Date of Termination.

(a) Termination by the Company for Cause or by You Without Good Reason During the Protected Period. If during the Protected Period you are Terminated by the Company for Cause or you voluntarily Terminate without Good Reason, the Company will have no obligation to pay any amounts or benefits to you under this Agreement.

(b) Terminations Triggering CIC Payments. The Company will pay you the payments and provide you the benefits described in this Section 3(b) upon Termination during

the Protected Period and during the Term, unless such Termination is (A) by the Company for Cause, (B) by reason of death, (C) due to your failure to perform your duties with the Company due to a Disability (as defined in the 2000 Plan), or (D) by you without Good Reason. For purposes of this Section 3(b), a Termination shall be deemed to have occurred for Good Reason if, notwithstanding the existence of a valid basis of Termination by you for Good Reason, there has not occurred a Termination by you for Good Reason. The payments or benefits (the "CIC Payments") provided under this Section 3(b) are as follows:

(i) The Company will pay you a lump sum CIC Payment, in cash, equal to 3.0 times your Annual Compensation.

(A) For this purpose, your "Annual Compensation" will be the sum of (1) plus (2), where (1) is the greater of your annual base salary in effect immediately prior to the occurrence of the event or circumstance upon which the Notice of Termination is based or your annual base salary in effect immediately prior to the Change in Control, and (2) is an amount equal to your target non-equity incentive award opportunity established by the Committee (as defined below) for the fiscal year in which your Termination occurs.

(ii) Other provisions of any plan or Annual Incentive Award authorization notwithstanding, with respect to your annual incentive award for the fiscal year in progress at your Date of Termination and your Annual Incentive Award for any previously completed year for which your final Annual Incentive Award has not yet been paid or payable or granted by the Board committee or other authorized decision maker with authority to make such determination (the "Committee"):

(A) If and to the extent that the level of your earning of any such award is based on one or more pre-set performance goals, any such award shall be deemed earned and vested as of the Date of Termination based on the level of actual achievement of your applicable performance goal through the earlier of the end of the performance period or the Date of Termination. For this purpose, the level of actual achievement of your performance goal through the applicable date shall be determined in good faith by the Committee and without the exercise of negative discretion, and any requirement that this determination be based on audited financial results shall not apply.

(B) If and to the extent that the level of your earning of any such award is not based on pre-set performance goals (i.e., is discretionary), any such award shall be deemed vested as of the date of Termination and shall be deemed earned at a level consistent with the level

of annual incentives (as a percentage of base salary) of other executives of comparable rank whose annual incentives are based on pre-set performance goals, provided that the annual incentive shall in no event be less than a pro rata amount of your target non-equity incentive award opportunity established by the Committee for the fiscal year in which your Termination occurs (with proration based on the portion of the applicable fiscal year during which you were employed). These determinations shall be made in good faith by the Committee and without the exercise of negative discretion, as provided above.

(C) No amount of such award will be payable based on performance after the Date of Termination under this Section 3(b)(ii). Subject to any restrictions imposed by Section 409A of the Code, if you are entitled to all or any portion of the annual incentive under any other plan or authorization, the amount payable hereunder will not be paid to the extent it would duplicate such payment of the annual incentive. The provisions regarding the timing of payment under Section 3(d) take precedence over any other payment timing rule applicable to any such annual incentive.

(D) In connection with this award, you will not be required to execute the Acknowledgement customarily required as a condition of payment of Annual Incentive Awards.

For purposes of this Section 3(b)(ii), if no Annual Incentive Award opportunity has been established for you for the fiscal year in progress at your Date of Termination, your Annual Incentive Award opportunity for that year will be deemed to be identical to the Annual Incentive Award opportunity that was established for the preceding year.

(iii) (A) Your stock options and other equity awards granted under the 2000 Plan (or any successor plan) (excluding long-term performance share or similar performance-vesting equity awards ("Performance Awards")) shall, subject to any restrictions imposed under Section 409A of the Code, become immediately vested and exercisable (if subject to exercise) and all restrictions on such awards shall lapse as of the date of your Termination, and (B) your Performance Awards shall, subject to any restrictions imposed under Section 409A of the Code, immediately vest at the maximum performance target as described in the applicable award agreement.

(iv) Subject to your continued compliance with Section 5, for the period under applicable law you are entitled to continue medical coverage following the Date of Termination (the "Continuation Period"), the Company shall offer you continued participation in the Company's employee medical, dental and vision plans in which you are a participant immediately prior to the Date of Termination (the "Medical Plans"), or

such Medical Plans you may elect during any open enrollment period allowable by the Company or the Company's Medical Plan insurance providers or, if permitted, as elected on the Date of Termination, at the Company's expense, which coverage may be provided at the Company's election under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, or other applicable law. Your participation in the Medical Plans during the Continuation Period shall be subject to your timely election of coverage. If at any time during the Continuation Period such continued coverage is not permitted under the terms and conditions of the applicable Medical Plan, the Company will use commercially reasonable efforts to arrange coverage for you under a medical coverage arrangement that provides benefits substantially equivalent to, and at a cost that is no less favorable to you on an after-tax basis, the benefits you would have been entitled to receive under the Medical Plan (assuming you had elected to participate voluntarily to the maximum extent permissible). Notwithstanding the foregoing, you agree and acknowledge that any continuation coverage provided under a Medical Plan shall be provided in a manner intended to comply with applicable law, including without limitation to avoid any excise tax under Section 4980D of the Code.

(c) Reduction in Certain Payments If Excise Tax Would Apply.

(i) Notwithstanding any other provision of this Agreement, in the event you become entitled to any amounts or benefits payable in connection with a Change in Control (whether or not such amounts are payable pursuant to this Agreement) (the "Total Change in Control Payments"), if any of such Total Change in Control Payments are subject to the tax (the "Excise Tax") imposed by Section 4999 of the Code (or any similar federal, state or local tax that may hereafter be imposed), the Total Change in Control Payments shall be reduced to the Reduced Amount (as defined below) if, but only if, reducing the Total Change in Control Payments would provide to you a greater net after-tax amount of Total Change in Control Payments than would be the case if no such reduction took place. The "Reduced Amount" shall be an amount expressed in present value which maximizes the aggregate present value of the Total Change in Control Payments without causing any Change in Control Payment to be subject to the Excise Tax, determined in accordance with Section 280G(d)(4) of the Code. Any reduction in Total Change in Control Payments shall be implemented in accordance with Section 3(c)(ii).

(ii) Any reduction in payments under this Section 3(c) shall apply to cash payments and/or vesting of equity awards so as to minimize the amount of compensation that is reduced (i.e., it applies to payments or vesting that to the greatest extent represent parachute payments), with the amount of compensation based on vesting to be measured (to be minimally reduced, for purposes of this provision) by the intrinsic value of the equity award at the date of such vesting. You will be advised of the

determination as to which compensation will be reduced and the reasons therefor, and will be provided a detailed computation of such amounts, and you and your advisors will be entitled to present information that may be relevant to this determination. No reduction shall be applied to an amount that constitutes a deferral of compensation under Section 409A of the Code except for amounts that have become payable at the time of the reduction and as to which the reduction will not result in a non-reduction in a corresponding amount that is a deferral of compensation under Section 409A of the Code that is not currently payable.

For purposes of determining whether any of the Total Change in Control Payments will be subject to the Excise Tax and the amount of such Excise Tax:

(A) The Total Change in Control Payments shall be treated as "parachute payments" within the meaning of Section 280G(b)(2) of the Code, and all "excess parachute payments" within the meaning of Section 280G(b)(1) of the Code shall be treated as subject to the Excise Tax, unless, and except to the extent that, in the written opinion of independent compensation consultants, counsel or auditors of nationally recognized standing ("Independent Advisors") selected by the Company, the Total Change in Control Payments (in whole or in part) do not constitute parachute payments, or such excess parachute payments (in whole or in part) represent reasonable compensation for services actually rendered within the meaning of Section 280G(b)(4) of the Code in excess of the base amount within the meaning of Section 280G(b)(3) of the Code or are otherwise not subject to the Excise Tax. You will be provided a copy of any such written opinion, and all fees and expenses of the Independent Advisors shall be borne solely by the Company.

(B) The value of any non-cash benefits or any deferred payment or benefit shall be determined by the Independent Advisors in accordance with the principles of Sections 280G(d)(3) and (4) of the Code.

For purposes of determining reductions in compensation under this Section 3(c), if any, you will be deemed (A) to pay federal income taxes at the applicable rates of federal income taxation for the calendar year in which the compensation would be payable; and (B) to pay any applicable state and local income taxes at the applicable rates of taxation for the calendar year in which the compensation would be payable, taking into account any effect on federal income taxes from payment of state and local income taxes. Compensation will be adjusted, if necessary, to provide for accurate payments or to correct any amounts previously estimated in determining the amount of reductions in compensation under this Section 3(c). However, no adjustments will be made later than

the applicable deadline under Section 409A of the Code if such adjustments would result in a tax penalty under Section 409A of the Code.

(iii) The Company shall have the right to control all proceedings with the Internal Revenue Service (or relating thereto) that may arise in connection with the determination and assessment of any Excise Tax and, at its sole option and expense, the Company may pursue or forego any and all administrative appeals, proceedings, hearings, and conferences with any taxing authority in respect of such Excise Tax (including any interest or penalties thereon); provided, however, that the Company's control over any such proceedings shall be limited to issues with respect to which compensation may be reduced hereunder, and you will be entitled to settle or contest any other issue raised by the Internal Revenue Service or any other taxing authority. You agree to cooperate with the Company in any proceedings relating to the determination and assessment of any Excise Tax.

(d) Time of Payment. The Company's obligation to make the payments provided for in Section 3(b)(i) and (ii) shall be subject to your execution of a release, in the form attached as Exhibit A, which you have not revoked, such actions to be completed by the end of any applicable revocation period. Subject to the remainder of this Section 3(d), if and only if such release has become legally effective, on the business day immediately following the 52nd day after your Date of Termination, the Company shall pay the amount specified in Section 3(b)(i) and (ii) in a lump sum. For purposes of compliance with Section 409A of the Code, the payments under Section 3(b)(i) and (ii) shall each be deemed to be separate payments, and it is intended that the payment under Section 3(b)(i) and (ii) (and any related payment under Section 3(c)) in each case shall be deemed first to be a short-term deferral under Treasury Regulation § 1.409A-1(b)(4), and the payment under Section 3(b)(i) then shall be deemed to be separation pay excluded from being a deferral of compensation to the extent provided under Treasury Regulation § 1.409A-1(b)(9)(iii). If, however, (i) for any reason all or any portion of the payment under Section 3(b)(i) or the payment under Section 3(b)(ii), is deemed to be a non-excluded deferral of compensation under Treasury Regulation § 1.409A-1(b) payable based upon your Termination, any payment (or any other payment or benefit hereunder considered to be such a non-excluded deferral of compensation) is intended to be paid or provided in accordance with Section 409A of the Code, and (ii) any of the Company's stock is publicly traded on an established securities market or otherwise, and (iii) at the Date of Termination you are a "key employee" (as defined in Code Section 416(i) without regard to paragraph (5) thereof), then the affected portion of such payment shall be made on the first business day that is on or after the date that is six months after the date of your separation from service (or if earlier, the date of your death). Likewise, if any other payment or benefit under this Agreement would be subject to a tax penalty under Section 409A of the Code, such payment or benefit will be payable to you only at the date specified in the preceding sentence if such delay would avoid such tax penalty to you. You shall not be entitled to exercise any influence on the time of any payment payable

hereunder, including in any case in which the permitted payment period would include portions of two different tax years.

(e) Notice. During the Protected Period, any purported termination of your employment by the Company or by you shall be communicated by written Notice of Termination to the other party hereto.

(f) Certain Definitions. Except as otherwise indicated in this Agreement, all definitions in this Section 3(f) shall be applicable during the Protected Period only.

(i) Annual Incentive Award. "Annual Incentive Award" shall mean the annual incentive compensation (including for this purpose the grant date fair value of any long term performance share awards, restricted stock, stock options or any other equity based award) paid or payable or granted during the applicable fiscal year or any award to the extent specified by the Committee in the relevant award agreement or any other equity based awards in each case paid or payable or granted in lieu of annual non-equity incentive compensation for that fiscal year; provided further that, (A) the grant date fair value of any equity based award granted as annual incentive compensation shall be included in the computation of the annual incentive amounts paid or granted in any applicable fiscal year based upon the grant date fair value of such award for accounting purposes and (B) any dividend equivalents paid or payable with respect to such an equity based award shall not be considered annual incentive compensation.

(ii) Cause. "Cause" for Termination by the Company of your employment, during the Protected Period, shall mean (A) willful misconduct, gross negligence, dishonesty, misappropriation, breach of fiduciary duty or fraud by you with regard to the Company or any of its assets or businesses; (B) your conviction of or the pleading of guilty or nolo contendere with regard to any felony or crime (for the purpose hereof, traffic violations and misdemeanors shall not be deemed to be a crime); or (C) any material breach by you of the provisions of this Agreement or any written employment agreement between you and the Company which is not cured within 30 days after written notice to you of such breach from the Board of Directors of the Company.

(iii) Date of Termination. "Date of Termination" shall mean the date specified in the Notice of Termination which, in the case of a Termination by the Company (other than a Termination for Cause), shall not be less than 30 days from the date such Notice of Termination is given and, in the case of a Termination by you, shall not be less than 30 nor more than 60 days from the date such Notice of Termination is given (except as otherwise provided in Section 3(f)(v)). The date of your death or Termination due to Disability shall be the Date of Termination.

(iv) Good Reason. "Good Reason" for Termination of your employment will mean the occurrence, without your written consent, of any one of the events specified in clause (A), (B) or (C) below, provided that you have given written Notice of Termination to the Company that an event constituting Good Reason has occurred within 90 days after the initial existence of the condition giving rise to such specified Good Reason, and the Company has failed to fully correct the specified Good Reason within 30 days after receipt of such Notice of Termination (such correction by the Company having the effect of canceling such Notice of Termination notice and any related Termination), and your separation from service occurs within two years after the initial event constituting Good Reason:

(A) The assignment to you of any duties inconsistent in any material adverse respect with your position, authority or responsibilities or any other material adverse change in such position, authority or responsibilities; for this purpose and for clarity (without limiting the scope of this clause (A)), your position, authority or responsibilities will be deemed to be materially and adversely changed if, during the period of your employment with the Company, (1) (I) you cease to serve in the position you held immediately prior to the occurrence of the material adverse change (your "Pre-Trigger Position") (x) with the Company or (y) following a Change in Control, with the ultimate parent entity of the group of entities that includes the Company (or any successor) or (II) you continue to serve in your Pre-Trigger Position but such ultimate parent entity or the Company (or any successor) does not have an outstanding class of common stock listed on a national securities exchange, or (2) the Board of Directors of the Company (or any successor) or a Board committee approves or adopts a significant business strategy or policy, including without limitation a material acquisition or disposition of assets, change in capitalization (including a material extraordinary dividend or spinoff), or reduction in force, which business strategy or policy was not approved by a majority of directors specified as not triggering a Change in Control in accordance with Section 14.2(b) of the 2000 Plan (or the substantially equivalent provision in any successor plan);

(B) A material reduction by the Company in either (i) your annual base salary in effect immediately prior to the Change in Control and as such base salary thereafter may have been increased, (ii) your annual incentive (as specified below), or (iii) your annual equity awards (as specified below). For this purpose, a reduction of \$10,000 in amount or value, on an annualized basis, of your base salary or annual equity awards value, or of these two elements in the aggregate, will be deemed

"material" (other changes may be material in the particular circumstances). A material reduction in your annual incentive will have occurred if the amount actually paid or payable to you for any year, all or part of which is in the Protected Period (including the year in which the Change in Control occurs), is reduced to a level less than 80% of your annual incentive actually paid for performance in the latest full fiscal year before the Change in Control, including the grant date fair value of any equity-based awards granted as a payment of your annual incentive. A material reduction in your annual equity awards will be based on the extent to which the aggregate grant date fair value of equity awards in a given fiscal year during the Protected Period is reduced from the grant date fair values of the annual equity awards granted to you from the Company before the Change in Control (these grants may have occurred in the same fiscal year as the Change in Control). Annual equity awards shall be deemed to have a value determined in a manner consistent with the Company's (or then parent company's) internal valuation method for such awards used at the time of grant. It shall not constitute a material reduction in the annual equity awards for the Company to change the form of such awards to either equity of the surviving parent corporation or cash, provided the value thereof is not materially reduced; or

(C) The relocation of the principal place of your employment to a location more than fifty (50) miles from the location of such place of employment on the Effective Date; except for required travel on the Company's business to an extent substantially consistent with your business travel obligations prior to the Change in Control.

(v) Notice of Termination. "Notice of Termination" shall mean notice indicating the specific termination provision in this Agreement relied upon and setting forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of your employment under the provision so indicated.

(vi) Termination. "Termination" means an event by which your then current employment relationship with the Company and all subsidiaries has ended, regardless of whether you are subsequently hired into a new position (including without limitation a position as a consultant), provided that, with respect to any payment hereunder which is deemed to be a non-excluded deferral of compensation under Treasury Regulation § 1.409A-1(b), a Termination will occur only at the time at which you have had a "separation from service" within the meaning of Treasury Regulation § 1.409A-1(h).

(g) Payment Outside the Protected Period. During your employment with the Company (which includes any affiliate of the Company) prior to or following the Protected Period, in the event that during the "Extended Protection Period" (as defined below) your employment is Terminated by the Company not for Cause or Terminated by you for Modified Good Reason (as defined in this Section 3(g)), you will be entitled to the payments and benefits under Sections 3(b)(i), (ii) and (iv) except that (A) the additional payments under Section 3(b)(i) will be equal to 2.0 times Annual Compensation and (B) the Continuation Period under Section 3(b)(iv) shall be 24 months (or such shorter period required by law). In addition, if your employment is Terminated by the Company not for Cause or Terminated by you with Modified Good Reason during the Extended Protection Period, all of your then outstanding and unvested stock option and other equity awards granted under the 2000 Plan (or any successor plan), excluding Performance Awards, shall, subject to any restrictions imposed under Section 409A of the Code, become immediately vested and exercisable (if subject to exercise) and all restrictions on such awards shall lapse as of the date of your Termination. Your Performance Awards shall, subject to any restrictions imposed under Section 409A of the Code, immediately vest at the maximum performance target as described in the applicable award agreement. For purposes of this Section 3(g), the "Extended Protection Period" means the period from (x) the Effective Date to the beginning of the Protected Period (the "Pre-Protected Period") and (y) the end of the Protected Period until the close of business on the second anniversary of the end of the Protected Period (the "Post-Protected Period"), *provided* that the Extended Protection Period will be automatically renewed for successive two-year periods unless either party hereto gives written notice of non-renewal to the other party at least ninety (90) days prior to the expiration of the then current Post-Protected Period of the Extended Protection Period. For purposes of this Section 3(g), "Modified Good Reason" shall mean the occurrence, without your written consent, of either (A) the assignment to you of any duties inconsistent in any material adverse respect with your position, authority or responsibilities or any other material adverse change in such position, authority or responsibilities, or you ceasing to serve in your Pre-Trigger Position; (B) a material reduction by the Company in either (i) your annual base salary (including, during the Post-Protected Period, as in effect immediately prior to the Change in Control), (ii) your annual incentive (as specified below), or (iii) your annual equity awards (as specified below). For this purpose, a reduction of \$10,000 in amount or value, on an annualized basis, of your base salary or annual equity awards value, or of these two elements in the aggregate, will be deemed "material" (other changes may be material in the particular circumstances). A material reduction in your annual incentive will have occurred if the amount actually paid or payable to you for any year is reduced to a level less than 80% of your annual incentive actually paid for performance in the latest full fiscal year before reduction (including any portion of a fiscal year that occurs during the Protected Period), including the grant date fair value of any equity-based awards granted as a payment of your annual incentive. A material reduction in your annual equity awards will be based on the extent to which the aggregate grant date fair value of equity awards in a given fiscal year of the Extended Protection Period is reduced from the grant date fair values

of the annual equity awards granted to you from the Company in the immediately preceding fiscal year (including any portion of a fiscal year that occurs during the Protected Period). Annual equity awards shall be deemed to have a value determined in a manner consistent with the Company's (or then parent company's) internal valuation method for such awards used at the time of grant. It shall not constitute a material reduction in the annual equity awards for the Company to change the form of such awards to either equity of the surviving parent corporation or cash, provided the value thereof is not materially reduced; or (C) the relocation of the principal place of your employment to a location more than fifty (50) miles from the location of such place of employment on the Effective Date; except for required travel on the Company's business to an extent substantially consistent with your business travel obligations during the Extended Protection Period; *provided* that, in each case, you have given Notice of Termination to the Company within 90 days after the initial existence of the condition giving rise to your asserted Modified Good Reason, and the Company has failed to fully correct the Modified Good Reason by your Date of Termination (which must be at least 30 days after the Notice is given) specified in the Notice of Termination (such correction by the Company having the effect of canceling such Notice and the resulting Termination), and your Termination occurs within one year after the initial existence of circumstances constituting Modified Good Reason. Other provisions of this Agreement applicable to Section 3(b) (for example, Section 3(d) and Section 6) shall apply to the payments and benefits under this Section 3(g) as well. If you remain employed as specified in this Section 3(g), the obligations of the Company under this Agreement shall continue for the applicable Post-Protected Period portion of the Extended Protection Period, without regard to provisions specifying the end of the Term. Any payments or benefits provided under this Section 3(g) prior to a Change in Control shall reduce any payments or benefits required to be paid pursuant to Sections 3(b)(i), (ii) or (iv), as applicable, following a Change in Control.

(h) Treatment of Equity Upon Termination by Reason of Death or Due to Disability. In the event of your Termination by reason of your death or due to your Disability (in either case whether prior to or during the Protected Period or during the Extended Protection Period), and subject the legal effectiveness of the release, your then outstanding and unvested equity awards will be treated as follows:

- (i) All then outstanding and unvested equity awards that vest solely based on continued service (e.g., stock options, restricted stock, restricted stock units) will become fully vested as of the your Date of Termination due to death or Disability, and if subject to settlement (as opposed to exercise) will be settled in a manner consistent with the terms set forth in the applicable award agreement but in no event later than the date specified in Section 3(d) hereof. Any stock options or other equity awards that are or become exercisable on your Date of Termination due to your death or Disability may be exercised by you (or your estate) for one year

following the Date of Termination, but in no event beyond the expiration of the stated term of such stock option.

- (ii) All then outstanding and unvested equity awards that vest based in whole or in part on achievement of one or more performance goals shall be treated in accordance with terms of the applicable award agreement, it being understood that any such performance-based equity award granted on or after the Effective Date shall provide for vesting in the event of your death or Disability that is no less favorable than the vesting terms applicable to the most recent performance-based equity award granted to you prior to the Effective Date.

4. Mitigation.

You will not be required to mitigate the amount of payments provided for under this Agreement by seeking other employment or otherwise, nor shall the amount of payments provided for under this Agreement be reduced by any compensation earned by you as the result of employment by another employer, by retirement benefits, by offset against any amount claimed to be owed by you to the Company, or otherwise.

5. Covenants for Protection of Company's Business. In consideration for the payments and benefits provided by the Company under this Agreement, by your execution of this agreement you agree as follows:

(i) You acknowledge that your services for the Company are of a special and unique nature and your position with the Company places you in a position of confidence and trust with clients and employees of the Company. Therefore, and in consideration of the Company's performance of its covenants and agreements under this Agreement and under any written employment agreement between you and the Company, you will not at any time during your employment with the Company and for a period of two years thereafter (the "Restrictive Period"), directly or indirectly, engage in any business (as an owner, joint venturer, partner, stockholder, director, officer, consultant, agent or otherwise, other than as the owner of less than 1% of the outstanding class of a publicly traded security) which competes with the business in which the Company is presently engaged or may be engaged at any time during your employment with the Company.

(ii) You agree that you will not (except on behalf of the Company during your employment with the Company), during the Restrictive Period, employ or retain, solicit the employment or retention of, or knowingly cause or encourage any entity to retain or solicit the employment or retention of, any person who is or was an employee of the Company at any time during the period commencing 12 months prior to your Termination of Employment. After your Termination of Employment: (A) You will refrain from disparaging, whether orally, in writing or

in other media, the Company, its affiliates, the officers, directors and employees of each of them, and the products and services of each of them, and (B) the Company will not disparage you or otherwise comment upon your employment performance other than as may be required by law or as requested by you.

(iii) You will not at any time, directly or indirectly, without the Company's prior written consent, disclose to any third party or use (except as authorized in the regular course of the Company's business or in your performance of your responsibilities for the Company) any confidential, proprietary or trade secret information that was either acquired by you during your employment with the Company or thereafter, including, without limitation, sales and marketing information, information relating to existing or prospective customers and markets, business opportunities, and financial, technical and other data (collectively, the "Confidential Information"). After termination of your employment with the Company for any reason and upon the written request of the Company, you shall promptly return to the Company all originals and/or copies of written or recorded material (regardless of the medium) containing or reflecting any Confidential Information and shall promptly confirm in writing to the Company that such action has been taken. Notwithstanding the foregoing, the following shall not constitute Confidential Information: (A) Information that is already in the public domain at the time of its disclosure to you; (B) Information that, after its disclosure to you, becomes part of the public domain by publication or otherwise other than through your act; and (C) Information that you received from a third party having the right to make such disclosure without restriction on disclosure or use thereof.

(iv) Nothing in this Agreement shall be construed to prevent you from (A) responding truthfully to a valid subpoena; or (B) reporting to, communicating with, contacting, responding to an inquiry from, cooperating with, providing relevant information to or otherwise participating or assisting in an investigation conducted by: (1) any federal, state or local governmental or regulatory body or official(s) or self-regulatory organization regarding a possible violation of any state or federal laws or regulations that has occurred, is occurring or is about to occur, including, but not limited to, the Department of Justice, the Securities and Exchange Commission and any other equivalent office of a federal or state agency or Inspector General; or (2) the Equal Employment Opportunity Commission, the National Labor Relations Board or any other governmental authority with responsibility for the administration of labor or employment laws regarding a possible violation of such laws. Prior authorization of the Company shall not be required to make any reports or disclosures described above and you are not required to notify the Company that you have made such reports or disclosures. Additionally, you will not be held criminally or civilly liable for disclosure of a trade secret made in confidence to a government official (federal, state, or local) or to an attorney for the sole purpose of reporting or investigating a suspected legal violation. Further, you will not be liable for disclosing a trade secret in a lawsuit and other proceeding if the filings are made under seal.

If it is determined by a court of competent jurisdiction in any state that any restriction in this Section 5 is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the laws of that state.

You acknowledge and agree that the Company's remedies at law for a breach or threatened breach of any of the provisions of Section 5 would be inadequate and, in recognition of this fact, you agree that, in the event of such a breach or threatened breach, in addition to any remedies at law, the Company, without posting any bond, may be entitled to obtain equitable relief in the form of specific performance, a temporary restraining order, a temporary or permanent injunction or any other equitable remedy which may then be available. Further, in the event you breach any of the foregoing covenants of this Section 5, in addition to any other remedies available to the Company, to the maximum extent permitted by applicable law, the Company shall have the right to recoup from you, and you shall be obligated to repay to the Company, an amount equal to the actual amount of the CIC Payment paid to you pursuant to Section 3(b)(i) multiplied by the Recoverable Portion. For the purposes of this Section 5, "Recoverable Portion" means a percentage obtained by dividing (i) the number of days remaining in the Restrictive Period from and after the commencement of such breach, by (ii) 730. For the avoidance of doubt, recoupment by the Company pursuant to the immediately preceding sentence shall neither be deemed liquidated damages, nor shall it preclude the Company from seeking or obtaining a judgment against you for damages caused by your breach of the foregoing covenants of this Section 5.

6. Prior Acknowledgment.

In connection with a Termination which entitles you to CIC Payments pursuant to Section 3(b), your agreement not to voluntarily terminate your employment with the Company or any of its affiliates, which is set forth in any Acknowledgement previously executed by you as a condition of payment of an Annual Incentive Award, shall terminate, shall no longer be a condition of your right to retain such Annual Incentive Award, and shall be of no further force or effect.

7. Miscellaneous.

(a) Successors. The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to expressly assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. As used in this Agreement, "Company" shall mean the Company as hereinbefore defined and any successor to its business and/or assets as aforesaid which assumes and agrees to perform this Agreement by operation of law, or otherwise.

(b) Binding Agreement. This Agreement shall inure to the benefit of and be enforceable by you and your personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. In the event of your death, all amounts otherwise payable to you hereunder shall, unless otherwise provided herein, be paid in accordance with the terms of this Agreement to your devisee, legatee or other designee or, if there is no such designee, to your estate.

(c) Notice. Notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given when (i) personally delivered or (ii) mailed by United States certified or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth on the first page of this Agreement; provided that all notice to the Company shall be directed to the attention of the Board with a copy to the Chief Executive Officer of the Company, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon receipt.

(d) Modifications. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing and signed by you and such officer as may be designated by the Board. No waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the time or at any prior or subsequent time.

(e) Governing Law. THE VALIDITY, INTERPRETATION, CONSTRUCTION AND PERFORMANCE OF THIS AGREEMENT SHALL BE GOVERNED BY THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO ITS CONFLICTS OF LAW PRINCIPLES.

(f) Tax Withholding. Any payments provided for hereunder shall be paid net of any applicable withholding required under federal, state or local law.

(g) Surviving Obligations. The obligations of the Company and your obligations under this Agreement shall survive the expiration of this Agreement to the extent necessary to give effect to this Agreement.

(h) Validity. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

(i) Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

(j) Entire Agreement. This Agreement sets forth the entire agreement of the parties hereto in respect of the subject matter contained herein and supersedes the provisions of all prior agreements (including any prior Change in Control Agreement between you and the Company and any severance provisions set forth in any prior written employment agreement between you and the Company), promises, covenants, arrangements, communications, representations or warranties, whether oral or written, by any officer, employee or representative of any party hereof with respect to the subject matter contained herein. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not expressly set forth in this Agreement. Notwithstanding anything to the contrary in this Agreement, the procedural provisions of this Agreement shall apply to all benefits payable as a result of a Change in Control (or other change in control). In the event that the terms of this Agreement conflict with the terms of any equity award agreement or equity incentive plan governing any such equity award, the terms of this Agreement shall control.

If this letter sets forth our agreement on the subject matter hereof, kindly sign and return to the Company the enclosed copy of this letter, which will then constitute our agreement on this subject.

COMTECH TELECOMMUNICATIONS CORP.

By: _____

[Name]

[Title]

Agreed to as of this __ day of ____, [Year].

[Name]

Exhibit A

General Release

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I, for myself and my successors, assigns, heirs and representatives (each, a "Releasing Party"), hereby release and forever discharge Comtech Telecommunications Corp. (the "Company"), its stockholders, officers, directors, employees, agents and attorneys, and their respective successors, assigns, heirs and representatives (each, a "Released Party"), individually and collectively, from any and all claims, demands, causes of action, liabilities or obligations, known or unknown, pending or not pending, liquidated or not liquidated, of every kind and nature whatsoever (collectively, the "Released Claims") which the Releasing Party has, has had or may have against any one or more of the Released Parties arising out of, based upon or in any way, directly or indirectly, related to the Company's business, my employment with the Company or the termination of such employment; provided, however, that this General Release shall have no effect whatsoever upon: (a) the Company's obligations, if any, to pay CIC Payments pursuant to the Change in Control Agreement between the undersigned and the Company, dated as of [Date] (the "CIC Agreement") or the rights of the undersigned to enforce such obligations; (b) any and all obligations of the Released Parties to defend, indemnify, hold harmless or reimburse the undersigned under the Indemnification Agreement between the Company and the undersigned, and/or under applicable law and/or under the respective charters and by-laws of the Released Parties, and/or pursuant to insurance policies, if any, for acts or omissions in the undersigned's capacity as a director, officer and/or employee thereof; and (c) any and all rights the undersigned may have to vested or accrued benefits or entitlements under and in accordance with any applicable plan, agreement, program, award, policy or arrangement of a Released Party.

The Released Claims include, without limitation, (a) all claims arising out of or relating to breach of contract, the Fair Labor Standards Act, the Age Discrimination in Employment Act, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1866, the National Labor Relations Act, the Americans with Disabilities Act, the Employee Retirement Income Security Act and/or any other federal, state or local statute, law, ordinance, regulation or order as the same may be amended or supplemented from time to time, (b) all claims for back pay, lost benefits, reinstatement, liquidated damages, punitive damages, and damages on account of any alleged personal, physical or emotional injury, and (c) all claims for attorneys' fees and costs.

I agree that I am voluntarily executing this General Release. I acknowledge that I am knowingly and voluntarily waiving and releasing any rights I may have under the Age Discrimination in Employment Act of 1967 and that the consideration given for the waiver and release is in addition to anything of value to which I was already entitled. I further acknowledge that I have been advised by this writing, as required by the Age Discrimination in Employment Act of 1967, that: (a) my waiver and release specified herein does not apply to any rights or

claims that may arise after the date I sign this General Release or my rights with respect to CIC Payments, if any, payable to me pursuant to the CIC Agreement; (b) I have the right to consult with an attorney prior to signing this General Release; (c) I have twenty-one (21) days to consider this General Release (although I may choose to sign it earlier); (d) I have seven (7) days after I sign this General Release to revoke it; and (e) this General Release will not be effective until the date on which the revocation period has expired, which will be the eighth day after I sign this General Release, assuming I have returned it to the Company by such date.

By: _____

Dated: _____

CHANGE-IN-CONTROL AGREEMENT
Tier 2

Dated: [Date]

PERSONAL AND CONFIDENTIAL

[Name]
[Title]
[Company Name]

Dear [Name]:

Comtech Telecommunications Corp. considers it essential to the best interests of its stockholders to foster the continued employment of its key management personnel and the key management personnel of its subsidiaries (such subsidiaries, together with Comtech Telecommunications Corp., collectively referred to as the "Company"). Our Board of Directors (the "Board") recognizes that the possibility of a change in ownership or control of the Company may result in the departure or distraction of key personnel to the detriment of the Company and our stockholders. Therefore, the Board has determined to enter into this agreement with you (i) to encourage and reinforce your attention and dedication to your assigned duties without distraction in the face of the disruptive circumstances that can arise from a possible change in control of the Company, (ii) to enhance our ability to retain you in those circumstances, and (iii) to provide you with fair and reasonable protection from the risks of a change in ownership and control so that you will be in a position to help the Company complete a transaction that would be beneficial to stockholders.

You and the Company agree as follows:

1. Term of Agreement and Protected Period.

(a) Term of Agreement. The period during which this Agreement shall be in effect (the "Term") shall be the period commencing on [Date] (the "Effective Date") through the close of business on the second anniversary of the Effective Date; provided, however, that the Term shall be automatically renewed for successive one-year periods unless either party hereto gives written notice of non-renewal to the other party at least sixty (60) days prior to the expiration of the then current Term; and provided further, that if a Change in Control has occurred prior to expiration of the then current Term, the Term shall continue until the date that is twenty-four (24) months after such occurrence of a Change in Control. The foregoing notwithstanding, if you remain employed with the Company at the end of the Protected Period (as defined below), the Company's obligations under Section 3(g) (and related provisions) will continue during the defined "Extended Protection Period" after the end of the Protected Period.

(b) Protected Period The "Protected Period" is the period from the time of occurrence of a Change in Control until the date that is twenty-four (24) months after the occurrence of the Change in Control. Notwithstanding the preceding sentence, the introductory text to Section 3 provides that certain events occurring before a Change in Control shall be deemed to have occurred during the Protected Period.

2. Change in Control.

"Change in Control" shall mean the occurrence during the Term of a Change in Control as defined in Section 14.2 of the 2000 Stock Incentive Plan, as such Plan may be amended from time to time.

3. Termination and Resulting Payments.

The Agreement provides no payments or benefits in connection with Terminations which occur prior to a Change in Control, except that, if you are Terminated within 90 days prior to a Change in Control by the Company without Cause at the direction of a Person who has entered into an agreement with the Company the consummation of which will constitute a Change in Control, or if you Terminate with Good Reason within 90 days prior to a Change in Control (treating the entry by such a Person into such an agreement as a Change in Control in applying the definition of Good Reason) if the circumstance or event which constitutes Good Reason occurs at the direction of such Person, then your Termination shall be deemed to have been during the Protected Period and following a Change in Control and shall qualify for the CIC Payments specified in Section 3(b); with payments thereunder to occur on the business day following the 52nd day after the Change in Control (subject to the legal effectiveness of your release), except that, if a payment is deemed to be a deferral of compensation for purposes of Section 409A of the Internal Revenue Code (the "Code") and the Change in Control did not constitute a change in the ownership of the Company, a change in effective control of the Company, or a change in the ownership of a substantial portion of the assets of the Company, as defined in Treasury Regulation § 1.409A-3(i)(5), then settlement shall occur at the date six months after your Date of Termination.

(a) Termination by the Company for Cause, by You Without Good Reason, or by Reason of Death, and Failure to Perform Duties Due to Disability If during the Protected Period you are Terminated by the Company for Cause, you voluntarily Terminate without Good Reason, Termination occurs due to your death, or Termination results from your failure to perform your duties with the Company due to a disability (for which you qualify for disability benefits), the Company will have no obligation to pay any amounts or benefits to you under this Agreement.

(b) Terminations Triggering CIC Payments The Company will pay you the payments and provide you the benefits described in this Section 3(b) upon Termination during the Protected Period and during the Term, unless such Termination is (A) by the Company for Cause, (B) by reason of death, (C) due to your failure to perform your duties with the Company due to disability (for which you qualify for disability benefits), or (D) by you without Good Reason. For purposes of this Section 3(b), a Termination shall be deemed to have occurred for Good Reason if, notwithstanding the existence of a valid basis of Termination by you for Good Reason, there has not occurred a Termination by you for Good Reason. The payments or benefits (the "CIC Payments") provided under this Section 3(b) are as follows:

(i) The Company will pay you a lump sum CIC Payment, in cash, equal to the lesser of (x) the CIC Multiple times your Annual Compensation or (y) 2.5 times your Annual Compensation.

(A) For this purpose, your "CIC Multiple" will be a fraction, the numerator of which is the number of full months that you were employed by the Company prior to Termination and the denominator of which is twelve (12).

(B) For this purpose, your "Annual Compensation" will be the sum of (1) plus (2), where (1) is the greater of your annual base salary in effect immediately prior to the occurrence of the event or circumstance upon which the Notice of Termination is based or your annual base salary in effect immediately prior to the Change in Control, and (2) is an amount equal to your target non-equity incentive award opportunity established by the Committee (as defined below) for the fiscal year in which your Termination occurs.

(ii) Other provisions of any plan or Annual Incentive Award authorization notwithstanding, with respect to your annual incentive award for the fiscal year in progress at your Date of Termination and your Annual Incentive Award for any previously completed year for which your final Annual Incentive Award has not yet been determined by the Board committee or other authorized decision maker with authority to make such determination (the "Committee"):

(A) If and to the extent that the level of your earning of any such award is based on one or more pre-set performance goals, any such award shall be deemed earned and vested as of the Date of Termination based on the level of actual achievement of your applicable performance goal through the earlier of the end of the performance period or the Date of Termination. For this purpose, the level of actual achievement of your performance goal through the applicable date shall be determined in good faith by the Committee and without the exercise of negative discretion, and any requirement that this determination be based on audited financial results shall not apply.

(B) If and to the extent that the level of your earning of any such award is not based on pre-set performance goals (i.e., is discretionary), any such award shall be deemed vested as of the date of Termination and shall be deemed earned at a level consistent with the level of annual incentives (as a percentage of base salary) of other executives of comparable rank whose annual incentives are based on pre-set performance goals, provided that the annual incentive shall in no event be less than a pro rata amount of your target non-equity incentive award opportunity established by the Committee for the fiscal year in which your Termination occurs (with proration based on the portion of the applicable fiscal year during which you were employed). These determinations shall be made in good faith by the Committee and without the exercise of negative discretion, as provided above.

(C) No amount of such award will be payable based on performance after the Date of Termination under this Section 3(b)(ii). If you are entitled to all or any portion of the annual incentive under any other plan or authorization, the amount payable hereunder will not be paid to the extent it would duplicate such payment of the annual incentive. The provisions regarding the timing of payment under Section 3(d) take precedence over any other payment timing rule applicable to any such annual incentive.

(D) In connection with this award, you will not be required to execute the Acknowledgement customarily required as a condition of payment of Annual Incentive Awards.

For purposes of this Section 3(b)(ii), if no Annual Incentive Award opportunity has been established for you for the fiscal year in progress at your Date of Termination, your Annual Incentive Award opportunity for that year will be deemed to be identical to the Annual Incentive Award opportunity that was established for the preceding year.

(iii) Your stock options and other equity awards shall be governed by the terms of the applicable plans and award agreements.

(iv) Subject to your continued compliance with Section 5, for the period under applicable law you are entitled to continue medical coverage following the Date of Termination (the "Continuation Period"), the Company shall offer you continued participation in the Company's employee medical, dental and vision plans in which you are a participant immediately prior to the Date of Termination (the "Medical Plans"), or such Medical Plans you may elect during any open enrollment period allowable by the Company or the Company's Medical Plan insurance providers or, if permitted, as elected on the Date of Termination, at the Company's expense, which coverage may be provided at the Company's election under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, or other applicable law. Your participation in the Medical Plans during the Continuation Period shall be subject to your timely election of coverage. If at any time during the Continuation Period such continued coverage is not permitted under the terms and conditions of the applicable Medical Plan, the Company will use commercially reasonable efforts to arrange coverage for you under a medical coverage arrangement that provides benefits substantially equivalent to, and at a cost that is no less favorable to you on an after-tax basis, the benefits you would have been entitled to receive under the Medical Plan (assuming you had elected to participate voluntarily to the maximum extent permissible). Notwithstanding the foregoing, you agree and acknowledge that any continuation coverage provided under a Medical Plan shall be provided in a manner intended to comply with applicable law, including without limitation to avoid any excise tax under Section 4980D of the Code.

(c) Reduction in Certain Payments If Excise Tax Would Apply.

(i) Notwithstanding any other provision of this Agreement, in the event you become entitled to any amounts or benefits payable in connection with a Change in Control (whether or not such amounts are payable pursuant to this Agreement) (the "Total Change in Control

Payments”), if any of such Total Change in Control Payments are subject to the tax (the “Excise Tax”) imposed by Section 4999 of the Code (or any similar federal, state or local tax that may hereafter be imposed), the Total Change in Control Payments shall be reduced to the Reduced Amount (as defined below) if but only if, reducing the Total Change in Control Payments would provide to you a greater net after-tax amount of Total Change in Control Payments than would be the case if no such reduction took place. The “Reduced Amount” shall be an amount expressed in present value which maximizes the aggregate present value of the Total Change in Control Payments without causing any Change in Control Payment to be subject to the Excise Tax, determined in accordance with Section 280G(d)(4) of the Code. Any reduction in Total Change in Control Payments shall be implemented in accordance with Section 3(c)(ii).

(ii) Any reduction in payments under this Section 3(c) shall apply to cash payments and/or vesting of equity awards so as to minimize the amount of compensation that is reduced (i.e., it applies to payments or vesting that to the greatest extent represent parachute payments), with the amount of compensation based on vesting to be measured (to be minimally reduced, for purposes of this provision) by the intrinsic value of the equity award at the date of such vesting. You will be advised of the determination as to which compensation will be reduced and the reasons therefor, and will be provided a detailed computation of such amounts, and you and your advisors will be entitled to present information that may be relevant to this determination. No reduction shall be applied to an amount that constitutes a deferral of compensation under Code Section 409A except for amounts that have become payable at the time of the reduction and as to which the reduction will not result in a non-reduction in a corresponding amount that is a deferral of compensation under Code Section 409A that is not currently payable.

For purposes of determining whether any of the Total Change in Control Payments will be subject to the Excise Tax and the amount of such Excise Tax:

- (A) The Total Change in Control Payments shall be treated as “parachute payments” within the meaning of Section 280G(b)(2) of the Code, and “excess parachute payments” within the meaning of Section 280G(b)(1) of the Code shall be treated as subject to the Excise Tax, unless, and except to the extent that, in the written opinion of independent compensation consultants, counsel or auditors of nationally recognized standing (“Independent Advisors”) selected by the Company, the Total Change in Control Payments (in whole or in part) do not constitute parachute payments, or such excess parachute payments (in whole or in part) represent reasonable compensation for services actually rendered within the meaning of Section 280G(b)(4) of the Code in excess of the base amount within the meaning of Section 280G(b)(3) of the Code or are otherwise not subject to the Excise Tax. You will be provided a copy of any such written opinion, and all fees and expenses of the Independent Advisors shall be borne solely by the Company.
- (B) The value of any non-cash benefits or any deferred payment or benefit shall be determined by the Independent Advisors in accordance with the principles of Sections 280G(d)(3) and (4) of the Code.

For purposes of determining reductions in compensation under this Section 3(c), if any, you will be deemed (A) to pay federal income taxes at the applicable rates of federal income taxation for the calendar year in which the compensation would be payable; and (B) to pay any applicable state and local income taxes at the applicable rates of taxation for the calendar year in which the compensation would be payable, taking into account any effect on federal income taxes from

payment of state and local income taxes. Compensation will be adjusted, if necessary, to provide for accurate payments or to correct any amounts previously estimated in determining the amount of reductions in compensation under this Section 3(c). However, no adjustments will be made later than the applicable deadline under Code Section 409A if such adjustments would result in a tax penalty under Section 409A.

(iii) The Company shall have the right to control all proceedings with the Internal Revenue Service (or relating thereto) that may arise in connection with the determination and assessment of any Excise Tax and, at its sole option and expense, the Company may pursue or forego any and all administrative appeals, proceedings, hearings, and conferences with any taxing authority in respect of such Excise Tax (including any interest or penalties thereon); provided, however, that the Company's control over any such proceedings shall be limited to issues with respect to which compensation may be reduced hereunder, and you will be entitled to settle or contest any other issue raised by the Internal Revenue Service or any other taxing authority. You agree to cooperate with the Company in any proceedings relating to the determination and assessment of any Excise Tax.

(d) Time of Payment. The Company's obligation to make the payments provided for in Section 3(b)(i) and (ii) shall be subject to your execution of a release, in the form attached as Exhibit A, which you have not revoked, such actions to be completed by the end of any applicable revocation period. If and only if such release has become legally effective, on the business day immediately following the 52nd day after your Date of Termination, the Company shall pay the amount specified in Section 3(b)(i) and (ii) in a lump sum. For purposes of compliance with Section 409A of the Internal Revenue Code, the payments under Section 3(b)(i) and (ii) shall each be deemed to be separate payments, and it is intended that the payment under Section 3(b)(i) and (ii) (and any related payment under Section 3(c)) in each case shall be deemed first to be a short-term deferral under Treasury Regulation § 1.409A-1(b)(4), and the payment under Section 3(b)(i) then shall be deemed to be separation pay excluded from being a deferral of compensation to the extent provided under Treasury Regulation § 1.409A-1(b)(9)(iii). If, however, (i) for any reason all or any portion of the payment under Section 3(b)(i) or the payment under Section 3(b)(ii), is deemed to be a non-excluded deferral of compensation under Treasury Regulation § 1.409A-1(b) payable based upon your Termination, and (ii) any of the Company's stock is publicly traded on an established securities market or otherwise, and (iii) at the Date of Termination you are a "key employee" (as defined in Code Section 416(i) without regard to paragraph (5) thereof), then the affected portion of such payment shall be made on the first business day that is on or after the date that is six months after the date of your separation from service. Likewise, if any other payment or benefit under this Agreement would be subject to a tax penalty under Code Section 409A such payment or benefit will be payable to you only at the date specified in the preceding sentence if such delay would avoid such tax penalty to you. You shall not be entitled to exercise any influence on the time of any payment payable hereunder, including in any case in which the permitted payment period would include portions of two different tax years.

(e) Notice. During the Protected Period, any purported termination of your employment by the Company or by you shall be communicated by written Notice of Termination to the other party hereto.

(f) Certain Definitions. Except as otherwise indicated in this Agreement, all definitions in this Section 3(f) shall be applicable during the Protected Period only.

- (i) **Annual Incentive Award.** "Annual Incentive Award" shall mean the annual incentive compensation (including for this purpose any long term performance share awards, restricted stock, stock options or any other equity based award) paid or payable or granted during the applicable fiscal year or any award to the extent specified by the Committee in the relevant award agreement or any other equity based awards in each case paid or payable or granted in lieu of annual non-equity incentive compensation for that fiscal year; provided further that, (A) the grant date fair value of any equity based award granted as annual incentive compensation shall be included in the computation of the annual incentive amounts paid or granted in any applicable fiscal year based upon the grant date fair value of such award for accounting purposes and (B) any dividend equivalents paid or payable with respect to such an equity based award shall not be considered annual incentive compensation.
- (ii) **Cause.** "Cause" for Termination by the Company of your employment, during the Protected Period, shall mean (A) willful misconduct, dishonesty, misappropriation, breach of fiduciary duty or fraud by you with regard to the Company or any of its assets or businesses; (B) your conviction or your pleading of nolo contendere with regard to any felony or crime (for the purpose hereof, traffic violations and misdemeanors shall not be deemed to be a crime); or (C) any material breach by you of the provisions of this Agreement which is not cured within 30 days after written notice to you of such breach from the Board of Directors of the Company.
- (iii) **Date of Termination.** "Date of Termination" shall mean the date specified in the Notice of Termination which, in the case of a Termination by the Company (other than a Termination for Cause), shall not be less than 30 days from the date such Notice of Termination is given and, in the case of a Termination by you, shall not be less than 30 nor more than 60 days from the date such Notice of Termination is given (except as otherwise provided in Section 3(f)(v)).
- (iv) **Good Reason.** "Good Reason" for Termination of your employment will mean the occurrence, without your written consent, of any one of the following, provided that, you have given Notice of Termination to the Company within 90 days after the initial existence of the condition giving rise to your asserted Good Reason, and the Company has failed to fully correct the Good Reason by your Date of Termination (which must be at least 30 days after the Notice is given, specified in the Notice of Termination (such correction by the Company having the effect of canceling such Notice and the resulting Termination), and your Termination occurs within one year after the initial existence of circumstances constituting Good Reason:
 - (A) The assignment to you of any duties inconsistent in any material adverse respect with your position, authority or responsibilities immediately prior to the occurrence of the Change in Control or any other material adverse change in such position, including authority or responsibilities;
 - (B) A material reduction by the Company in either (i) your annual base salary in effect immediately prior to the Change in Control and as such

base salary thereafter may have been increased, (ii) your annual incentive (as specified below), or (iii) your annual equity awards (as specified below). For this purpose, a reduction of \$10,000 in amount or value, on an annualized basis, of your base salary or annual equity awards value, or of these two elements in the aggregate, will be deemed "material" (other changes may be material in the particular circumstances). A material reduction in your annual incentive will have occurred if the amount actually paid or payable to you for any year, all or part of which is in the Protected Period (including the year in which the Change in Control occurs), is reduced to a level less than 80% of your annual incentive actually paid for performance in the latest full fiscal year before the Change in Control, including the grant date fair value of any equity-based awards granted as a payment of your annual incentive. A material reduction in your annual equity awards will be based on the extent to which the aggregate grant date fair value of equity awards in a given fiscal year during the Protected Period is reduced from the grant date fair values of the annual equity awards granted to you from the Company before the Change in Control (these grants may have occurred in the same fiscal year as the Change in Control). Annual equity awards shall be deemed to have a value determined in a manner consistent with the Company's (or then parent company's) internal valuation method for such awards used at the time of grant. It shall not constitute a material reduction in the annual equity awards for the Company to change the form of such awards to either equity of the surviving parent corporation or cash, provided the value thereof is not materially reduced; or

(C) The relocation of the principal place of your employment to a location more than fifty (50) miles from the location of such place of employment on the Effective Date; except for required travel on the Company's business to an extent substantially consistent with your business travel obligations prior to the Change in Control.

(v) Notice of Termination. "Notice of Termination" shall mean notice indicating the specific termination provision in this Agreement relied upon and setting forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of your employment under the provision so indicated.

(vi) Termination. "Termination" means an event by which your then current employment relationship with the Company and all subsidiaries has ended, regardless of whether you are subsequently hired into a new position (including without limitation a position as a consultant), provided that, with respect to any payment hereunder which is deemed to be a non-excluded deferral of compensation under Treasury Regulation § 1.409A-1(b), a Termination will occur only at the time at which you have had a "separation from service" within the meaning of Treasury Regulation § 1.409A-1(h).

(g) Additional Payment Following the Protected Period If you remain employed by the Company (which includes any affiliate of the Company) after the Protected Period, in the event that during the "Extended Protection Period" (as defined below) following the Protected Period your employment is Terminated by the Company not for Cause or Terminated by you for Modified Good Reason (as defined in this Section 3(g)), you will be entitled to the payments and benefits under Section 3(b) except that the additional payments under Section 3(b)(i) will be

equal to 1.5 times Annual Compensation. For purposes of this Section 3(g), the "Extended Protection Period" means the period from the end of the Protected Period until the close of business on the first anniversary of the end of the Protected Period, provided that the Extended Protection Period will be automatically renewed for successive one-year periods unless either party hereto gives written notice of non-renewal to the other party at least ninety (90) days prior to the expiration of the then current Extended Protection Period. For purposes of this Section 3(g), "Modified Good Reason" shall mean the occurrence, without your written consent, of either (A) the assignment to you of any duties inconsistent in any material adverse respect with your position, authority or responsibilities 60 days before the end of the Protected Period or any other material adverse change in such position, including authority or responsibilities; (B) the event specified in Section 3(f)(iv)(B); or (C) the event specified in Section 3(f)(iv)(C); provided that, in each case, you have given Notice of Termination to the Company within 90 days after the initial existence of the condition giving rise to your asserted Modified Good Reason, and the Company has failed to fully correct the Modified Good Reason by your Date of Termination (which must be at least 30 days after the Notice is given) specified in the Notice of Termination (such correction by the Company having the effect of canceling such Notice and the resulting Termination), and your Termination occurs within one year after the initial existence of circumstances constituting Modified Good Reason. Other provisions of this Agreement applicable to Section 3(b) (for example, Section 3(d) and Section 6) shall apply to the payments and benefits under this Section 3(g) as well. If you remain employed as specified in this Section 3(g), the obligations of the Company under this Agreement shall continue for the applicable Extended Protection Period after the end of the Protected Period, without regard to provisions specifying the end of the Term.

4. Mitigation.

You will not be required to mitigate the amount of payments provided for under this Agreement by seeking other employment or otherwise, nor shall the amount of payments provided for under this Agreement be reduced by any compensation earned by you as the result of employment by another employer, by retirement benefits, by offset against any amount claimed to be owed by you to the Company, or otherwise.

5. Covenants for Protection of Company's Business In consideration for the payments and benefits provided by the Company under this Agreement, by your execution of this agreement you agree as follows:

- (i) You will not (except on behalf of the Company) during your employment with the Company and during the period of 12 months thereafter (the "Restrictive Period") employ or retain, solicit the employment or retention of, or knowingly cause or encourage any entity to retain or solicit the employment or retention of, any person who is an employee of the Company or was an employee of the Company at any time during the period commencing 12 months prior to the termination of your employment with the Company. After your Termination of Employment: (A) You will refrain from disparaging, whether orally, in writing or in other media, the Company, its affiliates, the officers, directors and employees of each of them, and the products and services of each of them, and (B) the Company will not disparage you or otherwise comment upon your employment performance other than as may be required by law or as requested by you.

- (ii) You will not at any time, directly or indirectly, without the Company's prior written consent, disclose to any third party or use (except as authorized in the regular course of the Company's business or in your performance of your responsibilities for the Company) any confidential, proprietary or trade secret information that was either acquired by you during your employment with the Company or thereafter, including, without limitation, sales and marketing information, information relating to existing or prospective customers and markets, business opportunities, and financial, technical and other data (collectively, the "Confidential Information"). After termination of your employment with the Company for any reason and upon the written request of the Company, you shall promptly return to the Company all originals and/or copies of written or recorded material (regardless of the medium) containing or reflecting any Confidential Information and shall promptly confirm in writing to the Company that such action has been taken. Notwithstanding the foregoing, the following shall not constitute Confidential Information: (A) Information that is already in the public domain at the time of its disclosure to you; (B) Information that, after its disclosure to you, becomes part of the public domain by publication or otherwise other than through your act; and (C) Information that you received from a third party having the right to make such disclosure without restriction on disclosure or use thereof.
- (iii) You will not during your employment with the Company and during the Restrictive Period engage in Competition. For purposes of this Section 5(iii), "Competition" is the performance of services, whether as an employee, owner, advisor, consultant, director, stockholder, officer, or any other capacity, for any of the entities listed on Schedule 5(iii) to this Agreement.

If it is determined by a court of competent jurisdiction in any state that any restriction in this Section 5 is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the laws of that state.

You acknowledge and agree that the Company's remedies at law for a breach or threatened breach of any of the provisions of Section 5 would be inadequate and, in recognition of this fact, you agree that, in the event of such a breach or threatened breach, in addition to any remedies at law, the Company, without posting any bond, may be entitled to obtain equitable relief in the form of specific performance, a temporary restraining order, a temporary or permanent injunction or any other equitable remedy which may then be available. Further, in the event you breach any of the foregoing covenants of this Section 5, in addition to any other remedies available to the Company, to the maximum extent permitted by applicable law, the Company shall have the right to recoup from you, and you shall be obligated to repay to the Company, an amount equal to the actual amount of the CIC Payment paid to you pursuant to Section 3(b)(i) multiplied by the Recoverable Portion. For the purposes of this Section 5, "Recoverable Portion" means a percentage obtained by dividing (i) the number of days remaining in the Restrictive Period from and after the commencement of such breach, by (ii) 365. For the avoidance of doubt, recoupment by the Company pursuant to the immediately preceding sentence shall neither be deemed liquidated damages, nor shall it preclude the Company from seeking or obtaining a judgment against you for damages caused by your breach of the foregoing covenants of this Section 5.

6. Prior Acknowledgment. In connection with a Termination which entitles you to CIC Payments pursuant to Section 3(b), your agreement not to voluntarily terminate your employment with the Company or any of its affiliates, which is set forth in any Acknowledgement previously executed by you as a condition of payment of an Annual Incentive Award, shall terminate, shall no longer be a condition of your right to retain such Annual Incentive Award, and shall be of no further force or effect.

7. Miscellaneous.

(a) Successors. The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to expressly assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. As used in this Agreement, "Company" shall mean the Company as hereinbefore defined and any successor to its business and/or assets as aforesaid which assumes and agrees to perform this Agreement by operation of law, or otherwise.

(b) Binding Agreement. This Agreement shall inure to the benefit of and be enforceable by you and your personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. In the event of your death, all amounts otherwise payable to you hereunder shall, unless otherwise provided herein, be paid in accordance with the terms of this Agreement to your devisee, legatee or other designee or, if there is no such designee, to your estate.

(c) Notice. Notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given when (i) personally delivered or (ii) mailed by United States certified or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth on the first page of this Agreement; provided that all notice to the Company shall be directed to the attention of the Board with a copy to the Chief Executive Officer of the Company, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon receipt.

(d) Modifications. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing and signed by you and such officer as may be designated by the Board. No waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the time or at any prior or subsequent time.

(e) Governing Law. THE VALIDITY, INTERPRETATION, CONSTRUCTION AND PERFORMANCE OF THIS AGREEMENT SH GOVERNED BY THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO ITS CONFLICTS OF LAW PRINCIPLES.

(f) Tax Withholding. Any payments provided for hereunder shall be paid net of any applicable withholding required under federal, state or local law.

(g) Surviving Obligations. The obligations of the Company and your obligations under this Agreement shall survive the expiration of this Agreement to the extent necessary to give effect to this Agreement.

(h) Validity. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

(i) Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

(j) Entire Agreement. This Agreement sets forth the entire agreement of the parties hereto in respect of the subject matter contained herein and supersedes the provisions of all prior agreements (including any prior Change in Control Agreement between the parties), promises, covenants, arrangements, communications, representations or warranties, whether oral or written, by any officer, employee or representative of any party hereof with respect to the subject matter contained herein. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not expressly set forth in this Agreement. Notwithstanding anything to the contrary in this Agreement, the procedural provisions of this Agreement shall apply to all benefits payable as a result of a Change in Control (or other change in control). In the event that the terms of this Agreement conflict with the terms of any equity award agreement or equity incentive plan governing any such equity award, the terms of this Agreement shall control.

If this letter sets forth our agreement on the subject matter hereof, kindly sign and return to the Company the enclosed copy of this letter, which will then constitute our agreement on this subject.

COMTECH TELECOMMUNICATIONS CORP.

By:

[Name]

[Title]

Agreed to as of this __ day of _____, [Year].

[Name]

Exhibit A

General Release

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I, for myself and my successors, assigns, heirs and representatives (each, a "Releasing Party"), hereby release and forever discharge Comtech Telecommunications Corp. (the "Company"), its stockholders, officers, directors, employees, agents and attorneys, and their respective successors, assigns, heirs and representatives (each, a "Released Party"), individually and collectively, from any and all claims, demands, causes of action, liabilities or obligations, known or unknown, pending or not pending, liquidated or not liquidated, of every kind and nature whatsoever (collectively, the "Released Claims") which the Releasing Party has, has had or may have against any one or more of the Released Parties arising out of, based upon or in any way, directly or indirectly, related to the Company's business, my employment with the Company or the termination of such employment; provided, however, that this General Release shall have no effect whatsoever upon: (a) the Company's obligations, if any, to pay CIC Payments pursuant to the Change in Control Agreement between the undersigned and the Company, dated as of [Date] (the "CIC Agreement") or the rights of the undersigned to enforce such obligations; (b) any and all obligations of the Released Parties to defend, indemnify, hold harmless or reimburse the undersigned under the Indemnification Agreement between the Company and the undersigned, and/or under applicable law and/or under the respective charters and by-laws of the Released Parties, and/or pursuant to insurance policies, if any, for acts or omissions in the undersigned's capacity as a director, officer and/or employee thereof; and (c) any and all rights the undersigned may have to vested or accrued benefits or entitlements under and in accordance with any applicable plan, agreement, program, award, policy or arrangement of a Released Party.

The Released Claims include, without limitation, (a) all claims arising out of or relating to breach of contract, the Fair Labor Standards Act, the Age Discrimination in Employment Act, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1866, the National Labor Relations Act, the Americans with Disabilities Act, the Employee Retirement Income Security Act and/or any other federal, state or local statute, law, ordinance, regulation or order as the same may be amended or supplemented from time to time, (b) all claims for back pay, lost benefits, reinstatement, liquidated damages, punitive damages, and damages on account of any alleged personal, physical or emotional injury, and (c) all claims for attorneys' fees and costs.

I agree that I am voluntarily executing this General Release. I acknowledge that I am knowingly and voluntarily waiving and releasing any rights I may have under the Age Discrimination in Employment Act of 1967 and that the consideration given for the waiver and release is in addition to anything of value to which I was already entitled. I further acknowledge that I have been advised by this writing, as required by the Age Discrimination in Employment Act of 1967, that (a) my waiver and release specified herein does not apply to any rights or claims that may arise after the date I sign this General Release or my rights with respect to CIC Payments, if any, payable to me pursuant to the CIC Agreement; (b) I have the right to consult with an attorney prior to signing this General Release; (c) have twenty-one (21) days to consider this General Release (although I may choose to sign it earlier); (d) I have seven (7) days after I sign this General Release to revoke it; and (e) this General Release will not be effective until the date on which the revocation period has expired, which will be the eighth day after I sign this General Release, assuming I have returned it to the Company by such date.

Dated: _____

Schedule 5(iii)

[Competitor Entities]

Subsidiaries of Comtech Telecommunications Corp.*

<u>Subsidiaries</u>	<u>Jurisdiction of Incorporation</u>
Comtech Satellite Network Technologies, Inc.	Delaware
Comtech Satellite Network Technologies Pte.Ltd. (a subsidiary of Comtech Satellite Network Technologies, Inc.)	Singapore
Comtech Mobile Datacom LLC (a subsidiary of Comtech Systems, Inc.)	Delaware
Comtech PST Corp.	New York
Comtech Systems, Inc. (a subsidiary of TeleCommunication Systems, Inc.)	Delaware
Beijing Comtech EF Data Equipment Repair Service, Co., Ltd. (a subsidiary of Comtech Satellite Network Technologies, Inc.)	China
Comtech Satellite Network Technologies, Corp.	Canada
Comtech Xicom Technology Europe, Ltd. (a subsidiary of CGC Technology Limited)	United Kingdom
TeleCommunication Systems, Inc.	Maryland
NextGen Communications, Inc. (a subsidiary of TeleCommunication Systems, Inc.)	Maryland
NextGen Communications, Inc. (a subsidiary of TeleCommunication Systems, Inc.)	Virginia
microDATA LLC (a subsidiary of TeleCommunication Systems, Inc.)	Maryland
microDATA GIS, Inc. (a subsidiary of microDATA LLC)	Vermont
Comtech Solacom Technologies, Inc.	Canada
Solacom Technologies (US), Inc.	Delaware
Comtech NextGen LLC (a subsidiary of TeleCommunications Systems, Inc.)	Delaware
Comtech Tactical Europe LLC (a subsidiary of Comtech Systems, Inc.)	Delaware
Comtech UK Holdings Limited	United Kingdom
CGC Technology Limited (a subsidiary of Comtech UK Holdings Limited)	United Kingdom
Sheet Metal Precision Limited (a subsidiary of Comtech UK Holdings Limited)	United Kingdom
NG-911, Inc.	Iowa
Comtech Technologies, LLC	Russia

Pursuant to Item 601(b)(21)(ii) of Regulation SK, the names of other subsidiaries of Comtech are omitted because, considered in the aggregate, they would not constitute a significant subsidiary as of the end of the year covered by this report.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statements Nos. 333-125625, 333-143548, 333-166754, 333-51708 and 333-228690 on Form S-8 and Registration Statements Nos. 333-253827, 333-266120 and 333-266122 on Form S-3 of our reports dated September 29, 2022, relating to the consolidated financial statements and financial statement schedule of Comtech Telecommunications Corp., and the effectiveness of Comtech Telecommunications Corp.'s internal control over financial reporting appearing in this Annual Report on Form 10-K of Comtech Telecommunications Corp. for the year ended July 31, 2022.

/s/ DELOITTE & TOUCHE LLP

Jericho, New York
September 29, 2022

**CERTIFICATION PURSUANT TO
18 U.S.C. ss.1350,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Ken Peterman, certify that:

1. I have reviewed this annual report on Form 10-K of Contech Telecommunications Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting

Date: September 29, 2022

/s/ Ken Peterman

 Ken Peterman
 Chairman of the Board
 President and Chief Executive Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. ss.1350,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael A. Bondi, certify that:

1. I have reviewed this annual report on Form 10-K of Comtech Telecommunications Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting

Date: September 29, 2022

/s/ Michael A. Bondi

Michael A. Bondi
Chief Financial Officer

CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report of Comtech Telecommunications Corp. (the "Company") on Form 10-K for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Ken Peterman, Chairman of the Board, President and Chief Executive Officer of the Company, certify that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: September 29, 2022

Ken Peterman	/s/
Peteman	Ken
Chairman of the Board	
President and Chief Executive Officer	

CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report of Comtech Telecommunications Corp. (the "Company") on Form 10-K for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Michael A. Bondi, Chief Financial Officer of the Company, certify that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: September 29, 2022

Michael A. Bondi

/s/

A. Bondi
Chief Financial Officer

Michael