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

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2021

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission File Number 001-33963

Iridium Communications Inc.
(Exact name of registrant as specified in its charter)

DE 26-1344998
(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

1750 Tysons Boulevard, Suite 1400, McLean, VA 22102
(Address of principal executive offices, including zip code)

703-287-7400
(Registrant’s telephone number, including area code)

Common Stock, $0.001 par value
Trading Symbol IRDM
Name of Each Exchange on Which Registered
The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class
Trading Symbol
Name of Each Exchange on Which Registered
Common Stock, $0.001 par value IRDM The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

Indicate by check mark if 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,” “non-accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer ☒
Accelerated Filer ☐
Non-Accelerated Filer ☐
Smaller Reporting Company ☐
Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 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 the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of June 30, 2021, the last business day of the registrant’s most recently completed second fiscal quarter, was approximately $3,410.7 million.

The number of shares of the registrant’s common stock, par value $0.001 per share, outstanding as of February 15, 2022 was 128,373,452.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant’s definitive proxy statement for its 2022 annual meeting of stockholders to be filed pursuant to Regulation 14A with the Securities and Exchange Commission not later than 120 days after the registrant’s fiscal year end of December 31, 2021, are incorporated by reference into Part III of this Form 10-K.
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This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Such forward-looking statements include those that express plans, anticipation, intent, contingencies, goals, targets or future developments or otherwise are not statements of historical fact. Without limiting the foregoing, the words “believes,” “anticipates,” “plans,” “expects,” “intends” and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based on our current expectations and projections about future events, and they are subject to risks and uncertainties, known and unknown, that could cause actual results and developments to differ materially from those expressed or implied in such statements. The important factors discussed under the caption “Risk Factors” in this Form 10-K could cause actual results to differ materially from those indicated by forward-looking statements made herein. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.
PART I

Item 1. Business

Corporate Background

Iridium Communications Inc. (“we,” “us,” or “Iridium”) was formed as GHL Acquisition Corp., a special purpose acquisition company, in November 2007, for the purpose of effecting a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or other similar business combination. On February 21, 2008, we consummated our initial public offering. On September 29, 2009, we acquired, directly and indirectly, all the outstanding equity of Iridium Holdings LLC, or Iridium Holdings, and changed our name from GHL Acquisition Corp. to Iridium Communications Inc.

Iridium Holdings was formed under the laws of Delaware in 2000, and on December 11, 2000, Iridium Holdings, through its wholly owned subsidiary Iridium Satellite LLC, or Iridium Satellite, acquired certain satellite assets from Iridium LLC, a non-affiliated debtor in possession, pursuant to an asset purchase agreement.

Business Overview

We are the only commercial provider of communications services offering true global coverage, connecting people, organizations and assets to and from anywhere, in real time. Our low-earth orbit (LEO), L-band network provides reliable, weather-resilient communications services to regions of the world where terrestrial wireless or wireline networks do not exist or are limited, including remote land areas, open ocean, airways, the polar regions, and regions where the telecommunications infrastructure has been affected by political conflicts or natural disasters.

We provide voice and data communications services to businesses, the U.S. and foreign governments, non-governmental organizations, and consumers via our satellite network, which has an architecture of 66 operational satellites with in-orbit and ground spares and related ground infrastructure. We utilize an interlinked mesh architecture to route traffic across our satellite constellation using radio frequency crosslinks between satellites. This unique architecture minimizes the need for local ground facilities to support the constellation, which facilitates the global reach of our services and allows us to offer services in countries and regions where we have no physical presence.

The current Iridium® constellation was completed in 2019 and fully replaced our first-generation system while maintaining compatibility with all end-user equipment. In addition to supporting new products with higher data speeds, it also hosts the Aireon® system, which provides a global air traffic surveillance service through a series of automatic dependent surveillance-broadcast, or ADS-B, receivers on our satellites. We formed Aireon LLC in 2011, with subsequent investments from the air navigation service providers, or ANSPs, of Canada, Italy, Denmark, Ireland and the United Kingdom, to develop and market this service. Aireon has also contracted to pay us a fee to host the ADS-B receivers on our satellites, as well as data service fees for the delivery of the air traffic surveillance data over the Iridium system. In addition, we have entered into an agreement with L3Harris Technologies, Inc., or L3Harris, the manufacturer of the Aireon hosted payload, pursuant to which L3Harris pays us fees to allocate the remaining hosted payload capacity to its customers and data service fees on behalf of these customers.

Our commercial business, which we view as our primary source of long-term growth, is diverse and serves markets such as emergency services, maritime, aviation, government, utilities, oil and gas, mining, recreation, forestry, heavy equipment, construction, railways and other transportation. Many of our end users view our products and services as critical to their daily operations and integral to their communications and business infrastructure. For example, multinational corporations in various sectors use our services for business telephony, email and data transfer, including telematics and personal location tracking, and to provide mobile communications services for employees in areas inadequately served by other telecommunications networks. Commercial enterprises use our services to track assets in remote areas and provide telematics information such as location and engine diagnostics. Ship crews and passengers use our services for ship-to-shore calling, as well as to send and receive email and data files, and to receive electronic media, weather reports, emergency bulletins and electronic charts. Shipping operators use our services to manage operations on board ships and to transmit data, such as course, speed, fuel, weather and other navigation service data. Aviation end users use our services for air-to-ground telephony and data communications for position reporting, flight following, emergency tracking, weather information, electronic flight bag updates, and airline operational communications. Explorers and adventurers use our services as a safety and critical communications lifeline to remain in contact with friends and family, as well as for emergency distress signals. We have also seen growing adoption of our services to support autonomous systems, for which Iridium is used for command and control, image transmission and environmental data gathering via unmanned aerial, underwater and surface vehicles. Iridium Certus® provides a platform for our partners to
develop specialized broadband and midband (a term we use to describe services between our legacy 2.4 Kbps narrowband and our 128 Kbps and higher broadband offerings) applications on our network. With broadband services provided for the maritime and land-mobile industries and a recently launched midband service designed for maximum mobility, Iridium Certus offers the flexibility to scale device speeds, sizes and power requirements both up and down based on the needs of the end-user. We expect that these and future Iridium Certus service offerings will continue to drive growth opportunities in our commercial business.

The U.S. government, directly and indirectly, has been and continues to be our largest single customer, generating $129.7 million in service and engineering and support service revenue, or 21% of our total revenue, for the year ended December 31, 2021. This does not include revenue from the sale of equipment that may be ultimately purchased by U.S. or non-U.S. government agencies through third-party distributors, or airtime services purchased by U.S. or non-U.S. government agencies that are provided through our commercial gateway, as we lack specific visibility into these activities and the related revenue. We are operating under a multi-year, fixed-price contract with the U.S. government, which we refer to as our Enhanced Mobile Satellite Services, or EMSS, contract to provide specified satellite airtime services for an unlimited number of U.S. Department of Defense and other federal government subscribers. The EMSS contract, entered into in September 2019, has a total value of $738.5 million over its seven-year term, through September 2026, with annual revenues to us between $100 million and $110.5 million over the term. We may provide other services, such as Iridium Certus, to the U.S. government under separate arrangements for an additional fee.

The U.S. government owns and operates a dedicated gateway that is only compatible with our satellite network. The U.S. armed services, State Department, Department of Homeland Security, Federal Emergency Management Agency, or FEMA, Customs and Border Protection, and other U.S. government agencies, as well as other nations’ governmental agencies, use our voice and data services for a wide variety of applications. Our voice and data products are used for numerous primary and backup communications solutions, including logistical, administrative, morale and welfare, tactical, and emergency communications. In addition, our products are installed in ground vehicles, ships, and rotary- and fixed-wing aircraft and are used for command-and-control and situational awareness purposes. Our satellite network provides increased network security to the U.S. government because traffic is routed across our satellite constellation before being brought down to earth through the dedicated, secure U.S. government gateway. The U.S. government has made, and continues to make, significant investments to upgrade its dedicated gateway, to purchase our voice and data devices, and to invest directly and indirectly in research and development and implementation support for additional services on our network, such as Distributed Tactical Communications Services, or DTCS, and Iridium Certus.

We sell our products and services to commercial end users through a wholesale distribution network, encompassing approximately 100 service providers, approximately 285 value-added resellers, or VARs, and approximately 85 value-added manufacturers, or VAMs, which create and sell technology that uses the Iridium network either directly to the end user or indirectly through other service providers, VARs or dealers. These distributors often integrate our products and services with other complementary hardware and software and have developed a broad suite of applications using our products and services to target specific lines of business. We expect that demand for our services will increase as more applications are developed and deployed that utilize our technology.

At December 31, 2021, we had approximately 1,723,000 billable subscribers worldwide, representing a 17% increase compared to December 31, 2020. Total revenue increased from $583.4 million in 2020 to $614.5 million in 2021.

Industry

We compete primarily in the mobile satellite services sector of the global communications industry. Mobile satellite services operators provide voice and data services to people and machines using a network of satellites and ground facilities. Mobile satellite services are intended to meet users’ needs for connectivity in all locations where terrestrial wireless and wireline communications networks do not exist, do not provide sufficient coverage, or are impaired, including rural and developing areas that lack adequate wireless or wireline networks, airways, ocean and polar regions where few alternatives exist, and regions where the telecommunications infrastructure has been affected by political conflicts or natural disasters.

Government organizations, including military and intelligence agencies and disaster response agencies, non-governmental organizations, and industrial operations and support teams depend on mobile and fixed voice and data satellite communications services on a regular basis. Businesses with global operations require reliable communications services when operating in remote locations around the world. Mobile satellite services users span many sectors, including emergency services, maritime, aviation, government, utilities, oil and gas, mining, recreation, forestry, heavy equipment, construction, railways and other transportation, among others. Many of our customers view satellite communications services as critical to their daily operations.
We believe that increasing mobile penetration creates additional demand for mobile satellite services. According to a 2021 study by the GSM Association, unique mobile subscribers, excluding cellular Internet of Things, or IoT, reached 5.2 billion throughout the world as of the end of 2020 and are projected to reach 5.7 billion by 2025.

We believe that growth in the terrestrial wireless industry has increased awareness of the need for reliable mobile voice and data communications services. In addition, despite significant penetration and competition, terrestrial wireless systems do not cover a large majority of the earth’s surface and are focused mainly in those areas where people live, excluding oceans and other remote regions where ships, airplanes and other remote assets may travel or be located. By offering mobile communications services with global voice and data coverage, mobile satellite service providers address the demand from businesses, governments and individuals for connectivity and reliability in locations not consistently served by wireline and wireless terrestrial networks.

The mobile satellite services sector of the global telecommunications industry also benefits from the continued development of innovative, lower-cost technology and applications integrating mobile satellite products and services, including the continued advancement of IoT. We believe that growth in demand for mobile satellite services is driven in large part by the declining cost of these services, the diminishing size and lower costs of voice, data and IoT devices, the rollout of new applications tailored to the specific needs of customers across a variety of markets, and expansion into new international markets.

Communications industry sectors include:

- mobile satellite services, which provide customers with voice and data connectivity to mobile and fixed devices using ground facilities and networks of geostationary, or GEO, satellites, which are located approximately 22,300 miles above the equator, medium earth orbit satellites, which orbit between approximately 6,400 and 10,000 miles above the earth’s surface, or low earth orbit, or LEO, satellites, such as those in our constellation, which orbit between approximately 300 and 1,000 miles above the earth’s surface;
- fixed satellite services, which typically use GEO satellites to provide customers with broadband communications links between fixed points on the earth’s surface; and
- terrestrial services, which use a network of land-based equipment, including switching centers and radio base stations, to provide wireless or wireline connectivity and are complementary to satellite services.

Within the two major satellite sectors, fixed satellite services and mobile satellite services, the products that operators offer differ significantly from each other with respect to size of antenna and types of services that the products can offer. Fixed satellite services providers, such as Intelsat S.A., Eutelsat Communications S.A. and SES S.A., are characterized by large, often stationary or fixed ground terminals that send and receive high-bandwidth signals to and from the satellite network for video and high-speed data customers and international telephone markets. By contrast, mobile satellite services providers, such as us, focus more on voice and data services, where mobility and small-sized terminals are essential. Other mobile satellite service providers include Globalstar, Inc., ORBCOMM Inc., and in some portions of their businesses, Inmarsat Global Limited and new entrants such as SpaceX’s Starlink and Network Access Associates Limited’s OneWeb.

LEO systems, such as the one we operate, generally have lower transmission delays, or latency, than GEO systems, due to the shorter distance signals have to travel, which also enables the use of smaller antennas on mobile devices. Our L-band spectrum is also more resistant to weather interference than the K-band spectrum used by new entrants such as Starlink and OneWeb. We believe the unique interlinked mesh architecture of our constellation, combined with the global footprint of our satellites, distinguishes us from regional LEO satellite operators such as Globalstar and ORBCOMM, by allowing us to route voice and data transmissions to and from anywhere on the earth’s surface without the need for local ground infrastructure. As a result, we are the only mobile satellite services operator offering real-time, weather-resilient, low-latency services with true global coverage, including full coverage of the polar regions.

**Our Competitive Strengths**

- **Our Constellation.** Our unique satellite constellation provides true global and weather-resilient coverage, which enables our Iridium Certus platform offerings and empowers the development of a range of new global products and services, as well as supporting Aireon’s aircraft tracking service and other hosted payload missions. Our network design of 66 operational satellites uses an interlinked mesh architecture to transmit signals from satellite to satellite, which reduces the need for multiple local ground stations around the world and facilitates the global reach of our services. Many of our competitors use GEO satellites, which orbit above the earth’s equator, limiting their visibility to far northern or southern latitudes and polar regions. LEO satellites from operators like Globalstar and ORBCOMM use...
an architecture commonly referred to as “bent pipe,” which requires voice and data transmissions to be immediately routed to ground stations in the same region as the satellite and can only provide real-time service when they are within view of a ground station, limiting coverage to areas near where they have been able to license and locate ground infrastructure. The LEO design of our satellite constellation produces minimal voice and data transmission delays compared to GEO systems due to the shorter distance our signals have to travel, and LEO systems typically have smaller antenna and power requirements. Our L-band spectrum is also more resistant to weather interference than the K-band spectrum used by many of our competitors.

**Attractive and growing markets.** We believe that mobile satellite services will continue to experience growth driven by the increasing awareness of the need for reliable mobile voice and data communications services, the lack of coverage of most of the earth's surface by terrestrial wireless systems, and the continued development of innovative, lower-cost technology, applications integrating mobile satellite products and services, including embedding satellite capability into terrestrial smartphones, and the continued development of the IoT. Only satellite providers can offer global coverage, and developing a satellite network requires significant financial investment, as well as technological and regulatory challenges. We believe that we are well-positioned to capitalize on the growth in our industry from end users who require reliable, easy-to-use mobile communications services in all locations.

**Strategic relationship with the U.S. government.** The U.S. government is our largest single customer, and we have provided airtime services to the U.S. government (particularly the Department of Defense, or DoD) since our inception. We believe the U.S. government views our encrypted handset, IoT devices, DTCS and other products as mission-critical services and equipment. The U.S. government continues to make significant investments in a dedicated gateway on a U.S. government site to provide operational security and allow U.S. government handset and IoT users to communicate securely with other U.S. government communications equipment. This gateway is only compatible with our satellite network. In September 2019, we entered into the EMSS contract and continue to see significant usage of our network under this contract. With ongoing investments by the DoD, we expect to see growth in adoption as enhancements are implemented and new services are launched.

**Wholesale distribution network.** The specialized needs of our global end users span many markets, including emergency services, maritime, aviation, government, utilities, oil and gas, mining, recreation, forestry, heavy equipment, construction, railways and other transportation. We sell our products and services to commercial end users through a wholesale distribution network of service providers, VARs and VAMs, which often specialize in a particular line of business. Our distributors use our products and services to develop innovative and integrated communications solutions for their target markets, embedding our technology in their products or combining our products with other technologies, such as GPS and terrestrial wireless technology. In addition to promoting innovation, our wholesale distribution model allows us to capitalize on the research and development expenditures of our distribution partners, while lowering overall customer acquisition costs and mitigating some risks, such as consumer relationship risks. By supporting these distributors as they develop new products, services and applications, we believe we create additional demand for our products and services and expand our target markets at a lower cost than would a more direct marketing model. We believe our distribution network can continue to grow with us and increase our market penetration. For example, we used our wholesale distribution approach to introduce Iridium Certus, with multiple VAMs developing Iridium Certus customer terminals for the maritime, aviation and terrestrial markets at their expense, and agreements with numerous service partners to sell, service and support Iridium Certus terminals and service to global customers across these markets.

**Our Business and Growth Strategies**

- **Leverage our largely fixed-cost infrastructure to grow our service revenue.** Our business model is characterized by high capital costs, primarily incurred every 10 to 15 years, in connection with designing, building and launching new generations of our satellite constellation, and a low incremental cost of providing service to additional end users. We believe that service revenue will continue to be our largest source of future growth and profits, and we intend to focus on growing both our commercial and government service revenue in order to leverage our largely fixed-cost infrastructure. In particular, we believe that competitive broadband, midband and narrowband data services through
Iridium Certus and satellite IoT services, where we are engaging large, global enterprises as long-term customers for data and telematics solutions, represent our greatest opportunities for service revenue growth.

- **Expand our target markets through the development of new products and services.** We believe that we can expand our target markets by developing and offering a broader range of products and services, including a wider array of cost-effective and competitive broadband, midband and IoT data services using Iridium Certus technology to complement and expand on our existing legacy narrowband services. Iridium Certus is a multi-service platform that can deliver a range of services, from voice to a high-throughput L-band data connection, at a range of competitive price points, data speeds, and terminal dimensions to meet an expanding set of customer requirements. Iridium Certus services will include background IP data, high quality voice, messaging, and safety services, including Global Maritime Distress and Safety System, or GMDSS, and Aeronautical Mobile Satellite (Route) Service, or AMS(R)S. During 2021 we also introduced a new broadband service, Iridium Certus 200, offering uncompressed transmission speeds up to 176 Kbps and up to three high-quality voice lines through a small, lightweight and cost-effective antenna, and a new midband service, Iridium Certus 100, enabling small, low-profile antennas and battery-powered devices designed for maximum mobility, but with IP data speeds that efficiently support sending important pictures, emails and other vital information from remote places.

- **Accelerate the development of personal communications capabilities.** Part of our strategy for the development of personal mobile satellite communications is to allow individuals to connect to our network in more ways, including from devices such as smartphones, tablets and laptops through our Iridium GO!® device or a variety of personal communication devices from VAMs and VARs like Garmin. We are making our technology more accessible and cost-effective for our distribution partners to integrate by licensing our core technologies; by adding functionality, such as push-to-talk, or PTT, capability, which allows multiple users to participate in talk groups worldwide; by providing rugged, dependable devices and services; and by developing new services that take advantage of the capabilities of our global constellation.

- **Continued growth in services provided to the U.S. government.** Under our EMSS contract, we provide Iridium airtime services, including unlimited global standard and secure voice, paging, fax, Short Burst Data®, Iridium Burst®, RUDICS and DTCS services for an unlimited number of Department of Defense and other federal government subscribers. The fixed-price rate for the current year of the EMSS contract is $106 million, with increases thereafter up to $110.5 million for the final contract year ending in September 2026. Other services such as Iridium Certus and Satellite Time and Location provide us with opportunities to offer new products and services to the U.S. government for an additional fee.

- **Continue to expand our distribution network.** We believe our wholesale distribution network lowers our costs and risks, and we plan to continue to selectively expand our network of service providers, VAMs and VARs, to expand our sales and distribution efforts geographically, and to add additional industries or lines of business. We expect that our current and future value-added partners will continue to develop customized products, services and applications targeted to the land mobile, IoT, maritime, aviation and government markets. We believe these markets and the new service providers, VAMs and VARs who join our network as a result of new product offerings represent an attractive opportunity for continued subscriber and revenue growth.

- **Continue to support Aireon in the execution of its business plan.** Aireon, which we formed in 2011, is our primary hosted payload customer. Aireon received subsequent investments from five ANSPs: NAV CANADA, Enav (Italy), NATS (United Kingdom), NaviAir (Denmark) and the Irish Aviation Authority. Aireon developed an ADS-B receiver payload that is hosted on our satellites and gathers ADS-B position information from aircraft to provide a global air traffic surveillance service. Aireon has contracted to offer its service to ANSPs, the FAA, and other commercial customers worldwide. Aireon has also contracted to pay us a fee to host their payloads on our satellites and pays us data service fees for the delivery of the air traffic surveillance data from those payloads over the Iridium system. We will also continue to hold a meaningful equity stake in Aireon.

**Distribution Channels**

We sell our products and services to customers through a wholesale distribution network of approximately 100 service providers, approximately 285 VARs and approximately 85 VAMs. These distributors sell our products and services to end users, either directly or indirectly through service providers, VARs or dealers. Of these distributors, 54 sell primarily to U.S. and international government customers. Our distributors often integrate our products and services with other complementary hardware and software and have developed individual solutions targeting specific lines of business. We also sell airtime services directly to the U.S. government, including the Department of Defense, for resale to other government agencies.
We provide our distributors with support services, including assistance with coordinating end user sales and marketing, strategic planning and training, and second-tier customer support, as well as helping them market our products and services and respond to new business opportunities. We have representatives covering three regions around the world to better manage our distributor relationships: the Americas, which includes North, South and Central America; Asia Pacific, which includes Australia and Asia; and Europe, the Middle East, Africa and Russia. We have also established a global service program to provide portside service for our maritime customers at major ports worldwide. In addition, we maintain various online management tools that allow us to communicate efficiently with our distributors, and allow them to manage their customers’ Iridium devices from anywhere in the world. By relying on our distributors to manage end user sales, we believe that we reduce some of the risks and costs related to our business, such as consumer relationship risks and sales and marketing costs, while providing a broad and expanding distribution network for our products and services with access to diverse and geographically dispersed niche markets. We are also able to benefit from the specialized expertise of our distributors, who continue to develop innovative and improved solutions and applications integrating our product and service offerings, providing us with an attractive platform to support our growth.

**Commercial Markets**

We view our commercial business as our primary source of long-term growth. Service providers and VARs serve as our main distribution channel by purchasing our products and services and marketing them directly to their customers or indirectly through independent dealers. They are each responsible for customer billing, end user customer care, managing credit risk and maintaining all customer account information. If our service providers or VARs provide our services through dealers, these dealers will often provide such services directly to the end user. Service providers typically purchase our most basic products and services, such as mobile voice services and related satellite handsets, and offer additional services such as voice mail. Unlike service providers, our VARs typically focus more on data applications and provide a broader array of value-added services specifically targeted to the niche markets they serve, such as IoT, maritime, aviation and government markets, where high-use customers with specialized needs are concentrated. These VARs integrate our handsets, transceivers, high-speed data devices and Short Burst Data, or SBD®, modems with other hardware and software to create packaged solutions for end users. Examples of these applications include cockpit voice and data solutions for use by the aviation sector and voice, data and tracking applications for industrial customers, such as Caterpillar Inc., the Department of Defense, and other U.S. and foreign government agencies. Our service providers include satellite service providers such as Marlink AS, Applied Satellite Technology Limited and Network Innovations, as well as some of the largest telecommunications companies in the world, including Telstra Corporation Limited, KDDI Corporation and Singapore Telecommunications Limited. Our VARs include ARINC Incorporated, Blue Sky Network, LLC, Garmin Services Inc., Gogo Business Aviation LLC, Komatsu Ltd, Kore Telematics Inc., MetOcean Telematics Limited, NAL Research Corporation and Zunibal S.A.

We also sell our products to VAMs, who integrate our transceivers or chipsets into their proprietary hardware. These VAMs produce specialized end-user equipment, including integrated ship, vehicular and aviation communications systems, and global asset tracking devices, which they offer to end users in IoT, maritime, aviation and government markets. As with our service providers and VARs, VAMs sell their products either directly or through other distributors, including some of our service providers and VARs. Our VAMs include Beam Communications Pty Ltd., Calamp Wireless Networks Corporation, Garmin Services Inc. and Honeywell Global Tracking Limited.

In addition to VARs and VAMs, we maintain relationships with approximately 75 value-added developers, or VADs. We typically provide technical information to these companies on our products and services, which they then use to develop software and hardware that complements our products and services in line with the specifications of our VARs and VAMs. These products include handset docking stations, airline tracking and flight management applications and crew e-mail applications for the maritime industry. We believe that working with VADs allows us to create new platforms for our products and services and increases our market opportunity while reducing our overall research and development, marketing and support expenses. Our VADs include Pivotel Satellite Pty Ltd., Rockwell Collins Inc. and two10degrees Limited.

We use a wholesale rate structure for our commercial products and services. Under our distribution agreements, we charge our distributors wholesale rates for commercial products and services, subject to discount and promotional arrangements and geographic pricing. We also charge fixed monthly access fees per subscriber for some of our services. Our distributors are in turn responsible for setting their own pricing to end users. Our agreements with distributors typically have terms of one year and are automatically renewable for additional one-year terms, subject to termination rights. We believe this business model reduces back-office complexities and costs and allows distributors to remain focused on revenue generation, while also
providing incentives for distributors to focus on selling our commercial product and service portfolio and developing additional applications.

**Government Markets**

We provide mission-critical mobile satellite products and services to all military branches of the Department of Defense as well as other U.S. government departments and agencies. These users require voice and two-way data capability with global coverage, low latency, mobility and security and often operate in areas where no other terrestrial or wireless means of communications are available. We believe we are well positioned to satisfy demand from these users. Our 9575A handset is the only commercial, mobile handheld satellite phone that is capable of Type I encryption accredited by the U.S. National Security Agency for Top Secret voice communications. In addition, the U.S. government continues to make significant investments in a dedicated gateway that provides operational security and allows users of encrypted U.S. government handsets to communicate securely with other U.S. government communications equipment. These investments include upgrading the gateway to take advantage of the enhanced capabilities of our new network, including Iridium Certus and other enhanced services. This U.S. government gateway is only compatible with our satellite network.

We provide airtime and airtime support to U.S. government and other authorized customers pursuant to our seven-year EMSS contract managed by the U.S. Space Force, which we entered into in September 2019. Under the terms of this agreement, authorized customers utilize our airtime services through the U.S. government’s dedicated gateway. These services include unlimited global standard and secure voice, broadcast, netted or DTCS and select other services for an unlimited number of U.S. government subscribers. Other services may be purchased at an additional cost. The fixed-price rate for the current year of the EMSS contract is $106 million, with increases in annual value resulting in a total contract value of $738.5 million over the seven-year term. While we sell airtime directly to the U.S. government for resale to end users, our hardware products are sold to U.S. government customers through our network of distributors, which typically integrate them with other products and technologies. We may provide other services, such as Iridium Certus, to the U.S. government under separate arrangements for an additional fee. Through December 31, 2021, we have invested approximately $8.3 million to support the U.S. government's implementation of our enhanced services at its dedicated gateway, which we account for as cost of services in our consolidated financial statements. We expect to invest another approximately $3.7 million during the year ending December 31, 2022.

We also provide maintenance services for the U.S. government gateway pursuant to our Gateway Maintenance and Support Services, or GMSS, contract managed by the U.S. Space Force. This agreement, which became effective in April 2019, provides for a six-month base term and four one-year options, the first three of which have been exercised, for a total value of the contract to us of approximately $54 million.

In October 2019, we were also awarded a five-year indefinite-delivery/indefinite-quantity, or IDIQ, contract managed by the U.S. Space Force to enable ongoing innovation and enhancements for the U.S. government gateway. This contract has a one-year base period and four one-year options, the first two of which have been exercised, with a value of up to $76 million to us over the five-year period.

U.S. government services accounted for approximately 21% of our total revenue for the year ended December 31, 2021. Our reported U.S. government revenue includes airtime revenue derived from the EMSS contract and services provided through the GMSS contract, the IDIQ contract, and other engineering and support contracts with the U.S. government. Pursuant to federal acquisition regulations, the U.S. government may terminate the EMSS, GMSS or IDIQ contracts, in whole or in part, at any time.

Our government revenue does not include airtime services purchased by U.S. or non-U.S. government agencies that are provided through our commercial gateway, which we report as commercial service revenue, or equipment purchased by government customers from third-party distributors. We are unable to determine the specific amount of U.S. government revenue derived from these commercial sources.

**Lines of Business**

The specialized needs of our global customers span many markets. Our system is able to offer our customers cost-effective communications solutions with true global coverage in areas unserved or underserved by existing telecommunications infrastructure. Our mission-critical communications solutions have become an integral part of the communications and business infrastructure of many of our end users. In many cases, our service is the only connectivity for these critical applications or is used to complement terrestrial communications solutions.
Our current principal vertical lines of business include land mobile, maritime, aviation, IoT, hosted payloads and other data services, and U.S. government. We report commercial voice and data service, IoT data service, commercial broadband, hosted payload and other data service, and government service revenue separately. Land mobile and aviation are the principal contributors to the revenue we report as commercial voice and data, while maritime is primarily reported in commercial broadband revenue. Since we introduced Iridium Certus broadband in January 2019, Iridium Certus services have accounted for an increasing portion of our revenue, and we expect that trend to continue.

**Commercial Voice and Data and Commercial Broadband**

We offer commercial voice and data and commercial broadband services primarily in the land mobile, maritime, and aviation sectors. Beginning in 2020, we separately report commercial Iridium Certus broadband revenue with Iridium OpenPort service revenue as commercial broadband revenue, and prior year periods have been conformed to this presentation in our financial information included in this report. Previously, Iridium Certus broadband revenue and Iridium OpenPort service revenue were included in commercial voice and data revenue. Because there is considerable overlap in these sectors, we continue to combine our discussion of these revenue lines in this report, noting within the discussion where our broadband services contribute, particularly in maritime.

**Land Mobile**

We are the leading provider of mobile satellite communications services to the land mobile sector, providing handset services to areas not served or inconsistently served by existing terrestrial communications networks. In a 2021 report, TMF Associates reported that there were approximately 756,000 land voice satellite units in service in 2020. Mining, forestry, construction, oil and gas, utilities, heavy industry and transport companies as well as the military, public safety and disaster relief agencies are significant users of our land mobile services. Sales of Iridium GO! and Iridium PTT services also contribute to the land mobile sector. We believe that demand for mobile communications devices operating outside the coverage of terrestrial networks, combined with our small, lightweight, durable handsets with true global coverage, will allow us to capitalize on growth opportunities among these users.

In addition, we believe Iridium Certus broadband land mobile units are attractive in this market, as the combination of price, speeds, equipment, service costs and durability of equipment addresses a distinct market need. We also expect Iridium Certus midband services to be a source of revenue growth in the coming years.

Our land mobile end users utilize our satellite communications services for:

- **Voice and data**: Multinational corporations in various sectors use our services for business telephony, email and data transfer services, location-based services, broadband and to provide telephony services for employees in areas inadequately served by terrestrial networks. Oil and gas and mining companies, for example, provide their personnel with our equipment solutions while surveying new drilling and mining opportunities and while conducting routine operations in remote areas that are not served by terrestrial wireless communications networks. In addition, a number of recreational, scientific and other outdoor users rely on our mobile handheld satellite phones and services for use when beyond terrestrial wireless coverage. Iridium PTT offers non-governmental organizations (NGOs), military, first responder, oil and gas, civil government and other users the ability to hold group calls using the Iridium Extreme PTT handset or other devices developed by our VAMs and VARs using the Iridium 9523 PTT core transceiver. The Thales MissionLINK terminal, the first Iridium Certus offering in the land mobile area, allows rapid deployment and on-the-move communications, location tracking and telemetry. During 2021, we also introduced Iridium Certus midband service for our commercial and government land mobile customers.

- **Mobile and remote office connectivity**: A variety of enterprises use our services to make and receive voice calls and to establish data, email, internet and corporate network connections.

- **Public safety and disaster relief**: Relief agencies, such as FEMA, and other agencies, such as the Department of Homeland Security, use our products and services in their emergency response plans, particularly in the aftermath of natural disasters such as Hurricanes Dorian, Harvey, Irma and Maria, and earthquakes in Haiti in 2021 and the Mexico City area in 2017. These agencies generate significant demand for both our voice and data products, especially in advance of the hurricane season in North America. Further, many enterprises and governments include mobile satellite
services such as ours as part of their PACE plan (Primary/Alternate/Contingency/Emergency), to maintain communications continuity in case of terrestrial communication network outages.

- **Public telephone infrastructure**: Telecommunications service providers use our services to satisfy regulatory mandates and government expectations regarding the availability of communications services for rural populations currently not served by terrestrial infrastructure. Telstra Corporation, for example, uses our services to provide communications services in some of Australia’s most remote locations.

**Maritime**

We serve the commercial maritime market with a variety of products, including broadband terminals, embedded devices and handsets. This market includes merchant shipping, fishing, leisure and research vessels, and specialized watercraft. Since we introduced Iridium Certus broadband in January 2019, Iridium Certus services have accounted for an increasing portion of our revenue from this market, and we expect that trend to continue, although we still support our legacy broadband offering, Iridium OpenPort service. Our products and services targeting the maritime market typically have high average revenue per subscriber. Once one of our maritime systems is installed on a vessel, it often generates a multi-year recurring revenue stream from the customer. To take advantage of this, from time to time we may offer promotions or rebates to accelerate new customer acquisitions and solidify this expected long-term revenue stream.

We believe demand for higher-speed, low-cost data services will allow us to capitalize on opportunities in this market. We believe Iridium Certus, which offers data speeds of up to 704 Kbps, presents a superior communication solution to L-band users in the maritime market. We expect this offering to increase the addressable market for our maritime services.

Maritime end users utilize our satellite communications services for the following:

- **Business critical data applications**: Ship operators use our services to exchange email and data files and to receive other information such as meteorological reports, emergency bulletins, cargo and voyage data and electronic chart updates. We believe the breadth of our Iridium Certus offerings provides attractively priced options for shipping operators and fishing fleets seeking increased functionality, as well as for yachts, workboats and other vessels for which traditional marine satellite systems have typically been costly and underperforming. In conjunction with our distributors, we also offer additional services that permit service providers and VARs to offer complete integrated solutions for prepaid calling, email and IP-based data communications. For example, one of our distribution partners, KVH Industries, Inc., has been integrating Iridium Certus with its miniature Very Small Aperture Terminal, or mini-VSAT, broadband service to provide companion connectivity when the mini-VSAT terminal is out of its coverage area or non-operational.

- **Voice services**: Maritime global voice services are used for both vessel operations and communications for crew welfare. Merchant shipping companies use phone cards for crew use at preferential around-the-clock flat rates.

- **Vessel management and asset tracking**: Shipping operators use our services to manage operations on ships and to transmit data, such as course, speed and fuel stock. Our services are commonly integrated with GPS to provide a real-time position reporting capability. Many fishing vessels are required by law to carry terminals using approved mobile satellite services for tracking purposes as well as to monitor catches and to ensure compliance with geographic fishing restrictions. European Union regulations, for example, require EU-registered fishing vessels of over 15 meters to carry terminals for the purpose of positional reporting of those vessels. Furthermore, new environmental regulations in some jurisdictions are expected to require monitoring of merchant vessels in territorial waters, which would provide an additional growth opportunity for us.

- **Safety and Security applications**: Ships in distress, including as a result of potential piracy, hijack or terrorist activity, rely on satellite voice and data services. The Ship Security and Alert Systems, or SSAS, and Long Range Identification Tracking, or L.RIT, regulations were adopted by the International Maritime Organization, or IMO, to enhance maritime security in response to the threat from terrorism and piracy. Most deep-sea passenger and cargo ships must be fitted with a device that can send an alert message containing the ship’s ID and position whenever the ship is under threat or has been compromised. In addition, the IMO and a NATO advisory group have recommended the installation of a safe room or citadel equipped with a standalone secure communication link the crew can use from
inside the room to communicate with rescuing forces. Our distribution partners have developed several product solutions using our network to meet these requirements for merchant and fishing vessels.

In addition, we have been recognized by the IMO as a provider for the GMDSS. The GMDSS is a maritime service built to alert a maritime rescue coordination center of each vessel’s situation and position, information that can then be used to coordinate search and rescue efforts among ships in the area. As part of the GMDSS service, navigational and meteorological information is distributed to vessels. The IMO requires all vessels flagged by signatories to the International Convention for the Safety of Life at Sea, or SOLAS, over 300 gross tons and certain passenger vessels, irrespective of size, that travel in international waters to carry distress and safety terminals that provide GMDSS services. GMDSS service using our network became available in 2020, and our partners offer maritime terminals that include GMDSS service capabilities to vessel operators.

**Aviation**

We are one of the leading providers of mobile satellite communications services to the aviation sector. Our services are increasingly used in commercial and government aviation applications, principally by corporate jets, corporate and government helicopter fleets, specialized general aviation fleets, such as medevac companies and fire suppression fleets, and high-end personal aircraft. Our services are also employed by commercial airline operators for flight deck voice and data link services for aircraft operational and safety communications. As a result of authorizations by the FAA and U.S. Federal Communications Commission, or FCC, for us to provide air traffic datalink communications, commercial operators are installing avionics that use the Iridium network on the flight deck to comply with international air navigation communications requirements to operate in oceanic and remote airspace, including polar regions. Voice and data avionics platforms from our VAMs have been adopted as standard equipment and as factory options for a range of airframes in business aviation and air transport, such as Gulfstream Aerospace Corporation, Bombardier Inc., Cessna Aircraft Company, Boeing and Airbus. Avionics platforms that utilize our network are also retrofitted on thousands of corporate and commercial aircraft already in operation.

The global aviation community in particular has been negatively affected by the COVID-19 pandemic and measures taken to combat it. We saw significant recovery in this sector in 2021 and expect to see continued recovery in 2022; however, it is likely that air traffic, particularly commercial transport air traffic, will not fully recover to its pre-pandemic levels for a number of years. Charter or private jet usage has increased in this same period, and many commercial aircraft have been converted to cargo aircraft, while rotorcraft and unmanned aerial vehicle usage has remained relatively flat. We continue to see aviation as an area of growth for us.

Aviation end users utilize our satellite communications services for:

- **Air traffic control communications and safety applications**: The International Civil Aviation Organization, or ICAO, has approved standards and recommended practices allowing us to provide AMS(R)S to commercial aircraft on long-haul routes. This allows member states to evaluate and approve our services for safety communications on flights in oceanic and remote airspace. The FAA has approved Iridium for use in the Future Air Navigation Services, or FANS, including Automatic Dependent Surveillance - Contract, or ADS-C, datalink communications and Controller-Pilot Data Link Communications, or CPDLC, with air traffic control. Aircraft crew and air traffic controllers use our services for data and voice communications between the aircraft flight deck and ground-based air traffic control facilities. We are the only satellite provider capable of offering these critical flight safety applications around the entire globe, including the polar regions. We believe this particular sector of the market provides us with significant growth opportunities, as our services and applications can serve as a cost-effective alternative to systems currently in operation.

- **Aviation operational communications**: Aircraft crew and ground operations use our services for air-to-ground telephony and data communications. This includes the ADS-C automatic reporting of an aircraft’s position and mission-critical condition data to the ground and CPDLC for clearance and information services. We provide critical communications applications for numerous airlines and air transport customers including Hawaiian Airlines, United Airlines, UPS, Cathay Pacific Airways, Delta Airlines, Southwest Airlines and El Al Airlines. These operators rely on our services because other forms of communication may be unaffordable or unreliable in areas such as the polar regions. Collins Aerospace (ARINC) and SITA, the two leading providers of voice and data link communications services and applications to the commercial airline industry, integrate our products and services into their offerings.
• Aviation passenger communications: Corporate and private fleet aircraft passengers use our services for air-to-ground telephony and data communications. We believe our distributors’ small, lightweight, cost-effective solutions offer an attractive option for aircraft operators, particularly small fleet operators; for example, some operators use our services to enable small-cabin passengers to email using their own Wi-Fi-enabled mobile devices, including smartphones, without causing interference with aircraft operation. We expect that users in the corporate aviation market, and original equipment manufacturers, or OEMs, for business jets, will increase adoption of our services for in-flight passenger data communications using our network. We believe this presents a significant opportunity to increase market penetration and revenues in this market.

• Rotary and general aviation applications: The Iridium network is uniquely suited to these sectors, as we have small antenna designs that work under rotor blades and enable installation on smaller general aviation platforms. We are also a major supplier for rotary aviation applications to end users in a number of markets, including medevac, law enforcement, oil and gas, and corporate work fleets. Companies such as Air Logistics, EagleMed and Air Evac Lifeteam rely on applications from our distributors for traditional voice communications, fleet tracking and management, and real-time flight diagnostics. VARs and VAMs such as Flightcell International Ltd., Garmin Services Inc., Honeywell International, Inc., SkyTrac and Spider Tracks Limited incorporate Iridium products and services into their applications for these markets.

• Unmanned Aerial Vehicles (UAVs): Our small antennas and system designs support a wide range of UAV platforms. In addition, our global footprint enables reliable, beyond-line-of-sight communications for these UAV platforms regardless of their operational range. We operate as the communication link for remote-piloted aircraft for uses such as package delivery, medical supply, law enforcement, corporate surveying and even military applications.

We believe the benefits of Iridium Certus enhance our ability to address aviation market needs across these sectors.

**Commercial IoT Data**

We are one of the leading providers of satellite-based IoT services. We believe this market continues to experience increasing penetration and presents opportunities for future growth. As with land mobile, our largest IoT users include mining, construction, oil and gas, utilities, heavy industry, maritime, forestry and transport companies, as well as the military, public safety and disaster relief agencies. We believe increasing demand for automated data collection processes from mobile and remote assets operating outside the coverage of terrestrial wireline and wireless networks, as well as the continued need to integrate the operation of such assets into enterprise management and information technology systems, will likewise increase demand for our IoT applications. For example, our IoT devices have been adopted as standard equipment and as factory options by heavy equipment manufacturers such as Caterpillar Inc., Hitachi, Komatsu and Doosan to provide telematics solutions for end users.

Our IoT services are used for:

• **Personal tracking devices and location-based services:** Several of our VAMs and VARs, such as Garmin, NAL Research and Zoleo, market small, portable devices that provide personal tracking and data communications services to consumers and commercial end users. In addition, Iridium GO! and the Iridium Extreme handsets offer personal tracking and location-based services. These devices use IoT data services to send location information and other data to web-based portals for tracking.

• **Heavy equipment telematics:** Large, global heavy equipment original equipment manufacturers, such as Caterpillar Inc., Komatsu Limited, Hitachi Construction Machinery Co. Ltd., Hyundai Doosan Infracore and AGCO Corporation, use our global IoT services to monitor their off-road heavy equipment in markets such as construction, mining, agriculture and forestry.

• **Fleet management:** Our global coverage permits our products and services to be used to monitor the location of vehicle fleets, hours of service and engine telemetry data, as well as to conduct two-way communications with drivers around the world. Fleet management companies, such as Trimble Transportation & Logistics, Mix Telematics and Zatix, use our service to provide distance drivers with reliable communications to their dispatchers and their destinations to coordinate changing business needs, and our satellite network provides continuous communications coverage while they are in transit. We expect that the need for more efficient, cost-effective and safer fleet operations, as well as the imposition of regulatory mandates related to driver safety, such as drive-time monitoring, will increase demand for our services in this area.
• **Fixed-asset monitoring:** Multinational corporations, such as oil-field service companies like Schlumberger Limited and ConocoPhillips Company, use our services to run applications that allow remote monitoring and operation of equipment and facilities around the globe, such as oil pipelines and offshore drilling platforms.

• **Asset tracking:** Leveraging IoT applications developed by several of our distributors, companies use our services and related devices to track assets, including personnel, for logistics, theft-prevention and safety purposes. Companies and organizations that have fleets of vehicles use IoT solutions from Iridium distributors to improve the efficiency of their operations. For example, customers use Trimble Transportation’s solution to provide global communication to transportation assets, and the Department of Homeland Security Office of Enforcement and Removal uses Fleet Management Solutions’ IoT solution to transmit position, direction, speed and other data for management of its vehicle fleet.

• **Resource management:** Our global coverage and data throughput capabilities support natural resource management applications, such as fisheries management systems. Three of our VARs—CLS, MetOcean Telematics and Rock Seven—have developed applications for the fishing industry that enable regulatory compliance of fishing practices in a number of countries around the world.

• **Scientific data monitoring:** The global coverage of our network supports many scientific data collection applications such as the Argo float program of the National Oceanographic and Atmospheric Administration, or NOAA, the Global Ocean Observation project Challenger, operated by Rutgers University, and the anti-poaching programs of organizations such as Smithsonian National Zoo & Conservation Institute, Zoological Society of London, and Veterans Empowered to Protect African Wildlife, or VETPAW. These programs rely on our IoT services to collect scientific data from buoys and ocean gliders located throughout the world’s oceans and from wildlife habitats for monitoring and analysis. We believe the increased need for monitoring climate and environmental data associated with global climate change and human impact on the planet will increase demand for these services.

In the future, we expect our value-added partners to develop new IoT solutions with increased capabilities based on our Iridium Certus 9770 transceiver and other future midband devices we plan to provide across all of our key IoT vertical markets.

**Hosted Payload and Other Data Services**

Our Iridium satellites also host customer payloads. We generate revenue from these customers both from the hosted payload capacity and from data service fees. Because these revenues are based on a contractual commitment for the life of the Iridium constellation, we recognize revenue from these customers over the expected life of the system.

In addition to access and usage fees in the vertical lines of business described above, we generate revenue from several ancillary services related to our core service offerings. In conjunction with Satelles, Inc., we offer Satellite Time and Location services, which helps augment GPS and provides reliable location, timing and positioning data. We provide inbound connections from the public switched telephone network, or PSTN, short message services, or SMS, subscriber identity module, or SIM, activation, customer reactivation, and other peripheral services. We also provide research and development services to assist customers in developing new technologies compatible with our system, which we may leverage for use in service and product offerings in the future. We charge our distributors fees for these services.

**U.S. Government**

We are one of the leading providers of mobile satellite communications services to the U.S. government, principally the Department of Defense. We provide mobile satellite products and services to all branches of the U.S. armed forces. Our voice products are used for a variety of primary and backup communications solutions, including tactical operations, logistical, administrative, morale and welfare, and emergency communications. In addition, our products and related applications are installed on ground vehicles, ships, rotary- and fixed-wing aircraft, embedded in unattended sensors and used for command and control and situational awareness purposes. Global security concerns are among the factors driving demand for our products and services in this sector. See “U.S. Government Services” below for more information.

**Seasonality**

Our business is subject to seasonal usage changes for commercial customers, and we expect it to be affected by similar seasonality going forward. March through October are typically the peak months for commercial voice traffic and related subscriber equipment sales, given the predominance of population and outdoor activity in the northern hemisphere. U.S. government usage and commercial IoT usage have been less subject to seasonal changes.
Services and Products

At December 31, 2021, we had approximately 1,723,000 billable subscribers worldwide. Our principal services are mobile satellite services, including mobile voice and data services, high-speed data services, IoT services, hosted payload and other data services and engineering services. Sales of our commercial services collectively accounted for approximately 64% of our total revenue for the year ended December 31, 2021. We also sell related voice and data equipment to our customers, which accounted for approximately 15% of our total revenue for the year ended December 31, 2021. In addition, we offer services to U.S. government customers, including the Department of Defense. U.S. government services, including engineering services, accounted for approximately 21% of our total revenue for the year ended December 31, 2021.

Commercial Services

Postpaid Mobile Voice and Data Satellite Communications Services

We sell our mobile voice and data services to service providers and VARs who in turn offer such services to end users, either directly or indirectly through dealers, using various packaged solutions such as seasonal or annual plans with differing price levels that vary depending upon expected usage. In exchange for these services, we typically charge service providers and VARs a monthly access fee per subscriber, as well as usage fees for airtime resources consumed by their respective subscribers.

Prepaid Mobile Voice Satellite Communications Services

We also offer mobile voice services to service providers and VARs through prepaid plans. Service providers and VARs pay us in advance for defined blocks of airtime minutes with expiration periods in various configurations, ranging from 30 days to two years. These services are then generally sold to subscribers in the form of prepaid e-vouchers and scratch cards that enable subscribers to use our services on a per-minute basis. We believe service providers and VARs are drawn to these services because they enable greater cost control by eliminating the need for monthly billings and reducing collection costs, and can be sold in countries where credit may not be readily available for end users. Our distributors often offer our prepaid voice services through fixed devices to subscribers in rural villages, at remote industrial, commercial and residential sites, and on ships at sea, among other places. Fixed voice services are in many cases an attractive alternative to handheld mobile satellite communications services in situations where multiple users will access the service within a defined geographic area and terrestrial wireline or wireless service is not available. Fixed phones, for example, can be configured as pay phones that accept prepaid scratch cards and can be installed at a central location, for example in a rural village or on a maritime vessel.

Iridium PTT Service

Building on the foundation of DTCS technology, which provides regional tactical radio service to U.S. government users, our Iridium PTT service enables regional or global PTT calls among users on the same talkgroup in up to 10 customer-defined, geographically disparate locations around the world, providing a fast and robust communication experience. Iridium PTT can be used via the Iridium Extreme PTT satellite phone or the Iridium 9523 PTT core transceiver, which gives our VAMs the ability to build Iridium PTT into existing land mobile, maritime and aviation communications platforms. For example, Icom Inc. of Japan offers a purpose-built satellite PTT radio handheld unit for use on the Iridium network. We and our partners are also developing interoperability solutions for existing terrestrial land mobile radio systems, which will further extend the utility of the service.

Broadband Data Services

Our new broadband data offering, Iridium Certus, was launched in January 2019. Iridium Certus is a suite of products and services enabled by our upgraded satellite constellation. Iridium Certus is a multi-service platform capable of offering higher quality voice, enterprise-grade broadband functionality, SBD, streaming, PTT and safety services on a global basis. Iridium Certus is designed to support a variety of cost points, antenna types and data speeds ranging from midband to broadband speeds, currently available up to 704 Kbps. We have licensed the Iridium Certus technology to VAMs who have introduced products for the maritime and land mobile markets and are developing additional products for those markets and the aviation and government markets, as well as distribution partners for the Iridium Certus service in each of these vertical markets. We believe Iridium Certus provides a competitive, cost-effective and reliable range of services to the market, in standalone applications or as a complement to other wireless technologies for critical applications and safety services.
We also continue to offer Iridium OpenPort services, which provides maritime, aviation and terrestrial users speeds of up to 134 Kbps and three independent voice lines. For our Iridium OpenPort service, we typically charge service providers usage fees for airtime consumed by the respective subscribers for voice and data communications. We have discontinued the manufacture of the Iridium Pilot® platform that supports Iridium OpenPort services, and we expect our distributors to focus on selling Iridium Certus and eventually transition many ships that use Iridium OpenPort services to Iridium Certus services.

**Internet of Things Services**

Our IoT services are designed to address the market need for a small and cost-effective solution for sending and receiving data, such as location, from fixed and mobile assets in remote locations to a central monitoring station. Most of our IoT services operate through a two-way SBD transmission or circuit-switched data, between our network and a transceiver, which may be located, for example, on a container in transit or a buoy monitoring oceanographic conditions. The small size of our devices and their low-cost, omnidirectional antennas make them attractive for use in applications such as tracking asset shipments and monitoring unattended remote assets, including oil and gas assets, as well as vehicle tracking and mobile security. We sell our IoT services to our distributors, who incorporate them and in turn provide a solution package to commercial and government customers. Increasingly, our IoT transceivers are being built into products for consumer markets, such as personal location devices that provide two-way messaging. In the future, we expect our IoT partners to develop new offerings with increased capabilities based on our Iridium Certus 9770 transceiver and other future midband devices we plan to create that have optimized size, speed, power, and antenna characteristics for various applications. As with our mobile voice and data offerings, we typically charge service providers and VARs a monthly access fee per subscriber as well as usage fees for data used by their respective subscribers.

**U.S. Government Services**

We provide U.S. government customers bulk access to our services, including voice, netted voice, data, messaging and paging services, as well as maintenance services for the U.S. government’s dedicated gateway. We provide airtime to U.S. government subscribers through the U.S. government’s gateway under the EMSS contract, which is a fixed-price contract covering voice, low-speed data, paging and DTCS services. Additional services, such as broadband capabilities utilizing Iridium Certus technology, may be provided at an additional fee. To comply with U.S. government requirements, we ensure handsets sold for use by the U.S. government are manufactured in the United States. U.S. government customers procure our voice and data devices through specific, approved distributors from our network of service providers and VARs. Our VARs and VAMs typically integrate our products with other products, which they then offer to U.S. government customers as customized products, typically provisioned by the U.S. Space Force. Our voice and data solutions for the U.S. government include:

- personnel tracking devices;
- asset tracking devices for equipment, vehicles and aircraft;
- beyond-line-of-sight aircraft communications applications;
- maritime communications applications;
- specialized communications solutions for high-value individuals; and
- specialized, secure, mobile communications and data devices for the military and other government agencies, such as secure satellite handsets with U.S. National Security Agency Type I encryption capability.

With funding support from the U.S. government, we continue to invest in research and development to develop new products and applications for use by all branches of the U.S. armed forces. For example, in conjunction with the U.S. Space Force, we and select distribution partners offer DTCS, which provides critical, secure, PTT, netted communications using lightweight, handheld tactical radios, or add-ons to existing government tactical radios. In addition, we offer a secure satellite phone based on the Iridium Extreme, which we also developed with funding support from the U.S. government and which has been accredited by the National Security Agency, or NSA, to provide Type-1 encryption, enabling communications up to Top Secret from anywhere in the world.

**Our Products**

We offer a broad array of voice and data products for customers that work worldwide. In most cases, our devices or an antenna must be located outside and within view of a satellite to be able to access our network.
Satellite Handsets and Iridium GO!

Our principal handset offerings are the Iridium 9555 and Iridium Extreme satellite handsets. We believe the industrial-strength design of these products is critical for customers, many of whom are located in the most inhospitable spots on the planet and require rugged and reliable communications equipment.

**Iridium 9555.** The Iridium 9555 provides voice, SMS and narrowband data connectivity. This model features a grayscale screen, SMS capability, an integrated antenna and a speakerphone. The Iridium 9555 weighs 9.4 ounces and offers up to 3.1 hours of talk time. The Iridium 9555 has an industrial feel, with a rugged housing to protect its sophisticated satellite transceiver.

**Iridium Extreme.** The Iridium Extreme adds to the Iridium 9555’s capabilities by providing a rugged exterior that meets Military Standard 810F for durability, a dedicated, two-way emergency SOS button, and fully integrated GPS and location-based services. These extra features are provided in a handset that is even smaller than the Iridium 9555, weighing 8.7 ounces and offering up to four hours of talk time. An emergency response service provided by GEOS Travel Safety Group, or GEOS, is included with the purchase of the phone and airtime usage. The two-way emergency SOS button initiates a phone call and an emergency message via SMS to GEOS, which then coordinates with local emergency responders.

**Iridium Extreme PTT.** The Iridium Extreme PTT enhances the Iridium Extreme with an intelligently designed push-to-talk mode, expanded speakerphone, reinforced PTT button, and extended capacity battery. The user interface provides access to multiple communication services, including voice calling, SMS and SOS, allowing users to connect to a talkgroup located in up to 10 customer-defined geographic regions worldwide. The Iridium Extreme PTT weighs 9.5 ounces and offers up to 6.5 hours of talk time in phone mode and five hours of talk time in PTT mode.

**Iridium GO!** We also offer Iridium GO!, a small, rugged, personal connectivity device that connects to the Iridium network to create a Wi-Fi hotspot, enabling the use of smartphones and tablets for voice calls, text messages and emails, posts to social networking sites, and limited use of optimized mobile websites. Iridium GO! also has an emergency SOS button and GPS and location-based services. Smartphone or tablet access is provided through special applications downloaded for free from the Apple App Store or through Google Play for Android smartphones or tablets. A software development kit is available to enable the creation of additional applications or integrate Iridium GO! connectivity into existing applications.

We expect these devices to maintain our competitive position as premium offerings in the market due to their capabilities, mobility, reliability and global coverage. In addition to these devices, we offer variants of the Iridium 9555 handset and the Iridium Extreme handset that are qualified for sale to U.S. government customers.

**Broadband Data Devices**

Iridium Certus terminals are specifically designed for the maritime, aviation, land mobile or government markets and ultimately will offer a variety of significantly enhanced data speeds and antenna types. Iridium Certus terminals provide enterprise-grade broadband functionality alongside high-quality voice capabilities that can be used on a global basis. Iridium Certus is designed to support a variety of cost points, antenna types and data speeds ranging from midband to broadband speeds currently available up to 704 Kbps. We have licensed the Iridium Certus technology to a group of VAMs who have introduced products for the maritime and land mobile markets and are developing additional products for those markets as well as the aviation and government markets.

Iridium Certus is ideal for maritime operational and safety services. These terminals deliver the satellite communications technology that the industry demands, combining all the benefits of L-band with broadband and truly global coverage. Iridium Certus terminals offer superior connectivity for maritime customers whether used as a standalone service or as a companion to VSAT services. Our principal end users for Iridium Certus in the maritime market are merchant shipping, commercial fishing, large leisure vessels, and work boats. The initial terminals in this market were the Cobham Sailor 4300 and Thales VesseLINK. In addition, Intellian, a Korean maritime terminal manufacturer, introduced an Iridium Certus terminal to the market in 2020, and Thales introduced its VesseLINK 200 terminal, which uses our Iridium Certus 200 service, in 2021.

In aviation, Iridium Certus will deliver critical safety services and in-flight communications. Our principal targeted end users for Iridium Certus in the aviation market include commercial, corporate and government users, general aviation, rotorcraft and
unmanned aircraft. The initial terminals in this sector are the SkyTrac DLS-100 and the BlueSky SkyLink 7100. A number of other VAMs have been licensed to create aviation terminals using Iridium Certus services as well.

In the land mobile market, enterprises, governments, and individuals that want to maintain mobile IP and telephony connectivity for their operations while in remote areas without having to deploy ground-based infrastructure or expensive terminals utilize Iridium Certus. Iridium Certus devices may be integrated with internet, cellular, land mobile radio, and location-based applications to keep users connected, offering global push-to-talk, situational awareness, email, messaging and voice-over-IP. Our principal end users for Iridium Certus in the land mobile market are military users, rail, first responders, non-governmental organizations, oil and gas users, and remote fleets. Iridium now offers Iridium Certus 100, Iridium Certus 200 and Iridium Certus 700 services, supporting a portfolio of broadband and midband terminals through our partners to provide a range of capabilities at various price points. Terminals that are approved for land mobile market include the Thales MissionLINK 700 and 200, BSN SkyLink 5100, NAL Research Quicksilver, and McQ CONNECT, with additional Iridium Certus 100 terminals currently in development and expected to be commercially available in 2022.

In the government market, Iridium Certus terminals provide beyond-line-of-sight communications critical to mission success. The initial terminal in this market is the Thales MissionLINK, with additional terminals expected in the near future.

Our legacy terminal, the Iridium Pilot, provides up to three independent voice lines and an internet connection for data communications of up to 134 Kbps, using our Iridium OpenPort service. We have discontinued the manufacture of the Iridium Pilot terminal but still support the Iridium OpenPort service. With the introduction of the more powerful Iridium Certus terminals, we expect our distributors to focus on selling Iridium Certus and eventually upgrade many ships that have Iridium Pilot installed to Iridium Certus technology.

Voice and Data Modems

We also offer a combined voice transceiver and data modem, which our distributors integrate into a variety of communications solutions that are deployed in different applications around the world. Our principal offering in this space is the Iridium Core 9523 L-band transceiver, which utilizes the transceiver core of our Iridium Extreme satellite handset. The Iridium Core 9523 provides a small voice and data module that can be integrated with other components to create a modem tailored for typical VAM applications as well as specific applications, such as a dual-mode terrestrial radio and satellite phone or IoT applications that require more efficient data throughput through circuit-switched data transmission. The Iridium 9523 PTT adds PTT capability, allowing development partners to design and build land mobile, fixed, aviation and maritime devices with Iridium PTT service. In the future, we expect our value-added partners to develop new products based on our Iridium Certus 9770 transceiver and other optimized midband devices. Our principal customers for our L-band transceivers are VAMs and VARs, who integrate them into specialized devices that access our network.

Internet of Things Data Devices

Our principal IoT devices are the Iridium 9602 and 9603 full-duplex SBD transceivers. The Iridium 9602 is a small data device with two-way transmission, capable of sending packet data to and from any point in the world with low latency. The principal customers for our Iridium 9602 data modems are VARs and VAMs, who embed the device into their tracking, sensor, and data applications and systems, such as asset tracking systems. Our partners often combine the Iridium 9602 with a GPS receiver to provide location information to customer applications. We also offer the Iridium 9603, an even smaller transceiver that is functionally identical to the Iridium 9602. In addition, a number of VARs and VAMs include a cellular modem as part of their Iridium applications to provide low-cost cellular data transmission when available. These types of multimode applications are adopted by end users who require the ability to regularly transfer data but operate in areas with inconsistent cellular coverage. We provide gap-filler coverage for these applications, allowing users to operate anywhere on the globe.

We also offer Iridium Burst, our one-to-many global data broadcast service, which enables enterprises to send data to an unlimited number of devices anywhere in the world, even inside buildings, vehicles or aircraft, and Iridium Edge®, an off-the-shelf, environmentally sealed, rugged device that complements existing cellular solutions to create dual-mode connectivity for the most remote and inaccessible areas of the world.

Iridium Edge reduces the cost and complications associated with hardware development, manufacture and certification of satellite-specific terminals, which we expect to enable greater adoption of our IoT services. We also offer Iridium Edge Pro, a standalone IoT device that offers real-time GPS tracking capabilities, with a flexible programming platform that allows partners to create and run their own custom-made applications, and Iridium Edge Solar, a standalone, programmable, solar-powered
device that offers real-time GPS tracking in a self-charging, low-maintenance unit with over-the-air configuration that allows partners to create distinct tracking applications. In addition, during 2021 several partners launched Iridium Certus midband solutions for IoT, including the SkyLink product from Blue Sky Networks and the RockREMOTE from Ground Control.

**Device Development and Manufacturing**

We contract with Cambridge Consulting Ltd. and other suppliers to develop our devices, with Benchmark Electronics Inc., or Benchmark, to manufacture most of our devices in a facility in Thailand, and with Hybrid Design Associates to manufacture a portion of our devices in the U.S. Pursuant to our contract with Benchmark, we may be required to purchase excess materials at cost plus a contractual markup if the materials are not used in production within the periods specified in the agreement. Benchmark generally repurchases the materials from us at the same price we paid, as required for the production of the devices. Our agreement with Benchmark is automatically renewable for additional one-year terms unless terminated by either party.

We generally provide our distributors with a warranty on subscriber equipment for one year to 18 months from the date of activation, depending on the product. We also utilize other suppliers, some of which are the sole source, to manufacture some of the component parts of our devices.

In addition to our principal products, we also offer a selection of accessories for our devices, including extended-life batteries, holsters, earbud headphones, portable auxiliary antennas, antenna adaptors, USB data cables and charging units, among others. We purchase these products from several third-party suppliers either pursuant to contractual agreements or off the shelf at market prices.

**Domestic and Foreign Revenue**

We supply services and products to customers in a number of foreign countries. We allocate revenue geographically based on where we invoice our distributors, whom we bill for mobile satellite services and related equipment sales, and not according to the location of the end user. These distributors sell services directly or indirectly to end users, who may be located elsewhere. It is not possible for us to determine the geographical distribution of revenue from end users, as we do not contract directly with them. Substantially all of our revenue is invoiced in U.S. dollars. The table below sets forth the percentage of our revenue by country for the last three years.

<table>
<thead>
<tr>
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<th>Year Ended December 31,</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>2021</td>
</tr>
<tr>
<td>States</td>
<td>54%</td>
</tr>
<tr>
<td>Countries (1)</td>
<td>46%</td>
</tr>
</tbody>
</table>

(1) No single country in this group represented more than 10% of our revenue for any of the periods indicated.

For more information about our revenue from sales to foreign and domestic customers, see Note 15 to our consolidated financial statements included in this annual report.

**Traffic Originating Outside the United States**

A significant portion of our voice and data traffic originates outside the United States. The table below sets forth the percentage of our commercial voice and data traffic originating outside the United States for the last three years.

<table>
<thead>
<tr>
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<th>Year Ended December 31,</th>
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<tbody>
<tr>
<td></td>
<td>2021</td>
</tr>
<tr>
<td>Commercial voice traffic (minutes)</td>
<td>90 %</td>
</tr>
<tr>
<td>Commercial data traffic (kilobytes)</td>
<td>74 %</td>
</tr>
</tbody>
</table>

**Our Network**

Our satellite network has an architecture of 66 operational LEO satellites in six orbital planes of eleven vehicles each in nearly circular polar orbits, in addition to in-orbit spares and related ground infrastructure, as well as ground spares. Our operational satellites orbit at an altitude of approximately 483 miles (778 kilometers) above the earth and travel at approximately 16,689 miles per hour, resulting in a complete orbit of the earth approximately every 100 minutes. The design of our constellation...
ensures that generally at least one satellite is visible to subscribers from any point on the earth's surface. While our constellation offers true global coverage, most of our devices and antennas must have a direct line of sight to a satellite to transmit or receive a signal, and services on those devices are not available in locations where a satellite signal cannot be transmitted or received, which for some devices includes inside a building.

Our constellation uses radio frequency crosslinks between our satellites, which eliminates the need for local ground infrastructure. These crosslinks enable each satellite to communicate with up to four other satellites in space, two in the same orbital plane and two in adjacent planes. Our traffic is routed on a preplanned route between satellites to a predetermined satellite that is in contact with one of the Iridium teleport network, or TPN, locations. The TPN sites then transmit and receive the traffic and from the gateways, which in turn provide the interface to terrestrial-based networks such as the PSTN, a public land mobile network, or PLMN, and the internet. The use of a TPN allows grounding traffic at multiple locations within our ground network infrastructure. This and other design elements provide flexibility that allows for rapid reconfiguration of grounding traffic from the satellites in the event of a space, antenna or ground routing anomaly and results in greater reliability of our network. The design of our space and ground control system also facilitates the real-time monitoring and management of the satellite constellation and facilitates service upgrades via software enhancements.

We believe our interlinked satellite infrastructure provides several advantages over low-earth-orbiting “bent-pipe” satellite networks that rely on multiple terrestrial gateways, such as Globalstar’s and ORBCOMM’s networks. We have the only satellite network with true global coverage using weather-resilient L-band spectrum, and our constellation is less vulnerable to single points of failure, as traffic can be routed around any one satellite problem to complete the communications path to the ground. In addition, the small number of ground stations increases the security of our constellation, a factor that makes our network particularly attractive to government institutions and large enterprises. The low orbit of our constellation also allows our network to operate with low latency and with smaller antennas due to the proximity of our satellites to the earth.

Our constellation is designed to provide significant coverage overlap for mitigation of service gaps from individual satellite outages, particularly at higher northern and southern latitudes. Each satellite in our constellation was designed with a high degree of on-board subsystem robustness, an on-board fault detection system, and isolation and recovery capabilities for safe and quick risk mitigation. Our ability to reposition our satellites provides us with operating flexibility and enhances our ability to maintain a commercially acceptable level of service. If a satellite should fail or become unusable, in most cases we will be able to reposition one of our in-orbit spare satellites to take over its functions within days, with minimal impact on our services.

Our primary commercial gateway is located in Tempe, Arizona, with a second dedicated commercial gateway located in Russia. A gateway processes and terminates calls and generates and controls user information pertaining to registered users, such as geo-location and call detail records. The U.S. government owns and operates a dedicated gateway for U.S. government users, which provides an interface between voice and data devices and the Defense Information Systems Network and other terrestrial infrastructure, providing U.S. government users with secure communications capabilities. Our network has multiple antennas located at the TPN facilities, including the Tempe gateway, that communicate with our satellites and pass calls and data between the gateway and the satellites as the satellites pass above our antennas, thereby connecting signals from the terminals of end users to our gateways. This system, together with our satellite crosslinks, enables communications that are not dependent on a ground station in the region where the end user is using our services.

We operate our satellite constellation from our satellite network operations center, or SNOC, in Leesburg, Virginia. This facility manages the performance and status of each of our satellites, directing traffic routing through the network and controlling the formation of coverage areas by the satellites’ main mission antennas. We also operate TPN facilities in Fairbanks, Alaska and Tempe, Arizona in the United States, in Svalbard, Norway, and in Punta Arenas, Chile, that perform telemetry, tracking and control functions and route commercial services.

From time to time, individual satellites in our constellation experience operating problems that may result in a satellite outage, but due to the overlapping coverage within our constellation and the dynamic nature of our LEO system, the individual satellite outages typically do not negatively affect our customers’ use of our system for a prolonged period. In addition, most system processing related to our service is performed using software on board each satellite instead of on the ground. We believe this provides us with significant flexibility and contributes to the longevity of the constellation by enabling engineers to develop additional functionality and software-based solutions to occasional faults and anomalies in the system.

We continuously monitor and upgrade our gateway and TPN facilities as necessary and also maintain an inventory of spare parts. When we do not have necessary spares in inventory or our spares become obsolete, we may rely on third parties to develop necessary parts.
We hold a space station license for the launch and operation of our constellation, which expires February 23, 2032. Our U.S. gateway earth station and the U.S. government customer and commercial subscriber earth station licenses expire between March 2022 and November 2036. We must file renewal applications for earth station licenses between 30 and 90 days prior to expiration.

The Iridium constellation also hosts the Aireon system. The Aireon system was developed by Aireon LLC, which we formed in 2011, with subsequent investments from the ANSPs of Canada, Italy, the United Kingdom, Denmark and Ireland, to provide a global air traffic surveillance service through a series of ADS-B receivers on our satellites. Aireon has contracted to offer this service to our co-investors in Aireon, as well as other ANSPs, including the FAA. These ANSPs will use the service to provide improved air traffic control services over the oceans, as well as polar and remote regions. Aireon also plans to market the data to airlines and other users. Under our agreements with Aireon, Aireon will pay us fees of $200.0 million to host the ADS-B receivers on our satellites, of which they have paid us $62.5 million as of December 31, 2021, as well as power and data services fees of approximately $23.5 million per year in the aggregate for the delivery of the air traffic surveillance data over the Iridium system.

While the Aireon ADS-B receivers are the primary hosted payload on our satellites, we have also entered into an agreement with L3Harris for it to utilize the remaining space for payloads it has constructed for its customers. This agreement resulted in an additional $74.1 million in hosting and data service fees, all of which L3Harris has paid as of December 31, 2021.

We do not currently hold any active in-orbit insurance policies covering losses from satellite failures, and we do not expect to obtain in-orbit insurance covering losses from satellite failures or other operational problems affecting our constellation.

**Regulatory Matters**

**Our Spectrum**

We hold licenses to use 8.725 MHz of contiguous spectrum in the L-band, which operates at 1.6 GHz, and allows for two-way communication between our devices and our satellites. In addition, we are authorized to use 200 MHz of K-Band (23 GHz) spectrum for satellite-to-satellite communications, known as inter-satellite links, and 400 MHz of Ka-Band spectrum (19.4 GHz to 19.6 GHz and 29.1 GHz to 29.3 GHz) for two-way communication between our satellites and our ground stations, known as feeder links. We are also authorized to use the 156.0125-162.0375 MHz spectrum for reception of Automatic Identification System transmissions from maritime vessels and the 1087.7-1092.3 MHz spectrum for reception of Automatic Dependent Surveillance-Broadcast transmissions from aircraft. Access to this spectrum enables us to design satellites, network and terrestrial infrastructure enhancements cost effectively because each product and service can be deployed and sold worldwide. Our products and services are offered in over 100 countries, and we and our distributors continue to seek authorizations in additional countries.

Our use of spectrum is globally coordinated and recorded by, and subject to the frequency rules and regulations of, the International Telecommunication Union, or ITU. The ITU is the United Nations organization responsible for worldwide co-operation in the telecommunications sector. In order to protect satellite systems from harmful radio frequency interference from other satellite systems, the ITU maintains a Master International Frequency Register of radio frequency assignments. Each ITU administration is required to give notice of, coordinate and record its proposed use of radio frequency assignments with the ITU’s Radiocommunication Bureau. The coordination negotiations are conducted by the national administrations with the assistance of satellite operators. When the coordination process is completed, the ITU formally notifies all proposed users of frequencies and orbital locations in order to protect the recorded assignments from subsequent nonconforming or interfering uses by member states of the ITU. Only member states have full standing within this inter-governmental organization. Filings to the ITU were made on our behalf by the United States.

The ITU also controls the assignment of country codes used for placing telephone calls between different countries. Our network has been assigned the 8816 and 8817 country codes and uses these numbers for calling and communications between terminals.

**Constellation De-Orbiting Obligations**

We have certain de-orbit obligations under our FCC licenses. Specifically, pursuant to an orbital debris mitigation plan incorporated into our FCC satellite constellation license in 2002, we were required to lower each of our first-generation satellites to an orbit with a perigee of approximately 250 kilometers as it reached the end of its useful life and to coordinate
these orbit-lowering maneuvers with the U.S. Combined Space Operations Center. In August 2014, we received a license modification from the FCC permitting us to operate up to ten of our first-generation satellites pursuant to the less stringent 25 year de-orbit standards for non-geostationary satellites that the FCC acknowledged in 2004 would serve the public interest and has been utilized for other satellite constellations since that time. All of our second-generation satellites are subject to the less stringent 25 year de-orbit standard.

Our FCC license required us to de-orbit a first-generation satellite following its replacement with a second-generation satellite and to notify the FCC within 30 days following removal of a first-generation satellite from its operational orbit for purposes of de-orbit. We began de-orbiting individual satellites as they were replaced with new satellites. We completed the required de-orbit initiation process for our first-generation satellites during 2019. We plan to de-orbit our second-generation satellites pursuant to and within the 25 year de-orbit standard consistent with the FCC authorization of our current constellation.

**Aireon LLC and Aireon Holdings LLC Agreement**

We hold our ownership in Aireon LLC through the Amended and Restated Aireon Holdings LLC Agreement, along with our co-investors NAV CANADA, the ANSP of Canada; Enav S.p.A., the ANSP of Italy; Naviair, the ANSP of Denmark; Irish Aviation Authority Limited, the ANSP of Ireland; NATS (Services) Limited, the ANSP of the United Kingdom, and wholly owned subsidiaries of NAV CANADA, Enav, NATS, Naviair, and IAA. Aireon Holdings holds 100% of the membership interests in Aireon LLC, which is the operating entity for the Aireon system.

Under the Aireon Holdings LLC Agreement, we hold a common membership interest, and the other investors hold preferred membership interests resulting from their investments in Aireon for an aggregate purchase price of approximately $339 million. If and when funds are available, Aireon Holdings is required to redeem a portion of our ownership interest for a payment of $120 million, following which NAV CANADA’s subsidiary will hold a 45% interest in Aireon Holdings, and the other ANSP subsidiaries will collectively hold a 33% interest, with Iridium retaining a 22% interest. Based on Aireon’s business plan and restrictions under Aireon’s debt facility, we do not expect this redemption of our ownership interest to occur for several years.

The Aireon Holdings LLC Agreement provides for Aireon Holdings to be managed by a board of directors consisting of 11 members. Currently, we may nominate two directors, NAV CANADA may nominate five directors, Enav and NATS may each nominate one director, and Naviair and IAA may together nominate one director. The chief executive officer of Aireon Holdings serves as the eleventh director. The Aireon Holdings LLC Agreement also provides the minority-interest holders, including us, with several protective provisions. At December 31, 2021, our fully diluted ownership stake in Aireon Holdings LLC was approximately 35.7%, and remained unchanged. We account for our investment in Aireon Holdings LLC as an equity method investment.

We and the other Aireon investors have agreed to participate pro-rata, based on our fully diluted current ownership stake, in funding an investor bridge loan to Aireon. Our maximum commitment under the investor bridge loan is $10.7 million. In December 2020, we loaned $0.2 million to Aireon, which was subsequently repaid in June 2021.

**Competition**

The mobile satellite services industry is highly competitive, and we currently face substantial competition from other service providers that offer a range of mobile and fixed communications options. Currently, our principal mobile satellite services competitors are Inmarsat, Globalstar, ORBCOMM, and Thuraya Telecommunications Co., or Thuraya. We compete primarily on the basis of coverage, quality, mobility and pricing of services and products.

Inmarsat, which has agreed to be acquired by Viasat, owns and operates a fleet of GEO satellites. Unlike LEO satellites, GEO satellites orbit the earth at approximately 22,300 miles above the equator. GEO systems require substantially larger and more expensive antennas, and typically have higher transmission delays than LEO systems. Due to its GEO system, Inmarsat's coverage area covers most bodies of water except for a majority of the polar regions. Inmarsat is the leading provider of satellite communications services to the maritime sector. Inmarsat also offers land-based and aviation communications services.

Globalstar owns and operates a fleet of LEO satellites. Globalstar’s service is available only on a multi-regional basis as a result of its “bent pipe” architecture, which requires that voice and data transmissions be routed from satellites immediately to nearby ground stations. This design requires the use of multiple ground stations, which are impractical in extreme latitudes or over oceans.
ORBCOMM also provides commercial services using a fleet of LEO satellites. Like Globalstar, ORBCOMM’s network also has a “bent pipe” architecture, which constrains its real-time coverage area. ORBCOMM’s principal focus is low-cost data and IoT services, where it directly competes with our IoT offerings. Because a ground station may not be within view of a satellite, ORBCOMM’s services may have a significant amount of latency, which may limit their use in some mission-critical applications. It does not offer voice service or high-speed data services.

We also compete with regional mobile satellite communications services in several geographic markets. In these cases, the majority of our competitors’ customers require regional, not global, mobile voice and data services, so our competitors may present a viable alternative to our services. All of these regional competitors operate or plan to operate GEO satellites. Our regional mobile satellite services competitors currently include Thuraya, principally in Europe, the Middle East, Africa, Australia and several countries in Asia. In addition, there are a number of new entrants to the mobile satellite services industry, with varying constellation designs and business models, primarily providing commodity broadband services similar to existing GEO-based fixed satellite services operators. New entrants face significant challenges, including the cost and difficulty associated with obtaining spectrum licenses and successfully building and launching a satellite network. In addition to cost, there is a significant amount of lead time associated with obtaining the required licenses, building and launching the satellite constellation, and deploying the ground network technology. While many new entrants have announced Ka and Ku-band operations and business plans that are different from, and even complementary to, Iridium’s L-band services, some may in the future provide services that compete with us.

While we view our services as largely complementary to terrestrial wireline and wireless communications networks, we also compete with them indirectly. We provide service in areas that are inadequately covered by these ground systems. To the extent that terrestrial communications companies invest in underdeveloped areas, we will face increased competition in those areas. We believe that local telephone companies currently are reluctant to invest in new switches, landlines and cellular towers to expand their networks in rural and remote areas due to high costs and limited usage. Many of the underdeveloped areas are sparsely populated, making it difficult to generate the necessary returns on the capital expenditures required to build terrestrial wireless networks in those areas. We believe that our solutions offer a cost-effective and reliable alternative to terrestrial-based wireline and wireless systems in these remote regions.

Research and Development

Our research and development efforts have focused on the development, design and testing of our new constellation and new products, such as Iridium Certus, Iridium Edge, Iridium PTT, Iridium Burst, Iridium GO!, transceiver modules and chipsets. We also develop product enhancements and new applications for our existing products. Our research and development expenses were $11.9 million, $12.0 million and $14.3 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Employees and Human Capital Resources

Employees

As of December 31, 2021, we had 537 full-time employees and 6 part-time employees, none of whom are subject to any collective bargaining agreement. We consider our employee relations to be good.

Human Capital Resources

Our company is made up of varied and creative teams, and we are committed to creating an innovative and inclusive environment where our employees are proud to work. We foster this sentiment by focusing on development, employee wellness and social responsibility. This starts with an onboarding process that introduces our core mission and values, policies and procedures, performance review process and background about our company. We support our employees in their career development by providing on-the-job training and education reimbursement to help employees maintain or enhance skills in their current position or help with acquiring new skills to prepare for future opportunities. To measure employee engagement, we conduct an annual survey to assess and track retention and satisfaction. We take responses from our employees seriously and use them to inform specific strategies every year tailored to both the entire company as well as specific teams. We also help our employees stay engaged in other ways, including participation in Employee Resource Groups, or ERGs, volunteer activities through the Iridium Cares Program, and other outreach efforts that cover a range of topics and interests. Active ERGs include Iridium Women Connect.
We formed our Diversity and Inclusion Advisory Council in 2020, and it has identified four objectives to make our Iridium community, and the world, a more diverse and inclusive place:

- Helping to recruit and retain team members with diverse backgrounds and experiences;
- Fostering participation in activities supporting diversity and inclusion within our communities;
- Training, educating, and communicating with team members on the importance of diversity and inclusion to our culture and viability; and
- Periodically assessing our continual growth toward greater diversity and inclusion.

We currently have four working groups to put these objectives into practice. Each working group has its own goals, stakeholder relationships, strategy and executive sponsorship.

**Response to COVID-19**

As is the case for most companies and individuals, the COVID-19 pandemic has dramatically changed the way that we operate and how our employees live and work. From the earliest reports of the coronavirus outbreak, we actively monitored its spread to understand the potential impact on the health and safety of our workers and our partners. Our COVID-19 working group continues to closely monitor federal, state and local guidelines and requirements and communicate frequently to employees about recent developments and actions.

We developed a health and safety policy specific to COVID-19 that outlines protocols consistent with federal guidelines, and during 2020 we implemented an emergency COVID-19 sick leave policy to supplement existing paid time off. We initially transitioned our workforce to work from home and have now moved to a hybrid model, except for employees needing in-person access to laboratories or other resources onsite. We believe that we have learned to operate successfully in this new environment, and we remain committed to supporting our new, more carbon-friendly, hybrid work program for our team.

**Intellectual Property**

At December 31, 2021, we held 33 U.S. patents and one foreign patent. These patents cover several aspects of our satellite system, our global network, our communications services, and our devices.

In addition to our owned intellectual property, we also license critical intellectual property from Motorola Solutions to operate and maintain our network and related ground infrastructure and services as well as to design and manufacture our devices. This intellectual property is essential to our ability to continue to operate our constellation and sell our services and devices. We maintain our licenses with Motorola Solutions pursuant to several agreements, which can be terminated by Motorola Solutions upon the commencement by or against us of any bankruptcy proceeding or other specified liquidation proceedings or upon our material failure to perform or comply with any provision of the agreements. If Motorola Solutions were to terminate any such agreement, it may be difficult or, under certain circumstances, impossible to obtain the technology from alternative vendors.

We license additional intellectual property and technology from other third parties and expect to do so in the future in connection with our network and related ground infrastructure and services as well as our devices. If any such third party were to terminate its agreement with us or cease to support and service such intellectual property or technology, or if we are unable to renew such licenses on commercially reasonable terms or at all, it may be difficult, more expensive or impossible to obtain substitute intellectual property or technology from alternative vendors. Any substitute intellectual property or technology may also have lower quality or performance standards, which would adversely affect the quality of our devices and services. For more information, see “Risk Factors—We are dependent on intellectual property licensed from third parties to operate our constellation and sell our devices and for the enhancement of our existing devices and services.”

**Available Information**

Copies of our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments, if any, to those reports filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge through our website at www.iridium.com and on the website of the Securities and Exchange Commission, or SEC, at www.sec.gov. A request for any of these reports may also be submitted to us by writing: Investor Relations, Iridium Communications Inc., 1750 Tysons Boulevard, Suite 1400, McLean, VA 22102, or by calling our Investor Relations line at 703-287-7570.
Item 1A. Risk Factors

Risks related to our satellites and network

Our satellites may experience operational problems, which could affect our ability to provide an acceptable level of service to our customers.

From time to time, we experience temporary intermittent losses of signal cutting off calls in progress, preventing completions of calls when made or disrupting the transmission of data. If the magnitude or frequency of such problems increase and we are no longer able to provide a commercially acceptable level of service, our business and financial results and our reputation would be hurt and our ability to pursue our business plan would be compromised.

We may be required in the future to make changes to our constellation to maintain or improve its performance. Any such changes may require prior FCC approval, and the FCC may subject the approval to other conditions that could be unfavorable to our business. In addition, from time to time we may reposition our satellites within the constellation in order to optimize our service, which could result in degraded service during the repositioning period. Although we have some ability to remedy some types of problems affecting the performance of our satellites remotely from the ground, the physical repair of our satellites in space is not feasible.

Our products could fail to perform or could perform at reduced levels of service because of technological malfunctions or deficiencies, regulatory compliance issues, or events outside of our control, which would seriously harm our business and reputation.

Our products and services are subject to the risks inherent in a large-scale, complex telecommunications system employing advanced technology and heavily regulated by, among others, the FCC and similar authorities internationally. Any disruption to our satellites, services, information systems or telecommunications infrastructure, or regulatory compliance issues, could result in the inability or reduced ability of our customers to receive our services for an indeterminate period of time. These customers include government agencies conducting mission-critical work throughout the world, as well as consumers and businesses located in remote areas of the world and operating under harsh environmental conditions where traditional telecommunications services may not be readily available. Any disruption to our services or extended periods of reduced levels of service could cause us to lose customers or revenue, result in delays or cancellations of future implementations of our products and services, result in failure to attract customers, or result in litigation, customer service or repair work that would involve substantial costs and distract management from operating our business. The failure of any of the diverse elements of our system, including our satellites, our commercial gateway, our satellite teleport network facilities or our satellite network operations center, to function as required could render our system unable to perform at the quality and capacity levels required for success. Any system failures, repeated product failures or shortened product life, or extended reduced levels of service could reduce our sales, increase costs, or result in warranty or liability claims or litigation, cause us to extend our warranty period, and seriously harm our business.

We do not maintain in-orbit satellite insurance for our satellites, as a result of which we may be subject to increased costs.

We obtained insurance for our satellites covering launch and in-orbit failures of our satellites for a period of twelve months from the date of launch. All of our satellites were launched more than twelve months ago, and we have no plans to purchase further in-orbit insurance. As a result, a failure of one or more of our satellites, or the occurrence of equipment failures and other related problems, would constitute an uninsured loss and could harm our financial condition.

Our satellites have a limited life and may fail prematurely, which could cause our network to be compromised and materially and adversely affect our business, prospects and profitability, or cause us to incur additional expense to launch replacement satellites.

We have in the past and may in the future experience in-orbit malfunctions of our satellites, which could adversely affect the reliability of their service or result in total failure of the satellite. In-orbit failure of a satellite may result from various causes, including component failure, loss of power or fuel, inability to control positioning of the satellite, solar or other astronomical events, including solar radiation and flares, and space debris. Other factors that could affect the useful lives of our satellites include the quality of construction, gradual degradation of solar panels and the durability of components. Although we do not incur any direct cash costs related to the failure of a single satellite, if a satellite fails, we record an impairment charge in our statement of operations to reduce the remaining net book value of that satellite to zero, and any such impairment charges could depress our net income for the period in which the failure occurs. Further, a large number of such failures could shorten the expected life of our constellation, which would increase our depreciation expense, or require us to launch our ground spare satellites or even replace our constellation sooner than currently planned, either of which would increase our projected capital expenditures.
If operations at our commercial gateways or operations center were to be disrupted, we may experience interruptions in our ability to provide service to our customers.

Our commercial satellite network traffic is supported by a gateway in Tempe, Arizona, as well as a gateway in Izhevsk, Russia for traffic within Russian boundaries, and we operate our satellite constellation from our satellite network operations center in Leesburg, Virginia. If we are unable to use our primary commercial gateway in Tempe, it could take us from one to eight hours to switch operations to our backup facility for most services, and potentially longer for some services. During this time, our customers would be unable to use those services, and we could suffer a loss of revenue and harm to our reputation.

When operating on our backup facility, any further failure could leave us unable to offer services for an extended period. Our gateways and operations center may also experience service shutdowns or periods of reduced service in the future as a result of equipment failures, delays in deliveries, or regulatory issues. Any such failure would impede our ability to provide service to our customers.

Our customized hardware and software may be difficult and expensive to service, upgrade or replace.

Some of the hardware and software we use in operating our gateways is significantly customized and tailored to meet our requirements and specifications and could be difficult and expensive to service, upgrade or replace. Although we maintain inventories of some spare parts, it nonetheless may be difficult, expensive or impossible to obtain replacement parts for the hardware due to a limited number of those parts being manufactured to our requirements and specifications. In addition, our business plan contemplates updating or replacing some of the hardware and software in our network as technology advances, but the complexity of our requirements and specifications may present us with technical and operational challenges that complicate or otherwise make it expensive or infeasible to carry out such upgrades and replacements. If we are not able to suitably service, upgrade or replace our equipment, our ability to provide our services and therefore to generate revenue could be harmed.

Rapid and significant technological changes in the satellite communications industry may impair our competitive position and require us to make significant additional capital expenditures.

The satellite communications industry is subject to rapid advances and innovations in technology. We may face competition in the future from companies using new technologies and new satellite systems, including a significant number of new entrants who are developing or have announced a wide array of technologies, some of which would compete directly with one or more of our existing or planned products and services. New technology could render our system obsolete or less competitive by satisfying customer demand in more attractive ways or through the introduction of incompatible standards. Particular technological developments that could adversely affect us include the deployment by our competitors of new satellites with greater power, flexibility, efficiency or capabilities than ours, as well as continuing improvements in terrestrial wireless technologies. For us to keep up with technological changes and remain competitive, we may need to make significant capital expenditures, including capital to design and launch new products and services over the short to medium term, and, over the longer term, the acquisition of additional spectrum, satellites, launch vehicles and other network resources to support continued growth. Customer acceptance of the products and services that we offer will continually be affected by technology-based differences in our product and service offerings compared to those of our competitors. New technologies may also be protected by patents or other intellectual property laws and therefore may not be available to us. Any failure on our part to implement new technology within our system may compromise our ability to compete.

Our networks and those of our third-party service providers may be vulnerable to security risks.

We expect the secure transmission of confidential information over public networks to continue to be a critical element of our ability to compete for business, manage our risks, and protect our customers and our reputation. Our network and those of our third-party service providers and our customers may be vulnerable to unauthorized access, computer attacks, viruses and other security problems. Persons who circumvent security measures could wrongfully access and obtain or use information on our network or cause service interruptions, delays or malfunctions in our devices, services or operations, any of which could harm our reputation, cause demand for our products and services to fall, and compromise our ability to pursue our business plans. Recently, there have been reported a number of significant, widespread security attacks and breaches that have compromised network integrity for many companies and governmental agencies, in some cases reportedly originating from outside the United States. In addition, there are reportedly private products available in the market today that may attempt to unlawfully intercept communications made using our network. We may be required to expend significant resources to respond to, contain, remediate, and protect against these attacks and threats, including compliance with applicable data breach and security laws and regulations, and to alleviate problems, including reputational harm and litigation, caused by these security incidents. In addition, in the event of such a security incident, our customer contracts may not adequately protect us against liability to third parties with whom our customers conduct business. Although we have implemented and intend to continue to implement security measures, these measures may prove to be inadequate. These security incidents could have a significant effect on our systems,
devices and services, including system failures and delays that could limit network availability, which could harm our business and our reputation and result in substantial liability.

Our satellites may collide with space debris or another spacecraft, which could adversely affect the performance of our constellation.

In February 2009, we lost an operational satellite as a result of a collision with a non-operational Russian satellite. Although we have some ability to actively maneuver our satellites to avoid potential collisions with space debris or other spacecraft, this ability is limited by, among other factors, uncertainties and inaccuracies in the projected orbit location of and predicted conjunctions with debris objects tracked and cataloged by the U.S. government. Additionally, some space debris is too small to be tracked, and therefore its orbital location is completely unknown; nevertheless, this debris is still large enough to potentially cause severe damage or a failure of our satellites should a collision occur. If our constellation experiences additional satellite collisions with space debris or other spacecraft, our service could be impaired.

The space debris created by the February 2009 satellite collision may cause damage to other spacecraft positioned in a similar orbital altitude.

The 2009 collision of one of our satellites with a non-operational Russian satellite created a space debris field concentrated in the orbital altitude where the collision occurred, and thus increased the risk of space debris damaging or interfering with the operation of our satellites, which travel in this orbital altitude, as well as satellites owned by third parties, such as U.S. or foreign governments or agencies and other satellite operators. Although there are tools used by us and providers of tracking services, such as the U.S. Combined Space Operations Center, to detect, track and identify space debris, we or third parties may not be able to maneuver the satellites away from such debris in a timely manner. Any such collision could potentially expose us to significant losses and liability if we were found to be at fault.

Risks related to our business operations

Our business has been negatively affected by the COVID-19 pandemic, actions taken to mitigate the pandemic, and economic disruptions that have resulted, but we are unable to predict the full extent or nature of these impacts at this time.

In March 2020, in response to the COVID-19 pandemic, we began conducting business with remote work for most employees and have now moved to a hybrid model. The pandemic and the steps taken to respond have also caused substantial domestic and global economic disruption, including similar restrictions on activity among our distributors, which has led to reduced sales and has limited our distributors’ ability to install or service our products. These limitations may continue for the duration of these pandemic-related restrictions, and we or our distributors may take additional actions to respond as the situation evolves.

Further, the course of the pandemic is uncertain, and financial markets have experienced significant levels of volatility and uncertainty, which may continue. These disruptions could have an adverse effect on consumer and commercial spending and negatively affect demand for our and our distributors’ products and services, particularly in markets such as aviation and recreation. This, in turn, could negatively affect the value of our current agreements with our distributors and their willingness to enter into or renew contracts with us. The pandemic has also negatively affected the payment of accounts receivable and collections. For example, one of our distributors sought protection in bankruptcy, reducing the amount we received from them for past services. If additional distributors seek protection in bankruptcy, it could further harm our cash flows and results of operations. Finally, factors related to the pandemic, including changing work environments, concerns over safety, reluctance to obtain vaccines, and changing economic conditions, have caused an increase in employee resignations across many industries and companies, including ours.

Other effects of the COVID-19 pandemic and the effects of the modifications we and others have made in response are difficult to assess or predict with certainty at this time but may include risks to the stability of our employee base, a decline in the market price of our common stock, a prolonged economic downturn, and deterioration of the economy and consumer and commercial spending, any of which could further adversely affect our business, results of operations and financial condition in 2022 and beyond.

Aireon, our primary hosted payload customer, has been negatively affected by reduced air traffic as a result of the COVID-19 pandemic, which could reduce or eliminate the value of our agreements with, and ownership interest in, Aireon.

Aireon is our primary hosted payload customer, and we expect annual revenue to us from Aireon hosting, data services and power fees to be approximately $39.5 million. In addition, if and when funds are available following a planned refinancing of its credit facility, Aireon’s parent company, Aireon Holdings, is required to redeem a portion of our ownership interest for a payment of $120.0 million, and we would then retain a common ownership interest of approximately 22% in Aireon Holdings.
Based on Aireon’s business plan and restrictions under Aireon’s debt facility, we do not expect this redemption of our ownership interest to occur for several years.

Aireon provides air traffic surveillance services to ANSPs around the world, as well as other offerings based on its collection of air traffic surveillance data. The COVID-19 pandemic has resulted in substantially reduced air traffic worldwide, and it is uncertain when air traffic volumes will recover. A portion of Aireon’s customers pay them on a per-flight-hour basis, and even those customers with fixed-fee arrangements may seek to renegotiate their fees in the face of dramatically reduced air traffic. Further, Aireon’s business model requires expansion of its customer base to achieve its projected financial results, which may be substantially more difficult until air traffic volumes recover. While our fee arrangements with Aireon do not depend on traffic volumes, if Aireon’s revenues are substantially reduced, they may not be able to pay us the contractually required hosting, data services and power fees in a timely manner or at all. Further, Aireon may need to seek additional financing. Any sale of equity securities by Aireon would dilute our ownership if and to the extent that we do not invest additional funds to maintain our proportional ownership interest. If additional funding is not available, Aireon may default on its credit facility, which could result in the loss or reduction in value of our investment in Aireon, or be forced out of business, in which case we would not receive any further hosting, data or power fees, or the expected $120.0 million redemption payment, and we would lose the fair value of our retained investment in Aireon Holdings.

Our business plan depends on increased demand for mobile satellite services, among other factors.

Our business plan is predicated on growth in demand for mobile satellite services. Demand for mobile satellite services may not grow, or may even contract, either generally or in particular geographic markets, for particular types of services or during particular time periods. A lack of demand could impair our ability to sell products and services, develop and successfully market new products and services and could exert downward pressure on prices. Any decline in prices would decrease our revenue and profitability and negatively affect our ability to generate cash to pay down our debt or for capital expenditures, investments and other working capital needs.

Our ability to successfully implement our business plan will also depend on a number of other factors, including:

- our ability to maintain the health, capacity and control of our satellite constellation;
- the level of market acceptance and demand for our products and services;
- our ability to introduce innovative new products and services that satisfy market demand;
- our ability to expand our business using our existing spectrum resources both in the United States and internationally;
- our ability to sell our products and services in additional countries;
- our ability to comply with applicable regulatory requirements, both in the United States and internationally;
- our ability to maintain our relationship with U.S. government customers, particularly the Department of Defense;
- the ability of our distributors to market and distribute our products, services and applications effectively and their continued development of innovative and improved solutions and applications for our products and services;
- the effectiveness of our competitors in developing and offering similar services and products; and
- our ability to maintain competitive prices for our products and services and to control our costs.

Our agreements with U.S. government customers, particularly the Department of Defense, which represent a significant portion of our revenue, are subject to termination and renewal.

The U.S. government, through a dedicated gateway owned and operated by the Department of Defense, has been and continues to be, directly and indirectly, our largest customer, representing 21% and 22% of our revenue for the years ended December 31, 2021 and 2020, respectively. We provide the majority of our services to the U.S. government pursuant to our GMSS and EMSS contracts. We entered into these contracts in April 2019 and September 2019, respectively. The GMSS contract provides for a six-month base term and up to four one-year options exercisable at the election of the U.S. government, two of which have been exercised so far, and the EMSS contract provides for a term until September 2026 with a fixed, annual rate to provide specified satellite airtime services for an unlimited number of U.S. Department of Defense and other federal government subscribers. The U.S. government may terminate these agreements, in whole or in part, at any time for its convenience. Our relationship with the U.S. government is also subject to the overall U.S. government budget and appropriation decisions and processes. U.S. government budget decisions, including with respect to defense spending, are based on changing government priorities and
We could lose market share and revenue as a result of increasing competition from companies in the wireless communications industry, including cellular and other satellite operators, and from the extension of land-based communications services.

We face intense competition in all of our markets, which could result in a loss of customers and lower revenue and make it more difficult for us to enter new markets. We compete primarily on the basis of coverage, quality, portability, and pricing of services and products.

The provision of satellite-based services and products is subject to downward price pressure when capacity exceeds demand or as a result of aggressive discounting by some operators under financial pressure to expand their respective market share. In addition, we may face competition from new competitors, new technologies or new equipment, including proposed new LEO constellations. For example, we may face competition for our land-based services in the United States from incipient ancillary terrestrial component, or ATC, service providers who are designing a satellite operating business and a terrestrial component around their spectrum holdings. In addition, some of our competitors have announced plans for the launch of additional satellites. As a result of competition, we may not be able to successfully retain our existing customers and attract new customers.
In addition to our satellite-based competitors, terrestrial voice and data service providers, both wireline and wireless, could further expand into rural and remote areas and provide the same general types of services and products that we provide through our satellite-based system. Although satellite communications services and terrestrial communications services are not perfect substitutes, the two compete in some markets and for some services. Consumers generally perceive terrestrial wireless voice communication products and services as cheaper and more convenient than those that are satellite-based. Many of our terrestrial competitors have greater resources, wider name recognition and newer technologies than we do. In addition, industry consolidation could hurt us by increasing the scale or scope of our competitors, thereby making it more difficult for us to compete.

We depend on third parties to market and sell our products and services, and their inability to do so effectively could impair our revenue and our reputation.

We select third-party distributors, in some cases on an exclusive basis, and rely on them to market and sell our products and services to end users and to determine the prices end users pay. We also depend on our distributors to develop innovative and improved solutions and applications integrating our product and service offerings. As a result of these arrangements, we are dependent on the performance of our distributors to generate most of our revenue. Our distributors operate independently of us, and we have limited control over their operations, which exposes us to significant risks. Distributors may not commit the same level of resources to market and sell our products and services that we would, and these distributors may also market and sell competitive products and services. In addition, our distributors may not comply with the laws and regulatory requirements in their local jurisdictions, which could limit their ability to market or sell our products and services. If our distributors develop faulty or poorly performing products using our technology or services, we may be subject to claims, and our reputation could be harmed. If current or future distributors do not perform adequately, or if we are unable to locate competent distributors in particular countries and secure their services on favorable terms, we may be unable to increase or maintain our revenue in these markets or enter new markets, we may not realize our expected growth, and our brand image and reputation could be hurt.

In addition, we may lose distributors due to competition, consolidation, regulatory developments, business developments affecting our distributors or their customers, or for other reasons. For example, the COVID-19 pandemic and the steps taken to respond have caused substantial domestic and global economic disruption, including financial difficulties and restrictions on activity among our distributors, which have led to reduced sales and limited our distributors’ ability to install or service our products. These disruptions have also negatively affected the payment of accounts receivable and collections. For example, one of our distributors sought protection in bankruptcy, reducing the amount we received from them for past services. Other distributors could similarly seek to reorganize or seek protection from creditors, including us. These financial disruptions could also result in industry consolidation. In 2009, one of our largest competitors, Inmarsat, acquired our then largest distributor, Stratos Global Wireless, Inc., and in 2014, Inmarsat acquired Globe Wireless, one of our service providers. Following each acquisition, Inmarsat essentially stopped promoting sales of our products and services, and they may further reduce their efforts in the future. Any future consolidation of our distributors would further increase our reliance on a few key distributors of our services and the amount of volume discounts that we may have to give those distributors. Our two largest distributors, Marlink Group and Garmin, together represented approximately 10% of our revenue for the year ended December 31, 2021, and our ten largest distributors represented, in the aggregate, 35% of our revenue for the year ended December 31, 2021. The loss or consolidation of any of these distributors, or a decrease in the level of effort expended by any of them to promote our products and services, could reduce the distribution of our products and services as well as the development of new products and applications, which would negatively affect our revenue.

We rely on a limited number of key vendors for supply of equipment, components and services; the loss of any such supplier, or shortages experienced by such suppliers, could cause us to incur additional costs and delays in the production and delivery of our products, which could reduce the sales of those products and use of the related services.

We currently rely on two manufacturers of our devices, including our mobile handsets, L-band transceivers and SBD devices. We also utilize sole source suppliers for some of the component parts of our devices. If any of our suppliers were to terminate its relationship with us, we may not be able to find a replacement supplier in a timely manner, at an acceptable price or at all.

Further, our manufacturers and suppliers may cease production of our components or products or become capacity-constrained, or could face financial difficulties as a result of a surge in demand, a natural disaster or other event, including the impacts of the COVID-19 pandemic. For example, several of our suppliers are experiencing production delays as a result of the global silicon chip shortage. As a result, we have experienced and expect to continue to experience delays in fulfilling some product orders and are evaluating replacement components and product changes. These delays have increased our costs and reduced our sales of those products and use of the related services, and we expect these effects to continue through 2022.

Any future delay in production or delivery of our products or components by our suppliers could similarly adversely affect our business. Even if we are able to replace or supplement sole source or other component suppliers, there could be a substantial period of time in which our products would not be available; any new relationship may involve higher costs and delays in
development and delivery, and we may encounter technical challenges in successfully replicating the manufacturing processes. If our manufacturers or suppliers terminate their relationships with us, fail to provide equipment or services to us on a timely basis, or fail to meet our performance expectations, we may be unable to provide products or services to our customers in a competitive manner, which could in turn negatively affect our financial results and our reputation.

Conducting and expanding our operations outside the United States creates numerous risks, which may harm our operations and compromise our ability to expand our international operations.

We have significant operations outside the United States. We estimate that commercial data traffic originating outside the United States accounted for 74% and 72% of total commercial data traffic for the years ended December 31, 2021 and 2020, respectively, while commercial voice traffic originating outside the United States accounted for 90% and 91% of total commercial voice traffic for the years ended December 31, 2021 and 2020. We cannot provide the precise geographical distribution of revenue from end users because we do not contract directly with them. Instead, we determine the country in which we earn our revenue based on where we invoice our distributors. These distributors sell services directly or indirectly to end users, who may be located or use our products and services elsewhere. We and our distributors are also seeking authorization to sell our services in additional countries. The COVID-19 pandemic has, and we expect will continue to, put pressure on global economic conditions and overall spending, which could negatively affect end user adoption of our products.

Conducting operations outside the United States involves numerous risks and, while expanding our international operations would advance our growth, it would also increase our exposure to these risks. For example, in 2013 we commenced the provision of satellite communications services in Russia through a local subsidiary and its authorized Russian service providers and subsequently constructed a dedicated gateway in Russia. The U.S. government has imposed economic and diplomatic sanctions on certain Russian corporations, banks, and citizens and might impose additional sanctions in the future. If such sanctions, or any Russian response to such sanctions, affects our operations in Russia, it could limit our growth in Russia or prevent us from continuing to operate there at all, which would reduce our revenues.

Other risks associated with the proposed expansion of our international operations include:

- effects of the COVID-19 pandemic, including on international economies, supply chains and travel;
- difficulties in penetrating new markets due to established and entrenched competitors;
- difficulties in developing products and services that are tailored to the needs of local customers;
- lack of local acceptance or knowledge of our products and services;
- lack of recognition of our products and services;
- unavailability of, or difficulties in establishing, relationships with distributors;
- significant investments, including the development and deployment of dedicated gateways, as some countries require physical gateways within their jurisdiction to connect the traffic coming to and from their territory;
- instability of international economies and governments;
- changes in laws and policies affecting trade and investment in other jurisdictions;
- exposure to varying legal standards, including data privacy, security and intellectual property protection in other jurisdictions;
- difficulties in obtaining required regulatory authorizations;
- difficulties in enforcing legal rights in other jurisdictions;
- local domestic ownership requirements;
- requirements that operational activities be performed in-country;
- changing and conflicting national and local regulatory requirements;
- foreign currency exchange rates and exchange controls; and
- ongoing compliance with the U.S. Foreign Corrupt Practices Act, U.S. export controls, anti-money laundering and trade sanction laws, and similar international anti-corruption and trade laws in other countries.

If any of these risks were to materialize, it could affect our ability to successfully compete and expand internationally. Government organizations, foreign military and intelligence agencies, natural disaster aid associations, and event-driven response agencies use our commercial voice and data satellite communications services. Accordingly, we may experience reductions in usage due to changing global circumstances.
The prices for our products and services are typically denominated in U.S. dollars. Any appreciation of the U.S. dollar against other currencies, including as a result of the COVID-19 pandemic, will increase the cost of our products and services to our international customers and, as a result, may reduce the competitiveness of our international offerings and make it more difficult for us to grow internationally. Conversely, in some locations, primarily Russia, we conduct business in the local currency, and a depreciation of the local currency against the U.S. dollar will reduce the U.S. dollar value of our revenues from those countries.

**Pursuing strategic transactions may cause us to incur additional risks.**

We may pursue acquisitions, joint ventures or other strategic transactions from time to time. We may face costs and risks arising from any such transactions, including integrating a new business into our business or managing a joint venture. These risks may include adverse legal, organizational and financial consequences, loss of key customers and distributors, and diversion of management’s time.

In addition, any major business combination or similar strategic transaction may require significant additional financing, and our ability to obtain such financing may be restricted by the credit agreement governing our currently outstanding Term Loan. Further, depending on market conditions, investor perceptions of our company and other factors, we might not be able to obtain financing on acceptable terms, in acceptable amounts, or at appropriate times to implement any such transaction. Any such financing, if obtained, may dilute existing stockholders.

**Spectrum values historically have been volatile, which could cause the value of our business to fluctuate.**

Our business plan is evolving, and it may in the future include forming strategic partnerships to maximize value for our spectrum, network assets and combined service offerings in the United States and internationally. Values that we may be able to realize from such partnerships will depend in part on the value placed on our spectrum authorizations. Valuations of spectrum in other frequency bands historically have been volatile, and we cannot predict at what amount a future partner may be willing to value our spectrum and other assets. In addition, to the extent that the FCC takes action that makes additional spectrum available or promotes the more flexible use or greater availability of existing satellite or terrestrial spectrum allocations, for example by means of spectrum leasing or new spectrum sales, the availability of such additional spectrum could reduce the value of our spectrum authorizations and, as a result, the value of our business.

**We may be negatively affected by global economic conditions.**

Our operations and performance depend significantly on worldwide economic conditions. Uncertainty about global economic conditions poses a risk as individual consumers, businesses and governments may postpone spending in response to tighter credit, negative financial news, declines in income or asset values, or budgetary constraints. Reduced demand would cause a decline in our revenue and make it more difficult for us to operate profitably, potentially compromising our ability to pursue our business plan. We expect our future growth rate will be affected by the condition of the global economy, increased competition, maturation of the satellite communications industry, and the difficulty in sustaining high growth rates as we increase in size. Any substantial appreciation of the U.S. dollar may also negatively affect our growth by increasing the cost of our products and services in foreign countries.

**Our ability to operate our company effectively could be impaired if we lose members of our senior management team or key technical personnel.**

We depend on the continued service of key managerial and technical personnel and personnel with security clearances, as well as our ability to continue to attract and retain highly qualified personnel. We compete for such personnel with other companies, government entities, academic institutions and other organizations. The unexpected loss or interruption of the services of such personnel could compromise our ability to effectively manage our operations, execute our business plan and meet our strategic objectives.

**Risks related to our capital structure**

**We have a considerable amount of debt, which may limit our ability to fulfill our obligations and/or to obtain additional financing.**

As of December 31, 2021, we had $1,621.1 million of consolidated gross indebtedness. Our capital structure and reliance on indebtedness can have several important consequences, including, but not limited to, the following:

- If future cash flows are insufficient, we may not be able to make principal or interest payments on our debt obligations, which could result in the occurrence of an event of default under one or more of those debt instruments.
- Our leverage level could increase our vulnerability to adverse economic and industry conditions.
Our indebtedness requires us to dedicate a substantial portion of our cash flow from operations to payments on our debt, thereby reducing the availability of our cash flow for operations and other purposes.

Our leverage level could make it more difficult for us to satisfy our obligations to our lenders, resulting in possible defaults on and acceleration of such indebtedness.

Our leverage level could place us at a competitive disadvantage compared to any competitors that have less debt or comparable debt at more favorable interest rates and that, as a result, may be better positioned to withstand economic downturns.

Our consolidated indebtedness has the general effect of reducing our flexibility to react to changing business and economic conditions insofar as they affect our financial condition. The interest rates at which we might secure additional financings may be higher than our currently outstanding debt instruments or higher than forecasted at any point in time, which could adversely affect our business, financial condition, results of operations and cash flows.

Market conditions could affect our access to capital markets, restrict our ability to secure financing to make planned capital expenditures and investments and pay other expenses, which could adversely affect our business, financial condition, cash flows and results of operations.

Further, despite our substantial levels of indebtedness, we and our subsidiaries have the ability to incur substantially more indebtedness, which could further intensify the risks described above.

If we do not generate sufficient cash flows, we may be unable to repay our Term Loan when it matures.

We will need to repay our term Loan in full at maturity in November 2026. If our cash flows and capital resources are insufficient to repay the Term Loan when it matures, we may have to undertake alternative financing plans, such as refinancing or restructuring our debt, selling assets or operations, reducing or delaying capital investments, or seeking to raise additional capital. We may not be able to refinance our debt, or any refinancing of our debt could be at higher interest rates and may require us to comply with more restrictive covenants that could further restrict our business operations. Our ability to implement successfully any such alternative financing plans will depend on a range of factors, including our financial condition, general economic conditions and the level of activity in capital markets generally. Failure to repay or refinance the Term Loan at or prior to maturity would result in an event of default under the Term Loan.

The credit agreement governing our Term Loan contains cross-default or cross-acceleration provisions that may cause all of the debt issued under that instrument to become immediately due and payable because of a default under an unrelated debt instrument.

Our failure to comply with the obligations contained in the credit agreement governing our Term Loan or other future instruments of indebtedness could result in an event of default under the applicable instrument, which could result in the related debt and the debt issued under other instruments (together with accrued and unpaid interest and other fees) becoming immediately due and payable. In such event, we would need to raise funds from alternative sources, which funds may not be available to us on favorable terms, on a timely basis, or at all. Alternatively, such a default could require us to sell our assets and otherwise curtail our operations in order to pay our creditors. These alternative measures could have a material adverse effect on our business, financial position, results of operations and/or cash flows, which could cause us to become bankrupt or insolvent or otherwise impair our ability to make payments in respect of our indebtedness.

Adverse changes in our credit ratings or withdrawal of the ratings assigned to our debt securities by rating agencies may negatively affect us.

Our ability to access capital markets is important to our ability to operate our business. Increased scrutiny of the satellite industry and the impact of regulation, as well as changes in our financial performance and unfavorable conditions in the capital markets could result in credit agencies reexamining our credit ratings. A downgrade in our credit ratings could restrict or discontinue our ability to access capital markets at attractive rates and increase our borrowing costs. Furthermore, any rating assigned could be lowered or withdrawn entirely by a rating agency if, in that rating agency’s judgment, future circumstances relating to the basis of the rating, such as adverse changes, so warrant. Any future lowering of our ratings likely would make it more difficult or more expensive for us to obtain additional debt financing.

If we default under the Term Loan, the lenders may require immediate repayment in full of amounts borrowed or foreclose on our assets.

The credit agreement governing our Term Loan contains events of default, including cross-default with other indebtedness, bankruptcy, and a change in control (as defined in the credit agreement). If we experience an event of default, the lenders may require repayment in full of all principal and interest outstanding under the Term Loan. If we fail to repay such amounts, the
lenders may foreclose on the assets we have pledged under the Term Loan, which includes substantially all of the assets of our domestic subsidiaries, including our principal operating subsidiary, Iridium Satellite.

**Certain provisions in the credit agreement governing our Term Loan limit our financial and operating flexibility.**

The credit agreement governing our Term Loan contains covenants that place restrictions on, among other things, our ability to:

- incur liens,
- engage in mergers or asset sales,
- pay dividends,
- repay subordinated indebtedness,
- incur indebtedness,
- make investments and loans, and
- engage in other specified transactions.

These restrictions are typically structured with dollar limits based on a percentage of our trailing twelve month earnings before interest, taxes, depreciation and amortization and vary depending on our leverage level (in each case as calculated under the credit agreement). Complying with these restrictions may make it more difficult for us to successfully execute our business plan and compete against companies who are not subject to such restrictions.

**The LIBOR calculation method may change, and LIBOR is expected to be phased out after June 2023.**

Our Term Loan bears interest at a rate based on the London Interbank Offered Rate, or LIBOR. On March 5, 2021, the U.K. Financial Conduct Authority, or the FCA, announced that it will no longer require banks to submit rates for the calculation of the relevant LIBOR after June 2023. In the meantime, actions by the FCA, other regulators, or law enforcement agencies may result in changes to the method by which LIBOR is calculated. If changes to LIBOR result in an increase in rates, our interest expense under the Term Loan would increase. Further, if LIBOR is no longer available, our Term Loan provides a process to determine a substitute rate, and if such substitute rate is higher than LIBOR, our interest expense under the Term Loan would increase.

**The market price of our common stock may be volatile.**

The trading price of our common stock may be subject to substantial fluctuations. Factors affecting the trading price of our common stock may include:

- failure in the performance of our satellites;
- actual or anticipated variations in our operating results, including termination or expiration of one or more of our key contracts, or a change in sales levels under one or more of our key contracts;
- failure of Aireon to successfully carry out its business plan;
- failure to comply with the terms of the credit agreement governing our Term Loan;
- sales of a large number of shares of our common stock or the perception that such sales may occur;
- the dilutive effect of outstanding stock options and other equity awards;
- changes in financial estimates by industry analysts, or our failure to meet or exceed any such estimates, or changes in the recommendations of any industry analysts that elect to follow our common stock or the common stock of our competitors;
- impairment of intangible assets;
- actual or anticipated changes in economic, political or market conditions, such as recessions or international currency fluctuations;
- actual or anticipated changes in the regulatory environment affecting our industry;
- changes in the market valuations of our competitors;
- low trading volume; and
- announcements by our competitors regarding significant new products or services or significant acquisitions, strategic partnerships, divestitures, joint ventures or other strategic initiatives.
We may not pay dividends on our common stock in the foreseeable future.

We do not currently pay cash dividends on our common stock, and we may elect to retain all cash we generate to fund the growth of our business, fund acquisitions, pay down our existing debt, or for other purposes. Accordingly, we may not pay dividends on our common stock in the foreseeable future.

Risks related to legal and regulatory matters

Our business is subject to extensive government regulation, which mandates how we may operate our business and may increase our cost of providing services and slow our expansion into new markets.

Our ownership and operation of a satellite communications system and the sale of products that operate on that system are subject to significant regulation in the United States, including by the FCC, the U.S. Department of Commerce and others, and in foreign jurisdictions by similar local authorities. The rules and regulations of these U.S. and foreign authorities may change, and such authorities may adopt regulations that limit or restrict our operations as presently conducted or currently contemplated. Such authorities may also make changes in the licenses of our competitors that affect our spectrum. Such changes may significantly affect our business. Further, because regulations in each country are different, we may not be aware if some of our distribution partners or persons with whom we or they do business do not hold the requisite licenses and approvals. Our failure to provide services in accordance with the terms of our licenses or our failure to operate our satellites or ground stations as required by our licenses and applicable laws and government regulations could result in the imposition of government sanctions on us, including the suspension or cancellation of our licenses. Our failure or delay in obtaining the approvals required to operate in other countries would limit or delay our ability to expand our operations into those countries. Our failure to obtain industry-standard or government-required certifications for our products could compromise our ability to generate revenue and conduct our business in other countries. Any imposition of sanctions, loss of license or failure to obtain the authorizations necessary to use our assigned radio frequency spectrum and to distribute our products in the United States or foreign jurisdictions could cause us to lose sales, hurt our reputation and impair our ability to pursue our business plan.

In addition, one of our subsidiaries, Iridium Carrier Services LLC, holds a common carrier radio license and is thus subject to regulation as a common carrier, including limitations and prior approval requirements with respect to direct or indirect foreign ownership. A change in the manner in which we provide service, or a failure to comply with any common carrier regulations that apply to us or to pay required fees, could result in sanctions including fines, loss of authorizations, or the denial of applications for new authorizations or the renewal of existing authorizations.

Repurposing of satellite spectrum by adjacent operators of L-band spectrum for terrestrial services could interfere with our services.

In February 2003, the U.S. Federal Communications Commission, or FCC, adopted Ancillary Terrestrial Component, or ATC, rules that permit satellite service providers to establish terrestrial wireless networks in previously satellite-only bands, subject to certain requirements intended to ensure that terrestrial services remain ancillary to primary satellite operations and do not interfere with existing operators. In 2011, the FCC granted Ligado Networks (then known as Lightsquared), or Ligado, a waiver to convert its L-band satellite spectrum to terrestrial use, including a 10 MHz band close to the spectrum that we use for all of our services. That waiver was subsequently suspended in 2012 due to concerns about potential interference to GPS operations. Ligado sought another waiver in 2015 to modify the ATC of its L-band mobile satellite service network with a terrestrial-only proposal designed to address GPS industry concerns. In April 2020, the FCC announced that it had approved Ligado’s waiver request. We filed a petition for reconsideration opposing this waiver out of concern for the interference that we believe Ligado’s proposed operations would cause to our operations in adjacent L-band spectrum. Our petition remains pending.

Ligado’s implementation of these services would result in terrestrial use of L-band spectrum in the 1.6 GHz band, which we use to provide our services, and such implementation may affect the performance of our system for customers of our existing and future services. While the FCC’s decision to approve these services included conditions designed to protect other satellite services that use L-band spectrum from harmful interference, these conditions may prove insufficient, or the level of services provided may exceed those estimated by the FCC, in which case these or future terrestrial services permitted by the FCC could substantially interfere with our satellites and devices, which would adversely affect our services. If other countries permit similar terrestrial use of L-band spectrum in the 1.6 GHz band, the performance of our system may be subject to interference there as well.
If the FCC revokes, modifies or fails to renew our licenses, or fails to grant a new license or modification, our ability to operate will be harmed or eliminated.

We hold FCC licenses, specifically a license for our satellite constellation, licenses for our U.S. gateway and other ground facilities, and blanket earth station licenses for U.S. government customers and commercial subscribers, that are subject to revocation if we fail to satisfy specified conditions. The FCC licenses are also subject to modification by the FCC. Our satellite constellation license expires on February 23, 2032. Our U.S. gateway earth station and the U.S. government customer and commercial subscriber earth station licenses expire between March 2022 and November 2036. There can be no assurance that the FCC will renew the FCC licenses we hold or grant new ones or modifications. If the FCC revokes, modifies or fails to renew the FCC licenses we hold, or fails to grant a new license or modification, or if we fail to satisfy any of the conditions of our respective FCC licenses, we may not be able to continue to provide mobile satellite communications services.

As we and our distributors expand our offerings to include more consumer-oriented devices, we are more likely to be subject to product liability claims, recalls or litigation, which could adversely affect our business and financial performance.

Through our distributors, we offer several devices and services aimed at individual consumers, and we and our distributors continue to introduce additional devices and services. These devices and services, such as satellite handsets, personal locator devices and location-based services, can contain design and manufacturing defects. Defects may also occur in components and devices that we purchase from third parties. There can be no assurance we will be able to detect and fix all defects in the hardware, software and services that we sell. These devices and services may be used in isolated and dangerous locations, including emergency response situations, and users who suffer property damage, personal injury or death while using such devices or services may seek to assert claims or bring lawsuits against us. Further, it is possible that our devices could become the subject of consumer protection investigations, enforcement actions, or litigation, including class actions. We seek to limit our exposure to all of these claims by maintaining a consumer protection compliance program, and through appropriate notices, disclosures, indemnification provisions and disclosures, but these steps may not be effective. We also maintain product liability insurance, but this insurance may not cover any particular claim or litigation, or the amount of insurance may be inadequate to cover the claims brought against us. Product liability insurance could become more expensive and difficult to maintain and might not be available on acceptable terms or at all. In addition, it is possible that our devices could become the subject of a product recall as a result of a device defect. We do not maintain recall insurance, so any recall could have a significant effect on our financial results. In addition to the direct expenses of product liability claims, investigations, recalls and litigation, a claim, investigation, recall or litigation might cause us adverse publicity, which could harm our reputation and compromise our ability to sell our devices in the future.

The collection, storage, transmission, use and disclosure of user data and personal information could give rise to liabilities or additional costs as a result of laws, governmental regulations, and evolving views of personal privacy rights and information security standards.

We transmit, process, and in some cases store in the normal course of our business, personal information. Many jurisdictions around the world have adopted laws and regulations regarding the collection, storage, transmission, use and disclosure of personal information. The legal standards for processing, storing and using this personal information continue to evolve, impose additional obligations and risk on our business, and have the potential to make some of our business processes more costly or less feasible. For example, the California Consumer Privacy Act, or the CCPA, went into effect on January 1, 2020 and gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used by requiring companies to provide new disclosures to California consumers (as that term is broadly defined) and provide such consumers new ways to opt out of certain sales of personal information. In Europe, the European Commission enacted the General Data Protection Regulation, or GDPR, which became effective in May 2018. The GDPR superseded prior EU data protection legislation, imposes more stringent EU data protection requirements, and provides for greater penalties for noncompliance.

In addition, the interpretation of privacy and data protection laws and regulations regarding the collection, storage, transmission, use and disclosure of such information in some jurisdictions remains unclear. These laws may be interpreted, applied and enforced in conflicting ways from country to country and in a manner that is not consistent with our current business practices. Complying with these varying privacy and data security legal requirements could cause us to incur additional costs and change our business practices. Further, our services are accessible in many foreign jurisdictions, and some of these jurisdictions may claim that we are required to comply with their laws, even where we have no operating entity, employees or infrastructure located in that jurisdiction. We could face direct expenses related to a variety of enforcement actions, government investigations, or litigation, and an interruption to our business and adverse publicity because of such enforcement actions, government investigations, or litigation. Such enforcement actions, government investigations, or litigation could also cause us to incur significant expenses if we were required to modify our products, our services, our
infrastructure, or our existing security and privacy procedures in order to comply with new or expanded privacy and security regulations.

In addition, if end users allege that their personal information is not collected, stored, transmitted, used or disclosed by us or our business partners appropriately or in accordance with our policies or applicable laws, or that our failure to adequately secure their personal information compromised its security, we could have liability to them or to consumer protection agencies, including claims, investigations and litigation related to such allegations. Any failure on our part to protect end users’ personal information could result in a loss of user confidence, hurt our reputation, result in the loss of users, and cause us to incur significant expenses.

We have been and may in the future become subject to claims that our devices or services violate the patent or intellectual property rights of others, which could be costly and disruptive to us.

We operate in an industry that is susceptible to significant intellectual property litigation. As a result, we or our devices or services from time to time have been and may in the future be subject to intellectual property infringement claims or litigation. The defense of intellectual property suits is both costly and time-consuming, even if ultimately successful, and may divert management’s attention from other business concerns. An adverse determination in litigation to which we may become a party could, among other things:

- subject us to significant liabilities to third parties, including treble damages;
- require disputed rights to be licensed from a third party for royalties that may be substantial;
- require us to cease using technology that is important to our business; or
- prohibit us from selling some or all of our devices or offering some or all of our services.

We may be unable to offer one or more services in important regions of the world due to regulatory requirements, which could limit our growth.

While our constellation is capable of providing service globally, our ability to sell one or more types of service in some regions may be limited by local regulations. Some countries have specific regulatory requirements such as local domestic ownership requirements or requirements for physical gateways within their jurisdiction to connect traffic coming to and from their territory. In some countries, we may not be able to find an acceptable local partner or reach an agreement to develop additional gateways, or the cost of developing and deploying such gateways may be prohibitive, which could impair our ability to expand our product and service offerings in such areas and undermine our value for potential users who require service in those areas. Our inability to offer to sell our products and services in all major international markets could impair our international growth. In addition, the construction of such gateways in foreign countries may trigger and require us to comply with various U.S. regulatory requirements that could conflict with the laws or regulations of the local jurisdiction. Any of these developments could limit, delay or otherwise interfere with our ability to construct gateways or other infrastructure or network solutions around the world.

Security and emergency services regulations in the U.S. and other countries may affect our ability to operate our system and to expand into new markets.

Our operations are subject to regulations of the U.S. Department of Commerce’s Bureau of Industry and Security relating to the export of satellites and related technical data as well as our subscriber equipment, the U.S. Treasury Department’s Office of Foreign Assets Control relating to transactions involving entities sanctioned by the United States, and the U.S. State Department’s Office of Defense Trade Controls relating to satellite launch. We are also required to provide U.S. and some foreign government law enforcement and security agencies with call interception services and related government assistance, in respect of which we face legal obligations and restrictions in various jurisdictions. Given our global operations and unique network architecture, these requirements and restrictions are not always easy to comply with or harmonize. In addition, some countries require providers of telecommunications services to connect specified emergency numbers to local emergency services. We have discussed and continue to discuss with authorities in various countries the procedures used to satisfy our obligations, and have had to, and may in the future need to, obtain amendments or waivers to licenses or obligations in various countries. Countries are not obligated to grant requested amendments or waivers, and there can be no assurance that relevant authorities will not suspend or revoke our licenses or take other legal actions to attempt to enforce the requirements of their respective jurisdictions.

These U.S. and foreign obligations and regulations may limit or delay our ability to offer products and services in a particular country. As new laws and regulations are issued, we may be required to modify our business plans or operations. In addition, changing and conflicting national and local regulatory requirements may cause us to be in compliance with local requirements.
in one country, while not being in compliance with the laws and regulations of another. If we fail to comply with regulations in the United States or any other country, we could be subject to substantial fines or sanctions that could make it difficult or impossible for us to operate in the United States or such other country, or we may need to make substantial additional expenditures to bring our systems, products and services into compliance with the requirements.

**We may be unable to obtain and maintain contractually required liability insurance, and the insurance we obtain may not cover all liabilities to which we may become subject.**

Under our agreements with Motorola Solutions and the U.S. government, we are required to maintain an in-orbit liability insurance policy with a de-orbiting endorsement. The current policy, together with the de-orbiting endorsement, covers amounts that we and other specified parties may become liable to pay for bodily injury and property damages to third parties related to processing, maintaining, and de-orbiting our first-generation satellites. Our current policy has a one-year term, which expires on December 8, 2022, and excludes coverage for all third-party damages relating to the 2009 collision of our satellite with a non-operational Russian satellite. The price, terms and availability of insurance have fluctuated significantly since we began offering commercial satellite services. The cost of obtaining insurance can vary as a result of either satellite failures or general conditions in the insurance industry. Higher premiums on insurance policies would increase our cost. In-orbit liability insurance policies on satellites may not continue to be available on commercially reasonable terms or at all. In addition to higher premiums, insurance policies may provide for higher deductibles, shorter coverage periods and additional policy exclusions. For example, our current de-orbit insurance covers only twelve months from attachment and therefore would not cover losses arising outside that timeframe. In addition, even if we continue to maintain an in-orbit liability insurance policy, the coverage may not protect us against all third-party losses, which could be material.

Our current in-orbit liability insurance policy contains, and we expect any future policies would likewise contain, specified exclusions and material change limitations customary in the industry. These exclusions may relate to, among other things, losses resulting from in-orbit collisions such as the one we experienced in 2009, acts of war, insurrection, terrorism or military action, government confiscation, strikes, riots, civil commotions, labor disturbances, sabotage, unauthorized use of the satellites, nuclear contamination, and nuclear or radioactive contamination, as well as claims directly or indirectly occasioned as a result of noise, pollution, electrical and electromagnetic interference, and interference with the use of property.

In addition to our in-orbit liability insurance policy, we are required to maintain insurance to cover the potential liability of Motorola Solutions, the successor to the manufacturer of our first-generation satellites. We may not in the future be able to renew this coverage on reasonable terms and conditions, or at all. Our failure to maintain this insurance could increase our exposure to liability arising in relation to our first-generation satellites.

**Wireless devices’ radio frequency emissions are the subject of regulation and litigation concerning their environmental effects, which includes alleged health and safety risks. As a result, we may be subject to new regulations, demand for our services may decrease, and we could face liability based on alleged health risks.**

There has been adverse publicity concerning alleged health risks associated with radio frequency transmissions from portable hand-held telephones that have transmitting antennas. Lawsuits have been filed against participants in the wireless industry alleging a number of adverse health consequences, including cancer, as a result of wireless phone usage. Other claims allege consumer harm from failures to disclose information about radio frequency emissions or aspects of the regulatory regimes governing those emissions. Although we have not been party to any such lawsuits, we may be exposed to such litigation in the future. While we believe we comply with applicable standards for radio frequency emissions and power and do not believe that there is valid scientific evidence that use of our devices poses a health risk, courts or governmental agencies could determine otherwise. Any such finding could reduce our revenue and profitability and expose us and other communications service providers or device sellers to litigation, which, even if frivolous or unsuccessful, could be costly to defend.

If consumers’ health concerns over radio frequency emissions increase, they may be discouraged from using wireless handsets or other wireless consumer devices. Further, government authorities might increase regulation of wireless handsets and other wireless consumer devices as a result of these health concerns. Any actual or perceived risk from radio frequency emissions could reduce the number of our subscribers and demand for our products and services.

**Our ability to use our net operating loss carryforwards to offset future taxable income may be subject to certain limitations.**

Our ability to utilize U.S. net operating loss carryforwards and other tax attributes may be limited if we experience an “ownership change” under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, which generally occurs if one or more stockholders or groups of stockholders who own at least 5% of our common stock increase their ownership in the aggregate by more than 50% over their lowest ownership percentage within a rolling period that begins on the later of three years prior to the testing date and the date of the last ownership change. Similar rules may apply under state tax laws. If an “ownership change” were to occur, Section 382 of the Code would impose an annual limit on the amount of pre-ownership
change net operating loss carryforwards and other tax attributes we could use to reduce our taxable income. It is possible that such an ownership change could materially reduce our ability to use our net operating loss carryforwards or other tax attributes to offset taxable income, which could impact our profitability.

**We could be subject to adverse determinations by taxing authorities.**

We are subject to regular review and audit by both domestic and foreign tax authorities. As a result, we have received, and may in the future receive, assessments in multiple jurisdictions on various tax-related assertions, including transfer pricing adjustments or permanent establishment. Any adverse outcome of such a review or audit could have a negative effect on our operating results and financial condition. In addition, the determination of our provision for income taxes and other tax liabilities requires significant judgment, including transactions and calculations where the ultimate tax determination is uncertain. Although we believe our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our consolidated financial statements and may materially affect our financial results in the period or periods for which such determination is made.

**Changes in tax laws could increase our worldwide tax rate and materially affect our financial position and results of operations.**

Tax policies, laws or rates in various jurisdictions may be subject to significant change, which could materially and adversely affect our financial position and results of operations. Further, organizations such as the Organization for Economic Cooperation and Development have published action plans that, if adopted by countries where we do business, could increase our tax obligations in these countries. Due to our U.S. and international business activities, certain of these enacted and proposed changes to the taxation of our activities could increase our worldwide effective tax rate, which in turn could harm our financial position and results of operations.

**If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.**

We are subject to the reporting requirements of the Securities Exchange Act of 1934, the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, and the rules and regulations of the SEC and The Nasdaq Global Select Market. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal controls over financial reporting. We perform system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in our Annual Reports on Form 10-K, as required by Section 404 of the Sarbanes-Oxley Act. If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements, and we may conclude that our internal controls over financial reporting are not effective. If that were to happen, the market price of our stock could decline, and we could be subject to sanctions or investigations by the Nasdaq Global Select Market, the SEC or other regulatory authorities.

Maintaining effective internal controls over financial reporting is necessary for us to produce reliable financial statements. If we fail to maintain such controls, it could result in a material misstatement of our financial statements that would not be prevented or detected on a timely basis, which could cause investors and other users to lose confidence in our financial statements.

**Item 1B. Unresolved Staff Comments**

None.
Item 2. Properties

We own or lease the facilities described in the following table:

<table>
<thead>
<tr>
<th>Location</th>
<th>Country</th>
<th>Approximate Square Feet</th>
<th>Facilities</th>
<th>Owned/Leased</th>
</tr>
</thead>
<tbody>
<tr>
<td>McLean, Virginia</td>
<td>USA</td>
<td>30,600</td>
<td>Corporate Headquarters</td>
<td>Leased</td>
</tr>
<tr>
<td>Chandler, Arizona</td>
<td>USA</td>
<td>197,000</td>
<td>Technical Support Center, Distribution Center, Warehouse and Satellite</td>
<td>Leased</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Teleport Network Facility</td>
<td></td>
</tr>
<tr>
<td>Leesburg, Virginia</td>
<td>USA</td>
<td>40,000</td>
<td>Satellite Network Operations Center</td>
<td>Owned</td>
</tr>
<tr>
<td>Tempe, Arizona</td>
<td>USA</td>
<td>31,000</td>
<td>System Gateway and Satellite Teleport Network Facility</td>
<td>Owned Building on Leased Land</td>
</tr>
<tr>
<td>Tempe, Arizona</td>
<td>USA</td>
<td>25,000</td>
<td>Operations and Finance Office Space</td>
<td>Leased</td>
</tr>
<tr>
<td>Fairbanks, Alaska</td>
<td>USA</td>
<td>4,000</td>
<td>Satellite Teleport Network Facility</td>
<td>Owned</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Svalbard</td>
<td>Norway</td>
<td>1,800</td>
<td>Satellite Teleport Network Facility</td>
<td>Owned Building on Leased Land</td>
</tr>
<tr>
<td>Izhevsk, Udmurtia</td>
<td>Russia</td>
<td>8,785</td>
<td>System Gateway and Satellite Teleport Network Facility</td>
<td>Leased</td>
</tr>
<tr>
<td>Moscow</td>
<td>Russia</td>
<td>2,158</td>
<td>Sales and Administration Offices</td>
<td>Leased</td>
</tr>
<tr>
<td>Punta Arenas</td>
<td>Chile</td>
<td>3,200</td>
<td>Satellite Teleport Network Facility</td>
<td>Owned Building on Leased Land</td>
</tr>
<tr>
<td>Bishop's Stortford</td>
<td>United Kingdom</td>
<td>2,400</td>
<td>Sales Offices</td>
<td>Leased</td>
</tr>
</tbody>
</table>

Item 3. Legal Proceedings

Neither we nor any of our subsidiaries are currently subject to any material legal proceeding, nor, to our knowledge, is any material legal proceeding threatened against us or any of our subsidiaries.

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

Our common stock is currently listed on the Nasdaq Global Select Market under the symbol “IRDM.” As of February 15, 2022 there were 133 holders of record of our common stock.

Dividend Policy

We have not paid any dividends on our common stock to date.

Stock Price Performance Graph

The graph below compares the cumulative total return of our common stock from December 31, 2016 through December 31, 2021 with the comparable cumulative return of three indices, the S&P 500 Index, the Dow Jones Industrial Average Index and the Nasdaq Telecommunications Index. The graph plots the growth in value of an initial investment of $100 in each of our common stock, the S&P 500 Index, the Dow Jones Industrial Average Index and the Nasdaq Telecommunications Index over the indicated time periods. The stock price performance shown on the graph is not necessarily indicative of future price performance. The following stock price performance graph shall not be deemed to be “filed” for purposes of Section 18 of the Exchange Act, nor shall this information be incorporated by reference into any future filing under the Securities Act or the Exchange Act or any other document, except to the extent that we specifically incorporate it by reference into such filing or document.
**Issuer Purchases of Equity Securities**

The following table presents our monthly share repurchases for the quarter ended December 31, 2021:

<table>
<thead>
<tr>
<th>Period</th>
<th>Total number of shares purchased</th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 1-31</td>
<td>48,065</td>
<td>$36.81</td>
<td>48,065</td>
<td>$173.2 million</td>
<td></td>
</tr>
<tr>
<td>November 1-30</td>
<td>268,795</td>
<td>$38.39</td>
<td>268,795</td>
<td>$162.8 million</td>
<td></td>
</tr>
<tr>
<td>December 1-31</td>
<td>659,159</td>
<td>$39.80</td>
<td>659,159</td>
<td>$136.6 million</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>976,019</td>
<td>$39.27</td>
<td>976,019</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

On February 10, 2021, we announced that our board of directors had approved the repurchase of up to $300.0 million of our common stock through December 31, 2022. All shares listed above were purchased under this share repurchase program in open market transactions.

**Item 6. [Reserved].**
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

A discussion regarding our financial condition and results of operations for the year ended December 31, 2020 compared to the year ended December 31, 2019 can be found in Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our Annual Report on Form 10-K for the year ended December 31, 2020, as filed with the SEC on February 11, 2021.

Background

We were initially formed in 2007 as GHL Acquisition Corp., a special purpose acquisition company. In 2009, we acquired all the outstanding equity in Iridium Holdings LLC and changed our name to Iridium Communications Inc.

Overview of Our Business

We are engaged primarily in providing mobile voice and data communications services using a constellation of orbiting satellites. We are the only commercial provider of communications services offering true global coverage, connecting people, organizations and assets to and from anywhere, in real time. Our unique L-band satellite network provides reliable communications services to regions of the world where terrestrial wireless or wireline networks do not exist or are limited, including remote land areas, open ocean, airways, the polar regions and regions where the telecommunications infrastructure has been affected by political conflicts or natural disasters.

We provide voice and data communications services to businesses, the U.S. and foreign governments, non-governmental organizations and consumers via our satellite network, which has an architecture of 66 operational satellites with in-orbit and ground spares and related ground infrastructure. We utilize an interlinked mesh architecture to route traffic across the satellite constellation using radio frequency crosslinks between satellites. This unique architecture minimizes the need for ground facilities to support the constellation, which facilitates the global reach of our services and allows us to offer services in countries and regions where we have no physical presence.

We sell our products and services to commercial end users through a wholesale distribution network, encompassing approximately 100 service providers, 285 value-added resellers, or VARs, and 85 value-added manufacturers, or VAMs, who either sell directly to the end user or indirectly through other service providers, VARs or dealers. These distributors often integrate our products and services with other complementary hardware and software and have developed a broad suite of applications for our products and services targeting specific lines of business.

At December 31, 2021 we had approximately 1,723,000 billable subscribers worldwide, an increase of 247,000, or 17%, from approximately 1,476,000 billable subscribers at December 31, 2020. We have a diverse customer base, including end users in land-mobile, Internet of Things, or IoT, maritime, aviation and government.

We recognize revenue from both the provision of services and the sale of equipment. Service revenue represented 80% and 79% of total revenue for the years ended December 31, 2021 and 2020, respectively. Voice and data and IoT data service revenues have historically generated higher margins than subscriber equipment revenue, and we expect this trend to continue. We also recognize revenue from our hosted payloads, principally Aireon, including fees for hosting the payloads and fees for transmitting data from the payloads over our network, as well as revenue from other services, such as satellite time and location services.

Services Agreements for Upgrade of Satellite Constellation

In 2019, we completed the full replacement of our first-generation satellites with our upgraded constellation at a cost of approximately $3 billion.

In June 2010, we executed a primarily fixed price full scale development contract, or FSD, with Thales Alenia Space for the design and manufacture of satellites for the upgraded constellation. The total price under the FSD was $2.3 billion. Final payments under this contract were made during the second quarter of 2019. These costs were capitalized as construction in progress within property and equipment, net in the accompanying consolidated balance sheets.

To complete the upgraded constellation, we launched a total of 75 satellites into low earth orbit using eight Falcon 9 rockets under two contracts with Space Exploration Technologies Corp., or SpaceX, with a total price of $510.8 million. Final payments to SpaceX for these launches were made during the second quarter of 2019. These costs were capitalized as
construction in progress within property and equipment, net in the accompanying consolidated balance sheets. We shared one launch with GFZ German Research Centre for Geosciences for which we received $29.8 million from them.

**Term Loan**

In November 2019, we borrowed our $1,450.0 million Term Loan with an accompanying $100.0 million revolving loan available to us, or the Revolving Facility. Both facilities are under a credit agreement with the lenders, or the Credit Agreement. We used the proceeds of the Term Loan, along with our debt service reserve account and cash on hand to repay in full all of the indebtedness outstanding under a previous credit facility with a syndicate of bank lenders guaranteed by Bpifrance Assurance Export S.A.S., or the BPIAE Facility, as well as related expenses.

In February 2020, we borrowed an additional $200.0 million under our Term Loan and used the proceeds and approximately $183.5 million of cash on hand to repay in full all of the indebtedness outstanding under senior unsecured promissory notes, or the Notes, including premiums for early repayment.

In January 2021 and July 2021, we repriced all borrowings outstanding under our Term Loan and incurred third-party financing costs of $3.6 million and $1.3 million, respectively. As repriced, the Term Loan bears interest at an annual rate of LIBOR plus 2.50%, with a 0.75% LIBOR floor. All other terms of the Term Loan remain the same as before the repricing, including maturity in November 2026. The Revolving Facility bears interest at an annual rate of LIBOR plus 3.75% (but without a LIBOR floor) if and as drawn, with no original issue discount, a commitment fee of 0.5% per year on the undrawn amount, and a five-year maturity. See Note 7 to the consolidated financial statements included in this annual report for further discussion of our Term Loan.

As of December 31, 2021, we reported an aggregate balance of $1,621.1 million in borrowings under the Term Loan, before $23.1 million of net deferred financing costs, for a net principal balance of $1,598.0 million outstanding in our consolidated balance sheet. We have not drawn on our Revolving Facility.

Our Term Loan contains no financial maintenance covenants. With respect to the Revolving Facility, we are required to maintain a consolidated first lien net leverage ratio of no greater than 6.25 to 1 if more than 35% of the Revolving Facility has been drawn. The Credit Agreement contains other customary representations and warranties, affirmative and negative covenants, and events of default. We were in compliance with all covenants under the Credit Agreement as of December 31, 2021.

The Credit Agreement restricts our ability to incur liens, engage in mergers or asset sales, pay dividends, repay subordinated indebtedness, incur indebtedness, make investments and loans, and engage in other transactions as specified in the Credit Agreement. The Credit Agreement provides for specified exceptions, including baskets measured as a percentage of trailing twelve months of earnings before interest, taxes, depreciation and amortization, or EBITDA, and unlimited exceptions based on achievement and maintenance of specified leverage ratios, for, among other things, incurring indebtedness and liens and making investments, restricted payments for dividends and share repurchases, and payments of subordinated indebtedness. The Credit Agreement permits repayment, prepayment, and repricing transactions and requires quarterly principal payments of 0.25% of the $1.65 billion principal amount as of February 2020. The Credit Agreement also contains a mandatory prepayment sweep mechanism with respect to a portion of our excess cash flow (as defined in the Credit Agreement), which is phased out based on achievement and maintenance of specified leverage ratios. As of December 31, 2021, our leverage ratio was below the specified level, and we were not required to make a mandatory prepayment with respect to 2021 cash flows. As of December 31, 2020, our mandatory excess cash flow prepayment, as specified in the Credit Agreement, was calculated to be $12.7 million. Lenders have the right to decline payment. As such, we paid $4.7 million to lenders who did not decline payment in May 2021 with respect to the 2020 cash flows. This amount counted towards our required quarterly principal payments through December 31, 2021.
Derivative Financial Instruments

On November 27, 2019, we executed a two-year interest rate swap (the "Swap") to mitigate variability in forecasted interest payments on a portion of our borrowings under the Term Loan. We paid a fixed rate of 1.565% per annum on the $1.0 billion notional amount of the Swap, which expired in November 2021. We also entered into an interest rate swaption agreement (the "Swaption"), for which we paid a fixed rate of 0.50% per annum on the $1.0 billion notional amount. We sold the Swaption in May 2021 for $0.7 million but continued to pay the fixed rate through the expiration of the Swaption in November 2021. At inception, the Swap and Swaption (collectively, the "swap contracts") were designated as cash flow hedges for hedge accounting. The unrealized changes in market value were recorded in accumulated other comprehensive income (loss) and any remaining balance will be reclassified into earnings during the period in which the hedged transaction affects earnings. As a result of the repricing of the Term Loan in July 2021, we elected to de-designate the Swap as a cash flow hedge. Accordingly, as the related interest payments were still probable, the accumulated balance within other comprehensive income (loss) as of the de-designation date was amortized into earnings through the remaining term, and subsequent to de-designation, the changes in the valuation of the Swap were recorded directly into earnings.

On July 21, 2021, we entered into an interest rate cap agreement (the "Cap") that began in December 2021 upon the expiration of the Swap. The Cap manages our exposure to interest rate movements on a portion of the Term Loan now that the Swap has expired. The Cap provides the right for us to receive payment if one-month LIBOR exceeds 1.5%. Beginning in December 2021, we began to pay a fixed monthly premium based on an annual rate of 0.31% for the Cap. The Cap carried a notional amount of $1.0 billion as of December 31, 2021.

The Cap is designed to mirror the terms of the Term Loan and to offset the cash flows being hedged. We designated the Cap as a cash flow hedge of the variability of the LIBOR-based interest payments on the Term Loan. The effective portion of the Cap's change in fair value will be recorded in accumulated other comprehensive income (loss) and will be reclassified into earnings during the period in which the hedged transaction affects earnings. See Note 8 to our consolidated financial statements included in this report for further discussion of our derivative financial instruments.

Senior Unsecured Notes

On March 21, 2018, we issued $360.0 million in aggregate principal under the Notes, before $9.0 million of deferred financing costs, for a net principal balance of $351.0 million in borrowings from the Notes. The Notes bore interest at 10.25% per annum and were due to mature on April 15, 2023. Interest was payable semi-annually on April 15 and October 15, beginning on October 15, 2018, and principal would have been repaid in full upon maturity. As described above, the Notes were redeemed in full on February 13, 2020.

Total Interest on Debt and Loss on Extinguishment

Total interest incurred includes amortization of deferred financing fees and capitalized interest. To reprice the Term Loan in January 2021 and July 2021, we incurred third-party financing costs of $3.6 million and $1.3 million, respectively. These costs were expensed and are included within interest expense on the consolidated statements of operations and comprehensive income (loss) for the year ended December 31, 2021. Total interest incurred during the years ended December 31, 2021, 2020 and 2019 was $72.8 million, $99.2 million and $140.5 million, respectively. Interest incurred includes amortization of deferred financing fees of $4.3 million, $3.8 million and $21.3 million for the years ended December 31, 2021, 2020 and 2019, respectively. Interest capitalized during the year ended December 31, 2021, 2020 and 2019 was $2.1 million, $3.2 million and $15.1 million, respectively. As of December 31, 2021 and 2020, accrued interest on the Term Loan was $0.1 million and $0.2 million, respectively.

As part of the repayment of our previous debt facility in November 2019, we incurred a loss of approximately $111.7 million for the early extinguishment. In February 2020, we incurred a loss of approximately $30.2 million for the early extinguishment of the Notes. In July 2021, certain lenders did not participate in the repricing of the Term Loan, described above. Those portions of the Term Loan were replaced by new or existing lenders. This resulted in a loss of approximately $0.9 million. These losses were recorded within other income (expense) on our consolidated statements of operations and comprehensive income (loss).
Material Trends and Uncertainties

Our industry and customer base has historically grown as a result of:

- demand for remote and reliable mobile communications services;
- a growing number of new products and services and related applications;
- a broad wholesale distribution network with access to diverse and geographically dispersed niche markets;
- increased demand for communications services by disaster and relief agencies, and emergency first responders;
- improved data transmission speeds for mobile satellite service offerings;
- regulatory mandates requiring the use of mobile satellite services;
- a general reduction in prices of mobile satellite services and subscriber equipment; and
- geographic market expansion through the ability to offer our services in additional countries.

Nonetheless, we face a number of challenges and uncertainties in operating our business, including:

- our ability to maintain the health, capacity, control and level of service of our satellites;
- our ability to develop and launch new and innovative products and services;
- changes in general economic, business and industry conditions, including the effects of currency exchange rates;
- our reliance on a single primary commercial gateway and a primary satellite network operations center;
- competition from other mobile satellite service providers and, to a lesser extent, from the expansion of terrestrial-based cellular phone systems and related pricing pressures;
- market acceptance of our products;
- regulatory requirements in existing and new geographic markets;
- rapid and significant technological changes in the telecommunications industry;
- our ability to generate sufficient internal cash flows to repay our debt;
- reliance on our wholesale distribution network to market and sell our products, services and applications effectively;
- reliance on a global supply chain, including single-source suppliers for the manufacture of most of our subscriber equipment and for some of the components required in the manufacture of our end-user subscriber equipment and our ability to purchase component parts that are periodically subject to shortages resulting from surges in demand, natural disasters or other events, including the COVID-19 pandemic; and
- reliance on a few significant customers, particularly agencies of the U.S. government, for a substantial portion of our revenue, as a result of which the loss or decline in business with any of these customers may negatively impact our revenue and collectability of related accounts receivable.

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. The preparation of these financial statements requires the use of estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, income taxes, useful lives of property and equipment, loss contingencies, and other estimates. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

The accounting policies we believe to be most critical to understanding our financial results and condition and that require complex and subjective management judgments are discussed below. Our accounting policies are more fully described in Note 2 to the consolidated financial statements included in this report.
Revenue Recognition

We sell services and equipment through contracts with our customers. We evaluate whether a contract exists as it relates to collectability of the contract. Once a contract is deemed to exist, we evaluate the transaction price including both fixed and variable consideration. The variable consideration contained within our contracts with customers may include discounts, credits and other similar items. When a contract includes variable consideration, we evaluate the estimate of the variable consideration to determine whether the estimate needs to be constrained. Therefore, we include constrained consideration in the transaction price only to the extent that it is probable that a significant reversal of the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration or collectability is subsequently resolved. Variable consideration estimates are updated at the end of each quarter and collectability assessments are evaluated with new customers, or on an ongoing basis if initially deemed not probable, and updated as facts and circumstances change.

We sell prepaid services in the form of e-vouchers and prepaid cards. A liability is established equal to the cash paid upon purchase for the e-voucher or prepaid card. We recognize revenue from (i) the prepaid services upon the use of the e-voucher or prepaid card by the customer and (ii) the estimated pattern of use. We continually monitor the pattern of use for prepaid services. A change in the estimated pattern of use may impact our revenue recognition. While the terms of prepaid e-vouchers can be extended by the purchase of additional e-vouchers, prepaid e-vouchers may not be extended beyond three or four years, dependent on the initial term when purchased.

Revenue associated with some of our fixed-price engineering services arrangements is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligation. We recognize revenue on cost-plus-fixed-fee arrangements to the extent of estimated costs incurred plus the applicable fees earned. If actual results are not consistent with our estimates or assumptions, we may be exposed to changes to earned and unearned revenue that could be material to our results of operations.

Income Taxes

We account for income taxes using the asset and liability approach. This approach requires that we recognize deferred tax assets and liabilities based on differences between the financial statement bases and tax bases of our assets and liabilities. Deferred tax assets and liabilities are recorded based upon enacted tax rates for the period in which the deferred tax items are expected to reverse. Changes in tax laws or tax rates in various jurisdictions are reflected in the period of change. Significant judgment is required in the calculation of our tax provision and the resulting tax liabilities as well as our ability to realize our deferred tax assets. Our estimates of future taxable income and any changes to such estimates can significantly impact our tax provision in a given period. Significant judgment is required in determining our ability to realize our deferred tax assets related to federal, state and foreign tax attributes within their carryforward periods including estimating the amount and timing of the future reversal of deferred tax items in our projections of future taxable income. A valuation allowance is established to reduce deferred tax assets to the amounts we expect to realize in the future. We also recognize tax benefits related to uncertain tax positions only when we estimate that it is “more likely than not” that the position will be sustainable based on its technical merits. If actual results are not consistent with our estimates and assumptions, this may result in material changes to our income tax provision.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization. Property and equipment are depreciated or amortized over their estimated useful lives. We apply judgment in determining the useful lives based on factors such as engineering data, our long-term strategy for using the assets, the manufacturer's estimated design life for the assets, laws and regulations that could impact the useful lives of the assets and other economic factors. In evaluating the useful lives of our satellites, we assess the current estimated operational life of the satellites, including the potential impact of environmental factors on the satellites, ongoing operational enhancements and software upgrades. Additionally, we review engineering data relating to the operation and performance of our satellite network.

We depreciate our satellites over the shorter of their potential operational life or the period of their expected use. The appropriateness of the useful lives is evaluated on a quarterly basis or as events occur that require additional assessment. The upgraded satellites that have been placed into service are depreciated using the straight-line method over their respective estimated useful lives. If the estimated useful lives of our upgraded satellites change, it could have a material impact on the timing of the recognition of depreciation expense and hosted payload revenue.
During the construction period for our upgraded satellite constellation, assets under construction primarily consisted of costs incurred associated with the design, development and launch of the upgraded satellites, upgrades to our current infrastructure and ground systems and internal software development costs. We capitalized a portion of the interest on the BPIAE Facility during the construction period of the upgraded satellite constellation. Capitalized interest was added to the cost of the upgraded satellites. Once these assets were placed in service, they are depreciated using the straight-line method over their respective estimated useful lives. During each year end, we evaluate the useful lives of all assets under construction.

**Comparison of Our Results of Operations for the Years Ended December 31, 2021 and 2020**

<table>
<thead>
<tr>
<th>($ In thousands)</th>
<th>Year Ended December 31,</th>
<th>% of Total Revenue</th>
<th>% of Total Revenue</th>
<th>Change</th>
<th>Change</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2020</td>
<td></td>
<td>Dollars</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td><strong>Revenue:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>$ 388,104</td>
<td>63 %</td>
<td>$ 362,208</td>
<td>62 %</td>
<td>$ 25,896</td>
<td>7 %</td>
</tr>
<tr>
<td>Government</td>
<td>103,887</td>
<td>17 %</td>
<td>100,887</td>
<td>17 %</td>
<td>3,000</td>
<td>3 %</td>
</tr>
<tr>
<td>Total service revenue</td>
<td>491,991</td>
<td>80 %</td>
<td>463,095</td>
<td>79 %</td>
<td>28,896</td>
<td>6 %</td>
</tr>
<tr>
<td>Subscriber equipment</td>
<td>92,071</td>
<td>15 %</td>
<td>86,119</td>
<td>15 %</td>
<td>5,952</td>
<td>7 %</td>
</tr>
<tr>
<td>Engineering and support services</td>
<td>30,438</td>
<td>5 %</td>
<td>34,225</td>
<td>6 %</td>
<td>(3,787)</td>
<td>(11)%</td>
</tr>
<tr>
<td>Total revenue</td>
<td>614,500</td>
<td>100 %</td>
<td>583,439</td>
<td>100 %</td>
<td>31,061</td>
<td>5 %</td>
</tr>
<tr>
<td><strong>Operating expenses:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs of services (exclusive of depreciation and amortization)</td>
<td>97,020</td>
<td>16 %</td>
<td>91,097</td>
<td>16 %</td>
<td>5,923</td>
<td>7 %</td>
</tr>
<tr>
<td>Cost of subscriber equipment</td>
<td>53,376</td>
<td>9 %</td>
<td>51,596</td>
<td>9 %</td>
<td>1,780</td>
<td>3 %</td>
</tr>
<tr>
<td>Research and development</td>
<td>11,885</td>
<td>2 %</td>
<td>12,037</td>
<td>2 %</td>
<td>(152)</td>
<td>(1)%</td>
</tr>
<tr>
<td>Selling, general and administrative expenses</td>
<td>100,474</td>
<td>16 %</td>
<td>90,052</td>
<td>15 %</td>
<td>10,422</td>
<td>12 %</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>305,431</td>
<td>50 %</td>
<td>303,174</td>
<td>52 %</td>
<td>2,257</td>
<td>1 %</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>568,186</td>
<td>93 %</td>
<td>547,956</td>
<td>94 %</td>
<td>20,230</td>
<td>4 %</td>
</tr>
<tr>
<td><strong>Operating income</strong></td>
<td>46,314</td>
<td>7 %</td>
<td>35,483</td>
<td>6 %</td>
<td>10,831</td>
<td>31 %</td>
</tr>
<tr>
<td>Other income (expense):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest expense, net</td>
<td>(73,906)</td>
<td>(12)%</td>
<td>(94,271)</td>
<td>(16)%</td>
<td>20,365</td>
<td>(22)%</td>
</tr>
<tr>
<td>Loss on extinguishment of debt</td>
<td>(879)</td>
<td>0 %</td>
<td>(30,209)</td>
<td>(5)%</td>
<td>29,330</td>
<td>(97)%</td>
</tr>
<tr>
<td>Other income (expense), net</td>
<td>(417)</td>
<td>0 %</td>
<td>33</td>
<td>0 %</td>
<td>(450)</td>
<td>(1,364)%</td>
</tr>
<tr>
<td>Total other expense</td>
<td>(75,202)</td>
<td>(12)%</td>
<td>(124,447)</td>
<td>(21)%</td>
<td>49,245</td>
<td>(40)%</td>
</tr>
<tr>
<td><strong>Loss before income taxes</strong></td>
<td>(28,888)</td>
<td>(5)%</td>
<td>(88,964)</td>
<td>(15)%</td>
<td>60,076</td>
<td>(68)%</td>
</tr>
<tr>
<td>Income tax benefit</td>
<td>19,569</td>
<td>3 %</td>
<td>32,910</td>
<td>5 %</td>
<td>(13,341)</td>
<td>(41)%</td>
</tr>
<tr>
<td>Net loss</td>
<td>$ (9,319)</td>
<td>(2)%</td>
<td>$ (56,054)</td>
<td>(10)%</td>
<td>$ 46,735</td>
<td>(83)%</td>
</tr>
</tbody>
</table>
### Commercial Service Revenue

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenue</td>
<td>Billable Subscribers</td>
<td>ARPU</td>
</tr>
<tr>
<td><strong>Commercial services:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice and data</td>
<td>$175.6</td>
<td>370 $41</td>
<td>$168.6</td>
</tr>
<tr>
<td>IoT data</td>
<td>110.9</td>
<td>1,193 $8.58</td>
<td>97.0</td>
</tr>
<tr>
<td>Broadband (3)</td>
<td>43.0</td>
<td>13.2 $288</td>
<td>36.0</td>
</tr>
<tr>
<td>Hosted payload and other data</td>
<td>58.6</td>
<td>N/A</td>
<td>60.6</td>
</tr>
<tr>
<td><strong>Total commercial services</strong></td>
<td>$388.1</td>
<td>1,576 $41</td>
<td>$362.2</td>
</tr>
</tbody>
</table>

(1) Billable subscriber numbers are shown as of the end of the respective period.

(2) Average monthly revenue per unit, or ARPU, is calculated by dividing revenue in the respective period by the average of the number of billable subscribers at the beginning of the period and the number of billable subscribers at the end of the period and then dividing the result by the number of months in the period. Billable subscriber and ARPU data is not applicable for hosted payload and other data service revenue items.

(3) Commercial broadband consists of Iridium OpenPort and Iridium Certus broadband services.

For the year ended December 31, 2021, total commercial revenue increased $25.9 million, or 7%, primarily as a result of increases in IoT, broadband, and voice and data revenue mainly driven by increases in billable subscribers. Commercial IoT revenue increased $13.9 million, or 14%, from the prior year. The increase in IoT revenue was driven by a 24% increase in IoT billable subscribers due to continued strength in personal communications devices, as well as the lifting of mobility restrictions that had been imposed due to COVID-19. The subscriber increase effect on revenue was partially offset by a 6% reduction in IoT ARPU, primarily due to the increased proportion of personal communication subscribers using lower ARPU plans, countered in part by an increase in usage and ARPU by aviation subscribers due to increases in air travel from the prior year.

Commercial broadband revenue increased $7.0 million, or 20%, from the prior year, primarily due to the increase in broadband billable subscribers and an increase in ARPU associated with the increase in the mix of subscribers utilizing higher ARPU Iridium Certus broadband plans. Commercial voice and data revenue increased $7.0 million, or 4%, from the prior year, primarily due to an increase in volume across all voice and data services. These increases were offset in part by a decrease in hosted payload and other service revenue of $2.0 million, or 3%, compared to the prior year. This decrease was primarily due to a one-time data billing settlement that resulted in recognition of $1.3 million in the prior year period, plus the recognition of an additional $1.4 million of hosting data service revenue in the prior year due to an updated estimate of data service usage that did not recur in 2021.

### Government Service Revenue

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenue</td>
<td>Billable Subscribers</td>
<td>(1)</td>
</tr>
<tr>
<td>Government service revenue</td>
<td>$103.9</td>
<td>147</td>
<td>$100.9</td>
</tr>
</tbody>
</table>

(1) Billable subscriber numbers shown are at the end of the respective period.

We provide airtime and airtime support to U.S. government and other authorized customers pursuant to our EMSS contract entered into in September 2019. Under this agreement, authorized customers utilize specified Iridium airtime services provided through the U.S. government’s dedicated gateway. The fee is not based on subscribers or usage, allowing an unlimited number of users access to these services. The annual rate under the EMSS contract increased from $103.0 million in the prior year to $106.0 million during the third quarter of 2021.
Subscriber Equipment Revenue

Subscriber equipment revenue increased $6.0 million, or 7%, to $92.1 million for the year ended December 31, 2021 compared to the prior year, primarily due to an increase in the volume of handset and IoT device sales, partially offset by a decrease in the volume of Iridium Pilot and L-band transceiver device sales.

Engineering and Support Service Revenue

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31, 2021</th>
<th>2020</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(In millions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>$ 4.6</td>
<td>$ 4.5</td>
<td>$ 0.1</td>
</tr>
<tr>
<td>Government</td>
<td>25.8</td>
<td>29.7</td>
<td>(3.9)</td>
</tr>
<tr>
<td>Total</td>
<td>$ 30.4</td>
<td>$ 34.2</td>
<td>(3.8)</td>
</tr>
</tbody>
</table>

Engineering and support service revenue decreased by $3.8 million, or 11%, for the year ended December 31, 2021 compared to the prior year primarily due to the episodic nature of contract work under certain government contracts.

Operating Expenses

Cost of Services (exclusive of depreciation and amortization)

Cost of services (exclusive of depreciation and amortization) includes the cost of network engineering and operations staff, including contractors, software maintenance, product support services, and cost of services for government and commercial engineering and support service revenue.

Cost of services (exclusive of depreciation and amortization) increased by $5.9 million, or 7%, for the year ended December 31, 2021 compared to the prior year, primarily as a result of higher product support and network and satellite operation costs. These costs were higher in the current year primarily due to increased management incentive costs. This increase was partially offset by the decrease in work under certain government engineering contracts, as noted above.

Cost of Subscriber Equipment

Cost of subscriber equipment includes the direct costs of equipment sold, which consist of manufacturing costs, allocation of overhead, and warranty costs.

Cost of subscriber equipment increased $1.8 million, or 3%, for the year ended December 31, 2021 compared to the prior year period primarily due to an increase in volume of higher margin handsets and an increase in IoT device sales, partially offset by a decrease in the volume of Iridium Pilot and L-band transceiver device sales, as described above.

Research and Development

Research and development expenses decreased by $0.2 million, or 1%, for the year ended December 31, 2021 compared to the prior year period based on consistent spending on device-related features for our network.

Selling, General and Administrative

Selling, general and administrative expenses that are not directly attributable to the sale of services or products include sales and marketing costs as well as employee-related expenses (such as salaries, wages, and benefits), legal, finance, information technology, facilities, billing and customer care expenses.

Selling, general and administrative expenses increased by $10.4 million, or 12%, for the year ended December 31, 2021, primarily due to higher management incentive costs incurred in the current year. Management incentive costs were higher in the current year based on improved results and were lower in the prior year due to the impacts of the COVID-19 pandemic. The increase was partially offset by a decrease in stock appreciation rights expense in the current year resulting from changes in our stock valuation between the years. The increase was also offset by a decrease in bad debt expense and favorable settlements including social contribution tax credit received in the current year.
Depreciation and Amortization Expense
Depreciation and amortization expense increased by $2.3 million, or 1%, for the year ended December 31, 2021 compared to the prior year. The increase was primarily due to software enhancements related to our Iridium Certus service line that were placed into service during July 2021. We anticipate depreciation and amortization to remain relatively consistent over the next several years.

Other Income (Expense)

Interest Expense, net
Interest expense, net, for the year ended December 31, 2021 was $73.9 million, compared to $94.3 million for the prior year. The decrease resulted primarily from a decrease in the annual interest rate on our Term Loan to LIBOR plus 2.5%, with a 0.75% LIBOR floor, from an annual interest rate of LIBOR plus 3.75%, with a 1.0% LIBOR floor, as a result of the repricing of our Term Loan in January 2021 and July 2021. The decrease in interest expense was offset in part by $4.9 million of third-party financing costs paid in 2021, which were expensed as incurred, in connection with the repricing transactions.

Loss on Extinguishment of Debt
Loss on extinguishment of debt was $0.9 million for the year ended December 31, 2021, compared to $30.2 million for the prior year. During July 2021, we repriced our Term Loan and wrote off unamortized debt issuance costs related to several lenders who did not participate in the repricing and whose portions of the Term Loan were replaced by new or existing lenders. The loss on extinguishment of debt in 2020 resulted from the write off of unamortized debt issuance costs when we closed on an additional $200.0 million under our Term Loan in February 2020 and used the proceeds, together with cash on hand, to prepay all of the indebtedness outstanding under the Notes, including premiums for early prepayment.

Income Tax Benefit
For the year ended December 31, 2021, our income tax benefit was $19.6 million, compared to income tax benefit of $32.9 million for the prior year. Our effective tax rate was approximately 67.7% for the year ended December 31, 2021 compared to 37.0% for the prior year. The decrease in income tax benefit was primarily related to a decrease in loss before income taxes compared to the prior year. If our current estimates change in future periods, the impact on the deferred tax assets and liabilities may change correspondingly. See Note 12 to our consolidated financial statements for more detail on the individual items impacting our effective tax rate for the years.

Net Loss
Net loss was $9.3 million for the year ended December 31, 2021, compared to net loss of $56.1 million during the prior year. The improvement primarily resulted from the $29.3 million decrease in loss on extinguishment of debt, the $20.4 million decrease in interest expense, net, and the $10.8 million increase in total operating income partially offset by the $13.3 million decrease in income tax benefit.

Liquidity and Capital Resources
Our current indebtedness consists exclusively of amounts outstanding under the Term Loan, the terms of which are described above under the section captioned “Term Loan.”

As of December 31, 2021, we held non-cancelable purchase obligations of approximately $32.0 million for inventory purchases with Benchmark Electronics, Inc., or Benchmark, our primary third-party vendor. Our purchase obligations, all of which are due during 2022, increased $18.5 million from 2020 primarily due to increased demand and recovery from supply-chain constraints experienced during 2021.

As of December 31, 2021, our total cash and cash equivalents balance was $220.9 million, and we had $100.0 million of borrowing availability under our Revolving Facility. In addition to the Revolving Facility, our principal sources of liquidity are cash, cash equivalents and internally generated cash flows. Other than the purchase obligation noted above, our principal liquidity requirements over the next twelve months are primarily required principal and interest on the Term Loan, which we expect to be $16.5 million and, based on the current interest rate, approximately $60.0 million, respectively, as well as capital
expenditures of $45.0 million, working capital and potential share repurchases under the share repurchase program described in Note 10 to our consolidated financial statements included in this report.

We believe our liquidity sources will provide sufficient funds for us to meet our liquidity requirements for at least the next 12 months.

Our material long-term cash requirement is the repayment of the remaining principal amount under the Term Loan upon its maturity in 2026, which is expected to be $1,555.1 million. We expect to refinance this amount at or prior to maturity.

**Cash Flows - Comparison of the Years Ended December 31, 2021 and 2020**

The following table shows our consolidated cash flows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash provided by operating activities</td>
<td>$302,874</td>
<td>$249,767</td>
<td>$53,107</td>
</tr>
<tr>
<td>Net cash used in investing activities</td>
<td>$(36,382)</td>
<td>$(46,470)</td>
<td>$10,088</td>
</tr>
<tr>
<td>Net cash used in financing activities</td>
<td>$(182,469)</td>
<td>$(188,186)</td>
<td>$5,717</td>
</tr>
</tbody>
</table>

**Cash Flows from Operating Activities**

Net cash provided by operating activities for the year ended December 31, 2021 increased $53.1 million from the prior year. Net loss, as adjusted for non-cash activities, improved by $41.3 million over the prior year, primarily as a result of improved profitability. Net cash from operating activities also increased related to working capital changes of approximately $11.7 million. Cash flows from working capital increased primarily as a result of a decreased payout on management incentives in 2021 due to the COVID-19 impact on our 2020 financial results as compared to our expectations at the time the management incentives were originally established. Cash flows from working capital also increased as a result of lower interest payments associated with the completed retirement of the Notes in 2020 and the subsequent Term Loan repricing transactions in 2021. These increases were offset by net cash outflows resulting from the timing of customer collections and payments to vendors.

**Cash Flows from Investing Activities**

Net cash used in investing activities for the year ended December 31, 2021 decreased $10.1 million from the prior year period due primarily to maturities of marketable securities in the current year and purchases of marketable securities in the prior year. The movement in marketable securities was offset in part by a $3.5 million increase in capital expenditures. We continue to expect our capital expenditures to average approximately $40.0 million per year until 2029.

**Cash Flows from Financing Activities**

Net cash used in financing activities for the year ended December 31, 2021 decreased $5.7 million compared to the prior year period primarily due to lower net principal payments as we utilized our cash to pay down additional debt in 2020, offset by share repurchases we made in 2021. We repurchased and subsequently retired 4.3 million shares of our common stock during the year ended December 31, 2021, for a total purchase price of $163.4 million. The combination of full repayment of the Notes and additional borrowings under the Term Loan resulted in net payments of $193.8 million for the year ended December 31, 2020 compared to net payments of $16.5 million for 2021. See Note 7 to our consolidated financial statements included in this report for further discussion of our indebtedness.

**Seasonality**

Our results of operations have been subject to seasonal usage changes for commercial customers, and our results will be affected by similar seasonality going forward. March through October are typically the peak months for commercial voice services revenue and related subscriber equipment sales. U.S. government revenue and commercial IoT revenue have been less subject to seasonal usage changes.
Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We had an outstanding aggregate balance of $1,621.1 million under the Term Loan as of December 31, 2021. Under the Term Loan, we pay interest at an annual rate equal to the London Interbank Offered Rate, or LIBOR, plus 2.5%, with a 0.75% LIBOR floor. Accordingly, we are subject to interest rate fluctuations in future periods. On July 21, 2021, we entered into an interest rate cap agreement, which took effect in December 2021, or the Cap, with a notional amount of $1.0 billion. The Cap manages our exposure to interest rate movements on a portion of our Term Loan by providing us the right to receive payment if one-month LIBOR exceeds 1.5%. A one-half percentage point increase or decrease in the LIBOR would not have a material impact on our interest expense.

We have not borrowed under our Revolving Facility. Accordingly, although the Revolving Facility bears interest at LIBOR plus 3.75%, without a LIBOR floor, if and as drawn, we are not currently exposed to fluctuations in interest rates with respect to our Revolving Facility.

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents, as well as accounts receivable. We maintain our cash and cash equivalents with financial institutions with high credit ratings and at times maintain the balance of our deposits in excess of federally insured limits. The majority of our cash is swept nightly into a money market fund invested in U.S. treasuries, agency mortgage backed securities and/or U.S. government guaranteed debt. Accounts receivable are due from both domestic and international customers. We perform credit evaluations of our customers’ financial condition and record reserves to provide for estimated credit losses. Accounts payable are owed to both domestic and international vendors.
## Item 8. Financial Statements and Supplementary Data

*Iridium Communications Inc.*

<table>
<thead>
<tr>
<th>Report of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm (PCAOB ID: 42)</th>
<th>54</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidated Balance Sheets</td>
<td>56</td>
</tr>
<tr>
<td>Consolidated Statements of Operations and Comprehensive Income (Loss)</td>
<td>57</td>
</tr>
<tr>
<td>Consolidated Statements of Changes in Stockholders' Equity</td>
<td>58</td>
</tr>
<tr>
<td>Consolidated Statements of Cash Flows</td>
<td>59</td>
</tr>
<tr>
<td>Notes to Consolidated Financial Statements</td>
<td>60</td>
</tr>
</tbody>
</table>
To the Stockholders and the Board of Directors of Iridium Communications Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Iridium Communications Inc. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive (income) loss, changes in stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2021 and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have 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 December 31, 2021, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 17, 2022 expressed an unqualified opinion thereon.

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 Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.
Useful life of upgraded satellites

Description of the Matter

At December 31, 2021, the Company had $2.2 billion in Property and Equipment related to its upgraded satellites. As discussed in Note 2 to the consolidated financial statements, the Company’s upgraded satellites are depreciated on a straight-line basis over their estimated useful life, which is currently estimated to be 12.5 years. The Company’s useful life estimate is based on judgments made by management using the manufacturer’s estimated design life for the assets, engineering data relating to the operation and performance of its satellite network, and the Company’s long-term strategy for use of the assets.

Auditing the Company’s estimate of the useful life of the upgraded satellites involved a high degree of subjectivity due to the application of management’s judgment when evaluating the available information to determine the estimated useful life. The resulting estimated useful life has a significant effect on the timing of recognition of depreciation expense given the magnitude of the carrying amount of the upgraded satellites.

How We Addressed the Matter in Our Audit

We tested the design and operating effectiveness of controls over the Company’s processes to determine the estimated useful life of its upgraded satellites, including controls over management’s evaluation of the available information to determine the estimated useful life.

To test the Company’s estimated useful life of the upgraded satellites, our audit procedures included, among others, evaluating the application of available information to determine the estimated useful life of the upgraded satellites. For example, we compared management’s useful life estimate to the manufacturer’s estimated design life, publicly available information on the estimated useful life of similar assets, satellite operation and performance, and the life of its first-generation satellite constellation. Additionally, we evaluated the effect of changes, if any, in the Company’s long-term strategy for use of the assets on the useful life estimate.

We have served as Company’s auditor since 2001.
Tysons, Virginia
February 17, 2022

/s/ Ernst & Young LLP
Iridium Communications Inc.
Consolidated Balance Sheets
(In thousands, except per share data)

<table>
<thead>
<tr>
<th>Assets</th>
<th>December 31, 2021</th>
<th>December 31, 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$ 320,913</td>
<td>$ 237,178</td>
</tr>
<tr>
<td>Marketable securities</td>
<td>$ 7,548</td>
<td></td>
</tr>
<tr>
<td>Accounts receivable, net</td>
<td>$ 63,410</td>
<td>$ 61,151</td>
</tr>
<tr>
<td>Inventory</td>
<td>$ 29,044</td>
<td>$ 32,480</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>$ 11,043</td>
<td>$ 9,464</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td><strong>424,410</strong></td>
<td><strong>347,821</strong></td>
</tr>
<tr>
<td>Property and equipment, net</td>
<td><strong>2,662,336</strong></td>
<td><strong>2,917,076</strong></td>
</tr>
<tr>
<td>Other assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intangible assets, net</td>
<td>$ 43,999</td>
<td>$ 45,504</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>$ 3,180,795</strong></td>
<td><strong>$ 3,360,949</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities and stockholders' equity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current liabilities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term secured debt</td>
<td>$ 16,500</td>
<td>$ 16,766</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>16,196</td>
<td>14,390</td>
</tr>
<tr>
<td>Accrued expenses and other current liabilities</td>
<td>48,122</td>
<td>49,504</td>
</tr>
<tr>
<td>Deferred revenue</td>
<td>28,018</td>
<td>32,412</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td><strong>108,836</strong></td>
<td><strong>113,072</strong></td>
</tr>
<tr>
<td>Long-term secured debt, net</td>
<td><strong>1,581,516</strong></td>
<td><strong>1,596,893</strong></td>
</tr>
<tr>
<td>Deferred income tax liabilities, net</td>
<td>134,279</td>
<td>155,084</td>
</tr>
<tr>
<td>Deferred revenue, net of current portion</td>
<td>48,070</td>
<td>51,258</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>20,147</td>
<td>25,203</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td><strong>1,892,848</strong></td>
<td><strong>1,941,510</strong></td>
</tr>
</tbody>
</table>

| Commitments and contingencies               |                   |                   |
| Stockholders' equity:                       |                   |                   |
| Common stock, $0.001 par value, 300,000 shares authorized, 131,342 and 134,056 shares issued and outstanding at December 31, 2021 and 2020, respectively | 131 | 134 |
| Additional paid-in capital                  | 1,154,058         | 1,160,570         |
| Retained earnings                           | 140,810           | 275,915           |
| Accumulated other comprehensive loss, net of tax | (7,052)         | (17,180)          |
| **Total stockholders' equity**              | **1,287,947**     | **1,419,439**     |
| **Total liabilities and stockholders' equity** | **$ 3,180,795** | **$ 3,360,949**   |

See notes to consolidated financial statements

56
Iridium Communications Inc.
Consolidated Statements of Operations and Comprehensive Income (Loss)
(In thousands, except per share amounts)

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>$491,991</td>
<td>$463,095</td>
<td>$447,158</td>
</tr>
<tr>
<td>Subscriber equipment</td>
<td>92,071</td>
<td>86,119</td>
<td>82,856</td>
</tr>
<tr>
<td>Engineering and support services</td>
<td>30,438</td>
<td>34,225</td>
<td>30,430</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td>$614,500</td>
<td>$583,439</td>
<td>$560,444</td>
</tr>
<tr>
<td><strong>Operating expenses:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of services (exclusive of depreciation and amortization)</td>
<td>97,020</td>
<td>91,097</td>
<td>94,958</td>
</tr>
<tr>
<td>Cost of subscriber equipment</td>
<td>53,376</td>
<td>51,596</td>
<td>50,186</td>
</tr>
<tr>
<td>Research and development</td>
<td>11,885</td>
<td>12,037</td>
<td>14,310</td>
</tr>
<tr>
<td>Selling, general and administrative</td>
<td>100,474</td>
<td>90,052</td>
<td>93,165</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>305,431</td>
<td>303,174</td>
<td>297,705</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td>$568,186</td>
<td>$547,956</td>
<td>$550,324</td>
</tr>
<tr>
<td><strong>Operating income</strong></td>
<td>$46,314</td>
<td>$35,483</td>
<td>$10,120</td>
</tr>
<tr>
<td><strong>Other income (expense):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest expense, net</td>
<td>(73,906)</td>
<td>(94,271)</td>
<td>(115,396)</td>
</tr>
<tr>
<td>Loss on extinguishment of debt</td>
<td>(879)</td>
<td>(30,209)</td>
<td>(111,710)</td>
</tr>
<tr>
<td>Other income (expense), net</td>
<td>(417)</td>
<td>33</td>
<td>(1,133)</td>
</tr>
<tr>
<td><strong>Total other expense</strong></td>
<td>(75,202)</td>
<td>(124,447)</td>
<td>(228,239)</td>
</tr>
<tr>
<td>Loss before income taxes</td>
<td>(28,888)</td>
<td>(88,964)</td>
<td>(218,119)</td>
</tr>
<tr>
<td>Income tax benefit</td>
<td>19,569</td>
<td>32,910</td>
<td>56,120</td>
</tr>
<tr>
<td><strong>Net loss</strong></td>
<td>(9,319)</td>
<td>(56,054)</td>
<td>(166,193)</td>
</tr>
<tr>
<td>Series B preferred stock dividends, declared and paid excluding cumulative dividends</td>
<td>—</td>
<td>—</td>
<td>4,194</td>
</tr>
<tr>
<td><strong>Net loss attributable to common stockholders</strong></td>
<td>$ (9,319)</td>
<td>$ (56,054)</td>
<td>$ (166,193)</td>
</tr>
<tr>
<td>Weighted average shares outstanding - basic and diluted</td>
<td>133,530</td>
<td>133,491</td>
<td>125,167</td>
</tr>
<tr>
<td><strong>Net loss attributable to common stockholders per share - basic and diluted</strong></td>
<td>$ (0.07)</td>
<td>$ (0.42)</td>
<td>$ (1.33)</td>
</tr>
<tr>
<td><strong>Comprehensive income (loss):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net loss</td>
<td>$ (9,319)</td>
<td>$ (56,054)</td>
<td>$ (161,999)</td>
</tr>
<tr>
<td>Foreign currency translation adjustments</td>
<td>(280)</td>
<td>(3,277)</td>
<td>2,051</td>
</tr>
<tr>
<td>Unrealized gain (loss) on cash flow hedges, net of tax (see Note 8)</td>
<td>10,408</td>
<td>(7,036)</td>
<td>(121)</td>
</tr>
<tr>
<td><strong>Comprehensive income (loss)</strong></td>
<td>$ 809</td>
<td>$ (66,367)</td>
<td>$ (160,069)</td>
</tr>
</tbody>
</table>

See notes to consolidated financial statements
Iridium Communications Inc.
Consolidated Statements of Changes in Stockholders’ Equity
(In thousands)

<table>
<thead>
<tr>
<th>Series B Convertible</th>
<th>Preferred Stock</th>
<th>Common Stock</th>
<th>Additional Paid-In Capital</th>
<th>Accumulated Other Comprehensive Income (Loss)</th>
<th>Retained Earnings</th>
<th>Total Stockholders’ Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shares</td>
<td>Amount</td>
<td>Shares</td>
<td>Amount</td>
<td>Shares</td>
<td>Amount</td>
</tr>
<tr>
<td>Balance at December 31, 2018</td>
<td>497</td>
<td>$—</td>
<td>112,200</td>
<td>$112</td>
<td>$1,108,550</td>
<td>$ (6,797)</td>
</tr>
<tr>
<td>Stock-based compensation</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Stock options exercised and awards vested</td>
<td>—</td>
<td>—</td>
<td>3,003</td>
<td>3</td>
<td>13,468</td>
<td>—</td>
</tr>
<tr>
<td>Stock withheld to cover employee taxes</td>
<td>—</td>
<td>—</td>
<td>199</td>
<td>—</td>
<td>(4,594)</td>
<td>—</td>
</tr>
<tr>
<td>Net loss</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Dividends on Series B preferred stock</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Cumulative translation adjustments</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Unrealized loss on cash flow hedges, net of tax</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Preferred stock converted to common</td>
<td>(497)</td>
<td>—</td>
<td>16,628</td>
<td>17</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Balance at December 31, 2019</td>
<td>—</td>
<td>—</td>
<td>131,832</td>
<td>132</td>
<td>1,134,048</td>
<td>(6,867)</td>
</tr>
<tr>
<td>Stock-based compensation</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Stock options exercised and awards vested</td>
<td>—</td>
<td>—</td>
<td>2,588</td>
<td>2</td>
<td>12,713</td>
<td>—</td>
</tr>
<tr>
<td>Stock withheld to cover employee taxes</td>
<td>—</td>
<td>—</td>
<td>(164)</td>
<td>—</td>
<td>(4,513)</td>
<td>—</td>
</tr>
<tr>
<td>Net loss</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Cumulative translation adjustments</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Unrealized loss on cash flow hedges, net of tax</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Balance at December 31, 2020</td>
<td>—</td>
<td>—</td>
<td>134,056</td>
<td>134</td>
<td>1,160,570</td>
<td>(17,180)</td>
</tr>
<tr>
<td>Stock-based compensation</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Stock options exercised and awards vested</td>
<td>—</td>
<td>—</td>
<td>1,769</td>
<td>1</td>
<td>7,442</td>
<td>—</td>
</tr>
<tr>
<td>Stock withheld to cover employee taxes</td>
<td>—</td>
<td>—</td>
<td>(144)</td>
<td>—</td>
<td>(5,918)</td>
<td>—</td>
</tr>
<tr>
<td>Repurchases and retirements of common stock</td>
<td>—</td>
<td>—</td>
<td>(4,339)</td>
<td>(4)</td>
<td>(37,652)</td>
<td>—</td>
</tr>
<tr>
<td>Net loss</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Cumulative translation adjustments</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Unrealized gain on cash flow hedges, net of tax</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Balance at December 31, 2021</td>
<td>—</td>
<td>—</td>
<td>131,342</td>
<td>131</td>
<td>1,154,808</td>
<td>(7,052)</td>
</tr>
</tbody>
</table>

See notes to consolidated financial statements
Iridium Communications Inc.
Consolidated Statements of Cash Flows
(In thousands)

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash flows from operating activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net loss</td>
<td>$(9,319)</td>
<td>$(56,054)</td>
<td>$(161,999)</td>
</tr>
<tr>
<td>Adjustments to reconcile net loss to net cash provided by operating activities:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>(21,314)</td>
<td>(33,684)</td>
<td>(53,897)</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>305,431</td>
<td>303,174</td>
<td>297,705</td>
</tr>
<tr>
<td>Loss on extinguishment of debt</td>
<td>879</td>
<td>30,209</td>
<td>111,710</td>
</tr>
<tr>
<td>Stock-based compensation (net of amounts capitalized)</td>
<td>26,782</td>
<td>16,714</td>
<td>15,138</td>
</tr>
<tr>
<td>Amortization of deferred financing fees</td>
<td>4,201</td>
<td>3,658</td>
<td>18,904</td>
</tr>
<tr>
<td>All other items, net</td>
<td>(160)</td>
<td>1,124</td>
<td>952</td>
</tr>
<tr>
<td><strong>Changes in operating assets and liabilities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>(1,823)</td>
<td>6,380</td>
<td>2,509</td>
</tr>
<tr>
<td>Inventory</td>
<td>3,592</td>
<td>7,234</td>
<td>(12,951)</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>(1,696)</td>
<td>1,119</td>
<td>7,973</td>
</tr>
<tr>
<td>Other assets</td>
<td>3,911</td>
<td>3,241</td>
<td>3,097</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>(2,166)</td>
<td>7,410</td>
<td>(4,300)</td>
</tr>
<tr>
<td>Accrued expenses and other current liabilities</td>
<td>7,170</td>
<td>(15,662)</td>
<td>17,093</td>
</tr>
<tr>
<td>Deferred revenue</td>
<td>(7,531)</td>
<td>(21,692)</td>
<td>(6,435)</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>(5,083)</td>
<td>(3,404)</td>
<td>(3,170)</td>
</tr>
<tr>
<td><strong>Net cash provided by operating activities</strong></td>
<td>302,874</td>
<td>249,767</td>
<td>198,143</td>
</tr>
</tbody>
</table>

| **Cash flows from investing activities:** |        |        |        |
| Capital expenditures      | (42,147) | (38,689) | (117,819) |
| Purchases of other investments | (1,635) | (152) | (10,000) |
| Purchases of marketable securities | — | (7,629) | — |
| Sales and maturities of marketable securities | 7,400 | — | — |
| **Net cash used in investing activities** | (36,382) | (46,470) | (127,819) |

| **Cash flows from financing activities:** |        |        |        |
| Repayments on the Credit Facility, including extinguishment costs | — | — | (1,734,965) |
| Borrowings under the Term Loan | 179,285 | 202,000 | 1,450,000 |
| Payments on the Term Loan | (195,785) | (12,375) | — |
| Repayments on the Notes, including extinguishment costs | — | (383,451) | — |
| Repurchases of common stock | (163,442) | — | — |
| Payment of deferred financing fees | (4,052) | (2,562) | (28,803) |
| Proceeds from exercise of stock options | 7,443 | 12,715 | 13,471 |
| Tax payment upon settlement of stock awards | (5,918) | (4,513) | (4,596) |
| Payment of Series B preferred stock dividends | — | — | (8,387) |
| **Net cash used in financing activities** | (182,469) | (188,186) | (313,280) |

| Effect of exchange rate changes on cash and cash equivalents | (288) | (1,494) | 1,230 |
| Net increase (decrease) in cash and cash equivalents and restricted cash | 83,735 | 13,617 | (241,726) |
| Cash, cash equivalents and restricted cash, beginning of period | 237,178 | 223,561 | 465,287 |
| Cash, cash equivalents and restricted cash, end of period | $320,913 | $237,178 | $223,561 |

See notes to consolidated financial statements
Iridium Communications Inc.
Consolidated Statements of Cash Flows, continued
(In thousands)
### Supplemental cash flow information:

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest paid, net of amounts capitalized</td>
<td>$72,195</td>
<td>$98,714</td>
<td>$119,464</td>
</tr>
<tr>
<td>Income taxes paid (refund received), net</td>
<td>$1,784</td>
<td>$(661)</td>
<td>$(606)</td>
</tr>
</tbody>
</table>

### Supplemental disclosure of non-cash investing and financing activities:

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property and equipment received but not paid for yet</td>
<td>$8,225</td>
<td>$3,721</td>
<td>$3,975</td>
</tr>
<tr>
<td>Capitalized amortization of deferred financing costs</td>
<td>$115</td>
<td>$115</td>
<td>$2,416</td>
</tr>
<tr>
<td>Capitalized stock-based compensation</td>
<td>$2,834</td>
<td>$1,608</td>
<td>$1,503</td>
</tr>
</tbody>
</table>

See notes to consolidated financial statements
1. Organization and Business

Iridium Communications Inc. (the “Company”), a Delaware corporation, offers voice and data communications services and products to businesses, U.S. and international government agencies and other customers on a global basis. The Company is a provider of mobile voice and data communications services via a constellation of low earth orbiting satellites. The Company holds various licenses and authorizations from the U.S. Federal Communications Commission (the “FCC”) and from foreign regulatory bodies that permit the Company to conduct its business, including the operation of its satellite constellation.

The Company’s operations are conducted through, and its operating assets are owned by, its principal operating subsidiary, Iridium Satellite LLC (“Iridium Satellite”), Iridium Satellite’s immediate parent, Iridium Holdings LLC, and their subsidiaries. As a result, there are no material differences between the information presented in these consolidated financial statements of the Company and the financial information of Iridium Holdings, Iridium Satellite and their subsidiaries, on a consolidated basis, other than as a result of (i) tax provision as a result of Iridium Holdings, Iridium Satellite and their subsidiaries being classified as flow-through entities for U.S. federal income tax purposes and (ii) senior unsecured notes (fully repaid February 15, 2020, see Note 7), related interest expense and loss on extinguishment of debt.

2. Significant Accounting Policies and Basis of Presentation

Principles of Consolidation and Basis of Presentation

The Company has prepared the consolidated financial statements in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”). The accompanying consolidated financial statements include the accounts of (i) the Company, (ii) its wholly owned subsidiaries, and (iii) all less than wholly owned subsidiaries that the Company controls. All material intercompany transactions and balances have been eliminated.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of income and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates and assumptions, including those related to revenue recognition, the useful lives and recoverability of long-lived and intangible assets, income taxes, stock-based compensation, the incremental borrowing rate for its leases, and contingencies, among others. The Company bases these estimates on historical and anticipated results, trends, and various other assumptions that it believes are reasonable, including assumptions as to future events. These estimates form the basis for making judgments about the carrying values of assets and liabilities and recorded revenues and expenses. Actual results could differ materially from those estimates.

Adopted and Recently Issued Accounting Pronouncements


In March 2020, the FASB issued ASU No. 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting (“ASU 2020-04”). The guidance provides optional expedients and exceptions for contracts, hedging relationships, and other transactions that reference London Inter-bank Offered Rate (“LIBOR”) or another reference rate expected to be discontinued. ASU 2020-04 was further amended in January 2021 when the FASB issued ASU 2021-01, Reference Rate Reform (Topic 848): Scope (“ASU 2021-01”), which clarified the applicability of certain provisions. Both ASU 2020-04 and ASU 2021-01 are currently effective prospectively for all entities through December 31, 2022 when the reference rate replacement activity is expected to have been completed. The guidance in ASU 2020-04 and ASU 2021-01 is optional and may be elected over time as reference rate reform activities occur. As of December 31, 2021, the Company elected to apply the optional expedient for hedge accounting specifically to the interest rate cap agreement (the “Cap”) which was executed in July 2021. This allowed the Company to assume that the index upon which future interest payments on the hedged portion of the Term Loan (see Note 8) will be based matches the index on the Cap. Adoption of this
practical expedient had no impact on the Company’s consolidated financial statements upon adoption. The Company has not yet adopted any other expedients and will continue to evaluate the impact this standard may have on its consolidated financial statements.

**Fair Value Measurements**

The Company evaluates assets and liabilities subject to fair value measurements on a recurring and non-recurring basis to determine the appropriate level to classify them for each reporting period. This determination requires significant judgments to be made by management of the Company. Fair value is the price that would be received from the sale of an asset or paid to transfer a liability assuming an orderly transaction in the most advantageous market at the measurement date. U.S. GAAP establishes a hierarchical disclosure framework which prioritizes and ranks the level of observability of inputs used in measuring fair value.

The fair value hierarchy consists of the following tiers:

- Level 1, defined as observable inputs such as quoted prices in active markets for identical assets or liabilities;
- Level 2, defined as observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

The fair value estimates are based upon certain market assumptions and information available to the Company. The carrying values of the following financial instruments approximated their fair values as of December 31, 2021 and 2020: cash and cash equivalents, prepaid expenses and other current assets, accounts receivable, accounts payable, and accrued expenses and other current liabilities. Fair values approximate their carrying values because of their short-term nature. The Level 2 cash equivalents include money market funds, commercial paper and short-term U.S. agency securities. The Company also classifies its derivative financial instruments as Level 2.

The fair values of the Company’s Level 2 estimates are based upon certain market assumptions and information available to the Company. In determining fair value, the Company uses a market approach utilizing valuation models that incorporate observable inputs such as interest rates, bond yields and quoted prices for similar assets.

**Leases**

For new leases, the Company will determine if an arrangement is or contains a lease at inception. Leases are included as right-of-use (“ROU”) assets within other assets and ROU liabilities within accrued expenses and other liabilities and within other long-term liabilities on the Company’s consolidated balance sheets.

ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. Certain leases contain variable contractual obligations as a result of future base rate escalations which are estimated based on observed trends and included within the measurement of present value. The Company’s leases do not provide an implicit rate. The Company uses its incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The ROU asset also includes any lease payments made and excludes lease incentives. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

The Company has lease agreements with lease and non-lease components, which are generally accounted for separately. For certain leases, such as teleport network facilities, the Company elected the practical expedient to combine lease and non-lease components as a single lease component. Taxes assessed on leases in which the Company is either a lessor or lessee are excluded from contract consideration and variable payments when measuring new lease contracts or remeasuring existing lease contracts.
Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and receivables. The majority of cash is invested into a money market fund with U.S. treasuries, Agency Mortgage Backed Securities and/or U.S. government guaranteed debt. While the Company maintains its cash and cash equivalents with financial institutions with high credit ratings, it often maintains those deposits in federally insured financial institutions in excess of federally insured limits. The Company performs credit evaluations of its customers’ financial condition and records reserves to provide for estimated credit losses. Accounts receivable are due from both domestic and international customers.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of ninety days or less to be cash equivalents. These investments, along with cash deposited in institutional money market funds, regular interest bearing depository accounts and non-interest bearing depository accounts, are classified as cash and cash equivalents on the accompanying consolidated balance sheets.

Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount and are subject to late fee penalties. Management develops its estimate of an allowance for uncollectible receivables based on the Company’s experience with specific customers, aging of outstanding invoices, its understanding of customers’ current economic circumstances and its own judgment as to the likelihood that the Company will ultimately receive payment. The Company writes off its accounts receivable when balances ultimately are deemed uncollectible. The allowance for doubtful accounts was not material as of December 31, 2021 and 2020.

Foreign Currencies

Generally, the functional currency of the Company’s foreign consolidated subsidiaries is the local currency. Assets and liabilities of its foreign subsidiaries are translated to U.S. dollars based on exchange rates at the end of the reporting period. Income and expense items are translated at the weighted-average exchange rates prevailing during the reporting period. Translation adjustments are accumulated in a separate component of stockholders’ equity. Transaction gains or losses are classified as other income (expense), net in the accompanying consolidated statements of operations and comprehensive income (loss). In instances where the financial statements of a foreign entity in a highly inflationary economy are material, they are remeasured as if the functional currency were the reporting currency. In these instances, the financial statements of those entities are remeasured into the reporting currency. A highly inflationary economy is one that has cumulative inflation of approximately 100% or more over a three-year period.

Deferred Financing Costs

Direct and incremental costs incurred in connection with securing debt financing are deferred and are amortized as additional interest expense using the effective interest method over the term of the related debt.

Capitalized Interest

During the development and construction periods of a project, including the financing of the Company’s upgraded satellite constellation, the Company capitalizes interest. Capitalization ceases when the asset is ready for its intended use or when these activities are substantially suspended. If some portions of a project are substantially complete and ready for use and other portions have not yet reached that stage, the Company ceases capitalizing costs on the completed portion of the project but continues to capitalize for the incomplete portion of the project.

Inventory

Inventory consists primarily of finished goods, although the Company at times also maintains an inventory of raw materials from third-party manufacturers. The Company outsources manufacturing of subscriber equipment to a third-party manufacturer and purchases accessories from third-party suppliers. The Company’s cost of inventory includes an allocation of overhead, including payroll and payroll-related costs of employees directly involved in bringing inventory to its existing condition, and freight. Inventories are valued using the average cost method and are carried at the lower of cost or net realizable value.

The Company’s expense for excess and obsolete inventory was not material during the years ended December 31, 2021, 2020 or 2019.
The Company has a manufacturing agreement with Benchmark Electronics Inc. ("Benchmark") to manufacture most of its subscriber equipment. Pursuant to the agreement, the Company may be required to purchase excess materials at cost plus a contractual markup if the materials are not used in production within the periods specified in the agreement. Benchmark will then repurchase such materials from the Company at the same price paid by the Company, as required for the production of the subscriber equipment.

The Company's inventory balance consisted of the following:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2020</td>
</tr>
<tr>
<td>Finished Goods</td>
<td>$18,395</td>
<td>$27,936</td>
</tr>
<tr>
<td>Raw Materials</td>
<td>11,850</td>
<td>5,983</td>
</tr>
<tr>
<td>Inventory Valuation Reserve</td>
<td>(1,201)</td>
<td>(1,439)</td>
</tr>
<tr>
<td>Total</td>
<td>$29,044</td>
<td>$32,480</td>
</tr>
</tbody>
</table>

Stock-Based Compensation

The Company accounts for stock-based compensation at fair value. The fair value of stock options is determined at the grant date using the Black-Scholes-Merton option pricing model. The fair value of restricted stock units ("RSUs") is equal to the closing price of the underlying common stock on the grant date. The fair value of an award that is ultimately expected to vest is recognized on a straight-line basis over the requisite service or performance period and is classified in the consolidated statements of operations and comprehensive income (loss) in a manner consistent with the classification of the recipient’s compensation. The expected vesting of the Company’s performance-based RSUs is based upon the probability that the Company achieves the defined performance goals. The level of achievement of performance goals, if any, is determined by the Compensation Committee. Stock-based awards to non-employee consultants are expensed at their grant-date fair value as services are provided according to the terms of their agreements and are classified in selling, general and administrative expenses in the accompanying consolidated statements of operations and comprehensive income (loss). Classification of stock-based compensation by line item on the balance sheet and statement of operations is presented below:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2020</td>
</tr>
<tr>
<td>Property and equipment, net</td>
<td>$2,376</td>
<td>$1,319</td>
</tr>
<tr>
<td>Inventory</td>
<td>436</td>
<td>261</td>
</tr>
<tr>
<td>Prepaid and other current assets</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>Cost of subscriber equipment</td>
<td>53</td>
<td>29</td>
</tr>
<tr>
<td>Cost of services (exclusive of depreciation and amortization)</td>
<td>8,037</td>
<td>5,037</td>
</tr>
<tr>
<td>Research and development</td>
<td>333</td>
<td>305</td>
</tr>
<tr>
<td>Selling, general and administrative</td>
<td>18,359</td>
<td>11,343</td>
</tr>
<tr>
<td>Total stock-based compensation</td>
<td>$29,616</td>
<td>$18,322</td>
</tr>
</tbody>
</table>
Property and Equipment

Property and equipment is carried at cost less accumulated depreciation. The Company applies judgment in determining the useful lives based on factors such as engineering data, long-term strategy for using the assets, the manufacturer’s estimated design life for the assets, laws and regulations that could impact the useful lives of the assets and other economic factors. The Company assesses the current estimated operational life of the satellites, including the potential impact of environmental factors on the satellites, ongoing operational enhancements and software upgrades when evaluating the useful lives of its satellites. Additionally, the Company reviews engineering data relating to the operation and performance of its satellite network. Depreciation is calculated using the straight-line method over the following estimated useful lives:

<table>
<thead>
<tr>
<th>Asset</th>
<th>Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satellites</td>
<td>12.5 years</td>
</tr>
<tr>
<td>Ground system</td>
<td>5-7 years</td>
</tr>
<tr>
<td>Equipment</td>
<td>3-5 years</td>
</tr>
<tr>
<td>Internally developed software and purchased software</td>
<td>3-7 years</td>
</tr>
<tr>
<td>Building</td>
<td>39 years</td>
</tr>
<tr>
<td>Building improvements</td>
<td>5-39 years</td>
</tr>
<tr>
<td>Leasehold improvements</td>
<td>shorter of useful life or remaining lease term</td>
</tr>
</tbody>
</table>

The Company calculates depreciation expense using the straight-line method and evaluates the appropriateness of the useful life used in this calculation on a quarterly basis or as events occur that require additional assessment.

Repairs and maintenance costs are expensed as incurred.

Derivative Financial Instruments

The Company uses derivatives (interest rate swap, swaption, cap) to manage its exposure to fluctuating interest rate risk on variable rate debt. Its derivatives are measured at fair value and are recorded on the consolidated balance sheets within other current liabilities and other assets. When the Company’s derivatives are designated as cash flow hedges, the effective portion of the changes in fair value of the derivatives are recorded in accumulated other comprehensive income (loss) within the Company’s consolidated balance sheets and subsequently recognized in earnings when the hedged items impact earnings. Any ineffective portion of a derivative’s change in fair value will be recognized in earnings in the same period in which the hedged interest payments affect earnings. Within the consolidated statements of operations and comprehensive income (loss), the gains and losses related to cash flow hedges are recognized within interest income (expense), net, as this is the same financial statement line item associated with the hedged items. Cash flows from hedging activities are included in operating activities within the Company’s consolidated statements of cash flows, which is the same category as the item being hedged. See Note 8 for further information.

Long-Lived Assets

The Company assesses its long-lived assets for impairment when indicators of impairment exist. Recoverability of assets is measured by comparing the carrying amounts of the assets to the future undiscounted cash flows expected to be generated by the assets. Any impairment loss would be measured as the excess of the assets’ carrying amount over their fair value.

Intangible Assets

The Company’s intangible assets with finite lives are amortized over their useful lives and reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. If any indicators were present, the Company would test for recoverability by comparing the carrying amount of the asset to the net undiscounted cash flows expected to be generated from the asset. If those net undiscounted cash flows do not exceed the carrying amount (i.e., the asset is not recoverable), the Company would perform the next step, which is to determine the fair value of the asset and record an impairment loss, if any. The Company evaluates the useful lives for these intangible assets each reporting period to determine whether events and circumstances warrant a revision in their remaining useful lives.
Amortization is calculated using the straight-line method over the following estimated useful lives:

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual property</td>
<td>20 years</td>
</tr>
<tr>
<td>Assembled workforce</td>
<td>7 years</td>
</tr>
<tr>
<td>Patents</td>
<td>14 - 20 years</td>
</tr>
</tbody>
</table>

**Revenue Recognition**

The Company derives its revenue primarily as a wholesaler of satellite communications products and services. The primary types of revenue include (i) service revenue (access and usage-based airtime fees), (ii) subscriber equipment revenue, and (iii) revenue generated by providing engineering and support services to commercial and government customers. In addition to the discussion immediately below, see Note 12 for further discussion of the Company's revenue recognition.

**Wholesaler of satellite communications products and services**

Pursuant to wholesale agreements, the Company sells its products and services to service providers and recognizes revenue as it fulfills its performance obligations to the service providers, based on an amount that reflects the consideration to which it expects to be entitled in exchange for those products and services. The service providers, in turn, sell the products and services to other distributors or directly to the end users. The Company recognizes revenue when an arrangement exists, services or equipment are transferred, the transaction price is determined, the arrangement has commercial substance, and collection of consideration is probable.

**Contracts with multiple performance obligations**

At times, the Company sells services and equipment through arrangements that bundle equipment, airtime and other services. For these revenue arrangements when the Company sells services and equipment in bundled arrangements and determines that it has separate distinct performance obligations, the Company allocates the bundled contract price among the various performance obligations based on each deliverable’s stand-alone selling price. If the stand-alone selling price is not directly observable, the Company estimates the amount to be allocated for each performance obligation based on observable market transactions or the residual approach. When the Company determines the performance obligations are not distinct, the Company recognizes revenue on a combined basis. To the extent the Company's contracts include variable consideration, the transaction price includes both fixed and variable consideration. The variable consideration contained within the Company's contracts with customers may include discounts, credits and other similar items. When a contract includes variable consideration, the Company evaluates the estimate of the variable consideration to determine whether the estimate needs to be constrained; therefore, the Company includes the variable consideration in the transaction price only to the extent that it is probable that a significant reversal of the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Variable consideration estimates are updated at the end of each quarter.

**Service revenue sold on a stand-alone basis**

Service revenue is generated from the Company’s service providers through usage of its satellite system and through fixed monthly access fees per user charged to service providers. Revenue for usage is recognized when usage occurs and billed in arrears with payments generally submitted within 30 days. Revenue for fixed-per-user access fees is billed monthly in advance and generally recognized over the month, or related usage period, in which the services are provided to the end user. The Company sells prepaid services in the form of e-vouchers and prepaid cards. A liability is established equal to the cash paid upon purchase for the e-voucher or prepaid card. The Company recognizes revenue from (i) the prepaid services upon the use of the e-voucher or prepaid card by the customer and (ii) the estimated pattern of use. The Company does not offer refunds for unused prepaid services.

**Services sold to the U.S. government**

The Company provides airtime and airtime support to U.S. government and other authorized customers pursuant to the Enhanced Mobile Satellite Services (“EMSS”) contract managed by the U.S. Space Force. Under the terms of this agreement, authorized customers continue to utilize airtime services, provided through the U.S. government’s dedicated gateway. These services include unlimited global standard and secure voice, low and high-speed data, paging, broadcast and Distributed Tactical Communications Services (“DTCS”) services for an unlimited number of Department of Defense (“DoD”) and other federal subscribers. Under this contract, revenue is based on the annual fee for the fixed-price contract with unlimited
subscribers and is recognized on a straight-line basis over each contractual year, with equal payments submitted monthly. The U.S. government purchases its subscriber equipment from third-party distributors and not directly from the Company.

**Subscriber equipment sold on a stand-alone basis**

The Company recognizes subscriber equipment sales and the related costs when title to the equipment (and the risks and rewards of ownership) passes to the customer, typically upon shipment. Customers are billed when inventory is shipped, and payment is generally due within 30 days. Customers do not have rights of return without prior consent from the Company.

**Government engineering and support services**

The Company provides maintenance services to the U.S. government’s dedicated gateway. This revenue is recognized ratably over the periods in which the services are provided; the related costs are expensed as incurred.

**Other government and commercial engineering and support services**

The Company also provides engineering services to assist customers in developing new technologies for use on the Company’s satellite system. Fees to customers under these agreements are generally based on milestones and payments are submitted as milestones are achieved. The revenue associated with fixed-fee contracts is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying its performance obligation. The Company does not include purchases of goods from a third party in its evaluation of costs incurred. Incurred costs represent work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. The revenue associated with cost-plus-fixed-fee contracts is recognized to the extent of estimated costs incurred plus the applicable fees earned. The Company considers fixed fees under cost-plus-fixed-fee contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

**Research and Development**

Research and development costs are charged to expense in the period in which they are incurred.

**Advertising Costs**

Costs associated with advertising and promotions are expensed as incurred. Advertising expenses were $1.9 million, $1.2 million and $0.9 million for the years ended December 31, 2021, 2020 and 2019, respectively.

**Income Taxes**

The Company accounts for income taxes using the asset and liability approach, which requires the recognition of tax benefits or expenses for temporary differences between the financial reporting and tax bases of assets and liabilities. A valuation allowance is established when necessary to reduce deferred tax assets to the amounts expected to be realized. The Company also recognizes a tax benefit from uncertain tax positions only if it is “more likely than not” that the position is sustainable based on its technical merits. The Company’s policy is to recognize interest and penalties on uncertain tax positions as a component of income tax expense.

**Net Loss Per Share**

The Company calculates basic net loss per share by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share takes into account the effect of potentially dilutive common shares when the effect is dilutive. The effect of potentially dilutive common shares, including common stock issuable upon exercise of outstanding stock options, is computed using the treasury stock method. The effect of potentially dilutive common shares from the conversion of outstanding convertible preferred securities was computed using the as-if converted method at the stated conversion rate. The Company’s unvested RSUs awarded to the board of directors contain non-forfeitable rights to dividends and therefore are considered to be participating securities in periods of net income. The calculation of basic and diluted net loss per share excludes net income attributable to these unvested RSUs from the numerator and excludes the impact of these unvested RSUs from the denominator.
3. Cash and Cash Equivalents and Marketable Securities

Cash and Cash Equivalents

The following table summarizes the Company’s cash and cash equivalents:

<table>
<thead>
<tr>
<th>December 31,</th>
<th>Recurring Fair Value Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(In thousands)</td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents:</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>$28,496</td>
</tr>
<tr>
<td>Money market funds</td>
<td>292,417</td>
</tr>
<tr>
<td>Fixed income debt securities</td>
<td>—</td>
</tr>
<tr>
<td>Total cash and cash equivalents</td>
<td>$320,913</td>
</tr>
</tbody>
</table>

Marketable Securities

As of December 31, 2021, the Company did not hold any investment positions in marketable securities. As of December 31, 2020, the Company’s marketable securities consisted of only fixed-income securities. The amortized cost of these securities amounted to $7.6 million and the estimated fair value amounted to $7.5 million as of December 31, 2020. The gross unrealized gains and gross unrealized losses on these marketable securities were not material as of December 31, 2020. All marketable securities were classified as Level 2 investments in the fair value hierarchy.

The following table presents the contractual maturities of the Company's fixed income debt securities:

<table>
<thead>
<tr>
<th>December 31, 2020</th>
<th>Amortized Cost (In thousands)</th>
<th>Fair Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mature within one year</td>
<td>$5,530</td>
<td>$5,525</td>
</tr>
<tr>
<td>Mature after one year and within three years</td>
<td>2,024</td>
<td>2,023</td>
</tr>
<tr>
<td>Total</td>
<td>$7,554</td>
<td>$7,548</td>
</tr>
</tbody>
</table>
4. Property and Equipment

Property and equipment consisted of the following:

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2021 (In thousands)</th>
<th>December 31, 2020 (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satellite system</td>
<td>$3,197,460</td>
<td>$3,197,460</td>
</tr>
<tr>
<td>Ground system</td>
<td>75,899</td>
<td>64,581</td>
</tr>
<tr>
<td>Equipment</td>
<td>46,461</td>
<td>44,871</td>
</tr>
<tr>
<td>Internally developed software and purchased software</td>
<td>290,979</td>
<td>251,320</td>
</tr>
<tr>
<td>Building and leasehold improvements</td>
<td>30,198</td>
<td>29,924</td>
</tr>
<tr>
<td>Total depreciable property and equipment</td>
<td>3,640,997</td>
<td>3,588,156</td>
</tr>
<tr>
<td>Less: accumulated depreciation</td>
<td>(1,253,354)</td>
<td>(959,606)</td>
</tr>
<tr>
<td>Total depreciable property and equipment, net of accumulated depreciation</td>
<td>2,387,643</td>
<td>2,628,550</td>
</tr>
<tr>
<td>Land</td>
<td>8,037</td>
<td>8,037</td>
</tr>
<tr>
<td>Construction-in-process:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground spares</td>
<td>225,254</td>
<td>225,254</td>
</tr>
<tr>
<td>Other construction-in-process</td>
<td>41,402</td>
<td>55,235</td>
</tr>
<tr>
<td>Total property and equipment, net of accumulated depreciation</td>
<td>$2,662,336</td>
<td>$2,917,076</td>
</tr>
</tbody>
</table>

Other construction-in-process consisted of the following:

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2021 (In thousands)</th>
<th>December 31, 2020 (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internally developed and purchased software</td>
<td>$29,443</td>
<td>$44,444</td>
</tr>
<tr>
<td>Equipment</td>
<td>11,558</td>
<td>10,388</td>
</tr>
<tr>
<td>Ground system</td>
<td>401</td>
<td>403</td>
</tr>
<tr>
<td>Total other construction-in-process</td>
<td>$41,402</td>
<td>$55,235</td>
</tr>
</tbody>
</table>

Depreciation expense was $303.8 million, $301.7 million and $296.1 million for the years ended December 31, 2021, 2020 and 2019, respectively.
5. Intangible Assets

The Company had identifiable intangible assets as follows:

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2021</th>
<th></th>
<th>December 31, 2020</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Useful Life</td>
<td></td>
<td>Gross Carrying Value</td>
<td>Accumulated Amortization</td>
</tr>
<tr>
<td></td>
<td>(In thousands)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indefinite life intangible assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade names</td>
<td>Indefinite</td>
<td>$ 21,195</td>
<td>$</td>
<td>$                $ 21,195</td>
</tr>
<tr>
<td>Spectrum and licenses</td>
<td>Indefinite</td>
<td>14,030</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>35,225</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Definite life intangible assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual property</td>
<td></td>
<td>16,439</td>
<td>(9,637)</td>
<td>6,802</td>
</tr>
<tr>
<td>Assembled workforce</td>
<td></td>
<td>5,678</td>
<td>(4,055)</td>
<td>1,623</td>
</tr>
<tr>
<td>Patents</td>
<td></td>
<td>441</td>
<td>(92)</td>
<td>349</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>22,558</td>
<td>(13,784)</td>
<td>8,774</td>
</tr>
<tr>
<td><strong>Total intangible assets</strong></td>
<td></td>
<td>$57,783</td>
<td>(13,784)</td>
<td>$43,999</td>
</tr>
</tbody>
</table>

Amortization expense was $1.6 million, $1.5 million and $1.6 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Future amortization expense with respect to intangible assets existing at December 31, 2021, by year and in the aggregate, was as follows:

<table>
<thead>
<tr>
<th>Year ending December 31,</th>
<th>Amount (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$ 1,555</td>
</tr>
<tr>
<td>2023</td>
<td>1,555</td>
</tr>
<tr>
<td>2024</td>
<td>744</td>
</tr>
<tr>
<td>2025</td>
<td>744</td>
</tr>
<tr>
<td>2026</td>
<td>744</td>
</tr>
<tr>
<td>Thereafter</td>
<td>3,432</td>
</tr>
<tr>
<td><strong>Total estimated future amortization expense</strong></td>
<td>$ 8,774</td>
</tr>
</tbody>
</table>

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### 6. Leases

The Company has operating leases for land, office space, satellite network operations center (“SNOC”) facilities, system gateway facilities, a warehouse and a distribution center. The Company also has operations and maintenance (“O&M”) agreements that include leases associated with two teleport network facilities. Some of the Company's leases include options to extend the leases for up to 10 years. The Company does not include term extension options as part of its present value calculation of lease liabilities unless it is reasonably certain to exercise those options. As of December 31, 2021, the Company’s weighted-average remaining lease term relating to its operating leases was 5.9 years, and the weighted-average discount rate used to calculate the operating lease liability payment was 6.7%.

The table below summarizes the Company’s lease-related assets and liabilities:

<table>
<thead>
<tr>
<th>Classification</th>
<th>December 31, 2021 (In thousands)</th>
<th>December 31, 2020 (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating lease assets</td>
<td>Noncurrent Other assets</td>
<td>$20,369</td>
</tr>
<tr>
<td>Total lease assets</td>
<td></td>
<td>$20,369</td>
</tr>
<tr>
<td>Operating lease liabilities</td>
<td>Current Accrued expenses and other current liabilities</td>
<td>$3,703</td>
</tr>
<tr>
<td>Noncurrent Other long-term liabilities</td>
<td></td>
<td>$19,587</td>
</tr>
<tr>
<td>Total lease liabilities</td>
<td></td>
<td>$23,290</td>
</tr>
</tbody>
</table>

During the years ended December 31, 2021, 2020 and 2019, the Company incurred lease expense of $5.6 million, $5.6 million and $5.1 million, respectively. A portion of rent expense during these comparable periods was derived from leases that were not included within the ROU asset and liability balances shown above as they had terms shorter than twelve months and were therefore excluded from balance sheet recognition under ASU 2016-02.

Future payment obligations with respect to the Company's operating leases in which it was the lessee at December 31, 2021, by year and in the aggregate, were as follows:

<table>
<thead>
<tr>
<th>Year Ending December 31, Amount (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
</tr>
<tr>
<td>2023</td>
</tr>
<tr>
<td>2024</td>
</tr>
<tr>
<td>2025</td>
</tr>
<tr>
<td>2026</td>
</tr>
<tr>
<td>Thereafter</td>
</tr>
<tr>
<td>Total lease payments</td>
</tr>
</tbody>
</table>

### Lessor Arrangements

Operating leases in which the Company is a lessor consist primarily of hosting agreements with Aireon LLC (“Aireon”) (see Note 14) and L3Harris Technologies, Inc. (“L3Harris”) for space on the Company’s satellites. These agreements provide for a fee that will be recognized over the life of the satellites, currently estimated to be approximately 12.5 years. Lease income related to these agreements was $21.4 million, $21.4 million and $21.6 million for the years ended December 31, 2021, 2020 and 2019, respectively. Lease income is recorded as hosted payload and other data service revenue within service revenue on the Company’s consolidated statements of operations and comprehensive income (loss).
Both Aireon and L3Harris have made payments for their hosting agreements and the Company expects they will continue to do so. Future income with respect to the Company’s operating leases in which it was the lessor at December 31, 2021, by year and in the aggregate, is as follows:

<table>
<thead>
<tr>
<th>Year Ending December 31,</th>
<th>Amount (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$21,445</td>
</tr>
<tr>
<td>2023</td>
<td>21,445</td>
</tr>
<tr>
<td>2024</td>
<td>21,445</td>
</tr>
<tr>
<td>2025</td>
<td>21,445</td>
</tr>
<tr>
<td>2026</td>
<td>21,445</td>
</tr>
<tr>
<td>Thereafter</td>
<td>77,462</td>
</tr>
<tr>
<td>Total lease income</td>
<td>$184,687</td>
</tr>
</tbody>
</table>

7. Debt

Term Loan and Revolving Facility

On November 4, 2019, pursuant to a loan agreement (as amended to date, the “Credit Agreement”), the Company entered into a $1,450.0 million term loan with Deutsche Bank AG (the “Original Term Loan”) and an accompanying $100.0 million revolving loan (the “Revolving Facility”). The Original Term Loan was issued at a price equal to 99.5% of its face value, with a maturity date in November 2026. On February 7, 2020, the Company closed on an additional $200.0 million under its Credit Agreement for a total borrowing of $1,650.0 million (as expanded, the “Term Loan”). The additional amount is fungible with the Original Term Loan, having the same maturity date, interest rate and other terms, but was issued at a 1.0% premium to face value. The Term Loan initially bore interest at an annual rate of LIBOR plus 3.75%, with a 1.0% LIBOR floor.

The Term Loan was repriced in January 2021 for an annual interest rate of LIBOR plus 2.75%, with a 1.0% LIBOR floor. The Term Loan was repriced again in July 2021 for a new annual interest rate of LIBOR plus 2.50%, with a 0.75% LIBOR floor. The maturity date remains unchanged in November 2026. The interest rate on the Revolving Facility remained unchanged at LIBOR plus 3.75% with no LIBOR floor, and a maturity date in November 2024.

In July 2021, the Company paid $4.1 million of original issuance costs to reprice the Term Loan. Lenders making up approximately $65.2 million of the Term Loan did not participate in the repricing. Those portions of the Term Loan were replaced by new or existing lenders. This resulted in a $0.9 million loss on extinguishment of debt during the year ended December 31, 2021, as the Company wrote off the unamortized debt issuance costs related to the lenders who were fully repaid in an exchange of principal.

In February 2020, the Company used the proceeds of the additional $200.0 million borrowed under the Term Loan, together with cash on hand, to prepay and retire all of the indebtedness outstanding under then outstanding senior unsecured promissory notes (the “Notes”), including premiums for early prepayment. To prepay the Notes, the Company paid a call price equal to the present value at the redemption rate of (i) 105.125% of the $360.0 million principal amount of the Notes plus (ii) all interest due through the first call date in April 2020, representing a total call premium of $23.5 million, plus all accrued and unpaid interest to the redemption date. As a result of the prepayment, the Company also wrote off the remaining unamortized debt issuance costs, which resulted in a $30.2 million loss on extinguishment of debt during the year ended December 31, 2020.

As of December 31, 2021 and 2020, the Company reported an aggregate of $1,621.1 million and $1,637.6 million in borrowings under the Term Loan, respectively. These amounts do not include $23.1 million and $24.0 million of net unamortized deferred financing costs as of December 31, 2021 and 2020, respectively. The net principal balance in borrowings in the accompanying consolidated balance sheets as of December 31, 2021 and 2020 amounted to $1,598.0 million and $1,613.6 million, respectively. As of December 31, 2021 and 2020, based upon over-the-counter bid levels (Level 2 - market approach), the fair value of the borrowings under the Term Loan due in 2026 was $1,622.1 million and $1,647.9 million, respectively. The Company had not borrowed under the Revolving Facility as of December 31, 2021 or 2020.

The Credit Agreement restricts the Company’s ability to incur liens, engage in mergers or asset sales, pay dividends, repay subordinated indebtedness, incur indebtedness, make investments and loans, and engage in other transactions as specified in the Credit Agreement. The Credit Agreement provides for specified exceptions, including baskets measured as a percentage of

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trailing twelve months of earnings before interest, taxes, depreciation and amortization ("EBITDA") and unlimited exceptions based on achievement and maintenance of specified leverage ratios, for, among other things, incurring indebtedness and liens and making investments, restricted payments for dividends and share repurchases, and payments of subordinated indebtedness. The Credit Agreement also contains a mandatory prepayment sweep mechanism with respect to a portion of the Company’s excess cash flow (as defined in the Credit Agreement), which is phased out based on achievement and maintenance of specified leverage ratios. As of December 31, 2021, the Company was below the specified leverage ratio and a mandatory prepayment sweep was therefore not required.

The Credit Agreement contains no financial maintenance covenants with respect to the Term Loan. With respect to the Revolving Facility, the Credit Agreement requires the Company to maintain a consolidated first lien net leverage ratio (as defined in the Credit Agreement) of no greater than 6.25 to 1 if more than 35% of the Revolving Facility has been drawn. The Credit Agreement contains other customary representations and warranties, affirmative and negative covenants, and events of default. The Company was in compliance with all covenants as of December 31, 2021.

The effective interest rate on outstanding principal of the Term Loan was 4.3% during the year ended December 31, 2021.

**Interest on Debt**

Total interest incurred includes amortization of deferred financing fees and capitalized interest. To reprice the Term Loan in January 2021 and July 2021, the Company incurred third-party financing costs of $3.6 million and $1.3 million, respectively. These costs were expensed and are included within interest expense on the consolidated statements of operations and comprehensive income (loss) for the year ended December 31, 2021. All third-party financing costs incurred during the years ended December 31, 2020 and 2019 were also expensed and are included within interest expense on the consolidated statements of operations and comprehensive income (loss).

The following table presents the interest and amortization of deferred financing fees related to the Term Loan:

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2021 (In thousands)</th>
<th>2020 (In thousands)</th>
<th>2019 (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total interest incurred</td>
<td>$72,816</td>
<td>$99,155</td>
<td>$140,532</td>
</tr>
<tr>
<td>Amortization of deferred financing fees</td>
<td>$4,316</td>
<td>$3,773</td>
<td>$21,320</td>
</tr>
<tr>
<td>Capitalized interest</td>
<td>$2,146</td>
<td>$3,225</td>
<td>$15,055</td>
</tr>
</tbody>
</table>

As of December 31, 2021 and 2020, accrued interest under the Term Loan was $0.1 million and $0.2 million, respectively.

**Total Debt**

Future minimum principal repayments with respect to the Company's debt balances existing at December 31, 2021, by year and in the aggregate, are as follows:

<table>
<thead>
<tr>
<th>Year ending December 31, (In thousands)</th>
<th>Amount (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$16,500</td>
</tr>
<tr>
<td>2023</td>
<td>16,500</td>
</tr>
<tr>
<td>2024</td>
<td>16,500</td>
</tr>
<tr>
<td>2025</td>
<td>16,500</td>
</tr>
<tr>
<td>2026</td>
<td>1,555,125</td>
</tr>
<tr>
<td>Total debt commitments</td>
<td>1,621,125</td>
</tr>
<tr>
<td>Less: Original issuance discount</td>
<td>23,109</td>
</tr>
<tr>
<td>Less: Total short-term debt</td>
<td>16,500</td>
</tr>
<tr>
<td>Total long-term debt, net</td>
<td>$1,581,516</td>
</tr>
</tbody>
</table>
The repayment schedule above excludes future amounts that may be required to be prepaid pursuant to the excess cash flow sweep provision of the Credit Agreement, as those amounts are not determinable in advance.

8. Derivative Financial Instruments

The Company is exposed to interest rate fluctuations related to its Term Loan. The Company has reduced its exposure to fluctuations in the cash flows associated with changes in the variable interest rate by entering into offsetting positions through the use of interest rate swap and interest rate cap contracts which result in recognizing a fixed interest rate for a portion of the Term Loan. This will reduce the negative impact of increases in the variable rate over the term of the derivative contracts. These contracts are not used for trading or other speculative purposes. Historically, the Company has not incurred, and does not expect to incur in the future, any losses as a result of counterparty default.

Hedge effectiveness of interest rate swap and cap contracts is based on a long-haul hypothetical derivative methodology and includes all changes in value. The Company formally assesses, both at the hedge’s inception and on an ongoing quarterly basis, whether the designated derivative instruments are highly effective in offsetting changes in the cash flows of the hedged items. When the hedging instrument is sold, expires, is terminated, is exercised, no longer qualifies for hedge accounting, is de-designated, or is no longer probable, hedge accounting is discontinued prospectively.

Interest Rate Swaps

On November 27, 2019, the Company executed a long-term interest rate swap (“Swap”) through November 2021 to mitigate variability in forecasted interest payments on a portion of the Company’s borrowings under its Term Loan. On the last business day of each month, the Company received variable interest payments based on one-month LIBOR from the counterparty. The Company paid a fixed rate of 1.565% per annum on the Swap until its expiration in November 2021. The Company also entered into an interest rate swaption agreement (“Swaption”), for which the Company paid a fixed annual rate of 0.50%. At inception, the Swap and Swaption (collectively, the “swap contracts”) were designated as cash flow hedges for hedge accounting. The unrealized changes in market value were recorded in accumulated other comprehensive income (loss) and any remaining balance will be reclassified into earnings during the period in which the hedged transaction affects earnings. Due to the changes made to the Term Loan as a result of the July 2021 repricing, at that time the Company elected to de-designate the Swap as a cash flow hedge. Accordingly, as the related interest payments were still probable, the accumulated balance within other comprehensive income (loss) as of the de-designation date was amortized into earnings through the November 2021 expiration date. As of December 31, 2020, the Swap carried a notional amount of $1.0 billion and had a current liability balance of $5.2 million in other current liabilities related to the fair value of the Swap.

The Swaption carried a notional amount of $1.0 billion as of December 31, 2020. At December 31, 2020, the premium liability was netted with the Swaption, for a fair value of $4.4 million which was recorded in other current liabilities. The Company sold the Swaption in May 2021 for $0.7 million. The Company continued to pay the fixed annual rate for the Swaption through the term of the Swaption, which expired in November 2021.

Interest Rate Cap

On July 21, 2021, the Company entered into the Cap that began in December 2021 upon the expiration of the Swap. The Cap manages the Company’s exposure to interest rate movements on a portion of the Term Loan from the Cap’s inception through the maturity of the Term Loan in November 2026. The Cap provides the Company with the right to receive payment if one-month LIBOR exceeds 1.5%. Beginning in December 2021, the Company began to pay a fixed monthly premium based on an annual rate of 0.31% for the Cap. The Cap carried a notional amount of $1.0 billion as of December 31, 2021.

The Cap is designed to mirror the terms of the Term Loan and to offset the cash flows being hedged. The Company designated the Cap as a cash flow hedge of the variability of the LIBOR-based interest payments on the Term Loan. The effective portion of the Cap’s change in fair value will be recorded in accumulated other comprehensive income (loss). Any ineffective portion of the Cap’s change in fair value will be recorded in current earnings as interest expense.
**Fair Value of Derivative Instruments**

As of December 31, 2021, the Company had an asset balance of $4.9 million recorded in other assets for the fair value of the Cap.

During the years ended December 31, 2021, 2020, and 2019 the Company collectively incurred $8.5 million, $9.1 million, and $0.3 million, respectively, in net interest expense for the swap contracts and the Cap. Gains and losses resulting from fair value adjustments to the Cap are recorded within accumulated other comprehensive income (loss) within the Company’s consolidated balance sheet and reclassified to interest expense on the dates that interest payments become due. Cash flows related to the derivative contracts are included in cash flows from operating activities on the consolidated statements of cash flows. Over the next 12 months, the Company expects any gains or losses for cash flow hedges amortized from accumulated other comprehensive income (loss) into earnings to have an immaterial impact on the Company’s consolidated financial statements.

The following table presents the amount of unrealized gain or loss and related tax impact associated with the derivative instruments that the Company recorded in its consolidated statements of operations and comprehensive income (loss):

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2020</td>
<td>2019</td>
</tr>
<tr>
<td>Unrealized gain (loss), net of tax</td>
<td>$10,408</td>
<td>$7,036</td>
<td>$121</td>
</tr>
<tr>
<td>Tax benefit (expense)</td>
<td>$(3,316)</td>
<td>$2,464</td>
<td>$(41)</td>
</tr>
</tbody>
</table>

**9. Stock-Based Compensation**

In May 2019, the Company’s stockholders approved the amendment and restatement of the Company’s 2015 Equity Incentive Plan (as so amended and restated, the “Amended 2015 Plan”). As of December 31, 2021, the remaining aggregate number of shares of the Company’s common stock available for future grants under the Amended 2015 Plan was 10,462,457. The Amended 2015 Plan provides for the grant of stock-based awards, including nonqualified stock options, incentive stock options, restricted stock, restricted stock units (“RSUs”), stock appreciation rights and other equity securities to employees, consultants and non-employee directors of the Company and its affiliated entities. The number of shares of common stock available for issuance under the Amended 2015 Plan is reduced by (i) one share for each share of common stock issued pursuant to an appreciation award, such as a stock option or stock appreciation right with an exercise or strike price of at least 100% of the fair market value of the underlying common stock on the date of grant, and (ii) 1.8 shares for each share of common stock issued pursuant to any stock award that is not an appreciation award, also referred to as a “full value award.” The Amended 2015 Plan allows the Company to utilize a broad array of equity incentives and performance cash incentives in order to secure and retain the services of its employees, directors and consultants, and to provide long-term incentives that align the interests of its employees, directors and consultants with the interests of the Company’s stockholders. The Company accounts for stock-based compensation at fair value.

**Stock Options**

The stock option awards granted to employees generally (i) have a term of ten years, (ii) vest over four years with 25% vesting after the first year of service and the remainder vesting ratably on a quarterly basis thereafter, (iii) are contingent upon employment on the vesting date, and (iv) have an exercise price equal to the fair market value of the underlying shares at the date of grant.
The Company uses the Black-Scholes-Merton option pricing model to determine the fair value of its stock option awards on the date of grant. The Company will reconsider the use of the Black-Scholes-Merton model if additional information becomes available in the future that indicates another model would be more appropriate or if grants issued in future periods have characteristics that cannot be reasonably estimated under this model.

The Black-Scholes-Merton option pricing model incorporates the following assumptions:

- **Volatility** - The expected volatility of the options granted was estimated based upon historical volatility of the Company's share price of its common stock through daily observations of its trading history.
- **Expected life of options** - The expected life of options granted to employees was determined from the simplified method.
- **Risk-free interest rate** - The yield on zero-coupon U.S. Treasury strips was used to extrapolate a forward-yield curve. This “term structure” of future interest rates was then input into a numeric model to provide the equivalent risk-free rate to be used in the Black-Scholes-Merton model based on the expected term of the underlying grants.
- **Dividend yield** - The Black-Scholes-Merton valuation model requires an expected dividend yield as an input. The Company does not anticipate paying dividends during the expected term of the grants; therefore, the dividend rate is assumed to be zero.

The Company has historically granted stock options to newly hired and promoted employees. During 2019, the Company granted approximately 139,000 stock options with an estimated aggregate grant date fair value of $1.3 million. The Company did not grant any stock options during the years ended December 31, 2021 and 2020.

The following table summarizes weighted-average assumptions used in the Company’s calculations of fair value:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected volatility</td>
<td>40.78%</td>
</tr>
<tr>
<td>Expected term (years)</td>
<td>6.11</td>
</tr>
<tr>
<td>Expected dividends</td>
<td>—%</td>
</tr>
<tr>
<td>Risk free interest rate</td>
<td>2.59%</td>
</tr>
</tbody>
</table>

75
A summary of the activity of the Company’s stock options is as follows:

<table>
<thead>
<tr>
<th>Shares</th>
<th>Weighted-Average Exercise Price Per Share</th>
<th>Weighted-Average Remaining Contractual Term (Years)</th>
<th>Aggregate Intrinsic Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options outstanding at December 31, 2018</td>
<td>5,703</td>
<td>$8.29</td>
<td></td>
</tr>
<tr>
<td>Granted</td>
<td>139</td>
<td>21.12</td>
<td></td>
</tr>
<tr>
<td>Cancelled or expired</td>
<td>(1)</td>
<td>11.80</td>
<td></td>
</tr>
<tr>
<td>Exercised</td>
<td>(1,670)</td>
<td>8.11</td>
<td>$29,584</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(18)</td>
<td>11.74</td>
<td></td>
</tr>
<tr>
<td>Options outstanding at December 31, 2019</td>
<td>4,153</td>
<td>$8.78</td>
<td>4.03</td>
</tr>
<tr>
<td>Cancelled or expired</td>
<td>(5)</td>
<td>20.17</td>
<td></td>
</tr>
<tr>
<td>Exercised</td>
<td>(1,581)</td>
<td>8.14</td>
<td>$33,836</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(13)</td>
<td>18.17</td>
<td></td>
</tr>
<tr>
<td>Options outstanding at December 31, 2020</td>
<td>2,554</td>
<td>$9.10</td>
<td>3.94</td>
</tr>
<tr>
<td>Cancelled or expired</td>
<td>(3)</td>
<td>10.67</td>
<td></td>
</tr>
<tr>
<td>Exercised</td>
<td>(857)</td>
<td>8.51</td>
<td>$31,544</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(13)</td>
<td>16.07</td>
<td></td>
</tr>
<tr>
<td>Options outstanding at December 31, 2021</td>
<td>1,681</td>
<td>$9.35</td>
<td>3.28</td>
</tr>
<tr>
<td>Options exercisable at December 31, 2021</td>
<td>1,603</td>
<td>$8.84</td>
<td>3.11</td>
</tr>
<tr>
<td>Options exercisable and expected to vest at December 31, 2021</td>
<td>1,680</td>
<td>$9.34</td>
<td>3.28</td>
</tr>
</tbody>
</table>

The Company recognized $0.8 million, $1.0 million and $1.3 million of stock-based compensation expense related to stock options in the years ended December 31, 2021, 2020 and 2019, respectively.

The weighted-average grant date fair value of options granted during the year ended December 31, 2019 was $9.18. The total fair value of the shares vested during the years ended December 31, 2021, 2020 and 2019 was $2.3 million, $1.4 million and $1.4 million, respectively.

As of December 31, 2021, the total unrecognized cost related to non-vested options was approximately $0.6 million. This cost is expected to be recognized over a weighted-average period of 0.9 years.

**Restricted Stock Units**

RSUs represent the right to receive a share of common stock at a future date. RSUs granted to employees for service generally vest over four years, with 25% vesting on the first anniversary of the grant date and the remainder vesting ratably on a quarterly basis thereafter, subject to continued employment. The RSUs granted to non-employee directors generally vest in full on the first anniversary of the grant date. Some RSUs granted to employees for performance vest upon the completion of defined performance goals, subject to continued employment. RSUs are classified as equity awards because the RSUs will be paid in the Company’s common stock upon vesting. The fair value of RSUs is determined at the grant date based on the closing price of the Company’s common stock on the date of grant. The related compensation expense is recognized over the service period and is based on the grant date fair value of the Company’s common stock and the number of shares expected to vest. The fair value of the awards is not remeasured at the end of each reporting period. RSUs do not carry voting rights until the RSUs are vested and the underlying shares are released in accordance with the terms of the award.
RSU Summary

A summary of the Company’s activity for RSUs is as follows:

<table>
<thead>
<tr>
<th></th>
<th>RSUs (In thousands)</th>
<th>Weighted-Average Grant Date Fair Value Per RSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding at December 31, 2018</td>
<td>3,077</td>
<td>$10.13</td>
</tr>
<tr>
<td>Granted</td>
<td>1,058</td>
<td>22.50</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(102)</td>
<td>14.86</td>
</tr>
<tr>
<td>Released</td>
<td>(1,331)</td>
<td>10.52</td>
</tr>
<tr>
<td>Outstanding at December 31, 2019</td>
<td>2,702</td>
<td>$14.62</td>
</tr>
<tr>
<td>Granted</td>
<td>1,061</td>
<td>26.73</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(92)</td>
<td>17.72</td>
</tr>
<tr>
<td>Released</td>
<td>(1,007)</td>
<td>15.63</td>
</tr>
<tr>
<td>Outstanding at December 31, 2020</td>
<td>2,664</td>
<td>$18.96</td>
</tr>
<tr>
<td>Granted</td>
<td>913</td>
<td>41.55</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(115)</td>
<td>29.49</td>
</tr>
<tr>
<td>Released</td>
<td>(912)</td>
<td>21.12</td>
</tr>
<tr>
<td>Outstanding at December 31, 2021</td>
<td>2,550</td>
<td>$25.80</td>
</tr>
<tr>
<td>Vested and unreleased at December 31, 2021</td>
<td>860</td>
<td></td>
</tr>
</tbody>
</table>

(1) These RSUs were granted to the Company's board of directors as a part of their compensation for board and committee service and had vested but had not yet settled, meaning that the underlying shares of common stock had not been issued and released.

As of December 31, 2021, the total unrecognized cost related to non-vested RSUs was approximately $22.2 million. This cost is expected to be recognized over a weighted-average period of 1.36 years. The Company recognized $26.0 million, $15.7 million and $13.8 million of stock-based compensation expense related to RSUs in the years ended December 31, 2021, 2020 and 2019, respectively.

Service-Based RSU Awards

The majority of the annual compensation the Company provides to non-employee members of its board of directors is paid in the form of RSUs. In addition, some members of the Company’s board of directors elect to receive the remainder of their annual compensation, or a portion thereof, in the form of RSUs. An aggregate amount of approximately 39,000, 58,000 and 76,000 service-based RSUs were granted to the Company’s non-employee directors as a result of these payments and elections during the years ended December 31, 2021, 2020 and 2019, respectively, with an estimated grant date fair value of $1.6 million, $1.4 million and $1.4 million, respectively.

During the years ended December 31, 2021, 2020 and 2019, the Company granted approximately 531,000, 713,000 and 740,000 service-based RSUs, respectively, to its employees, with an estimated aggregate grant date fair value of $22.0 million, $19.1 million and $16.9 million, respectively.

During the years ended December 31, 2021, 2020 and 2019, the Company granted approximately 2,000, 10,000 and 11,000 service-based RSUs, respectively, to non-employee consultants, with an estimated grant date fair value of $0.1 million, $0.2 million and $0.2 million, respectively.

Performance-Based RSU Awards

In March 2021, 2020 and 2019, the Company awarded approximately 228,000, 115,000 and 125,000 performance-based RSUs, respectively, to the Company’s executives and employees (the “Bonus RSUs”), with an estimated grant date fair value of $9.5 million, $3.1 million and $2.9 million, respectively. Vesting of the Bonus RSUs is and was dependent upon the Company’s
achievement of defined performance goals over the respective fiscal year. The Company records stock-based compensation expense related to performance-based RSUs when it is considered probable that the performance conditions will be met. Management believes it is probable that substantially all of the 2021 Bonus RSUs will vest. The level of achievement, if any, of performance goals will be determined by the compensation committee of the Company’s board of directors and, if such goals are achieved, the 2021 Bonus RSUs will vest, subject to continued employment, in March 2022. Substantially all of the Bonus RSUs awarded in 2019 and 2020 vested in March 2020 and March 2021, respectively, upon the determination of the level of achievement of the respective performance goals.

Additionally, during 2021, 2020 and 2019, the Company awarded approximately 110,000, 144,000 and 96,000 performance-based RSUs, respectively, to the Company’s executives (the “Executive RSUs”). The estimated aggregate grant date fair value of the Executive RSUs for the 2021, 2020 and 2019 grants was $4.6 million, $3.9 million and $2.2 million, respectively. Vesting of the Executive RSUs is and was dependent upon the Company’s achievement of defined performance goals over a two-year period. The vesting of Executive RSUs will ultimately range from 0% to 150% of the number of shares underlying the Executive RSUs granted based on the level of achievement of the performance goals. If the Company achieves the performance goals, 50% of the number of Executive RSUs earned based on performance will vest on the second anniversary of the grant date, and the remaining 50% will vest on the third anniversary of the grant date, in each case subject to the executive’s continued service as of the vesting date. During March 2021, 2020 and 2019, the Company awarded additional shares underlying performance-based RSUs to the Company’s executives for over-achievement of performance targets related to the Executive RSUs originally awarded in 2019, 2018 and 2017 in the amounts of 3,000, 20,000 and 11,000 shares, respectively.

10. Equity Transactions

Preferred Stock

The Company is authorized to issue 2.0 million shares of preferred stock with a par value of $0.0001 per share. The Company previously issued 1.5 million shares of preferred stock. The remaining 0.5 million authorized shares of preferred stock remain undesignated and unissued as of December 31, 2021 and 2020. As of December 31, 2021 and 2020, there were no outstanding shares of preferred stock, as all preferred stock was converted into common stock in prior periods according to its terms.

Share Repurchase Program

In February 2021, the Company announced that its Board of Directors had authorized the repurchase of up to $300.0 million of its common stock through December 31, 2022. This time-frame can be extended or shortened by the Board of Directors. Repurchases are made from time to time on the open market at prevailing prices or in negotiated transactions off the market. All shares are immediately retired upon repurchase in accordance with the board-approved policy. When treasury shares are retired, the Company’s policy is to allocate the excess of the repurchase price over the par value of shares acquired first, to additional paid-in capital, and then to retained earnings. The portion to be allocated to additional paid-in capital is calculated by applying a percentage, determined by dividing the number of shares to be retired by the number of shares outstanding, to the balance of additional paid-in capital as of the date of retirement.

The Company repurchased and subsequently retired 4.3 million shares of its common stock during the year ended December 31, 2021, for a total purchase price of $163.4 million. As of December 31, 2021, $136.6 million remained available and authorized for repurchase under this program. As the share repurchases were authorized in 2021, no shares were permitted to be repurchased during the year ended December 31, 2020.
11. Revenue

The following table summarizes the Company’s services revenue:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td>(In thousands)</td>
</tr>
<tr>
<td><strong>Commercial services:</strong></td>
<td></td>
</tr>
<tr>
<td>Voice and data</td>
<td>$175,584</td>
</tr>
<tr>
<td>IoT data</td>
<td>110,919</td>
</tr>
<tr>
<td>Broadband</td>
<td>42,990</td>
</tr>
<tr>
<td>Hosted payload and other data</td>
<td>58,611</td>
</tr>
<tr>
<td>Total commercial services</td>
<td>388,104</td>
</tr>
<tr>
<td><strong>Government services</strong></td>
<td>103,887</td>
</tr>
<tr>
<td><strong>Total services</strong></td>
<td>$491,991</td>
</tr>
</tbody>
</table>

The following table summarizes the Company’s engineering and support services revenue:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td>(In thousands)</td>
</tr>
<tr>
<td>Commercial</td>
<td>$4,613</td>
</tr>
<tr>
<td>Government</td>
<td>25,825</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$30,438</td>
</tr>
</tbody>
</table>

The Company’s contracts with customers generally do not contain performance obligations with terms in excess of one year. As such, the Company does not disclose details related to the value of performance obligations that are unsatisfied as of the end of the reporting period. The total value of any performance obligations that extend beyond a year is immaterial to the financial statements. The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and deferred revenue (contract liabilities) on the consolidated balance sheets. The Company bills amounts under its agreed-upon contractual terms at periodic intervals (for services), upon shipment (for equipment), or upon achievement of contractual milestones or as work progresses (for engineering and support services). Billing may occur subsequent to revenue recognition, resulting in unbilled accounts receivable (contract assets). The Company may also receive payments from customers before revenue is recognized, resulting in deferred revenue (contract liabilities). The Company recognized revenue that was previously recorded as deferred revenue in the amounts of $43.0 million, $41.1 million and $43.0 million for the years ended December 31, 2021, 2020 and 2019, respectively. The Company has also recorded costs of obtaining contracts expected to be recovered in prepaid expenses and other current assets (contract assets or commissions), that are not separately disclosed on the consolidated balance sheets. The commissions are recognized over the estimated usage period. The following table presents contract assets not separately disclosed:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td>(In thousands)</td>
</tr>
<tr>
<td><strong>Contract Assets:</strong></td>
<td></td>
</tr>
<tr>
<td>Commissions</td>
<td>$1,190</td>
</tr>
<tr>
<td>Other contract costs</td>
<td>$2,558</td>
</tr>
<tr>
<td>Unbilled receivables</td>
<td>$10,752</td>
</tr>
</tbody>
</table>
12. Income Taxes

U.S. and foreign components of income before income taxes are presented below:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(In thousands)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. loss</td>
<td>$ (31,352)</td>
<td>$ (89,251)</td>
<td>$ (218,391)</td>
<td></td>
</tr>
<tr>
<td>Foreign income</td>
<td>2,464</td>
<td>287</td>
<td>272</td>
<td></td>
</tr>
<tr>
<td>Total loss before income taxes</td>
<td>$ (28,888)</td>
<td>$ (88,964)</td>
<td>$ (218,119)</td>
<td></td>
</tr>
</tbody>
</table>

The components of the Company’s income tax provision were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(In thousands)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current taxes:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal tax benefit</td>
<td>$ (537)</td>
<td>$ (688)</td>
<td>$ (3,796)</td>
<td></td>
</tr>
<tr>
<td>State tax expense</td>
<td>42</td>
<td>70</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Foreign tax expense</td>
<td>2,240</td>
<td>1,387</td>
<td>1,481</td>
<td></td>
</tr>
<tr>
<td>Total current tax (benefit) expense</td>
<td>1,745</td>
<td>769</td>
<td>(2,278)</td>
<td></td>
</tr>
<tr>
<td>Deferred taxes:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal tax benefit</td>
<td>(14,109)</td>
<td>(27,701)</td>
<td>(50,690)</td>
<td></td>
</tr>
<tr>
<td>State tax benefit</td>
<td>(6,686)</td>
<td>(5,869)</td>
<td>(1,850)</td>
<td></td>
</tr>
<tr>
<td>Foreign tax benefit</td>
<td>(519)</td>
<td>(109)</td>
<td>(1,302)</td>
<td></td>
</tr>
<tr>
<td>Total deferred tax benefit</td>
<td>(21,314)</td>
<td>(33,679)</td>
<td>(53,842)</td>
<td></td>
</tr>
<tr>
<td>Total income tax benefit</td>
<td>$ (19,569)</td>
<td>$ (32,910)</td>
<td>$ (56,120)</td>
<td></td>
</tr>
</tbody>
</table>

A reconciliation of the U.S. federal statutory income tax expense to the Company’s effective income tax provision is below. Any amounts that do not have a meaningful impact on this reconciliation are not separately disclosed.

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(In thousands)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected tax benefit at U.S. federal statutory tax rate</td>
<td>$ (6,067)</td>
<td>$ (18,811)</td>
<td>$ (45,790)</td>
<td></td>
</tr>
<tr>
<td>State taxes, net of federal benefit</td>
<td>(9,094)</td>
<td>(6,723)</td>
<td>(15,608)</td>
<td></td>
</tr>
<tr>
<td>State tax valuation allowance</td>
<td>711</td>
<td>2,561</td>
<td>16,216</td>
<td></td>
</tr>
<tr>
<td>Deferred impact of state tax law changes and elections</td>
<td>1,200</td>
<td>(1,684)</td>
<td>(2,414)</td>
<td></td>
</tr>
<tr>
<td>Equity-based compensation</td>
<td>(9,597)</td>
<td>(8,414)</td>
<td>(8,227)</td>
<td></td>
</tr>
<tr>
<td>Limitation on executive compensation deduction</td>
<td>3,140</td>
<td>666</td>
<td>920</td>
<td></td>
</tr>
<tr>
<td>Other nondeductible items</td>
<td>65</td>
<td>206</td>
<td>873</td>
<td></td>
</tr>
<tr>
<td>Tax credits</td>
<td>(1,278)</td>
<td>(1,048)</td>
<td>(995)</td>
<td></td>
</tr>
<tr>
<td>Foreign taxes</td>
<td>1,100</td>
<td>723</td>
<td>1,217</td>
<td></td>
</tr>
<tr>
<td>Other adjustments</td>
<td>251</td>
<td>(386)</td>
<td>(2,312)</td>
<td></td>
</tr>
<tr>
<td>Total income tax benefit</td>
<td>$ (19,569)</td>
<td>$ (32,910)</td>
<td>$ (56,120)</td>
<td></td>
</tr>
</tbody>
</table>
The components of deferred tax assets and liabilities are as follows:

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2021 (In thousands)</th>
<th>December 31, 2020 (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deferred tax assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term contracts</td>
<td>$57,189</td>
<td>$64,738</td>
</tr>
<tr>
<td>Federal, state and foreign net operating losses, other carryforwards and tax credits</td>
<td>410,450</td>
<td>430,273</td>
</tr>
<tr>
<td>Other</td>
<td>23,236</td>
<td>22,493</td>
</tr>
<tr>
<td><strong>Total deferred tax assets</strong></td>
<td>490,875</td>
<td>517,504</td>
</tr>
<tr>
<td>Valuation allowance</td>
<td>(34,522)</td>
<td>(32,218)</td>
</tr>
<tr>
<td><strong>Net deferred tax assets</strong></td>
<td>456,353</td>
<td>485,286</td>
</tr>
<tr>
<td><strong>Deferred tax liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed assets, intangibles and research and development expenditures</td>
<td>(532,414)</td>
<td>(577,955)</td>
</tr>
<tr>
<td>Investment in joint venture</td>
<td>(46,070)</td>
<td>(52,203)</td>
</tr>
<tr>
<td>Other</td>
<td>(11,061)</td>
<td>(6,283)</td>
</tr>
<tr>
<td><strong>Total deferred tax liabilities</strong></td>
<td>(589,545)</td>
<td>(636,441)</td>
</tr>
<tr>
<td><strong>Net deferred income tax liabilities</strong></td>
<td>$ (133,192)</td>
<td>$ (151,155)</td>
</tr>
</tbody>
</table>

Pursuant to ASC 740, the Company nets deferred tax assets and liabilities within the same jurisdiction. As of December 31, 2021, the Company had a net deferred tax asset of $1.1 million that is included in other assets on the balance sheet and a net deferred tax liability of $134.3 million.

The Company recognizes valuation allowances to reduce deferred tax assets to the amount that is more likely than not to be realized. In assessing the likelihood of realization, management considers: (i) future reversals of existing taxable temporary differences; (ii) future taxable income exclusive of reversing temporary differences and carryforwards; (iii) taxable income in prior carryback year(s) if carryback is permitted under applicable tax law; and (iv) tax planning strategies.

The Company had deferred tax assets related to cumulative U.S. federal net operating loss carryforwards and interest expense carryforwards of approximately $330.2 million and $337.1 million as of December 31, 2021 and 2020, respectively. U.S. federal net operating loss carryforwards for periods prior to 2018, if unutilized, will expire in various amounts from 2031 through 2037. The Company believes that the U.S. federal net operating losses will be utilized before the expiration dates and, as such, no valuation allowance has been established for these deferred tax assets. U.S. federal net operating loss carryforwards for 2018 and thereafter and interest expense carryforwards do not expire. The Company had deferred tax assets related to the state net operating loss carryforwards of approximately $61.3 million and $69.7 million as of December 31, 2021 and 2020, respectively, that expire from 2025 through 2043. The Company does not expect to fully utilize all of its state net operating losses within the respective carryforward periods and as such reflects a partial valuation allowance of $32.6 million and $30.2 million as of December 31, 2021 and 2020, respectively, against these deferred tax assets.

The Company had deferred tax assets related to research and development tax credits as of December 31, 2021 and 2020, respectively, that expire in various amounts from 2029 through 2041. The Company had approximately $5.6 million and $5.7 million of deferred tax assets related to foreign tax credits as of December 31, 2021 and 2020, respectively, that expire in various amounts through 2031. The Company does not expect to utilize all of its foreign tax credits within the respective carryforward periods. As such, the Company had a partial valuation allowance of $0.8 million and $1.1 million as of December 31, 2021 and 2020, respectively.
The Company has provided for U.S. income taxes on all undistributed earnings of its significant foreign subsidiaries since the Company does not indefinitely reinvest these undistributed earnings. The Company measures deferred tax assets and liabilities using tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The Company recognizes the effect on deferred tax assets and liabilities of a change in tax rates in income in the period that includes the enactment date.

**Uncertain Income Tax Positions**

The Company is subject to income taxes in the U.S. and various state and foreign jurisdictions. Significant judgment is required in evaluating tax positions and determining the provision for income taxes. The Company establishes liabilities for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes may be due. These liabilities are established when the Company believes that certain positions might be challenged despite its belief that its tax return positions are fully supportable. The Company adjusts these liabilities in light of changing facts and circumstances, such as the outcome of a tax audit. The provision for income taxes includes the impact of changes to these liabilities.

There were no unrecognized tax benefits as of December 31, 2021, and the amount of unrecognized tax benefits was $0.5 million as of December 31, 2020. Any changes in the next twelve months are not anticipated to have a significant impact on the results of operations, financial position or cash flows of the Company. All of the Company’s uncertain tax positions, if recognized, would affect its income tax expense.

The Company has elected an accounting policy to classify interest and penalties related to unrecognized tax benefits as a component of income tax expense. As of December 31, 2021, there were no interest and penalties on unrecognized tax benefits, and as of December 31, 2020, potential interest and penalties on unrecognized tax benefits were not significant.

The Company is subject to tax audits in all jurisdictions for which it files tax returns. Tax audits by their very nature are often complex and can require several years to complete. Currently, there are no U.S. federal, state or foreign jurisdiction tax audits pending. The Company’s corporate U.S. federal and state tax returns from 2011 to 2020 remain subject to examination by tax authorities and the Company’s foreign tax returns from 2013 to 2020 remain subject to examination by tax authorities.

The following is a tabular reconciliation of the total amounts of unrecognized tax benefits which includes related interest and penalties:

<table>
<thead>
<tr>
<th></th>
<th>2021 (In thousands)</th>
<th>2020 (In thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at January 1</td>
<td>$537</td>
<td>$953</td>
</tr>
<tr>
<td>Change attributable</td>
<td>(537)</td>
<td>(416)</td>
</tr>
<tr>
<td>to tax positions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>taken in a prior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance at December</td>
<td>$—</td>
<td>$537</td>
</tr>
<tr>
<td>31, 2021</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table above shows a reconciliation of the total amounts of unrecognized tax benefits which includes related interest and penalties.
13. Net Loss Per Share

The Company calculates basic net loss per common share by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. In periods of net income, diluted net income per share takes into account the effect of potentially dilutive common shares when the effect is dilutive. Potentially dilutive common shares include (i) common stock issuable upon exercise of outstanding stock options and (ii) contingent RSUs that are convertible into shares of common stock upon achievement of certain service and performance requirements. The effect of potentially dilutive common shares is computed using the treasury stock method.

The computations of basic and diluted net loss per common share are set forth below:

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>(In thousands, except per share data)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numerator:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net loss attributable to common stockholders - basic and diluted</td>
<td>$(9,319)</td>
<td>$(56,054)</td>
<td>$(166,193)</td>
</tr>
<tr>
<td>Denominator:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighted average common shares - basic and diluted</td>
<td>133,530</td>
<td>133,491</td>
<td>125,167</td>
</tr>
<tr>
<td>Net loss attributable to common stockholders per share - basic and diluted</td>
<td>$(0.07)</td>
<td>$(0.42)</td>
<td>$(1.33)</td>
</tr>
</tbody>
</table>

Due to the Company’s net loss position for the years ended December 31, 2021, 2020 and 2019 all potential common stock equivalents were anti-dilutive and therefore excluded from the calculation of diluted net loss per share. The incremental number of shares underlying stock options and RSUs outstanding with anti-dilutive effects are presented below:

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>(In thousands)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance-based RSUs</td>
<td>183</td>
<td>127</td>
<td>295</td>
</tr>
<tr>
<td>Service-based RSUs</td>
<td>536</td>
<td>567</td>
<td>678</td>
</tr>
<tr>
<td>Stock options</td>
<td>1,189</td>
<td>1,946</td>
<td>2,522</td>
</tr>
</tbody>
</table>

83
14. Related Party Transactions

Aireon LLC and Aireon Holdings LLC

The Company's satellite constellation hosts the Aireon system, which provides a global air traffic surveillance service through a series of automatic dependent surveillance-broadcast ("ADS-B") receivers. The Company formed Aireon in 2011, with subsequent investments from the air navigation service providers ("ANSPs") of Canada, Italy, Denmark, Ireland and the United Kingdom, to develop and market this service. The Company and the other Aireon investors hold their interests in Aireon through an amended and restated LLC agreement (the "Amended and Restated Limited Liability Company Agreement"). Aireon Holdings LLC holds 100% of the membership interests in Aireon LLC, which is the operating entity. At each of December 31, 2021 and 2020, the Company's fully diluted ownership stake in Aireon Holdings LLC was approximately 35.7%, subject to certain redemption provisions contained in the Amended and Restated Limited Liability Company Agreement. The Company's investment in Aireon is accounted for as an equity method investment, with a carrying value of zero.

Aireon has contracted to pay the Company a fee to host the ADS-B receivers on its constellation, as well as fees for power and data services in connection with the delivery of the air traffic surveillance data. Pursuant to an agreement with Aireon (the "Hosting Agreement"), Aireon will pay the Company fees of $200.0 million to host the ADS-B receivers, of which $62.5 million had been paid as of December 31, 2021, as well as power fees of up to approximately $3.7 million per year. Aireon also pays data services fees of approximately $19.8 million per year for the delivery of the air traffic surveillance data under a data transmission services agreement. Pursuant to ASU 2016-02, the Company considers the Hosting Agreement an operating lease. The Company recognized $16.1 million, $16.1 million and $16.0 million of hosting fee revenue under the Hosting Agreement for the years ended December 31, 2021, 2020 and 2019, respectively. There were no receivables due under the Hosting Agreement as of December 31, 2021 and 2020. The Company recorded power fee and data service fee revenue from Aireon of $23.5 million, $23.9 million and $12.6 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Under two services agreements, the Company also provides Aireon with administrative services and support services, the fees for which are paid monthly. Aireon receivables due to the Company under these two agreements totaled $2.2 million and $2.3 million at December 31, 2021 and 2020, respectively.

The Company and the other Aireon investors have agreed to participate pro rata, based on their fully diluted ownership stakes, in funding an investor bridge loan to Aireon. The Company's maximum commitment under the investor bridge loan is $10.7 million. In December 2020, the Company loaned $0.2 million to Aireon, which was subsequently repaid in June 2021.

15. Segments, Significant Customers, Supplier and Service Providers and Geographic Information

The Company operates in one business segment, providing global satellite communications services and products.

The Company derived approximately 21%, 22% and 22% of its total revenue in the years ended December 31, 2021, 2020 and 2019, respectively, from prime contracts or subcontracts with agencies of the U.S. government. For the years ended December 31, 2021, 2020 and 2019, no single commercial customer accounted for more than 10% of the Company’s total revenue.

Approximately 34% and 35% of the Company’s accounts receivable balance at December 31, 2021 and 2020, respectively, was due from prime contracts or subcontracts with agencies of the U.S. government. As of December 31, 2021 and 2020, no single commercial customer accounted for more than 10% of the Company’s total accounts receivable balance.

The Company contracts for the manufacture of its subscriber equipment primarily from a limited number of manufacturers and utilizes other sole source suppliers for certain component parts of its devices. Should events or circumstances prevent the manufacturer or the suppliers from producing the equipment or component parts, the Company’s business could be adversely affected until the Company is able to move production to other facilities of the manufacturer or secure a replacement manufacturer or an alternative supplier for such component parts.
Net property and equipment by geographic area was as follows:

<table>
<thead>
<tr>
<th></th>
<th>December 31,</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021 (In thousands)</td>
<td>2020 (In thousands)</td>
</tr>
<tr>
<td>United States</td>
<td>$429,888</td>
<td>$421,930</td>
</tr>
<tr>
<td>Satellites in orbit</td>
<td>2,228,644</td>
<td>2,487,220</td>
</tr>
<tr>
<td>All others</td>
<td>3,804</td>
<td>7,926</td>
</tr>
<tr>
<td>Total</td>
<td>$2,662,336</td>
<td>$2,917,076</td>
</tr>
</tbody>
</table>

Revenue by geographic area was as follows:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021 (In thousands)</td>
</tr>
<tr>
<td>United States</td>
<td>$330,948</td>
</tr>
<tr>
<td>Other countries (1)</td>
<td>283,552</td>
</tr>
<tr>
<td>Total</td>
<td>$614,500</td>
</tr>
</tbody>
</table>

(1) No single country in this group represented more than 10% of revenue.

Revenue is attributed to geographic area based on the billing address of the distributor. Service location and the billing address are often not the same. The Company’s distributors sell services directly or indirectly to end users, who may be located or use the Company’s products and services elsewhere. The Company cannot provide the geographical distribution of end users because it does not contract directly with them. The Company is exposed to foreign currency exchange fluctuations as foreign currency exchange rate movements create a degree of risk by affecting the U.S. dollar value of sales made and costs incurred in foreign currencies.

16. Employee Benefit Plan

The Company sponsors a defined-contribution 401(k) retirement plan (the “Plan”) that covers all employees. Employees are eligible to participate in the Plan on the first day of the month following the date of hire, and participants are 100% vested from the date of eligibility. The Company matches employees’ contributions equal to 100% of the salary deferral contributions up to 5% of the employees’ eligible compensation each pay period. Company matching contributions to the Plan were $3.5 million, $3.1 million, and $3.1 million for the years ended December 31, 2021, 2020 and 2019, respectively.
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

Under the supervision and with the participation of our management, including our chief executive officer, who is our principal executive officer, and our chief financial officer, who is our principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, as of the end of the period covered by this report. In evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs. In addition, the design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a control system, misstatements due to error or fraud may occur and not be detected.

Based on this evaluation, our chief executive officer and our chief financial officer concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the U.S. Securities and Exchange Commission’s rules and forms, and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosures.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Such internal control includes those policies and procedures that:

• Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of our company;

• 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 our company; and

• Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our 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. 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.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2021. In making this assessment, our management used the criteria set forth in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on its assessment, our management has determined that, as of December 31, 2021, our internal control over financial reporting was effective based on those criteria.
Our independent registered public accounting firm, Ernst & Young LLP, has audited our 2021 financial statements. Ernst & Young LLP was given unrestricted access to all financial records and related data, including minutes of all meetings of stockholders, the Board of Directors and committees of the Board. Ernst & Young LLP has issued an unqualified report on our 2021 financial statements as a result of the audit and also has issued an unqualified report on our internal controls over financial reporting which is attached hereto.

Changes in Internal Control Over Financial Reporting

During the quarter ended December 31, 2021, there were no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.
Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Iridium Communications Inc.

Opinion on Internal Control over Financial Reporting

We have audited Iridium Communications Inc.’s internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Iridium Communications Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Iridium Communications Inc. as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive income (loss), changes in stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and our report dated February 17, 2022 expressed an unqualified report thereon.

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.

Definitions 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/ Ernst & Young LLP

Tysons, Virginia
February 17, 2022
Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.
PART III

We will file a definitive Proxy Statement for our 2022 Annual Meeting of Stockholders (the “2022 Proxy Statement”) with the SEC, pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year. Accordingly, certain information required by Part III has been omitted as permitted by General Instruction G (3) to Form 10-K. Only those sections of the 2022 Proxy Statement that specifically address the items set forth herein are incorporated by reference.

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated by reference to the sections of our 2022 Proxy Statement entitled “Board of Directors and Committees,” “Election of Directors” and “Management.”

Item 11. Executive Compensation

The information required by this Item is incorporated by reference to the sections of our 2022 Proxy Statement entitled “Compensation Discussion and Analysis,” “Executive Compensation” and “Director Compensation.”


The information required by this Item is incorporated by reference to the sections of our 2022 Proxy Statement entitled “Security Ownership of Certain Beneficial Owners and Management” and “Securities Authorized for Issuance under Equity Compensation Plans.”

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated by reference to the sections of our 2022 Proxy Statement entitled “Transactions with Related Parties” and “Director Independence.”

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated by reference to the section of our 2022 Proxy Statement entitled “Independent Registered Public Accounting Firm Fees.”
Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of this Form 10-K:

(1) Financial Statements

Iridium Communications Inc.:

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm 54
Consolidated Balance Sheets 56
Consolidated Statements of Operations and Comprehensive Income (Loss) 57
Consolidated Statements of Changes in Stockholders’ Equity 58
Consolidated Statements of Cash Flows 59
Notes to Consolidated Financial Statements 60

(2) Financial Statement Schedules

The financial statement schedules are not included here because required information is included in the consolidated financial statements.

(3) Exhibits

The following list of exhibits includes exhibits submitted with this Form 10-K as filed with the Securities and Exchange Commission.

<table>
<thead>
<tr>
<th>Exhibit No.</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Amended and Restated Certificate of Incorporation dated September 29, 2009, incorporated by reference to Exhibit 3.1 of the Registrant’s Current Report on Form 8-K filed with the SEC on September 29, 2009.</td>
</tr>
<tr>
<td>3.2</td>
<td>Certificate of Amendment to Amended and Restated Certificate of Incorporation dated May 12, 2015, incorporated by reference to Exhibit 3.1 of the Registrant’s Current Report on Form 8-K filed with the SEC on May 15, 2015.</td>
</tr>
<tr>
<td>3.3</td>
<td>Amended and Restated Bylaws, incorporated by reference to Exhibit 3.2 of the Registrant’s Current Report on Form 8-K filed with the SEC on May 15, 2015.</td>
</tr>
<tr>
<td>4.1</td>
<td>Specimen Common Stock Certificate, incorporated by reference to Exhibit 4.2 of the Registrant’s Registration Statement on Form S-1 (Registration No. 333-147722) filed with the SEC on February 4, 2008.</td>
</tr>
<tr>
<td>4.2</td>
<td>Description of the Registrant’s securities registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, incorporated by reference to Exhibit 4.2 to the Registrant’s Annual Report on Form 10-K filed with the SEC on February 25, 2020.</td>
</tr>
<tr>
<td>10.1#</td>
<td>Credit Agreement dated November 4, 2019 among Iridium Holdings LLC, Iridium Communications Inc., Iridium Satellite LLC, Various Lenders, and Deutsche Bank AG New York Branch, as Administrative Agent and Collateral Agent, incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K filed with the SEC on November 4, 2019.</td>
</tr>
<tr>
<td>10.4</td>
<td>Amendment No. 3 to Credit Agreement dated November 4, 2019, among Iridium Holdings LLC, Iridium Communications Inc., Iridium Satellite LLC, Various Lenders, and Deutsche Bank AG New York Branch, as Administrative Agent and Collateral Agent, dated as of July 28, 2021, incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K filed with the SEC on July 29, 2021.</td>
</tr>
</tbody>
</table>


10.7 Amended and Restated Transition Services, Products and Asset Agreement, between Iridium Satellite LLC, Iridium Holdings LLC and Motorola, Inc., dated as of September 30, 2010, incorporated by reference to Exhibit 10.9 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.

10.8 Amendment No. 1 to Amended and Restated Transition Services, Products and Asset Agreement, between Iridium Satellite LLC, Iridium Holdings LLC and Motorola, Inc., dated as of December 30, 2010, incorporated by reference to Exhibit 10.10 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.

10.9† System Intellectual Property Rights Amendment and Agreement, between Iridium Satellite LLC and Motorola, Inc., dated as of September 30, 2010.

10.10 Supplemental Subscriber Equipment Technology Amendment and Agreement, between Iridium Satellite LLC and Motorola, Inc., dated as of September 30, 2010, incorporated by reference to Exhibit 10.12 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.


10.15 Form of Registration Rights Agreement, incorporated by reference to Annex D of the Registrant’s Proxy Statement filed with the SEC on August 28, 2009.

10.16 Amendment No. 1 to Registration Rights Agreement, dated as of March 29, 2011, by and among Iridium Communications Inc. and the parties listed on the signature pages thereto, incorporated by reference to Exhibit 10.1 of the Registrant’s Current Report on Form 8-K filed with the SEC on March 30, 2011.

10.17* Amended and Restated Employment Agreement, dated as of March 30, 2011, by and between the Registrant and Matthew J. Desch, incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K filed with the SEC on April 5, 2011.


10.19* Amendment to Employment Agreement by and between the Registrant and Thomas J. Fitzpatrick, dated as of December 31, 2010, incorporated by reference to Exhibit 10.34 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.


10.26 Form of Indemnity Agreement between the Registrant and each of its directors and officers, incorporated by reference to Exhibit 10.5 to the Registrant’s Form S-1/A filed with the SEC on February 4, 2008.

10.27* Form of Stock Option Award Agreement for use in connection with the 2009 Iridium Communications Inc. Stock Incentive Plan, incorporated by reference to Exhibit 10.42 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.

10.28* Form of Restricted Stock Unit Agreement for use in connection with the 2009 Iridium Communications Inc. Stock Incentive Plan, incorporated by reference to Exhibit 10.48 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 6, 2012.

10.29* Amended and Restated Performance Share Program established under the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.3 to the Registrant’s Quarterly Report on Form 10-Q filed with the SEC on April 23, 2019.

10.30* Form of Performance Share Award Grant Notice and Performance Share Award Agreement for use in connection with the Performance Share Program established under the Iridium Communications Inc. 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.2 to the Registrant’s Current Report on Form 8-K filed with the SEC on March 3, 2016.

10.31* Form of Stock Option Agreement for Non-Employee Directors for use in connection with the 2009 Iridium Communications Inc. Stock Incentive Plan, incorporated by reference to Exhibit 10.46 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.

10.32* Form of Restricted Stock Award Agreement for Non-Employee Directors for use in connection with the 2009 Iridium Communications Inc. Stock Incentive Plan, incorporated by reference to Exhibit 10.47 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.

10.33* Form of Restricted Stock Unit Award Agreement for Non-Employee Directors for use in connection with the 2009 Iridium Communications Inc. Stock Incentive Plan, incorporated by reference to Exhibit 10.48 to the Registrant’s Annual Report on Form 10-K filed with the SEC on March 7, 2011.

10.34* Iridium Communications Inc. 2012 Equity Incentive Plan, incorporated by reference to Appendix A to the Registrant’s Proxy Statement filed with the SEC on April 10, 2012.

10.35* Forms of Stock Option Grant Notice and Stock Option Agreement for use in connection with the Iridium Communications Inc. 2012 Equity Incentive Plan, incorporated by reference to Exhibit 99.2 to the Registrant’s Current Report on Form 8-K filed with the SEC on May 23, 2012.

10.36* Forms of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement for use in connection with the Iridium Communications Inc. 2012 Equity Incentive Plan, incorporated by reference to Exhibit 99.3 to the Registrant’s Current Report on Form 8-K filed with the SEC on May 24, 2012.


10.39* Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated herein by reference to Exhibit 10.1 to the Registrant’s registration statement on Form S-8 filed on May 23, 2019.

10.40* Forms of Option Grant Notice and Option Agreement for use in connection with the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.2 of the Registrant’s Current Report on Form 8-K filed with the SEC on May 15, 2015.

10.41* Forms of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Award Agreement for use in connection with the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.37 of the Registrant’s Annual Report on Form 10-K filed with the SEC on February 11, 2021.

10.42* Forms of Non-Employee Director Option Grant Notice and Non-Employee Director Option Agreement for use in connection with the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.4 of the Registrant’s Annual Report on Form 10-K filed with the SEC on May 15, 2015.

10.43* Forms of Non-Employee Director Restricted Stock Unit Award Grant Notice and Non-Employee Director Restricted Stock Unit Award Agreement for use in connection with the Iridium Communications Inc. 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.5 of the Registrant’s Current Report on Form 8-K filed with the SEC on May 15, 2015.

10.44* UK Sub-Plan of the Iridium Communications Inc. 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.40 of the Registrant’s Annual Report on Form 10-K filed with the SEC on February 11, 2021.
<table>
<thead>
<tr>
<th>Exhibit No.</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.41*</td>
<td>Forms of UK Option Grant Notice and UK Option Agreement for use in connection with the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.7 of the Registrant’s Current Report on Form 8-K filed with the SEC on May 15, 2015.</td>
</tr>
<tr>
<td>10.42*</td>
<td>Forms of UK Restricted Stock Unit Award Notice and UK Restricted Stock Unit Agreement for use in connection with the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.42 of the Registrant’s Annual Report on Form 10-K filed with the SEC on February 11, 2021.</td>
</tr>
<tr>
<td>10.43*</td>
<td>Forms of UK Non-Employee Director Option Grant Notice and UK Non-Employee Director Option Agreement for use in connection with the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.9 of the Registrant’s Current Report on Form 8-K filed with the SEC on May 15, 2015.</td>
</tr>
<tr>
<td>10.44*</td>
<td>Forms of UK Non-Employee Director Restricted Stock Unit Award Notice and UK Non-Employee Director Restricted Stock Unit Award Agreement for use in connection with the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan, incorporated by reference to Exhibit 10.10 of the Registrant’s Current Report on Form 8-K filed with the SEC on May 15, 2015.</td>
</tr>
<tr>
<td>21.1</td>
<td>List of Subsidiaries.</td>
</tr>
<tr>
<td>23.1</td>
<td>Consent of Ernst &amp; Young LLP, independent registered public accounting firm.</td>
</tr>
<tr>
<td>31.1</td>
<td>Certification of Chief Executive Officer pursuant to Section 302 of The Sarbanes-Oxley Act of 2002.</td>
</tr>
<tr>
<td>31.2</td>
<td>Certification of Chief Financial Officer pursuant to Section 302 of The Sarbanes-Oxley Act of 2002.</td>
</tr>
<tr>
<td>32.1**</td>
<td>Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of The Sarbanes-Oxley Act of 2002.</td>
</tr>
<tr>
<td>101.INS</td>
<td>XBRL Instance Document</td>
</tr>
<tr>
<td>101.SCH</td>
<td>XBRL Taxonomy Extension Schema</td>
</tr>
<tr>
<td>101.CAL</td>
<td>XBRL Taxonomy Extension Calculation Linkbase</td>
</tr>
<tr>
<td>101.DEF</td>
<td>XBRL Taxonomy Extension Definition Linkbase</td>
</tr>
<tr>
<td>101.LAB</td>
<td>XBRL Taxonomy Extension Label Linkbase</td>
</tr>
<tr>
<td>101.PRE</td>
<td>XBRL Taxonomy Extension Presentation Linkbase</td>
</tr>
<tr>
<td>104</td>
<td>Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).</td>
</tr>
</tbody>
</table>

# Exhibits and schedules have been omitted pursuant to Item 601(a)(5) of Regulation S-K and will be furnished on a supplemental basis to the Securities and Exchange Commission upon request.

† Certain confidential portions of this exhibit, marked by asterisks, were omitted because the identified confidential portions are (i) not material and (ii) the type that the registrant treats as private or confidential.

* Denotes management contract or compensatory plan or arrangement.

** These certifications are being furnished solely to accompany this Annual Report pursuant to 18 U.S.C. Section 1350, and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and are not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.
Item 16.  Form 10-K Summary

Not applicable.
Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

IRIDIUM COMMUNICATIONS INC.

Date: February 17, 2022

By: /s/ Thomas J. Fitzpatrick

Thomas J. Fitzpatrick
Chief Financial 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:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s/ Matthew J. Desch</td>
<td>Chief Executive Officer and Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Matthew J. Desch</td>
<td>(Principal Executive Officer)</td>
<td></td>
</tr>
<tr>
<td>/s/ Thomas J. Fitzpatrick</td>
<td>Chief Financial Officer, Chief Administrative Officer and</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Thomas J. Fitzpatrick</td>
<td>Director</td>
<td></td>
</tr>
<tr>
<td>/s/ Timothy P. Kapalka</td>
<td>Chief Accounting Officer, Iridium Satellite LLC</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Timothy P. Kapalka</td>
<td>(Principal Accounting Officer)</td>
<td></td>
</tr>
<tr>
<td>/s/ Robert H. Niehaus</td>
<td>Director and Chairman of the Board</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Robert H. Niehaus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Thomas C. Canfield</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Thomas C. Canfield</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ L. Anthony Frazier</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>L. Anthony Frazier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Jane L. Harman</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Jane L. Harman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Alvin B. Krongard</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Alvin B. Krongard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Suzanne E. McBride</td>
<td>Chief Operations Officer and Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Suzanne E. McBride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Eric T. Olson</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Eric T. Olson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Steven B. Pfeiffer</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Steven B. Pfeiffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Parker W. Rush</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Parker W. Rush</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Henrik O. Schliemann</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Henrik O. Schliemann</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ Barry J. West</td>
<td>Director</td>
<td>February 17, 2022</td>
</tr>
<tr>
<td>Barry J. West</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
System Intellectual Property Rights Amendment and Agreement

This System Intellectual Property Rights Amendment and Agreement ("AGREEMENT") is entered into by Motorola, Inc., a Delaware corporation with its principal offices located at 1303 East Algonquin Road, Schaumburg, Illinois 60196 ("MOTOROLA"), and Iridium Satellite LLC, a Delaware limited liability company with principal offices located at 1750 Tysons Boulevard, Suite 1400, McLean, Virginia 22102 ("IRIDIUM").

Background

WHEREAS, MOTOROLA and IRIDIUM entered into the Intellectual Property Rights Agreement dated as of December 11, 2000 (the "FIRST GENERATION IPR AGREEMENT"), whereby MOTOROLA granted IRIDIUM a license to certain intellectual property owned or controlled by MOTOROLA for use in connection with IRIDIUM’s operation of the FIRST GENERATION IRIDUM SYSTEM (as defined below);

WHEREAS, contemporaneously herewith MOTOROLA and IRIDIUM are entering into a Settlement Agreement (the "SETTLEMENT AGREEMENT"), in settlement of certain disputes between the parties;

WHEREAS, Section 2.8 of the FIRST GENERATION IPR AGREEMENT, provides that upon written request from IRIDIUM, MOTOROLA will grant licenses to IRIDIUM under certain MOTOROLA intellectual property for a second generation of IRIDIUM’s satellite system "under commercially reasonable terms and conditions including a reasonable royalty payment;"

WHEREAS, IRIDIUM desires, and MOTOROLA is willing to provide, a license to use certain of MOTOROLA's intellectual property for the second generation of IRIDIUM’s satellite system, including pursuant to the license contemplated by Section 2.8 of the FIRST GENERATION IPR AGREEMENT; and

WHEREAS, for the reasons stated above and as contemplated by the SETTLEMENT AGREEMENT, MOTOROLA and IRIDIUM now desire to enter into this AGREEMENT.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants set forth herein and in the SETTLEMENT AGREEMENT and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

Agreement

1. DEFINITIONS. Capitalized terms used in this AGREEMENT have the meanings set forth in the Background section of this AGREEMENT, or as defined elsewhere in this AGREEMENT, including in this Section 1, or, when expressly provided, as defined in the FIRST GENERATION IPR AGREEMENT.

1.1. “AFFILIATE” means, with respect to any party, a legal entity that, directly or indirectly, is controlled by, controls, or is under common control with such party (but only so long as such control exists). As used in the preceding sentence, “control” shall mean and include (i) the ownership of 50% or more of the voting securities or other voting interests of any legal entity; or (ii) the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of any legal entity, whether through the ownership of voting securities,
by contract or otherwise; and “controlled by” and “under common control with” shall have correlative meanings.

1.2. “FIRST GENERATION IRIDIUM SYSTEM” means the “Iridium System,” as defined in Section 1.8 of the FIRST GENERATION IPR IRIDIUM AGREEMENT.

1.3. “GATEWAY(S)” means the ground-based facilities that embody and use the GATEWAY INTERFACE SPECIFICATION, supporting the subscriber billing/information functions and call processing operations and the connection of the IRIDIUM SYSTEMS subscriber communications through the public switched telephone network (PSTN).

1.4. “GATEWAY INTERFACE SPECIFICATION” means the functional specification that defines the radio frequency interface, logical and physical protocols, and functionality necessary for GATEWAY inter-operability with the SPACE SEGMENT and SYSTEM CONTROL SEGMENT.

1.5. “GATEWAY SEGMENT” means that part of the IRIDIUM SYSTEMS consisting solely of the GATEWAYS.

1.6. “INITIAL PAYMENT” shall have the meaning set forth in the SETTLEMENT AGREEMENT.

1.7. “INTELLECTUAL PROPERTY CLAIM” shall have the meaning set forth in the SUPPLEMENTAL SETA.

1.8. “INTELLECTUAL PROPERTY RIGHTS” means copyrights, patents (other than design patents), database rights, and trade secret rights, including any registrations and applications with respect to any of the foregoing. INTELLECTUAL PROPERTY RIGHTS does not include rights in design patents, trademarks, trade dress or registerable industrial designs and like rights involving trade identity.

1.9. “INTERFACE SPECIFICATIONS” means, individually and collectively, the interface specifications set forth in Annex A to Exhibit C of this AGREEMENT.

1.10. “IRIDIUM SERVICE(S)” means any services provided by or over the FIRST GENERATION IRIDIUM SYSTEM or the NEXT SYSTEM (as the context indicates) using the applicable SPACE SEGMENT; provided, however, that IRIDIUM SERVICE(S) does not include and shall in no event be interpreted to include (i) any services relating to the manufacturing or production of any SUBSCRIBER EQUIPMENT; (ii) any services provided by any TERRESTRIAL WIRELESS SYSTEM(S); or (iii) any services that are introduced by IRIDIUM after the date hereof that do not use the applicable SPACE SEGMENT of the IRIDIUM SYSTEMS, other than for providing backup or redundancy for services that otherwise use the applicable SPACE SEGMENT of the IRIDIUM SYSTEMS.

1.11. “IRIDIUM SYSTEMS” means, collectively, the FIRST GENERATION IRIDIUM SYSTEM and the NEXT SYSTEM. IRIDIUM SYSTEMS does not include and shall in no event be interpreted to include (A) any SUBSCRIBER EQUIPMENT; (B) a THIRD GENERATION IRIDIUM SYSTEM or any other satellite system; or (C) any TERRESTRIAL WIRELESS SYSTEM(S) or any SUBSCRIBER EQUIPMENT or other equipment for use in connection with any TERRESTRIAL WIRELESS SYSTEM.

1.12. “IRIDIUM TECHNICAL INFORMATION” means (i) all information and material, including confidential and trade secret information (in whatever form) and computer software (in object form).
code form and in source code form) that was used by MOTOROLA or any of its SUBSIDIARIES as of the date of the FIRST GENERATION IPR AGREEMENT to OPERATE AND MAINTAIN the FIRST GENERATION IRIDIUM SYSTEM and that is necessary or useful to allow IRIDIUM to OPERATE AND MAINTAIN the FIRST GENERATION IRIDIUM SYSTEM, including the information and materials identified in Exhibit A, (ii) the INTERFACE SPECIFICATIONS, and (iii) any other FIRST GENERATION IRIDIUM SYSTEM related material provided by MOTOROLA to IRIDIUM and embodying any of the MOTOROLA SYSTEM IP RIGHTS.


1.14. “MOTOROLA SYSTEM IP RIGHTS” means those INTELLECTUAL PROPERTY RIGHTS that were owned by MOTOROLA or any of its SUBSIDIARIES as of the date of the FIRST GENERATION IPR AGREEMENT, but limited to those that MOTOROLA or any of its SUBSIDIARIES continue to own as of the date of this AGREEMENT, that (i) were embodied in the FIRST GENERATION IRIDIUM SYSTEM and used in the OPERATION AND MAINTENANCE of the FIRST GENERATION IRIDIUM SYSTEM; (ii) were in the IRIDIUM TECHNICAL INFORMATION; or (iii) arose from works expressly designed for the FIRST GENERATION IRIDIUM SYSTEM. MOTOROLA SYSTEM IP RIGHTS also includes rights or licenses which MOTOROLA has received from unaffiliated third parties, but only to the extent that (a) such rights or licenses are necessary for the OPERATION AND MAINTENANCE of the FIRST GENERATION IRIDIUM SYSTEM; and (b) MOTOROLA has the right, as of the date of this AGREEMENT, to grant to IRIDIUM rights and licenses under such third party's INTELLECTUAL PROPERTY RIGHTS without cost to MOTOROLA or, if there is a cost, such cost is paid by IRIDIUM. Notwithstanding anything in this AGREEMENT to the contrary, MOTOROLA SYSTEM IP RIGHTS specifically excludes any TRANSFERRED INTELLECTUAL PROPERTY RIGHTS and any INTELLECTUAL PROPERTY RIGHTS relating to TERRESTRIAL WIRELESS SYSTEMS, automotive technologies, semiconductor manufacturing, semiconductor structures, or semiconductor manufacturing processes.

1.15. “NDA” shall have the meaning set forth in Section 4.3.

1.16. “NEXT SYSTEM” means a SECOND GENERATION IRIDIUM SYSTEM. NEXT SYSTEM includes spare satellites and repaired or replaced components of the SPACE SEGMENT, SYSTEM CONTROL SEGMENT, and GATEWAY SEGMENT. NEXT SYSTEM also includes (A) any upgraded, enhanced, or additional computer software incorporated into the SPACE SEGMENT, SYSTEM CONTROL SEGMENT, GATEWAY SEGMENT or other components of the NEXT SYSTEM other than SUBSCRIBER EQUIPMENT; and (B) any upgraded, enhanced, or additional hardware components of the SPACE SEGMENT, SYSTEM CONTROL SEGMENT, GATEWAY SEGMENT or other components of the NEXT SYSTEM (other than SUBSCRIBER EQUIPMENT), provided, that, in the case of (B) above, such hardware components do not, individually or collectively, cause a material increase in applications, features, or functionality of IRIDIUM SERVICES, in the aggregate, compared to the applications, features and functionality of IRIDIUM SERVICES, in the aggregate, provided over the NEXT SYSTEM without the upgraded, enhanced, or additional hardware components. NEXT SYSTEM does not include and shall in no event be interpreted to include (1) any SUBSCRIBER EQUIPMENT; (2) a THIRD GENERATION IRIDIUM SYSTEM or any other satellite system; or (3) any TERRESTRIAL WIRELESS
SYSTEM(S) or any SUBSCRIBER EQUIPMENT or other equipment for use in connection with any TERRESTRIAL WIRELESS SYSTEM. For the avoidance of doubt, the completely integrated, satellite-based, digitally-switched, second-generation telecommunication system currently being developed by IRIDIUM and its AFFILIATES and contractors to upgrade and replace the FIRST GENERATION IRIDIUM SYSTEM, such upgrade and replacement contemplated to include the replacement of all or substantially all of the SPACE SEGMENT of the FIRST GENERATION IRIDIUM SYSTEM, is a NEXT SYSTEM.

1.17. “OPERATION AND MAINTENANCE” or “OPERATE AND MAINTAIN” means the operation and maintenance of (or to operate and maintain) the IRIDIUM SYSTEMS and the provision of (or to provide) IRIDIUM SERVICES, including upgrading and enhancing the IRIDIUM SYSTEM to the extent contemplated by the definition of IRIDIUM SYSTEMS.

1.18. “PERSON” means an individual, corporation, partnership, limited liability company, unincorporated association, trust, joint venture or other organization or entity, including any nation or government, foreign or domestic, any state or other political subdivision thereof and any agency or other entity exercising executive, legislative, judicial, regulatory or administrative functions of government, including all taxing authorities.

1.19. “PROPRIETARY INFORMATION” shall have the meaning set forth in the NDA.

1.20. “SPACE SEGMENT” means that part of the IRIDIUM SYSTEMS consisting solely of the space vehicles (also called satellites) in low earth orbit. SPACE SEGMENT includes any upgraded, enhanced, or additional computer software or hardware components incorporated into the space vehicles that do not constitute the deployment of a THIRD GENERATION IRIDIUM SYSTEM. SPACE SEGMENT does not include the SYSTEM CONTROL SEGMENT, the GATEWAY SEGMENT, SUBSCRIBER EQUIPMENT or other components.

1.21. “SATELLITE SUBSCRIBER EQUIPMENT” means, collectively and individually, SUBSCRIBER EQUIPMENT operable over either of the IRIDIUM SYSTEMS.

1.22. “SECOND GENERATION IRIDIUM SYSTEM” has the meaning set forth in Section 1.16 of the FIRST GENERATION IPR AGREEMENT.

1.23. “SUBSCRIBER AGREEMENTS” means, collectively, the Subscriber Equipment Technology Agreement (Design) and the Subscriber Equipment Technology Agreement (Manufacturing), each dated September 30, 2002 and each between MOTOROLA and SE Licensing LLC (“SEL”, an IRIDIUM AFFILIATE), and the Supplemental Subscriber Equipment Technology Amendment and Agreement, dated as of the date hereof, between MOTOROLA and IRIDIUM.

1.24. “SUBSCRIBER EQUIPMENT” means, collectively and individually, any wireless communication device, including devices such as voice terminals (e.g. cellular handsets), data terminals (e.g. paging devices, global positioning devices, and other portable data processing equipment), and voice and data terminals (e.g. smart phones).

1.25. “SUBSIDIARY” means, with respect to a party, any legal entity, more than fifty percent (50%) of whose outstanding shares or securities representing the right to vote for the election of directors or other managing authority are, or more than fifty percent (50%) of whose equity interest is, now or hereafter, owned or controlled, directly or indirectly by that party (but only so long as such ownership or control or equity interest exists).
1.26. “SUPPLEMENTAL SETA” means the Supplemental Subscriber Equipment Technology Amendment and Agreement dated as of the date hereof, entered into by MOTOROLA and IRIDIUM.

1.27. “SYSTEM CONTROL SEGMENT” means the various ground-based sites, equipment and facilities used to manage and control the individual space vehicles of the SPACE SEGMENT and the communications links between the segments of the IRIDIUM SYSTEM. The SYSTEM CONTROL SEGMENT includes the SNOCS (Satellite Network Operations Centers), TTACs (Telemetry Tracking and Control Stations), MTC (Message Termination Controllers), ODNs (Operational Data Networks) and the OSNs (Operational Support Networks).

1.28. “TERM” shall have the meaning set forth in Section 6.1.1.

1.29. “TERRESTRIAL WIRELESS SYSTEM(S)” means any terrestrial wireless communication system or equipment not incidental to a space-based commercial satellite communication system and any service provided using such a system or equipment. For the avoidance of doubt, TERRESTRIAL WIRELESS SYSTEM(S) specifically includes any equipment compatible with air interfaces or standards/protocols associated with any of the following terrestrial wireless communication systems: IS-95 (CDMA), IS-136 (US TDMA), GSM, W-CDMA, CDMA2000, CDMA EVDO, iDEN systems, GPRS, UMTS, WiMax, LTE, IEEE 802.xx (including 802.16 and 802.11), OFDM/OFDMA based cellular communication systems, and Land Mobile Radio, including P25, DMR, dPMR, and TETRA, and future generations or evolutions of such systems.

1.30. “THIRD GENERATION IRIDIUM SYSTEM” means (i) a satellite system that replaces in full the SPACE SEGMENT of the NEXT SYSTEM; or (ii) a satellite system that does not replace in full the SPACE SEGMENT of the NEXT SYSTEM but where such satellite system comprises a derivative of the NEXT SYSTEM that (a) contains hardware components of the SPACE SEGMENT that are upgrades to hardware components of the SPACE SEGMENT of the NEXT SYSTEM, other than upgrades necessitated by the obsolescence of hardware components in the initial design of the NEXT SYSTEM, and (b) such upgraded hardware components cause a material increase in applications, features, or functionality of IRIDIUM SERVICES, in the aggregate, provided over such satellite system compared to the applications, features and functionality of IRIDIUM SERVICES, in the aggregate, that could be provided over the NEXT SYSTEM.

1.31. “TRANSFERRED INTELLECTUAL PROPERTY RIGHTS” means (i) the INTELLECTUAL PROPERTY RIGHTS set forth on Exhibit B and (ii) any MOTOROLA INTELLECTUAL PROPERTY RIGHTS (as defined in the FIRST GENERATION IPR AGREEMENT) that were owned or controlled by MOTOROLA or a SUBSIDIARY as of December 11, 2000 and that, prior to the date of this AGREEMENT, MOTOROLA has (a) sold or transferred to any third party, or (b) granted an exclusive or sole license to any third party to the extent the rights granted under this AGREEMENT would violate the exclusivity granted to the third party under such sole or exclusive license.

2. FIRST GENERATION IPR AGREEMENT.

2.1. Relationship to FIRST GENERATION IPR AGREEMENT. Except as set forth in this Section 2, this AGREEMENT supplements, and does not amend or supersede, the FIRST GENERATION IPR AGREEMENT, which remains in full force and effect. For the avoidance of doubt, (i) any license or right in or to a MOTOROLA INTELLECTUAL PROPERTY RIGHT
(as defined in the FIRST GENERATION IPR AGREEMENT) that is not a MOTOROLA SYSTEM IP RIGHT is governed solely by the FIRST GENERATION IPR AGREEMENT; and (ii) any license or right in or to a MOTOROLA INTELLECTUAL PROPERTY RIGHT that also is a MOTOROLA SYSTEM IP RIGHT is governed both by this AGREEMENT and the FIRST GENERATION IPR AGREEMENT. In the event of a conflict between governing provisions of this AGREEMENT and the FIRST GENERATION IPR AGREEMENT, the provision of this AGREEMENT shall have precedence and govern over the conflicting provision of the FIRST GENERATION IPR AGREEMENT.

2.2. Interpretation. Except as expressly provided, the parties agree that the provisions of the FIRST GENERATION IPR AGREEMENT shall not be used to interpret this AGREEMENT and except as provided in Section 2.3 of this AGREEMENT, the provisions of this AGREEMENT shall not be used to interpret the provisions of the FIRST GENERATION IPR AGREEMENT.

2.3. Override and Amendment.

2.3.1. Sections 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, and 3.2 of the FIRST GENERATION IPR AGREEMENT shall be of no further force or effect.

2.3.2. Section 4.4 of the FIRST GENERATION IPR AGREEMENT is hereby deleted. The parties’ liability under the FIRST GENERATION IPR AGREEMENT is governed by Section 5.4 and Section 6.9 of this AGREEMENT.

2.3.3. Section 5.1 of the FIRST GENERATION IPR AGREEMENT is hereby deleted and replaced in its entirety with the following:

“Term. This AGREEMENT shall be effective upon the date of this AGREEMENT and shall continue in force thereafter, unless terminated sooner (i) in accordance with the terms of this AGREEMENT; or (ii) by the mutual agreement of the parties (the “TERM”).”

2.3.4. Section 5.6 of the FIRST GENERATION IPR AGREEMENT is hereby deleted. The parties’ right to assign any right or obligation under the FIRST GENERATION IPR AGREEMENT or the FIRST GENERATION IPR AGREEMENT itself is governed by Section 6.6 of this AGREEMENT.

3. GRANTS AND ASSIGNMENT. Contingent upon MOTOROLA’s receipt of the INITIAL PAYMENT in accordance with the SETTLEMENT AGREEMENT, MOTOROLA agrees to grant to IRIDIUM the rights and licenses set forth in this Section 3.

3.1. License. MOTOROLA and its SUBSIDIARIES grant to IRIDIUM a non-exclusive, non-transferable (except as expressly provided herein), irrevocable, worldwide, non-sublicenseable (except as expressly provided in Section 3.4), fully paid-up, royalty-free license during the TERM under the MOTOROLA SYSTEM IP RIGHTS solely:

3.1.1. to design, make, use, deploy, and OPERATE AND MAINTAIN the NEXT SYSTEM (which includes the provision of IRIDIUM SERVICES and the design, manufacture, testing, use, and placement into service of space vehicles for the SPACE SEGMENT of the NEXT SYSTEM and the de-orbiting of such space vehicles);
3.1.2. to use and OPERATE AND MAINTAIN the FIRST GENERATION IRIDIUM SYSTEM (which includes the provision of IRIDIUM SERVICES); and

3.1.3. to make, use, or import any product or service, or practice any method, covered by the MOTOROLA SYSTEM IP RIGHTS solely in connection with the exercise of the rights set forth in Sections 3.1.1-3.1.2; and

3.1.4. subject to the confidentiality provisions herein to use, copy, reproduce, and prepare derivative works of the IRIDIUM TECHNICAL INFORMATION solely in connection with the exercise of the rights set forth in Sections 3.1.1-3.1.3.

3.2. Backwards Compatibility. MOTOROLA and its SUBSIDIARIES grant to IRIDIUM a non-exclusive, irrevocable, non-transferable (except as expressly provided herein), worldwide, fully paid-up, royalty-free license during the TERM under the MOTOROLA SYSTEM IP RIGHTS, to the extent necessary to assure backward compatibility between SATELLITE SUBSCRIBER EQUIPMENT designed for and operable on either of the IRIDIUM SYSTEMS and a THIRD GENERATION IRIDIUM SYSTEM, to design, deploy, make, use, import, operate, and maintain those components of a THIRD GENERATION IRIDIUM SYSTEM that are necessary to assure such backward compatibility.

3.3. “Have Made” Rights. The licenses in Section 3.1 and Section 3.2, subject to the provisions of this AGREEMENT, include the right to have others exercise the rights granted to IRIDIUM solely for the benefit of IRIDIUM.

3.4. Sublicense.

3.4.1. Right. The license of Section 3.1, subject to the provisions of this AGREEMENT, includes the right for IRIDIUM (but not sublicensees) to sublicense solely IRIDIUM’s right to provide IRIDIUM SERVICES.

3.4.2. Condition. MOTOROLA expressly reserves the right to immediately terminate IRIDIUM’s right to grant sublicenses with respect to a PERSON operating thereunder if such PERSON files a lawsuit or commences arbitration or other formal proceeding that asserts any INTELLECTUAL PROPERTY CLAIM against MOTOROLA or any of its AFFILIATES. If MOTOROLA receives notice of a potential INTELLECTUAL PROPERTY CLAIM from a PERSON operating under an IRIDIUM sublicense in accordance with this AGREEMENT, MOTOROLA will notify IRIDIUM of the potential termination of the applicable license and rights with respect to the claiming PERSON. IRIDIUM agrees to include in any sublicense grant the express condition that the sublicense terminates immediately upon IRIDIUM’s receipt of notice from MOTOROLA that IRIDIUM’s right to grant the applicable sublicense is terminated.

3.4.3. Reporting. Within thirty (30) days of December 31 of each year in the TERM of this AGREEMENT, IRIDIUM shall provide MOTOROLA written notice of any sublicense granted in the preceding twelve (12)-month period and any sublicense not previously reported, identifying the sublicensee and effective date of the sublicense agreement. Prior to IRIDIUM’s disclosure of any IRIDIUM
TECHNICAL INFORMATION or other MOTOROLA PROPRIETARY INFORMATION to any sublicensee, IRIDIUM shall enter into a written confidentiality agreement with the sublicensee obligating the sublicensee to confidentiality and use restrictions no less restrictive than those set forth in the NDA.

3.4.4. Audit. For purposes of auditing IRIDIUM’s compliance with Sections 3.4.2 and 3.4.3, IRIDIUM will, upon thirty (30) calendar days’ advance notice, provide reasonable access to a reputable third-party auditor selected by MOTOROLA, during IRIDIUM’s regular business hours, to its agreements with the applicable sublicensees and will reasonably assist such auditor in performing such audits. MOTOROLA may request such audits if it has a reasonable belief that IRIDIUM is not in compliance with Sections 3.4.2 and 3.4.3. The audits shall be limited in duration, manner, and scope and only as reasonably necessary and appropriate to confirm compliance with the terms of such Sections, shall be conducted in a manner that minimizes business disruptions of IRIDIUM, shall not be conducted more than once in any twelve (12)-month period and shall be at MOTOROLA’s expense. All information learned or exchanged in connection with an audit, as well as the results thereof, or otherwise learned or exchanged pursuant to the activities set forth in this Section 3.4.4, shall constitute IRIDIUM PROPRIETARY INFORMATION, and the third-party auditor shall only disclose to MOTOROLA generally whether IRIDIUM was in compliance with Sections 3.4.2 and 3.4.3 and shall not disclose to MOTOROLA any specific information or provisions set forth in the audited agreements with the applicable sublicensee.

3.5. Transfer of the INTERFACE SPECIFICATIONS. Contingent upon MOTOROLA’s receipt of the INITIAL PAYMENT in accordance with the SETTLEMENT AGREEMENT, MOTOROLA agrees to transfer certain of its rights in the INTERFACE SPECIFICATIONS to IRIDIUM as follows:

3.5.1. Transfer. MOTOROLA and its SUBSIDIARIES hereby assign to IRIDIUM all of MOTOROLA’s right, title, and interest in and to the copyrights in the INTERFACE SPECIFICATIONS. Contemporaneously herewith, MOTOROLA shall execute a confirmatory Assignment & Bill of Sale assigning, selling and transferring to IRIDIUM all of MOTOROLA’s right, title and interest in and to the copyright in INTERFACE SPECIFICATIONS (the “BILL OF SALE”), the form of which is attached hereto as Exhibit C.

3.5.2. License. MOTOROLA and its SUBSIDIARIES grant to IRIDIUM a perpetual, irrevocable, fully paid-up, royalty-free, worldwide, non-exclusive license, with the right to grant sublicenses, under MOTOROLA’s and its SUBSIDIARIES’ trade secret rights in the INTERFACE SPECIFICATIONS to use and exploit the INTERFACE SPECIFICATIONS in any and all fields.

3.5.3. Further Assurances. Upon IRIDIUM’s request, MOTOROLA shall cooperate with IRIDIUM and use reasonable efforts, including executing any necessary documents, to establish, record, or perfect IRIDIUM’s ownership of those copyrights assigned, and will do so without further consideration, other than
reimbursement of reasonable out-of-pocket expenses incurred by MOTOROLA in connection with IRIDIUM’s request.

3.5.4. **Pre-Existing Rights.** IRIDIUM takes ownership of the copyrights in the INTERFACE SPECIFICATIONS subject to any and all licenses, license rights, license options, and covenants not to assert that MOTOROLA may have entered into or granted on or prior to the date of this AGREEMENT.

3.5.5. **Delivery.** MOTOROLA has no obligation to deliver the INTERFACE SPECIFICATIONS or any material or trade secret information related thereto. IRIDIUM acknowledges that it has, prior to the date of this AGREEMENT, received and is now in possession of the INTERFACE SPECIFICATIONS and materials and trade secret information related thereto necessary for IRIDIUM’s understanding and use of the INTERFACE SPECIFICATIONS.

3.5.6. **Grant Back.** IRIDIUM hereby grants to MOTOROLA and its SUBSIDIARIES (including MOBILITY and its SUBSIDIARIES) a non-transferable (except as expressly provided herein), perpetual, irrevocable, non-sublicenseable, fully paid-up, royalty-free, worldwide, non-exclusive license under the copyrights in the INTERFACE SPECIFICATIONS, subject to Section 4.2.2, to publish, reproduce, display, transmit, adapt, sell, prepare derivative works, distribute, perform or otherwise exploit or make use of the INTERFACE SPECIFICATIONS or portions thereof throughout the world in any form or medium, and in any language, for the entire term of copyright, including any renewals and extensions, and to have others exercise the foregoing rights for the benefit of MOTOROLA or its SUBSIDIARIES. Modifications to and derivative works of the INTERFACE SPECIFICATIONS made by or on behalf of MOTOROLA (or its SUBSIDIARIES, including MOBILITY and its SUBSIDIARIES) shall, as between the IRIDIUM and MOTOROLA, be owned by MOTOROLA.

3.6. **Compensation.** Pursuant to the SETTLEMENT AGREEMENT, IRIDIUM will be making certain payments to MOTOROLA. For the avoidance of doubt, the rights, licenses, and assignment granted to IRIDIUM herein are contingent upon MOTOROLA’s receipt of the INITIAL PAYMENT in accordance with the SETTLEMENT AGREEMENT.

3.7. **Reservation of Rights.** Except as expressly set forth herein, MOTOROLA retains all right, title and interest in and to the MOTOROLA SYSTEM IP RIGHTS and the IRIDIUM TECHNICAL INFORMATION. This AGREEMENT does not and shall not be interpreted to grant IRIDIUM or its SUBSIDIARIES, impliedly or by way of laches or estoppel, any rights (i) to utilize MOTOROLA SYSTEM IP RIGHTS or the IRIDIUM TECHNICAL INFORMATION in any manner other than as expressly stated herein; (ii) to make, use, sell, lease, import, or otherwise dispose of any SUBSCRIBER EQUIPMENT or any products for use in connection with TERRESTRIAL WIRELESS SYSTEMS; or (iii) to provide any service by any TERRESTRIAL WIRELESS SYSTEM. Notwithstanding anything to the contrary in this AGREEMENT, MOTOROLA grants no license or right, expressly, impliedly, or by way of laches or estoppel, under any TRANSFERRED INTELLECTUAL PROPERTY RIGHTS.
3.8. **Limitation of Rights.** In the event IRIDIUM comes under the ownership or control of another entity, or acquires, controls or merges with another entity, all licenses granted herein shall not extend to the operations, products or services of the other entity without the express written consent of MOTOROLA.

3.9. **Continuation of Rights.** Notwithstanding anything else to the contrary, in the event that MOTOROLA separates its SUBSIDIARY, MOBILITY, whether by way of a sale, establishment of a joint venture, spinoff, spinout, or otherwise (a “Separation”), the licenses, and benefits granted to or for the benefit of MOTOROLA and its SUBSIDIARIES (including MOBILITY and its SUBSIDIARIES) under this Section 3 (collectively the “Rights”) survive and remain in full force and effect such that the Rights will continue to benefit both MOTOROLA and its SUBSIDIARIES and MOBILITY and its SUBSIDIARIES following the Separation in accordance with Section 3. MOBILITY and its SUBSIDIARIES collectively is an intended third party beneficiary under this Agreement. In the event that, following such Separation, there is a Change of Control of MOBILITY, the Rights granted to or for the benefit of MOBILITY and its SUBSIDIARIES (in existence prior to the Change of Control) will continue to the extent and for as long as MOBILITY remains a separately identifiable legal entity; provided that none of the Rights will extend to the third party acquirer of MOBILITY or any of the acquirer’s AFFILIATES. For purposes of this Section 3.9, “Change of Control” means either of the following: (a) a third party (other than an AFFILIATE of MOTOROLA or MOBILITY) acquires all or substantially all of the assets of MOBILITY; or (b) a third party (other than an AFFILIATE of MOTOROLA or MOBILITY) acquires at least fifty percent (50%) of the outstanding voting power of MOBILITY by means of any transaction or series of related transactions including, without limitation, any reorganization, merger, consolidation or tender offer.

4. **IRIDIUM TECHNICAL INFORMATION.**

4.1. **IRIDIUM TECHNICAL INFORMATION.** IRIDIUM acknowledges that it has, prior to the date of this AGREEMENT, received and is now in possession of certain IRIDIUM TECHNICAL INFORMATION licensed hereunder. MOTOROLA has no obligation to maintain or support the IRIDIUM TECHNICAL INFORMATION.

4.2. **Limited Obligations Regarding IRIDIUM TECHNICAL INFORMATION.**

4.2.1. MOTOROLA has no obligation to identify any item that could fall within the scope of the definition of IRIDIUM TECHNICAL INFORMATION. MOTOROLA shall, however, use reasonable efforts to provide to IRIDIUM, at IRIDIUM’s expense, any IRIDIUM TECHNICAL INFORMATION reasonably requested by IRIDIUM which is not identified on Exhibit A hereto to the extent that MOTOROLA is legally entitled to do so; provided that this obligation shall cease upon the launch of the first satellite that is intended to constitute part of the NEXT SYSTEM.

4.2.2. For the period of “Protection of Proprietary Information” set forth in the NDA, MOTOROLA shall use reasonable efforts to preserve any confidential or trade secret information in the INTERFACE SPECIFICATIONS consistent with past practices used by MOTOROLA with respect to such INTERFACE SPECIFICATIONS; provided, however, IRIDIUM acknowledges that portions of the INTERFACE SPECIFICATIONS may form part of or be incorporated into

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other specifications or technology that remain owned by MOTOROLA and agrees that MOTOROLA’s disclosure, in its ordinary course of business, of such other specifications or technology (e.g., to standard setting organizations or customers and suppliers) is a permitted disclosure that may be made at MOTOROLA’s discretion; provided further that MOTOROLA obtains a reasonable written confidentiality agreement from any third party receiving access to the INTERFACE SPECIFICATIONS to the extent practicable under the circumstances.

4.3. Confidentiality. The parties are entering into a Non-Disclosure Agreement contemporaneously herewith (the “NDA”), the form of which is attached hereto as Exhibit D. The terms of the NDA are incorporated herein, and shall apply to PROPRIETARY INFORMATION that is exchanged pursuant to and during the TERM of this AGREEMENT. The provisions of the NDA are in addition to any other remedies available to either party in the event of a breach by the other. The terms and conditions (but not the existence) of this AGREEMENT shall be considered PROPRIETARY INFORMATION of both parties to be treated in accordance with the terms of the NDA. Additionally, all IRIDIUM TECHNICAL INFORMATION disclosed to IRIDIUM, whether under this AGREEMENT or prior to this AGREEMENT, shall be considered PROPRIETARY INFORMATION of MOTOROLA, to be treated in accordance with the terms of the NDA. PROPRIETARY INFORMATION provided to IRIDIUM may be used only in accordance with the licenses under Section 3 to accomplish the stated purposes of this AGREEMENT. The obligations in the NDA regarding use and disclosure of PROPRIETARY INFORMATION shall survive termination of this AGREEMENT. If this AGREEMENT expires or is terminated, upon MOTOROLA’s request, IRIDIUM will make commercially reasonable efforts to return all PROPRIETARY INFORMATION, or, with MOTOROLA’s consent, destroy such PROPRIETARY INFORMATION.

5. REPRESENTATIONS; DISCLAIMERS.

5.1. Limited Warranty. To MOTOROLA’s knowledge, no MOTOROLA SYSTEM IP RIGHTS are owned or held by a SUBSIDIARY other than MOBILITY or a MOBILITY SUBSIDIARY; provided, however, to the extent MOTOROLA SYSTEM IP RIGHTS are owned or held by a SUBSIDIARY (including MOBILITY AND ITS SUBSIDIARIES), MOTOROLA warrants that it has the right to grant the licenses contemplated hereby on behalf of such SUBSIDIARY or MOTOROLA otherwise agrees to obtain for IRIDIUM the necessary licenses to such MOTOROLA SYSTEM IP RIGHTS consistent with the licenses granted herein.

5.2. No Other Warranty. MOTOROLA makes no representation or warranty that the IRIDIUM TECHNICAL INFORMATION comprises all information or technology or that the MOTOROLA SYSTEM IP RIGHTS comprise all rights necessary for IRIDIUM to design, make, use, deploy, or OPERATE AND MAINTAIN the IRIDIUM SYSTEMS or to provide the IRIDIUM SERVICES or any other services. MOTOROLA MAKES NO WARRANTY REGARDING THE IRIDIUM TECHNICAL INFORMATION (INCLUDING THE INTERFACE SPECIFICATIONS). MOTOROLA WILL NOT PROVIDE ANY UPDATES, ENHANCEMENTS, EXTENSIONS, SUPPORT, ASSISTANCE, INSTALLATION, TRAINING OR OTHER SERVICES EXCEPT AS SPECIFICALLY PROVIDED IN THIS
AGREEMENT. MOTOROLA SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE.

5.3. **Limitation of Liability.** In no event shall either party have any liability to the other party or any other third party for any lost profits, lost data, or loss of use, or for any indirect, special or consequential or punitive damages arising out of this agreement, under any cause of action or theory of liability arising under federal or state law, and irrespective of whether that party has advance notice of the possibility of such damages. These limitations shall apply notwithstanding the failure of the essential purpose of any limited remedy.

5.4. **Cap on Liability.**

5.4.1. In no event and under no circumstance shall Motorola or any subsidiary of Motorola (including Mobility and its subsidiaries) be liable to Iridium, any affiliate of Iridium, any Iridium licensee, sublicensee, or manufacturer, or anyone claiming by or through Iridium or any third parties (including direct or indirect customers of or vendors to Iridium) in an aggregate cumulative amount in excess of U.S. $2,500,000 for any and all costs, damages, claims or losses whatsoever arising out of or related to this agreement, the first generation IPR agreement, the subscriber agreements, or any provision hereunder or thereunder whether pursued as a breach (i.e., default) of this agreement, the first generation IPR agreement, or the subscriber agreements, or as a tort or other cause of action.

5.4.2. Except for violations and misuse of intellectual property rights (including those licensed to Iridium under this agreement, the first generation IPR agreement, or the subscriber agreements), in no event and under no circumstance shall Iridium or any subsidiary of Iridium be liable to Motorola, any affiliate of Motorola, any Motorola licensee, sublicensee, or manufacturer or anyone claiming by or through Motorola, or any third parties (including direct or indirect customers of or vendors to Motorola) in an aggregate cumulative amount in excess of U.S. $2,500,000 for any and all costs, damages, claims or losses whatsoever arising out of or related to this agreement, the first generation IPR agreement, the subscriber agreements, or any provision hereunder or thereunder, whether pursued as a breach (i.e., default) of this agreement, the first generation IPR agreement, or the subscriber agreements, or as a tort or other cause of action.

5.5. **Disclaimer.** Nothing contained in this AGREEMENT shall be construed as:
5.5.1. restricting the right of MOTOROLA or any of its SUBSIDIARIES (including MOBILITY and its SUBSIDIARIES) to make, use, sell, lease or otherwise dispose of any particular product or products;

5.5.2. an admission by IRIDIUM of, or a warranty or representation by MOTOROLA as to, the validity and/or scope of the MOTOROLA SYSTEM IP RIGHTS, or a limitation on IRIDIUM to contest, in any proceeding, the validity and/or scope thereof;

5.5.3. an admission by MOTOROLA of, or a warranty or representation by IRIDIUM as to, the validity and/or scope of any INTELLECTUAL PROPERTY RIGHTS of IRIDIUM, or a limitation on MOTOROLA to contest, in any proceeding, the validity and/or scope thereof;

5.5.4. conferring any license or other right, by implication, estoppel or otherwise under any MOTOROLA SYSTEM IP RIGHTS, except as expressly granted herein, or under any other INTELLECTUAL PROPERTY RIGHT owned by MOTOROLA or its SUBSIDIARIES;

5.5.5. conferring any license or other right, by implication, estoppel or otherwise under any TRANSFERRED INTELLECTUAL PROPERTY RIGHTS;

5.5.6. conferring any license or right with respect to any trademark, trade or brand name, a corporate name of either party or any of their respective SUBSIDIARIES, or any other name or mark, or contraction, abbreviation or simulation thereof;

5.5.7. imposing on MOTOROLA any obligation to institute any suit or action for infringement of any MOTOROLA SYSTEM IP RIGHTS, or to defend any suit or action brought by a third party which challenges or concerns the validity of any MOTOROLA SYSTEM IP RIGHTS;

5.5.8. a warranty or representation by MOTOROLA that the use of the IRIDIUM TECHNICAL INFORMATION (including the INTERFACE SPECIFICATIONS), or the use, manufacture, or OPERATION AND MAINTENANCE of the IRIDIUM SYSTEMS, or any provision, sale, lease or other disposition IRIDIUM SERVICES, or any other products or services will be free from infringement of any INTELLECTUAL PROPERTY RIGHTS;

5.5.9. imposing on either party any obligation to file any patent application or to secure any INTELLECTUAL PROPERTY RIGHTS or maintain any INTELLECTUAL PROPERTY RIGHTS in force; or

5.5.10. an obligation on either party to furnish any manufacturing or technical information under this AGREEMENT, except as the same is specifically provided for herein.

6. GENERAL.

6.1. Term and Termination.

6.1.1. Term. This AGREEMENT shall be effective upon the date of this AGREEMENT and shall continue in force thereafter, unless terminated sooner (i) in accordance with the terms of this AGREEMENT; or (ii) by the mutual agreement of the parties (the “TERM”).

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6.1.2. **Termination for Cause - Mutual.** Either party shall have the right to terminate this AGREEMENT by giving written notice to the other party at any time upon or after:

6.1.2.1. the commencement by such other party of a voluntary proceeding concerning itself under any bankruptcy or insolvency law; or the commencement of any involuntary proceeding against such other party under any bankruptcy or insolvency law where a petition has not been dismissed within one hundred and twenty (120) calendar days after commencement; or a receiver or custodian is appointed for or takes charge of all or substantially all of the property of such other party and such receiver or custodian has not been dismissed within ninety (90) calendar days; or such other party has taken action toward winding up, dissolution, or liquidation of its business; or such other party has been adjudicated bankrupt or insolvent; or such other party has made a general assignment for the benefit of creditors; or

6.1.2.2. material failure of such other party to perform or comply with a provision of this AGREEMENT and such failure continues unremedied for a period of forty-five (45) calendar days or more following written notice from the non-breaching party of such failure.

6.2. **Survival.** Upon expiration or termination of this AGREEMENT, all rights, obligations, and duties that specifically extend beyond the expiration or termination date shall survive. The following rights and obligations shall survive any expiration or termination of this AGREEMENT to the degree necessary to permit their complete fulfillment or discharge:

6.2.1. obligations of confidentiality; and

6.2.2. licenses running in favor of customers of IRIDIUM with respect to products sold or services provided prior to termination.

6.3. **Notices and Requests.** All notices required or permitted to be given under this AGREEMENT shall be in writing, shall make reference to this AGREEMENT, and shall be delivered by hand, confirmed email in PDF format, facsimile transmission, or dispatched by prepaid air courier or by registered or certified airmail, postage prepaid, to the following:

To MOTOROLA:

Motorola, Inc.
1303 East Algonquin Road
Schaumburg, Illinois 60196
Attn: General Counsel

with copies (which copies shall not constitute notice hereunder) to:

Winston & Strawn LLP
35 W. Wacker Drive
Chicago, Illinois 60601
Attn: Oscar A. David
To IRIDIUM:

Iridium Satellite LLC
1750 Tysons Boulevard
Suite 1400
McLean, Virginia 22102
Attn: John Brunette, General Counsel

with copies (which copies shall not constitute notice hereunder) to:

Sidley Austin LLP
1 South Dearborn Street
Chicago, Illinois 60603
Attn: Jeffrey S. Rothstein

All notices shall be deemed served when verification of delivery has been received, as required by this Section. A party may give written notice of a change of address and after notice of such change has been received, any notice or request shall thereafter be given to such party at the changed address.

6.4. **Governing Law.** Any claim arising under or relating to this AGREEMENT shall be governed by the internal substantive laws of the State of Illinois or federal courts located in Illinois, without regard to principles of conflict of laws, and the parties agree to submit to the jurisdiction of Illinois courts or federal courts located in the State of Illinois.

6.5. **Export.** IRIDIUM shall not export, either directly or indirectly, any IRIDIUM TECHNICAL INFORMATION or system or product incorporating the IRIDIUM TECHNICAL INFORMATION without first obtaining any required license or other approval from the U.S. Department of Commerce or any other agency or department of the United States Government. In the event IRIDIUM exports any such materials from the United States or re-exports any such materials from a foreign destination, IRIDIUM shall ensure that the distribution and export/re-export is in compliance with all laws, regulations, orders, or other restrictions of the U.S. Export Administration Regulations. IRIDIUM agrees that it will not, nor will it allow others to, export/re-export any technical data, process, IRIDIUM TECHNICAL INFORMATION, other information provided hereunder, or service, without first obtaining such license, approval or letter.

6.6. **Assignment.** This AGREEMENT shall be binding upon the parties and their respective successors and permitted assigns. Neither party may assign any or all of its rights or obligations under this AGREEMENT or the NDA, in whole or in part, without the express written consent of the other party to this AGREEMENT, except that:

6.6.1. MOTOROLA may assign this AGREEMENT and the NDA (i) to an AFFILIATE; or (ii) in connection with an acquisition, merger, consolidation, reorganization, or similar transaction, or any divestiture or other separation of a MOTOROLA business.

6.6.2. IRIDIUM may assign or otherwise transfer, subject to Section 3.8, this AGREEMENT and the NDA (i) to an AFFILIATE; or (ii) in connection with any merger, consolidation or sale of all or substantially all its assets.

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6.7. **Severability.** If any one or more provisions of this AGREEMENT are held for any reason to be invalid or unenforceable, the remaining provisions of this AGREEMENT will be unimpaired and the parties shall use good faith to negotiate a substitute, valid and enforceable provision that most nearly effects the parties’ intention underlying the invalid or unenforceable provision.

6.8. **Waiver and Modification.** Failure by either party to enforce any provision of this AGREEMENT shall not be deemed a waiver of future enforcement of that or any other provision. Any waiver, amendment or other modification of any provision of this AGREEMENT shall be effective only if in writing and signed by both parties.

6.9. **Attorneys’ Fees and Costs.** The parties will bear their own costs, attorneys’ fees, and expenses in connection with preparing this AGREEMENT. In the event any action is brought to enforce this AGREEMENT, the FIRST GENERATION IPR AGREEMENT, or the SUBSCRIBER AGREEMENTS, the prevailing party shall be entitled to recover, in addition to any other amounts awarded, its reasonable attorneys’ fees and other related reasonable litigation costs and expenses. For the avoidance of doubt, any such attorneys’ fees and other litigation costs and expenses are exempt from each party’s respective cap on liability set forth in Section 5.4.

6.10. **Relationship of the Parties.** Nothing in this AGREEMENT shall be construed as creating any partnership, joint venture, or agency between the parties. This AGREEMENT is the result of negotiation between the parties. The parties acknowledge that they have been represented by counsel during such negotiation. Accordingly, this AGREEMENT shall not be construed for or against either party regardless of which party drafted this AGREEMENT or any portion thereof.

6.11. **Interpretation.** The section headings contained in this AGREEMENT are for reference purposes only and shall not affect in any way the meaning or interpretation of this AGREEMENT. In this AGREEMENT, defined terms shall be equally applicable to both the singular and plural forms. The words “including”, “include” and “includes” shall each be deemed to be followed by the term “without limitation.” The terms “hereof”, “herein” and “hereunder” shall refer to this entire AGREEMENT. Any agreement or exhibit referred to herein shall mean such agreement or exhibit as amended, restated, supplemented or modified as of the date hereof and from time to time hereafter to the extent permitted by the applicable provisions thereof and this AGREEMENT. Unless otherwise stated, references to sections, paragraphs and exhibits shall be references to sections, paragraphs and exhibits of this AGREEMENT.

6.12. **Entire Agreement.** Except as set forth in Section 2, the terms and conditions of this AGREEMENT, including its exhibits, constitute the entire agreement between the parties with respect to the subject matter of this AGREEMENT, and merge and supersede all prior and contemporaneous agreements, understandings, negotiations and discussions with respect to such subject matter. No oral explanation or oral information by either party shall alter the meaning or interpretation of this AGREEMENT. IRIDUIM acknowledges that it has not executed or authorized the execution of this AGREEMENT in reliance upon any such oral explanation or information in or reliance upon any promise, representation, warranty, or statement not expressly set forth in this AGREEMENT. This AGREEMENT shall directly inure to the benefit of MOBILITY (and its SUBSIDIARIES), including its permitted successors and assigns, and said entity shall be deemed a third-party beneficiary of this AGREEMENT. This AGREEMENT may be executed in two or more counterparts, all of which, taken together, shall be regarded as one and the same instrument. Delivery by facsimile or by email in PDF format shall be
The following exhibits are attached hereto and incorporated herein:

Exhibit A CERTAIN IRIDIUM TECHNICAL INFORMATION
Exhibit B TRANSFERRED INTELLECTUAL PROPERTY RIGHTS
Exhibit C FORM OF BILL OF SALE
Exhibit D FORM OF NONDISCLOSURE AGREEMENT

6.13 **Agreements with Other Parties**. IRIDIUM shall require its AFFILIATES, manufacturers, and licensees to comply with terms and conditions commensurate with those of this AGREEMENT that are reasonably necessary to perfect and protect MOTOROLA's rights set forth in this AGREEMENT and to otherwise afford MOTOROLA the benefits of the terms and conditions of this AGREEMENT.

* * * * *
In witness of their agreement, the parties have caused this binding AGREEMENT to be executed and delivered below by their authorized representatives.

MOTOROLA, INC.  IRIDIUM SATELLITE LLC

/s/ M. Kraus  /s/ John S. Brunette
Signature  Signature
M. Kraus  John S. Brunette
Printed Name  Printed Name
Senior Director, Licensing  Chief Legal & Administrative Officer
Title  Title
September 30, 2010  September 30, 2010
Date  Date

MOTOROLA, INC.

/s/ Jonathan P. Meyer
Signature
Jonathan P. Meyer
Printed Name
Senior Vice President
Title
September 30, 2010
Date

Signature Page to the
System Intellectual Property Rights Amendment and Agreement
EXHIBIT A
CERTAIN IRIDIUM TECHNICAL INFORMATION

1. The Gateway Interface Specification;

2. The Gateway Design Package; and

3. The Iridium Space System Operation Plan;

4. IRIDIUM™ SV—SV Interface Control Document, Alternate System Design, Doc. No. ICD-G0001.SYS, Rev. G; and

5. Copies of software design documentation, source code, and configuration files and documented know-how (consisting of training materials and manuals, operations process and procedure documentation, and documentation relating to operational tools) and other documentation that (i) is created and documented prior to the effective date of the execution date of the FIRST GENERATION IPR AGREEMENT, (ii) in MOTOROLA’S reasonable opinion is necessary to OPERATE AND MAINTAIN the FIRST GENERATION IRIDIUM SYSTEM or procure replacement parts therefor in accordance with the term of the FIRST GENERATION IPR AGREEMENT, and (iii) MOTOROLA delivered to IRIDIUM in accordance with the training and support services described in the original Transition Services, Products and Asset Agreement, dated as of December 11, 2000 (concurrent with this Agreement, MOTOROLA and IRIDIUM entered into an Amended and Restated Transition Services, Products and Asset Agreement).
EXHIBIT B

TRANSFERRED INTELLECTUAL PROPERTY RIGHTS

TRANSFERRED INTELLECTUAL PROPERTY RIGHTS include the following U.S. patents (whether or not used in the OPERATION AND MAINTENANCE of the FIRST GENERATION IRIDIUM SYSTEM):

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In addition to the U.S. patents listed above (the “US Patents”), TRANSFERRED INTELLECTUAL PROPERTY RIGHTS include all (i) patents or patent applications to which any of the US Patents directly or indirectly claims priority, or for which any of the US Patents directly or indirectly forms a basis for priority; (ii) reissues, reexaminations, extensions, continuations, continuations in part, continuing prosecution applications, requests for continuing examinations, divisions, and registrations of any of the US Patents or any asset falling within clause (i); (iii) foreign patents, patent applications and counterparts relating to any US Patent or any asset falling within clause (i) or (ii), including without limitations, certificates of invention, utility models, industrial design protection, design patent protection, and other governmental grants or issuances; and (iv) any items in any of the foregoing categories (i) through (iii) whether or not expressly listed as US Patents and whether or not claims in any of the foregoing have been rejected, withdrawn, cancelled, or the like.

B-2
This ASSIGNMENT and BILL OF SALE is made and delivered as of and in accordance with and subject to that certain System Intellectual Property Rights Amendment and Agreement (the “IPR Agreement”), dated [l], 2010 between Motorola, Inc., a Delaware corporation (“MOTOROLA”), and Iridium Satellite LLC, a Delaware corporation (“IRIDIUM”). Capitalized terms not otherwise defined in this ASSIGNMENT and BILL OF SALE have the same meanings given to them in the IPR Agreement.

MOTOROLA, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby sell, assign, and transfer to IRIDIUM, MOTOROLA’s entire right, title, and interest in and to all copyrights under copyright law by operation of law or otherwise, in the works of authorship identified in Annex A hereto (collectively the “Assigned Works”). MOTOROLA also hereby assigns to IRIDIUM any future claims, demands, and causes of action for infringement of the foregoing assigned copyrights in or to any of the Assigned Works and all of the proceeds from the foregoing hereafter accruing.

This assignment of copyrights includes, but is not limited to, any and all of MOTOROLA’s rights under the assigned copyrights to publish, reproduce, display, transmit, adapt, sell, prepare derivative works, distribute, perform or otherwise make use of such Assigned Works or portions thereof throughout the world in any form or medium, and in any language, and to license the assigned copyrights, for the entire term of copyright, including any renewals and extensions. Where permitted by law, MOTOROLA waives any applicable moral rights.

MOTOROLA hereby authorizes and requests the Copyright Office officials in the United States and any and all foreign countries to issue any and all copyright registrations for the Assigned Works, when granted, to IRIDIUM, as IRIDIUM of MOTOROLA’s entire right, title and interest in and to the same, for the sole use and benefit of said IRIDIUM, its successors and assigns.

IN WITNESS WHEREOF, the undersigned has caused this ASSIGNMENT and BILL OF SALE to be signed this day of , 2010.

MOTOROLA, INC.

Acknowledged and accepted:

IRIDIUM SATELLITE LLC

STATE OF ________________________________ )
COUNTY OF ________________________________ )

Before me, a Notary Public in and for the County and State aforesaid, appeared __________________, to me personally known to be the signer of the foregoing instrument, and acknowledged execution of said instrument as a free and voluntary act for the uses and purposes therein expressed.

Notary: ________________________________

STATE OF ________________________________ )
COUNTY OF ________________________________ )

Before me, a Notary Public in and for the County and State aforesaid, appeared __________________, to me personally known to be the signer of the foregoing instrument, and acknowledged execution of said instrument as a free and voluntary act for the uses and purposes therein expressed.

Notary: ________________________________
ANNEX A
ASSIGNED WORKS

INTERFACE SPECIFICATIONS:
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This Non-Disclosure Agreement ("AGREEMENT") is effective as of the ___ day of __________, 2010 by and between Motorola, Inc., a Delaware corporation with offices located at 1303 East Algonquin Road, Schaumburg, Illinois 60196 (hereafter "MOTOROLA"), and Iridium Satellite LLC, a Delaware limited liability company with principal offices located at 1750 Tysons Boulevard, Suite 1400, McLean, Virginia 22102 (hereafter "IRIDIUM").

A. Background. The parties or their affiliates are parties to the following agreements, among others: (i) the Intellectual Property Rights Agreement, dated December 11, 2000 ("FIRST GENERATION IPR AGREEMENT"); (ii) the System Intellectual Property Rights Amendment and Agreement, dated __________, 2010 ("SYSTEM IPR AGREEMENT"); (iii) the Subscriber Equipment Technology Agreement (Design), dated September 30, 2002 ("SETA (DESIGN)"); (iv) the Subscriber Equipment Technology Agreement (Manufacturing), dated September 30, 2002 ("SETA (MFG)"); and (v) the Supplemental Subscriber Equipment Technology Amendment and Agreement, dated __________, 2010 ("SSETA"), which shall be collectively referred to as the "IP AGREEMENTS."

B. Definition. "PROPRIETARY INFORMATION" means information disclosed by either party ("DISCLOSING PARTY") to or otherwise received by the other party ("RECIPIENT") pursuant to any of the IP AGREEMENTS that the DISCLOSING PARTY at the time of disclosure identifies in writing as confidential and/or proprietary by means of a legend, marking, stamp or other positive written notice identifying the information to be confidential and/or proprietary, or information disclosed orally, visually, or by other non-written manner by the DISCLOSING PARTY to the RECIPIENT, where the RECIPIENT was informed that the information is confidential in nature, or any other information disclosed by the DISCLOSING PARTY to the RECIPIENT in any manner that the RECIPIENT should reasonably recognize as being of a confidential nature.

C. Use of Proprietary Information. PROPRIETARY INFORMATION disclosed hereunder may be used only during the term of this AGREEMENT and only for purposes set forth in or otherwise permitted by the IP AGREEMENTS. This AGREEMENT is entered into solely to provide for the treatment of PROPRIETARY INFORMATION to the extent disclosed hereunder or under the IP AGREEMENTS. Neither party has an obligation to supply PROPRIETARY INFORMATION hereunder.

D. Protection of Proprietary Information. It is agreed that for a period of ten (10) years following the termination of the IP AGREEMENT pursuant to which PROPRIETARY INFORMATION was disclosed, the RECIPIENT will use such PROPRIETARY INFORMATION only for the purpose(s) provided in Section C above and shall make reasonable efforts to preserve in confidence such PROPRIETARY INFORMATION and prevent disclosure thereof to third parties. The RECIPIENT agrees that it will use the same reasonable efforts to protect PROPRIETARY INFORMATION as are used to protect its own proprietary information, and such degree of care shall include at least the use of reasonable care. Disclosures of such information shall be restricted to those employees, contractors, customers, agents, and permitted sublicensees of the RECIPIENT who are participating in the efforts provided in Paragraph C above, who have a need to know such information, and who have been made aware of and consent to abide by restrictions at least as restrictive as those contained herein concerning the use of such PROPRIETARY INFORMATION.
E. **Exceptions.** The obligation to protect PROPRIETARY INFORMATION, and the liability for unauthorized disclosure or use of PROPRIETARY INFORMATION, shall not apply with respect to such information which is:

(i) published or otherwise is or becomes available to the public other than by breach of this AGREEMENT; or

(ii) rightly received by the RECIPIENT hereunder from a third party without confidential limitation; or

(iii) independently known by or independently developed by the RECIPIENT without the use of PROPRIETARY INFORMATION; or

(iv) approved in writing by the DISCLOSING PARTY for public release by the RECIPIENT.

In addition, in the event that the RECIPIENT is required to disclose PROPRIETARY INFORMATION pursuant to any applicable law, regulation (including SEC regulations and rules), stock exchange rule or any other market or reporting system, or by legal process or pursuant to applicable professional standards, the RECIPIENT may do so provided that the RECIPIENT has, if possible, notified the DISCLOSING PARTY promptly upon learning of the possibility that disclosure could be required pursuant to any such law, regulation, or legal order and has, to the extent practicable or permitted, given the DISCLOSING PARTY a reasonable opportunity to contest or limit the scope of such required disclosure and has cooperated with the DISCLOSING PARTY toward this end.

F. **Term and Termination.** The term of this AGREEMENT shall coincide with the term of the last to expire or terminate of the IP AGREEMENTS. Termination of the IP AGREEMENTS shall not, however, affect the rights and obligations contained herein with respect to PROPRIETARY INFORMATION disclosed hereunder prior to termination.

G. **No Transfer or License of Intellectual Property.** Except as expressly provided herein, neither the execution and delivery of this AGREEMENT, nor the furnishing of any PROPRIETARY INFORMATION, shall be construed as granting either expressly or by implication, estoppel or otherwise, any ownership rights or rights by license or otherwise under any invention, improvement, discovery or patent, trade secret, know-how, work of authorship, software program, or other intellectual property now or hereafter owned or under the control of a party disclosing PROPRIETARY INFORMATION hereunder.

H. **Transfer/Assignment.** Except as expressly permitted in any IP AGREEMENT, this AGREEMENT and the rights and obligations hereunder may not be transferred or assigned by one party without the prior written approval of the other party hereto.

I. **U.S. Laws and Regulations.** Except as expressly permitted in the IP AGREEMENTS, the RECIPIENT shall not export, directly or indirectly, any PROPRIETARY INFORMATION disclosed under this AGREEMENT to any country which the U.S. Government at the time of export requires an export license or other Government approval without first obtaining such license or approval. The RECIPIENT shall first obtain the written consent of the DISCLOSING PARTY prior to submitting any request for authority to export any such PROPRIETARY INFORMATION.

J. **Applicable Law.** The law of the State of Illinois, U.S.A., except for its choice of laws rules, shall govern this AGREEMENT.
K. **No Formal Business Relationship.** This AGREEMENT shall not be construed as a teaming, joint venture or other such arrangement; rather, the parties hereto expressly agree that this AGREEMENT is for the purpose of protecting PROPRIETARY INFORMATION only.

L. **No Obligation to Support; No Representation.** PROPRIETARY INFORMATION provided hereunder is provided “AS IS”, without any warranty of any kind, except as expressly provided in the IP AGREEMENTS. Neither party nor their officers, directors, employees, advisors or agents make any representation or warranty as to the accuracy or completeness of any PROPRIETARY INFORMATION which may be furnished hereunder, and none of such officers, directors, employees, advisors or agents are authorized to make any such representation or warranty. Neither party nor their officers, directors, employees, advisors or agents shall have any liability to the RECIPIENT or any other person resulting from the use of the PROPRIETARY INFORMATION, or any inaccuracy or incompleteness of the PROPRIETARY INFORMATION.

M. **Entire Agreement.** This AGREEMENT contains the entire understanding between the parties relative to the protection of PROPRIETARY INFORMATION and supersedes all prior and collateral communication, reports, and understanding between the parties in respect thereto. No change, modification, alteration, or addition to any provision hereof shall be binding unless in writing and signed by authorized representatives of both parties.

N. **Binding Effect.** This AGREEMENT shall be binding upon each party, its affiliates, respective employees, agents, representative, successors, and assigns.

O. **Headings.** Paragraph headings are included in this AGREEMENT for purposes of information and ease of use only and shall not be used in interpreting its terms.

AGREED AND ACCEPTED BY:

Motorola, Inc. Iridium Satellite LLC

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D-3
Re: Transition Agreement

Dear Tom:

This letter sets forth the substance of the agreement (the “Agreement”) which Iridium Communications Inc., Iridium Satellite LLC and any of their subsidiaries (collectively, the “Company”) are offering to you in connection with your transition to consulting status.

1. **Transition Date.** Your last day of work with the Company as Chief Legal Officer and Corporate Secretary and your employment termination date will be December 31, 2021 (the “Transition Date”).

2. **Accrued Salary and Vacation.** No later than the first normal pay date following your Transition Date, the Company will pay you all accrued salary and accrued vacation time. You will receive these payments regardless of whether or not you sign this Agreement.

3. **Severance Benefits.** If you execute this Agreement within twenty-one (21) days of receipt, but no earlier than the Transition Date, and do not revoke your acceptance as described below, the Company will offer you the following “Severance Benefits,” subject to the terms and qualifications stated herein:
   
   a. The Company will make severance payments to you in the form of continuation of your base salary in effect on the Transition Date for twelve (12) months following the Transition Date (such period the “Severance Period” and such payments the “Salary Continuation”). The Salary Continuation will be subject to standard payroll deductions and withholdings. The first payment of the Salary Continuation will be made on the day that is no later than sixty (60) days following the Transition Date (the “Severance Pay Commencement Date”), provided the Company has received the executed Agreement from you on or before that date and that the Agreement is no longer subject to revocation. On the Severance Pay Commencement Date, the Company will pay in a lump sum the aggregate amount of the Salary Continuation under this Section 3(a) that the Company would have paid you through such date had the payments commenced on the Transition Date through the Severance Pay Commencement Date. The remaining installments will occur on the Company’s regularly scheduled payroll dates thereafter.

   b. The Company will provide an additional severance payment in the form of a fully taxable cash payment in the amount of the monthly COBRA premium to continue Executive’s coverage at the same level of coverage that was in effect on Executive’s Transition Date (including coverage for Executive’s eligible dependents, if applicable) multiplied by 12, regardless of whether Executive or Executive’s dependents elect COBRA continuation coverage (such amount, the “Health Care Payment”). Subject to Section 17 below, the Health Care Payment shall be payable within 60 days following Executive’s Transition Date and subject to
required payroll deductions and tax withholdings. For clarity, Executive may use the Health Care Payment for any purpose, which may include the cost of COBRA premiums, but Executive is not required to elect COBRA continuation coverage.

c. The Company will pay you an amount equal to the 2021 bonus that you would have earned (had you remained employed through the payment date for such bonus), based on actual achievement of the designated performance metrics (the “Bonus Severance”). The Bonus Severance will be subject to standard payroll deductions and withholdings, and paid in substantially equal installments on the Company’s normal payroll schedule over the remainder of the Severance Period from and after the date the Company determines (as part of its determination for all bonus eligible employees) actual performance and the amount of bonus that would have been earned based on such performance.

4. Benefit Plans. Your participation in Company sponsored benefit plans will cease as of the Transition Date. Except as otherwise provided in this Agreement, you acknowledge and agree that the Company has no further obligations to you with respect to payment of post-termination health insurance coverage.

5. Consultancy. The Company will offer you the Consulting Agreement attached as Exhibit A (the “Consulting Agreement”). If you execute the Consulting Agreement on the Transition Date you will begin your consulting relationship effective immediately. Provided the Company has received the executed Consulting Agreement from you on or before the Transition Date, beginning on the Transition Date, you will provide consulting services to the Company at an anticipated rate of up to twenty (20) hours per month while the Consulting Agreement remains in effect, subject to the terms of the Consulting Agreement. If you execute this Agreement and then revoke it, your consultancy with the Company will end on the date you revoke this Agreement. If you timely execute and do not revoke this Agreement, then the terms of your consultancy will be as set forth in the Consulting Agreement.

6. Other Compensation or Benefits. You acknowledge that, except as expressly provided in this Agreement and the Consulting Agreement, you are not eligible for, and will not receive, any additional compensation, severance or benefits after the Transition Date with the exception of any vested right you may have under the terms of a written ERISA-qualified benefit plan (e.g., 401(k) account) and any rights you have under any existing equity awards.

7. Expense Reimbursements. You agree that, within ten (10) days of the Transition Date, you will submit your final documented expense reimbursement statement reflecting all business expenses you incurred as an employee through the Transition Date, if any, for which you seek reimbursement. The Company will reimburse you for reasonable business expenses pursuant to its regular business practice.

8. Return of Company Property. If requested by the Company, you agree to return to the Company all Company documents (and all copies thereof) and other Company property that are specifically requested by the Company and that you have had in your possession at any time, including, but not limited to, Company files, notes, drawings, records, business plans and forecasts, financial information, specifications, computer-recorded information, tangible property including, but not limited to, computers, cell phone, entry cards, identification badges and keys; and, any materials of any kind that contain or embody any proprietary or confidential information of the Company (and all reproductions thereof). If
requested by the Company, you agree that you will make a diligent search to locate any such documents, property and
information. In addition, if requested by the Company, if you have used any personal computer, server, or e-mail system to
receive, store, review, prepare or transmit any Company confidential or proprietary data, materials or information, you agree to
provide the Company with a computer-useable copy of such information and then permanently delete and expunge such
Company confidential or proprietary information from those systems and you agree to provide the Company access to your
system as requested to verify that the necessary copying and/or deletion is done.

9. Continuing Obligations. Both during and after your employment you acknowledge your continuing obligations
under that certain Employment Agreement by and between you and the Company, dated as of April 29, 2011 (the “Employment
Agreement”). A copy of the Employment Agreement is attached hereto as Exhibit B. Notwithstanding anything to the contrary in
this Agreement or the Employment Agreement, confidential information that is also a “trade secret,” as defined by law, may be
disclosed (A) if it is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an
attorney and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or
other document filed in a lawsuit or other proceeding, if such filing is made under seal. In addition, in the event that you file a
lawsuit for retaliation by the Company for reporting a suspected violation of law, you may disclose the trade secret to your
attorney and use the trade secret information in the court proceeding, if you: (A) file any document containing the trade secret
under seal; and (B) do not disclose the trade secret, except pursuant to court order.

10. Confidentiality. Unless and until this Agreement is filed by the Company with the United States Securities and
Exchange Commission, the provisions of this Agreement will be held in strictest confidence by you and will not be publicized or
disclosed in any manner whatsoever; provided, however, that: (a) you may disclose this Agreement to your immediate family; (b)
you may disclose this Agreement in confidence to your attorney, accountant, auditor, tax preparer, and financial advisor; and (c)
you may disclose this Agreement inssofar as such disclosure may be required by law. Notwithstanding the foregoing, nothing in
this Agreement shall limit your right to voluntarily communicate with the Equal Employment Opportunity Commission, United
States Department of Labor, the National Labor Relations Board, the Securities and Exchange Commission, other federal
government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the
extent expressly permitted by Section 7 of the National Labor Relations Act.

11. Non-Disparagement. You hereby agree not to defame or disparage the Company or any executive, manager,
director, or officer of the Company in any medium to any person without limitation in time. Notwithstanding this provision, you
may confer in confidence with your legal representatives and respond accurately and fully to any question, inquiry or request for
information when required by legal process. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to
voluntarily communicate with the Equal Employment Opportunity Commission, United States Department of Labor, the National
Labor Relations Board, the Securities and Exchange Commission, other federal government agency or similar state or local
agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of
the National Labor Relations Act.
12. ** Cooperation After Termination.** During the time that you are providing consulting services to the Company, you agree to cooperate fully with the Company in all matters relating to the transition of your work and responsibilities on behalf of the Company, including, but not limited to, any present, prior or subsequent relationships and the orderly transfer of any such work and institutional knowledge to such other persons as may be designated by the Company.

13. ** Release.** In exchange for the payments and other consideration under this Agreement, to which you would not otherwise be entitled, and except as otherwise set forth in this Agreement, you, on behalf of yourself and, to the extent permitted by law, on behalf of your spouse, heirs, executors, administrators, assigns, insurers, attorneys and other persons or entities, acting or purporting to act on your behalf (collectively, the “Employee Parties”), hereby generally and completely release, acquit and forever discharge the Company, its parents and subsidiaries, and its and their officers, directors, managers, partners, agents, representatives, employees, attorneys, shareholders, predecessors, successors, assigns, insurers and affiliates (the “Company Parties”) of and from any and all claims, liabilities, demands, contentions, actions, causes of action, suits, costs, expenses, attorneys’ fees, damages, indemnities, debts, judgments, levies, executions and obligations of every kind and nature, in law, equity, or otherwise, both known and unknown, suspected and unsuspected, disclosed and undiscovered, arising out of or in any way related to agreements, events, acts or conduct at any time prior to and including the execution date of this Agreement, including but not limited to: all such claims and demands directly or indirectly arising out of or in any way connected with your employment with the Company or the termination of that employment; claims or demands related to salary, bonuses, commissions, stock, stock options, or any other ownership interests in the Company, vacation pay, fringe benefits, expense reimbursements, severance pay, or any other form of compensation, including claims under the Employment Agreement; any claim for any severance benefit which might have been due to you under any previous agreement executed by and between any member of the Company Parties and you; claims pursuant to any federal, state or local law, statute, or cause of action; tort law; or contract law (individually a “Claim” and collectively “Claims”). The Claims you are releasing and waiving in this Agreement include, but are not limited to, any and all Claims that any of the Company Parties:

- has violated its personnel policies, handbooks, contracts of employment, or covenants of good faith and fair dealing;
- has discriminated against you on the basis of age, race, color, sex (including sexual harassment), national origin, ancestry, disability, religion, sexual orientation, marital status, parental status, source of income, entitlement to benefits, any union activities or other protected category in violation of any local, state or federal law, constitution, ordinance, or regulation, including but not limited to: the Age Discrimination in Employment Act, as amended (“ADEA”); Title VII of the Civil Rights Act of 1964, as amended; the Civil Rights Act of 1991; 42 U.S.C. § 1981, as amended; the Equal Pay Act; the Americans With Disabilities Act; the Genetic Information Nondiscrimination Act; the Family and Medical Leave Act; the Virginia Human Rights Act; the Employee Retirement Income Security Act; the Employee Polygraph Protection Act; the Worker Adjustment and Retraining Notification Act; the Older Workers Benefit Protection Act; the anti-retaliation provisions of
the Sarbanes-Oxley Act, or any other federal or state law regarding whistleblower retaliation; the Lilly Ledbetter Fair Pay Act; the Uniformed Services Employment and Reemployment Rights Act; the Fair Credit Reporting Act; and the National Labor Relations Act;

- has violated any statute, public policy or common law (including but not limited to Claims for retaliatory discharge; negligent hiring, retention or supervision; defamation; intentional or negligent infliction of emotional distress and/or mental anguish; intentional interference with contract; negligence; detrimental reliance; loss of consortium to you or any member of your family and/or promissory estoppel).

Notwithstanding the foregoing, you do not waive or release Claims (i) with respect to the right to enforce this Agreement, (ii) with respect to any vested right you may have under any employee pension or welfare benefit plan of the Company Parties, (iii) any D&O insurance policy applicable to you and/or the Company’s certificates of incorporation, charter and by-laws, (iv) that may arise after the execution date of this Agreement, or (v) with respect to any Claims that cannot legally be waived. Also excluded from this Agreement are any Claims which cannot be waived by law, including, without limitation, any rights you may have under applicable workers’ compensation laws and your right, if applicable, to file or participate in an investigative proceeding of any federal, state or local governmental agency. Nothing in this Agreement shall prevent you from filing, cooperating with, or participating in any proceeding or investigation before the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission or any other federal government agency, or similar state or local agency (“Government Agencies”), or exercising any rights pursuant to Section 7 of the National Labor Relations Act. You further understand this Agreement does not limit your ability to voluntarily communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. While this Agreement does not limit your right to receive an award for information provided to the Securities and Exchange Commission, you understand and agree that, you are otherwise waiving, to the fullest extent permitted by law, any and all rights you may have to individual relief based on any Claims that you have released and any rights you have waived by signing this Agreement. If any Claim is not subject to release, to the extent permitted by law, you waive any right or ability to be a class or collective action representative or to otherwise participate in any putative or certified class, collective or multi-party action or proceeding based on such a Claim in which any of the Company Parties is a party. This Agreement does not abrogate your existing rights under any Company benefit plan or any plan or agreement related to equity ownership in the Company; however, it does waive, release and forever discharge Claims existing as of the date you execute this Agreement pursuant to any such plan or agreement.

14. Your Acknowledgments and Affirmations. You also acknowledge and agree that (i) the consideration given to you in exchange for the waiver and release in this Agreement is in addition to anything of value to which you were already entitled, and (ii) that you have been paid for all time worked, have received all the leave, leaves of absence and leave benefits and protections for which you are eligible, and have not suffered any on-the-job injury or have any occupational disease for which you have not already filed a Claim. You affirm that all of the
decisions of the Company Parties regarding your pay and benefits through the date of your execution of this Agreement were not discriminatory based on age, disability, race, color, sex, religion, national origin or any other classification protected by law. You affirm that you have not filed or caused to be filed, and are not presently a party to, a Claim against any member of the Company Parties. You acknowledge and affirm that you have not been retaliated against for reporting any allegation of corporate fraud or other wrongdoing by any member of the Company Parties, or for exercising any rights protected by law, including any rights protected by the Fair Labor Standards Act, the Family Medical Leave Act or any related statute or local leave or disability accommodation laws, or any applicable state workers’ compensation law.

15. **No Admission.** This Agreement does not constitute an admission by the Company of any wrongful action or violation of any federal, state, or local statute, or common law rights, including those relating to the provisions of any law or statute concerning employment actions, or of any other possible or claimed violation of law or rights.

16. **Breach.** You acknowledge that it may be impossible to assess the damages caused by your violation of the terms of Sections 3(b), 8, 9, 10 and 11 of this Agreement and further agree that any threatened or actual violation or breach of those Sections of this Agreement will constitute immediate and irreparable injury to the Company. You therefore agree that any such breach of this Agreement is a material breach of this Agreement, and, in addition to any and all other damages and remedies available to the Company upon your breach of this Agreement, the Company shall be entitled to an injunction to prevent you from violating or breaching this Agreement. You agree that if the Company is successful in whole or part in any legal or equitable action against you under this Agreement, you agree to pay all of the costs, including reasonable attorney’s fees, incurred by the Company in enforcing the terms of this Agreement.

17. **Section 409A.** Notwithstanding anything to the contrary herein, the following provisions apply to the extent severance benefits provided herein are subject to Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect (“Section 409A”). The payments and benefits under this Agreement are intended to qualify for exemptions from the application of Section 409A, and to the extent not so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Section 409A to the extent necessary to avoid taxation under Section 409A. Each installment of severance benefits is a separate “payment” for purposes of Treas. Reg. Section 1.409A-2(b)(2)(i), and the severance benefits are intended to satisfy the exemptions from application of Section 409A provided under Treasury Regulations Sections 1.409A-1(b)(4) and 1.409A-1(b)(9). Notwithstanding any provision to the contrary in this Agreement, if you are deemed by the Company at the time of your separation from service to be a “specified employee” for purposes of Section 409A, and if any of the payments upon separation from service set forth herein and/or under any other agreement with the Company are deemed to be “deferred compensation,” then, to the extent delayed commencement of any portion of such payments is required in order to avoid a prohibited distribution under Section 409A and the related adverse taxation under Section 409A, such payments shall not be provided to you prior to the earliest of (i) the expiration of the six-month period measured from the date of separation from service, (ii) the date of your death, or (iii) such earlier date as permitted under Section 409A without the imposition of taxation under Section 409A. The parties acknowledge that the exemptions from application of Section 409A to severance benefits are fact specific, and any
later amendment of this Agreement to alter the timing, amount or conditions that will trigger payment of severance benefits may preclude the ability of severance benefits provided under this Agreement to qualify for an exemption. It is intended that this Agreement shall comply with the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify you for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

18. **Miscellaneous.** This Agreement, including the Exhibits hereto, constitutes the complete, final and exclusive embodiment of the entire agreement between you and the Company with regard to this subject matter. It is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. This Agreement may not be modified or amended except in a writing signed by both you and a duly authorized officer of the Company. This Agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and inure to the benefit of both you and the Company, their heirs, successors and assigns. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this Agreement and the provision in question will be modified by the court so as to be rendered enforceable. This Agreement will be deemed to have been entered into and will be construed and enforced in accordance with the laws of the Commonwealth of Virginia as applied to contracts made and to be performed entirely within Virginia.

You acknowledge that you have been given at least twenty-one (21) calendar days from the date of receipt of this Agreement to consider all of the provisions of the Agreement, including your agreement to waive and release any Claims you might have against the Company Parties including any Claims under the ADEA, although you may choose to voluntarily execute this Agreement earlier, but not earlier than the Transition Date, and if you do you will sign the Consideration Period waiver below. You shall have seven (7) calendar days from the date of your execution of this Agreement to revoke this Agreement, including with respect to all Claims referred to herein (including, without limitation, any and all Claims arising under the ADEA), by delivering a written notice of such revocation to Melissa Ferguson at Melissa.Ferguson@iridium.com. If you revoke the Agreement, you will be deemed not to have accepted the terms of this Agreement. This Agreement shall not be effective until the date upon which the revocation period has expired unexercised (the “Effective Date”), which shall be the eighth day after this Agreement is executed by you.

YOU FURTHER ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT CAREFULLY, HAVE BEEN ADVISED BY THE COMPANY TO CONSULT AN ATTORNEY, AND FULLY UNDERSTAND THAT BY SIGNING BELOW YOU ARE GIVING UP CERTAIN RIGHTS WHICH YOU MAY HAVE TO SUE OR ASSERT A CLAIM AGAINST ANY OF THE COMPANY RELEASEES, AS DESCRIBED HEREIN AND THE OTHER PROVISIONS HEREOF AND ARE KNOWINGLY AND VOLUNTARILY WAIVING AND RELEASING ALL RIGHTS YOU MAY HAVE UNDER THE ADEA. YOU HAVE BEEN ADVISED THAT YOUR WAIVER AND RELEASE DO NOT APPLY TO ANY RIGHTS OR CLAIMS THAT MAY ARISE AFTER THE EXECUTION DATE OF THIS AGREEMENT. YOU ACKNOWLEDGE
THAT YOU HAVE NOT BEEN FORCED OR PRESSURED IN ANY MANNER WHATSOEVER TO SIGN THIS AGREEMENT AND YOU AGREE TO ALL OF ITS TERMS VOLUNTARILY.

If this Agreement is acceptable to you, please sign below and return the original to me on or before the date that is twenty-one (21) days after you receive this Agreement, but no earlier than the Transition Date. You acknowledge that you are not permitted to sign prior to the Transition Date.

Sincerely,

Iridium Communications Inc.

By: /S/ Matthew J. Desch
Matthew J. Desch, CEO

Agreed to and Accepted:

/S/ Thomas D. Hickey
Thomas D. Hickey

Attachments:
Exhibit A – Consulting Agreement
Exhibit B – Employment Agreement
CONSIDERATION PERIOD

I, Thomas D. Hickey, understand that I have the right to take at least 21 days to consider whether to sign this Agreement, which I received on December 31, 2021. If I elect to sign this Agreement before 21 days have passed, I understand I am to sign and date below this paragraph to confirm that I knowingly and voluntarily agree to waive the 21-day consideration period. I understand that I am not permitted to sign prior to the Transition Date.

Agreed:

/S/ Thomas D. Hickey

Signature

December 31, 2021

Date
Exhibit A

CONSULTING AGREEMENT

This Consulting Agreement (the “Consulting Agreement”) by and between Iridium Communications Inc., Iridium Satellite LLC and any of their subsidiaries (collectively, “Client”) and Thomas D. Hickey, an individual (“Consultant”) is effective as of December 31, 2021 (the “Effective Date”).

RECITALS

WHEREAS, the parties desire for the Client to engage Consultant to perform the services described herein and for Consultant to provide such services on the terms and conditions described herein; and

WHEREAS, the parties desire to use Consultant’s independent skill and expertise pursuant to this Consulting Agreement as an independent contractor;

NOW THEREFORE, in consideration of the promises and mutual agreements contained herein, the parties hereto, intending to be legally bound, agree as follows:

1. Engagement of Services. Consultant agrees to provide consulting services to include, among other things: participating in Client meetings as requested by the Chief Executive Officer of the Client (the “CEO” or the “Executive”) and other services upon request of the CEO. Consultant agrees to exercise the highest degree of professionalism and utilize his expertise and creative talents in performing these services. Consultant agrees to make himself available to perform such consulting services throughout the Consulting Period (as defined below), which shall include a maximum of twenty (20) hours per month throughout the Consulting Period, and to be reasonably available to teleconference with the Client.

2. Compensation. In consideration for the services rendered pursuant to this Consulting Agreement and for the assignment of certain of Consultant’s right, title and interest pursuant hereto, (i) Client will pay Consultant a consulting fee of $105,000, subject to standard payroll deductions and withholdings, no later than January 14, 2022 (ii) Consultant’s restricted stock units awards and stock option awards set forth on Schedule I to this Consulting Agreement (the “Current Awards”) will remain outstanding and continue to be eligible to vest in accordance with the terms of such awards and (iii) the Consultant’s Current Awards that are stock options will remain exercisable in accordance with their terms while Consultant continues to provide such services to the Company under this Consulting Agreement. For the avoidance of doubt, the Current Awards will cease vesting pursuant to this Consulting Agreement and be solely subject to the terms of the Company’s equity compensation plans and award agreements upon the termination of this Consulting Agreement.

3. Ownership of Work Product. Consultant hereby irrevocably assigns, grants and conveys to Client all right, title and interest now existing or that may exist in the future in and to
any document, development, work product, know-how, design, processes, invention, technique, trade secret, or idea, and all intellectual property rights related thereto, that is created by Consultant, to which Consultant contributes, or which relates to Consultant’s services provided pursuant to this Consulting Agreement (the “Work Product”), including all copyrights, trademarks and other intellectual property rights (including but not limited to patent rights) relating thereto. Consultant agrees that any and all Work Product shall be and remain the property of Client. Consultant will immediately disclose to the Client all Work Product. Consultant agrees to execute, at Client’s request and expense, all documents and other instruments necessary or desirable to confirm such assignment. In the event that Consultant does not, for any reason, execute such documents within a reasonable time of Client’s request, Consultant hereby irrevocably appoints Client as Consultant’s attorney-in-fact for the purpose of executing such documents on Consultant’s behalf, which appointment is coupled with an interest. Consultant shall not attempt to register any works created by Consultant pursuant to this Consulting Agreement at the U.S. Copyright Office, the U.S. Patent & Trademark Office, or any foreign copyright, patent, or trademark registry. Consultant retains no rights in the Work Product and agrees not to challenge Client’s ownership of the rights embodied in the Work Product. Consultant further agrees to assist Client in every proper way to enforce Client’s rights relating to the Work Product in any and all countries, including, but not limited to, executing, verifying and delivering such documents and performing such other acts (including appearing as a witness) as Client may reasonably request for use in obtaining, perfecting, evidencing, sustaining and enforcing Client’s rights relating to the Work Product. Notwithstanding the foregoing, nothing in this Consulting Agreement shall serve to alter the ownership of any intellectual property rights of Client.

4. **Artist’s, Moral, and Other Rights.** If Consultant has any rights, including without limitation “artist’s rights” or “moral rights,” in the Work Product which cannot be assigned (the “Non-Assignable Rights”), Consultant agrees to waive enforcement worldwide of such rights against Client. In the event that Consultant has any such rights that cannot be assigned or waived Consultant hereby grants to Client a royalty-free, paid-up, exclusive, worldwide, irrevocable, perpetual license under the Non-Assignable Rights to (i) use, make, sell, offer to sell, have made, and further sublicense the Work Product, and (ii) reproduce, distribute, create derivative works of, publicly perform and publicly display the Work Product in any medium or format, whether now known or later developed.

5. **Representations and Warranties.** Consultant represents and warrants that: (a) Consultant has the full right and authority to enter into this Consulting Agreement and perform his obligations hereunder; (b) Consultant has the right and unrestricted ability to assign the Work Product to Client as set forth in Sections 3 and 4 (including without limitation the right to assign any Work Product created by Consultant’s employees or contractors); (c) the Work Product has not heretofore been published in its entirety; and (d) the Work Product will not infringe upon any copyright, patent, trademark, right of publicity or privacy, or any other proprietary right of any person, whether contractual, statutory or common law. Consultant agrees to indemnify Client from any and all damages, costs, claims, expenses or other liability (including reasonable attorneys’ fees) arising from or relating to the breach or alleged breach by Consultant of the representations and warranties set forth in this Section 5.

6. **Independent Contractor Relationship.** Consultant is an independent contractor and not an employee of the Client. Nothing in this Consulting Agreement is intended to, or
should be construed to, create a partnership, agency, joint venture or employment relationship. The manner and means by which Consultant chooses to complete the consulting services are in Consultant’s sole discretion and control. In completing the consulting services, Consultant agrees to provide his own equipment, tools and other materials at his own expense. Consultant is not authorized to represent that he is an agent, employee, or legal representative of the Client. Consultant is not authorized to make any representation, contract, or commitment on behalf of Client or incur any liabilities or obligations of any kind in the name of or on behalf of the Client. Consultant shall be free at all times to arrange the time and manner of performance of the consulting services. Consultant is not required to maintain any schedule of duties or assignments. Consultant is also not required to provide reports to the Client. In addition to all other obligations contained herein, Consultant agrees: (a) to proceed with diligence and promptness and hereby warrants that such services shall be performed in accordance with the highest professional standards in the field to the satisfaction of the Client; and (b) to comply, at Consultant’s own expense, with the provisions of all state, local, and federal laws, regulations, ordinances, requirements and codes which are applicable to the performance of the services hereunder.

7. Consultant’s Responsibilities. As an independent contractor, the mode, manner, method and means used by Consultant in the performance of services shall be of Consultant’s selection and under the sole control and direction of Consultant. Consultant shall be responsible for all risks incurred in the operation of Consultant’s business and shall enjoy all the benefits thereof. Any persons employed by or subcontracting with Consultant to perform any part of Consultant’s obligations hereunder shall be under the sole control and direction of Consultant and Consultant shall be solely responsible for all liabilities and expenses thereof. The Client shall have no right or authority with respect to the selection, control, direction, or compensation of such persons.

8. Treatment. Consultant agrees, as an independent contractor, he is not entitled to workers’ compensation benefits in the event that Consultant is injured in any manner while performing obligations under this Consulting Agreement. Consultant is solely responsible for, and must maintain adequate records of, expenses incurred in the course of performing services under this Consulting Agreement, except as provided herein.

9. No Employee Benefits. Consultant acknowledges and agrees that neither he nor anyone acting on his behalf shall receive any employee benefits of any kind from the Client as a result of performance of services under this Consulting Agreement. Consultant (and Consultant’s agents, employees, and subcontractors) is excluded from participating in any fringe benefit plans or programs, as a result of the performance of services under this Consulting Agreement, without regard to Consultant’s independent contractor status. In addition, Consultant (on behalf of himself and on behalf of Consultant’s agents, employees, and contractors) waives any and all rights, if any, to participation in any of the Client’s fringe benefit plans or programs including, but not limited to, health, sick leave, accident or dental coverage, life insurance, disability benefits, severance, accidental death and dismemberment coverage, unemployment insurance coverage, workers’ compensation coverage, and pension or 401(k) benefit(s) provided by the Client to its employees as a result of performance of services under this Consulting Agreement. Nothing in this Section 9 changes Consultant’s rights (i) to benefits earned prior to the Effective Date of this Consulting Agreement (e.g., 401(k) benefits earned as
an employee prior to Effective Date); or (ii) rights under that certain Transition Agreement between the Consultant and the Client.

10. **Expenses and Liabilities.** Consultant agrees that as an independent contractor, he is solely responsible for all expenses (and profits/losses) he incurs in connection with the performance of services. Consultant understands that he will not be reimbursed for any supplies, equipment, or operating costs, nor will these costs of doing business be defrayed in any way by the Client. In addition, the Client does not guarantee to Consultant that fees derived from Consultant’s business will exceed Consultant’s costs.

11. **Non-Exclusivity.** The Client reserves the right to engage other consultants to perform services, without giving Consultant a right of first refusal or any other exclusive rights. Consultant reserves the right to perform services for other persons, provided that the performance of such services does not conflict or interfere with services provided pursuant to or obligations under this Consulting Agreement.

12. **No Conflict of Interest.** During the term of this Consulting Agreement, unless prior written permission is given by the Executive, Consultant will not accept work, enter into a contract, or provide services to any third party that could be reasonably deemed as a conflict or interfere with or otherwise conflict or interfere with the services provided pursuant to or the obligations under this Consulting Agreement. Nothing herein is intended to amend, reduce, eliminate or modify the obligations that Consultant owes to the Company as set forth in Section 9 of the Transition Agreement. Consultant warrants that there is no other contract or duty on his part that prevents or impedes Consultant’s performance under this Consulting Agreement. Consultant agrees to indemnify Client from any and all liability incurred by Client by reason of the alleged breach by Consultant of that warranty.

13. **Confidential Information.** Consultant agrees to hold Client’s Confidential Information (as defined below) in strict confidence and not to disclose such Confidential Information to any third parties. Consultant also agrees not to use any of Client’s Confidential Information for any purpose other than performance of Consultant’s services hereunder. “Confidential Information” as used in this Consulting Agreement shall mean all information disclosed by Client to Consultant, or otherwise, regarding Client or its business obtained by Consultant pursuant to services provided under this Consulting Agreement that is not generally known in the Client’s trade or industry and shall include, without limitation, (a) concepts and ideas relating to the development and distribution of content in any medium or to the current, future and proposed products or services of Client or its subsidiaries or affiliates; (b) trade secrets, drawings, inventions, know-how, software programs, and software source documents; (c) information regarding plans for research, development, new service offerings or products, marketing and selling, business plans, business forecasts, budgets and unpublished financial statements, licenses and distribution arrangements, prices and costs, suppliers and customers; and (d) any information regarding the skills and compensation of employees, contractors or other agents of the Client or its subsidiaries or affiliates. Confidential Information also includes proprietary or confidential information of any third party who may disclose such information to Client or Consultant in the course of Client’s business. Consultant’s obligations set forth in this Section shall not apply with respect to any portion of the Confidential Information that Consultant can document by competent proof that such portion: (i) is in the public domain through no fault of Consultant; (ii) has been rightfully independently communicated to
Consultant free of any obligation of confidence; or (iii) was developed by Consultant independently of and without reference to any information communicated to Consultant by Client. In addition, Consultant may disclose Client’s Confidential Information in response to a valid order by a court or other governmental body, as otherwise required by law. All Confidential Information furnished to Consultant by Client is the sole and exclusive property of Client or its suppliers or customers. Upon request by Client, Consultant agrees to promptly deliver to Client the original and any copies of such Confidential Information. Consultant’s duty of confidentiality under this Consulting Agreement does not amend or abrogate in any manner Consultant’s continuing duties under any prior agreement between Consultant and Client. Notwithstanding the foregoing or anything to the contrary in this Consulting Agreement or any other agreement between Client and Consultant, nothing in this Consulting Agreement shall limit Consultant’s right to discuss Consultant’s engagement with the Client or report possible violations of law or regulation with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, the Securities and Exchange Commission, or other federal government agency or similar state or local agency or to discuss the terms and conditions of Consultant’s engagement with others to the extent expressly permitted by applicable provisions of law or regulation, including but not limited to “whistleblower” statutes or other similar provisions that protect such disclosure. Further, notwithstanding the foregoing, pursuant to 18 U.S.C. Section 1833(b), Consultant shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that: (1) is made in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney, and solely for the purpose of reporting or investigating a suspected violation of law; or (2) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

14. Term and Termination.

14.1 Term. Unless earlier terminated as set forth in Section 14.2 below, the term of this Consulting Agreement and the “Consulting Period” shall commence on the Effective Date and shall terminate fifteen (15) months following the Effective Date.

14.2 Termination.

(a) Automatic Termination. If Consultant fails to execute the Transition Agreement in accordance with the timing requirements stated therein, then this Consulting Agreement will automatically terminate effective at the end of the twenty-first day following Consultant’s receipt of the Transition Agreement. If Consultant revokes his acceptance of the Transition Agreement within seven (7) days after executing the Transition Agreement, then this Consulting Agreement will automatically terminate on the day of such revocation.

(b) Termination Upon Notice. Either party may terminate this Consulting Agreement due to breach by the other party, upon thirty (30) days’ advance written notice.

(c) Termination Upon Breach. The Client may terminate this Consulting Agreement before its expiration immediately if the Consultant materially breaches the Consulting Agreement. The parties agree that a “Material Breach” by Consultant shall occur if he: (i) fails to abide by any recognized professional standard,
including any ethical standard; (ii) fails to provide services as reasonably requested by the Executive, which is not cured within ten (10) business days; (iii) secures other full-time employment that prohibits his ability to provide services to the Client; (iv) breaches any other material obligations of this Consulting Agreement, or (v) violates local, state, or federal laws.

14.3 Effect of Termination. Upon any termination or expiration of this Consulting Agreement, Consultant (i) shall immediately discontinue all use of Client’s Confidential Information delivered under this Consulting Agreement; (ii) shall delete any such Client Confidential Information from Consultant’s computer storage or any other media, including, but not limited to, online and off-line libraries; and (iii) shall return to Client, or, at Client’s option, destroy, all copies of such Confidential Information then in Consultant’s possession. In the event the Client terminates this Consulting Agreement or if Consultant terminates this Consulting Agreement, Consultant will not receive any additional consulting fees or other compensation as of the date of termination.

14.4 Survival. The rights and obligations contained in Sections 3-6, 8-9, 13, 14.3, 14.4, and 15-22 will survive any termination or expiration of this Consulting Agreement.

15. Insurance. Neither party shall be obligated to provide insurance to the other.

16. Successors and Assigns. Consultant may not subcontract or otherwise delegate his obligations under this Consulting Agreement without Client’s prior written consent. Client may assign this Consulting Agreement to an affiliated entity. Subject to the foregoing, this Consulting Agreement will be for the benefit of Client’s successors and assigns, and will be binding on Consultant’s subcontractors or delegates.

17. Notices. Any notice required or permitted by this Consulting Agreement shall be in writing and shall be delivered as follows with notice deemed given as indicated: (i) by overnight courier upon written verification of receipt; (ii) by telecopy or facsimile transmission upon acknowledgment of receipt of electronic transmission; or (iii) by email when acknowledged by the receiving party or within three business days of delivery, whichever occurs first. Notice shall be sent to the addresses set forth below or such other address as either party may specify in writing.

18. Governing Law. This Consulting Agreement shall be governed in all respects by the laws of the Commonwealth of Virginia, as such laws are applied to agreements entered into and to be performed entirely within Virginia between Virginia residents. Any suit involving this Consulting Agreement shall be brought in a court sitting in Virginia. The parties agree that venue shall be proper in such courts, and that such courts will have personal jurisdiction over them.

19. Severability. Should any provisions of this Consulting Agreement be held by a court of law to be illegal, invalid or unenforceable, the legality, validity and enforceability of the remaining provisions of this Consulting Agreement shall not be affected or impaired thereby.

20. Waiver. The waiver by Client of a breach of any provision of this Consulting Agreement by Consultant shall not operate or be construed as a waiver of any other or subsequent breach by Consultant.
21. **Injunctive Relief for Breach.** Consultant’s obligations under this Consulting Agreement are of a unique character that gives them particular value; breach of any of such obligations will result in irreparable and continuing damage to Client for which there will be no adequate remedy at law; and, in the event of such breach, Client will be entitled to injunctive relief and/or a decree for specific performance, and such other and further relief as may be proper (including monetary damages if appropriate and attorney’s fees).

22. **Entire Agreement.** This Consulting Agreement is being entered into as part of the Transition Agreement between Client and Consultant, and will only remain effective if Consultant executes the Transition Agreement and does not revoke his acceptance. This Consulting Agreement and the Transition Agreement constitutes the entire understanding of the parties relating to the subject matter and supersedes any previous oral or written communications, representations, understanding, or agreement between the parties concerning such subject matter. This Consulting Agreement shall not be changed, modified, supplemented or amended except by express written agreement signed by Consultant and the Client. The parties have entered into separate agreements related to Consultant’s previous employment relationship with Client. These separate agreements govern the previous employment relationship between Consultant and Client, have or may have provisions that survive termination of Consultant’s relationship with Client under this Consulting Agreement, may be amended or superseded without regard to this Consulting Agreement, and are enforceable according to their terms without regard to the enforcement provision of this Consulting Agreement.

[Signature page follows]
In Witness Whereof, the parties have executed this Consulting Agreement effective as of the date first written above.

“Client” “Consultant”

Iridium Communications Inc. Thomas D. Hickey

By: /S/ Matthew J. Desch /S/ Thomas D. Hickey

Name (print): Matthew J. Desch Name (print): Thomas D. Hickey

Title: CEO Address: ____________________________

Telephone:_________________ _________________________________

Tel:__________________________

Attachment:

Schedule I – Current Awards
Exhibit B

Employment Agreement

See Exhibit 10.70 to the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2013, filed with the Securities and Exchange Commission on March 4, 2014.
December 15, 2021

TO: The Board of Directors of Iridium Communications Inc. (the “Board”)

RE: Compensation Program for Non-Employee Directors

Adoption of 2022 Compensation Program for Non-Employee Directors

The Board is being requested to adopt the 2022 compensation program for its non-employee members, which program will be effective as of January 1, 2022. The terms of the program are set forth in the Compensation Program for Non-Employee Directors (the “Program”) and are briefly summarized below.

Annual Board Retainer (Amount and Default Payment Mechanic): The Program provides that each non-employee director will receive an Annual Board Retainer in the amount of $225,000, which amount is payable: (i) $50,000 in cash (unless the director makes a timely election to receive all or a portion of this cash component of the Annual Board Retainer in the form of Restricted Stock Units (“RSUs”), or in any mix of cash and RSUs, subject to the limitations described below); and (ii) $175,000 in RSUs. Cash will be paid quarterly in arrears on or as soon as practicable after the last day of each calendar quarter in which service occurred.

Annual Chairman of the Board and Committee Chair Retainers (Amounts and Default Payment Mechanic): The Chairman of the Board will receive an additional annual retainer of $50,000 and the Chairs of the Audit, Compensation, and Nominating and Corporate Governance Committees will receive an additional annual retainer of $40,000, $15,000 and $10,000, respectively, all of which amounts are payable in cash quarterly in arrears on or as soon as practicable after the last day of each calendar quarter in which service occurred (unless the director makes a timely election to receive all or a portion of such retainer in the form of RSUs, or in any mix of cash and RSUs, subject to the limitations described below).

Annual Committee Member Retainers (Amounts and Default Payment Mechanic): The members of the Audit, Compensation, and Nominating and Corporate Governance Committees who are not serving as the chairperson of the committee will receive an additional annual retainer of $20,000, $7,500 and $5,000, respectively, all of which amounts are payable in cash quarterly in arrears on or as soon as practicable after the last day of each calendar quarter in which service occurred (unless the director makes a timely election to receive all or a portion of such retainer in the form of RSUs, or in any mix of cash and RSUs, subject to the limitations described below).
Annual Government Advisory Committee Retainer (Amounts and Payment Mechanic): Non-employee directors serving on the Government Advisory Committee during 2022 will receive an additional annual retainer of $15,000 in the form of RSUs, subject to vesting and the limitations described below regarding RSU grants. Non-employee directors serving on the Government Advisory Committee may not make an election to receive the Annual Government Advisory Committee Retainer in any other form.

Compensation Elections: Elections must be made annually. Please complete the “2022 Election Form”. This Election Form must be submitted by December 31, 2021 to be valid for 2022. Once the Election Form is submitted for a year, the elections made are irrevocable for that year.

Annual Board Retainer Elections: Non-employee directors may elect to receive all or a portion of $50,000 of the Annual Board Retainer in cash or RSUs (elections to receive cash or RSUs must be made in 5% increments). The remaining $175,000 of the Annual Board Retainer is paid in the form of RSUs and no election may be made with respect to such amount.

Annual Chairman of the Board, Committee Chair and Committee Member Retainers Elections: Non-employee directors may elect to receive all or a portion of the Annual Chairman of the Board Retainer, Annual Committee Chair Retainers and/or Annual Committee Member Retainers, if any, in cash or RSUs (elections to receive cash or RSUs must be made in 25% increments).

RSUs: All RSUs are governed by our Amended and Restated 2015 Equity Incentive Plan (the “Plan”) and the applicable Non-Employee Director Restricted Stock Unit Agreement and will be granted on the third business day in January.

Deferral Election: Non-employee directors may elect to either (a) defer delivery of the shares to be issued upon settlement of vested RSUs to a later date, as has been Iridium’s past practice, or (b) receive such shares at the time the RSUs vest. This “deferral election” must be made with respect to all or none of the RSUs granted pursuant to the Program (i.e., the election may not be made with respect to only a portion of the RSUs granted pursuant to the Program). Consistent with our past practice, any vested RSUs that are subject to a deferral election will be settled in Iridium stock on the earlier of (i) the date that is six months and one day after “separation from service” (as defined in Treasury Regulations Section 1.409A-1(h), without regard to alternate definitions thereunder) as a director (a “Separation from Service”) and (ii) a Change in Control, as defined in the Plan, that also constitutes a “change in control event” (as determined under Treasury Regulations Section 1.409A-3(i)(5)) (a “Change in Control”). RSUs are taxable at ordinary income rates when shares are issued, based on the fair market value (“FMV”) of the shares at the time of issuance.

Vesting: All RSUs granted as Annual Board Retainers, Annual Chairman of the Board Retainer, Annual Committee Chair Retainers, Annual Committee Member Retainers and Annual Government Advisory Committee Retainers will vest on the first anniversary of the date of grant, subject to the non-employee director’s continuous service as a director through such date. All RSUs granted to non-employee directors are subject to full acceleration of vesting upon a termination for death or disability. Any unvested RSUs are forfeited upon a termination as a director for any reason other than death or disability.
IRIDIUM COMMUNICATIONS INC.
COMPENSATION PROGRAM FOR NON-EMPLOYEE DIRECTORS

EFFECTIVE DATE: January 1, 2022

GENERAL: Each member of the board of directors (the “Board”) of Iridium Communications Inc. (the “Company”) who is not an Employee (as defined in the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan (the “Equity Incentive Plan”)) (each, a “Non-Employee Director”) will be eligible to receive cash and equity-based compensation as set forth in this Iridium Communications Inc. Compensation Program for Non-Employee Directors (this “Program”). Capitalized terms not explicitly defined in this Program but defined in the Equity Incentive Plan will have the same definitions as in the Equity Incentive Plan.

ANNUAL COMPENSATION:

• Annual Board Retainer: $225,000 will be payable for each calendar year to each Non-Employee Director as follows:
  • $50,000 in the form of cash (the “Annual Cash Retainer”), unless the Non-Employee Director makes a timely election to receive all or a portion of the Annual Cash Retainer in the form of restricted stock units (“RSUs”) (subject to the limitations described below); and
  • $175,000 in the form of RSUs (the “Annual Stock Retainer”).

• Annual Committee Chair Retainers: The following amounts will be payable for each calendar year to each chairperson of the following committees of the Board (each, a “Committee”) in the form of cash, unless the Non-Employee Director makes a timely election to receive all or a portion of the Annual Committee Chair Retainer in the form of RSUs (subject to the limitations described below):
  • Audit – $40,000;
  • Compensation – $15,000; and
  • Nominating and Corporate Governance – $10,000.

• Annual Committee Member Retainers: The following amounts will be payable for each calendar year to each member of the following Committees who is not serving as the chairperson of the Committee in the form of cash, unless the Non-Employee Director makes a timely election to receive all or a portion of the Annual Committee Member Retainer in the form of RSUs (subject to the limitations described below):
  • Audit – $20,000;
• Compensation – $7,500; and

• Nominating and Corporate Governance – $5,000.

• **Annual Chairman of the Board Retainer:** $50,000 will be payable for each calendar year to the chairman of the Board in the form of cash, unless the Non-Employee Director makes a timely election to receive all or a portion of the Annual Chairman of the Board Retainer in the form of RSUs (subject to the limitations described below).

• **Annual Government Advisory Committee Retainer:** $15,000 will be payable for each calendar year in the form of RSUs to each Non-Employee Director serving on the Company’s Government Advisory Committee during a calendar year (subject to the limitations described below). Non-Employee Directors serving on the Government Advisory Committee may not make an election to receive the Annual Government Advisory Committee Retainer in any other form.

• **Partial Year of Service:** Notwithstanding the foregoing or anything in this Program to the contrary, if a Non-Employee Director’s service as a Non-Employee Director (for purposes of any Annual Cash Retainer or Annual Stock Retainer) or as a chairperson of a Committee (for purposes of any Annual Committee Chair Retainer) or as a member of a Committee (for purposes of any Annual Committee Member Retainer) or as a chairman of the Board (for purposes of any Annual Chairman of the Board Retainer) or as a member of the Government Advisory Committee (for purposes of the Annual Government Advisory Committee Retainer) commences or terminates after the beginning of a calendar year, then the Non-Employee Director will only be eligible to receive 25% of the full amount of the applicable retainer (each as set forth above), in the applicable form, for each partial or full calendar quarter of such service completed during such calendar year. Notwithstanding the foregoing, upon termination of service as a Director any portion of any retainer paid in the form of RSUs will be forfeited to the extent not vested on the date of or as a result of such termination in accordance with the terms of this Program.

**TIMING OF ELECTIONS; TIMING AND FORM OF PAYMENTS (OTHER THAN ANNUAL GOVERNMENT ADVISORY COMMITTEE RETAINER):**

• **Current Non-Employee Directors:**

  * **Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer and Annual Chairman of the Board Retainer:** If a Non-Employee Director’s service as a Non-Employee Director commences prior to the beginning of a calendar year, then the Non-Employee Director must make an election, prior to the beginning of such calendar year, with respect to (i) his or her Annual Cash Retainer for such calendar year and (ii) any Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of the Board Retainer that is or may become payable for such calendar year. Each Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer and Annual Chairman of the Board Retainer will be paid or granted as follows:
• **Cash:** The portion (if any) of each Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer and Annual Chairman of the Board Retainer that is to be paid in the form of cash will be determined based on such election. Such portion will be paid in the form of cash in arrears in equal installments over the applicable number of calendar quarters during such calendar year, with payment occurring on or as soon as practicable after the last day of the applicable calendar quarter and in all cases not later than March 15 of the calendar year following the calendar year in which it was earned.

• **Stock:** The portion (if any) of each Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer and Annual Chairman of the Board Retainer that is to be granted in the form of RSUs will be determined based on such election. Such portion will be granted in the form of RSUs on the third business day in January of such calendar year. Any such award will vest in full on the first anniversary of the date of grant of the award, provided that the Non-Employee Director is in service as a Director on such vesting date.

Notwithstanding the foregoing, if the Non-Employee Director becomes a chairperson of a Committee, a member of a Committee or chairman of the Board after the third business day in January of such calendar year, then the portion (if any) of his or her Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of the Board Retainer, as applicable, that is to be granted in the form of RSUs will be granted on the third business day after the date that the Non-Employee Director becomes a chairperson of a Committee, a member of a Committee or chairman of the Board, as applicable. Any such award will vest in full on the first anniversary of the date of grant of the award, provided that the Non-Employee Director is in service as a Director on such vesting date.

**Annual Stock Retainer:** A Non-Employee Director may not make an election regarding the form of payment of his or her Annual Stock Retainer; the Annual Stock Retainer is paid in the form of RSUs. If a Non-Employee Director’s service as a Non-Employee Director commences prior to the beginning of a calendar year, then the RSUs will be granted on the third business day in January of the calendar year. The RSUs will vest in full on the first anniversary of the date of grant, provided that the Non-Employee Director is in service as a Director on such vesting date.

• **New Non-Employee Directors:**

**Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer and Annual Chairman of the Board Retainer:** If a Non-Employee Director’s service as a Non-Employee Director commences on or after the beginning of a calendar year, then the Non-Employee Director must make an election, within 30 days following the commencement of such service, with respect to (i) his or her Annual Cash Retainer for such calendar year and (ii) any Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of the Board Retainer that is or may become payable for such calendar year; provided, however, that (a) such election will be applicable only to the portion of the applicable Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of the Board
Retainer payable for any calendar quarter during such calendar year that begins after the date of such election, and (b) no such election may be made if such service commences during the final calendar quarter of such calendar year. Each such Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer and Annual Chairman of the Board Retainer will be paid or granted as follows:

- **Cash:** 25% of the full amount of an Annual Cash Retainer (and Annual Committee Chair Retainer, Annual Committee Member Retainer and Annual Chairman of the Board Retainer, if applicable), as set forth under “Annual Compensation” above, will be paid in the form of cash for (i) the calendar quarter in which the Non-Employee Director’s service as a Non-Employee Director, chairperson of a Committee, member of a Committee or chairman of the Board, as applicable, commences and, (ii) if later, for the calendar quarter in which such election is made, with payment occurring on or as soon as practicable after the last day of the applicable calendar quarter and in all cases not later than March 15 of the calendar year following the calendar year in which it was earned.

With respect to any calendar quarter during such calendar year that begins after the date of such election, the portion (if any) of the Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of the Board Retainer that is to be paid in the form of cash will be determined based on such election. Such portion will be paid in the form of cash in arrears in equal installments over the applicable number of calendar quarters during such calendar year, with payment occurring on or as soon as practicable after the last day of the applicable calendar quarter and in all cases not later than March 15 of the calendar year following the calendar year in which it was earned.

- **Stock:** With respect to any calendar quarter during such calendar year that begins after the date of such election, the portion (if any) of an Annual Cash Retainer, Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of the Board Retainer that is to be granted in the form of RSUs will be determined based on such election. Such portion will be granted in the form of RSUs on the first business day of the first calendar quarter that begins after the date of such election. Any such award will vest in full on the first anniversary of the date of grant of the award, provided that the Non-Employee Director is in service as a Director on such vesting date.

Notwithstanding the foregoing, if the Non-Employee Director becomes a chairperson of a Committee, a member of a Committee or chairman of the Board after the first business day of the first calendar quarter that begins after the date of such election, then the portion (if any) of his or her Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of the Board Retainer, as applicable, that is to be granted in the form of RSUs, will be granted on the third business day after the date that the Non-Employee Director becomes a chairperson of a Committee, a member of a Committee or chairman of the Board, as applicable. Any such award will vest in full on the first anniversary of the date of grant of the award, provided that the Non-Employee Director is in service as a Director on such vesting date.
**Annual Stock Retainer:** A Non-Employee Director may not make an election regarding the form of payment of his or her Annual Stock Retainer; the Annual Stock Retainer is paid in the form of RSUs. If a Non-Employee Director’s service as a Non-Employee Director commences on or after the beginning of a calendar year, a pro-rated portion of the Annual Stock Retainer for a partial year of service, as set forth under “Annual Compensation” above, will be granted in the form of RSUs on the first business day of the first calendar quarter that begins after the date such Non-Employee Director commences service; provided, however, that if such service commences during the final calendar quarter of such calendar year, such award will be granted on the last day of such calendar year. The Annual Stock Retainer will be pro-rated based on the number of calendar quarters during the year during which the Non-Employee Director will serve on the Board. Any such award will vest in full on the first anniversary of the date of grant of the award, provided that the Non-Employee Director is in service as a Director on such vesting date.

**TERMS OF ELECTIONS:**

- Once an election is submitted for a calendar year, it will be irrevocable with respect to such calendar year.
- A Non-Employee Director must submit a new election for each calendar year.
- Elections must be allocated in multiples as follows:
  - Allocation of the Annual Cash Retainer must be made among cash and RSUs in multiples of 5%.
  - Allocation of the Annual Committee Chair Retainer, Annual Committee Member Retainer and/or Annual Chairman of the Board Retainer must be made among cash and RSUs in multiples of 25%.
  - The election to defer delivery of shares to be issued upon settlement of vested RSUs must be with respect to either 0% or 100% of such shares.

**TIMING OF ANNUAL GOVERNMENT ADVISORY COMMITTEE RETAINER**

- **Current Non-Employee Directors Serving on Government Advisory Committee:** If a Non-Employee Director’s service on the Government Advisory Committee commences prior to the beginning of a calendar year, then the Non-Employee Director’s Annual Government Advisory Committee Retainer paid in the form of RSUs will be granted on the third business day in January of such calendar year and will vest on the first anniversary of the date of grant, provided that the Non-Employee Director is in service as a Director on such vesting date.

- **Non-Employee Directors Commencing Service on Government Advisory Committee:** If a Non-Employee Director commences service on the Government Advisory Committee on or after the beginning of a calendar year, then the Non-Employee Director’s Annual Government Advisory Committee Retainer paid in the form of RSUs, as set forth under “Annual Compensation” above, will be pro-rated based on the number of calendar
quarters during the year during which the Non-Employee Director will serve on the Committee and will be granted on the
first business day of the first calendar quarter that begins after the date the Non-Employee Director commences service on the
Government Advisory Committee provided, however, that if such service commences during the final calendar quarter of
such calendar year, such award will be granted on the last business day of such calendar year. The RSUs will vest in full on
the first anniversary of the date of grant, provided that the Non-Employee Director is in service as a Director on such vesting
date.

**TERMS OF EQUITY-BASED AWARDS:**

- Any RSUs described in this Program will be granted under the Equity Incentive Plan and will be subject to the terms and
  conditions of (i) this Program, (ii) the Equity Incentive Plan and (iii) the forms of RSU grant notice and agreement approved
  by the Board for the grant of such awards to Non-Employee Directors.

- Unless a number of units is otherwise set forth in this Program, the actual number of units subject to any RSUs granted
  pursuant to this Program will be determined by dividing the dollar amount allocated to such award by the Fair Market Value
  of a share of the Company’s common stock on the day on which the RSU is granted (with the resulting number of units
  rounded down to the nearest whole unit).

- If a Non-Employee Director timely elects to defer delivery of shares to be issued upon settlement of vested RSUs (or such
  Non-Employee Director does not make a timely election as to the timing for delivery of such shares), any vested RSUs
  granted pursuant to this Program will be settled in shares of the Company’s common stock on the earlier of (i) six months and
  one day after a Non-Employee Director’s “separation from service” (as such term is defined in Treasury Regulations Section
  1.409A-1(h) without regard to any alternative definition thereunder) as a Director (a “Separation from Service”) for any
  reason or (ii) a Change in Control that also constitutes a “change in control event” (as determined under Treasury Regulations
  Section 1.409A-3(i)(5)) (a “Change in Control”).

- If a Non-Employee Director does not elect to defer delivery of shares to be issued upon settlement of vested RSUs and
  instead timely elects to be issued such shares upon vesting, any RSUs granted pursuant to this Program will be settled in
  shares of the Company’s common stock on the applicable vesting date (or as soon as practicable thereafter), subject to the
  terms and conditions of the applicable form of RSU grant notice and agreement approved by the Board; provided, that such
  shares shall be delivered no later than the date that is the 15th day of the third calendar month of the year following the year
  in which such shares are no longer subject to a “substantial risk of forfeiture” within the meaning of Treasury Regulations
  Section 1.409A-1(d).

- With respect to any outstanding RSUs granted pursuant to this Program, if a Non-Employee Director’s service as a Director is
  terminated:
  - due to the Non-Employee Director’s death or Disability, any unvested portion of any such award will become fully vested
    upon such termination; or
• due to any reason other than death or Disability or Cause, any unvested portion of any such award will be forfeited to the Company.

EXPENSES: Each Non-Employee Director will be eligible for reimbursement from the Company for all reasonable out-of-pocket expenses incurred by the Non-Employee Director in connection with his or her attendance at Board and Committee meetings. To the extent that any taxable reimbursements are provided to a Non-Employee Director, they will be provided in accordance with Section 409A of the Code and any applicable state law of similar effect, including, but not limited to, the following provisions: (i) the amount of any such expenses eligible for reimbursement during the Non-Employee Director’s taxable year may not affect the expenses eligible for reimbursement in any other taxable year; (ii) the reimbursement of an eligible expense must be made no later than the last day of the Non-Employee Director’s taxable year that immediately follows the taxable year in which the expense was incurred; and (iii) the right to any reimbursement may not be subject to liquidation or exchange for another benefit.

SECTION 409A: Notwithstanding anything to the contrary in this Program, if a Director is deemed by the Company at the time of such Director’s “separation from service” (as such term is defined in Treasury Regulations Section 1.409A-1(h) without regard to any alternative definition thereunder) with the Company to be a “specified employee” for purposes of Section 409A(a)(2)(B)(i) of the Code, and if any of the payments upon such separation from service set forth herein and/or under any other agreement with the Company are deemed to be “deferred compensation,” then to the extent delayed commencement of any portion of such payments is required to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code and the related adverse taxation under Section 409A of the Code, such payments shall not be provided to such Director prior to the earliest of (i) the date that is six months and one day after the date of such separation from service, (ii) the date of the Director’s death, or (iii) such earlier date as permitted under Section 409A of the Code without the imposition of adverse taxation. Upon the first business day following the expiration of such applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this paragraph shall be paid in a lump sum to the Director, and any remaining payments due shall be paid as otherwise provided.
**IRIDIUM COMMUNICATIONS INC.**  
**Compensation Program for Non-Employee Directors**

**2022 Election Form**

<table>
<thead>
<tr>
<th>Name (Last, First, Middle Initial)</th>
<th>Social Security Number</th>
<th>Date of Birth</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date of Election to Board of Directors</th>
<th>Date of Participation in Program</th>
<th>Primary Phone Number</th>
</tr>
</thead>
</table>

By signing below, I certify that I have read and understand the terms of the Iridium Communications Inc. Compensation Program for Non-Employee Directors (the “Program”) and voluntarily elect the compensation allocations listed below.

By signing below, I also understand that (i) to be valid, my election must be received by Iridium by no later than December 31, 2021, (ii) my election may not be revoked or changed once made, (iii) if I do not make a timely election, I will be paid my Annual Board Retainer $50,000 in cash and $175,000 in restricted stock units and 100% of any other retainer I am eligible to receive in cash, with all restricted stock units granted pursuant to the Program deemed to be subject to the “Deferred Settlement” alternative below under the “Deferral Election” section, and (iv) if I select “Deferred Settlement” below under the “Deferral Election” section, any compensation I elect to receive as restricted stock units (if vested) will not be paid out to me until six months and one day after my separation from service (as defined under Treasury Regulations Section 1.409A-1(h)) as a director (or, if earlier, on a Change in Control (as defined in the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan) that also constitutes a “change in control event” (as determined under Treasury Regulations Section 1.409A-3(i)(5)).

### 2022 Compensation Allocation — Annual Board Retainer

The Annual Board Retainer ($225,000) consists of (i) an Annual Cash Retainer ($50,000) and (ii) an Annual Stock Retainer ($175,000).

The election for the Annual Cash Retainer may be allocated among cash and restricted stock units in multiples of 5%.

**Note:** This election will apply only to the Annual Cash Retainer. An election may not be made with respect to the Annual Stock Retainer. The Annual Stock Retainer will be paid 100% in restricted stock unit.

I hereby elect the following allocation for my 2022 Annual Cash Retainer:

<table>
<thead>
<tr>
<th>Annual Cash Retainer ($50,000):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash ___%</td>
</tr>
<tr>
<td>Restricted Stock Units ___%</td>
</tr>
</tbody>
</table>

**Total Percentage = 100%**
### 2022 Compensation Allocation — Annual Committee Chair Retainer, Annual Committee Member Retainer or Annual Chairman of Board Retainer

The election for the Annual Committee Chair Retainer, Annual Committee Member Retainer and/or Annual Chairman of the Board Retainer may be allocated among cash and restricted stock units in multiples of 25%.

**Note:** This election will apply to any Annual Committee Chair Retainer, Annual Committee Member Retainer and/or Annual Chairman of the Board Retainer that is or may become payable for 2022. An election may not be made with respect to the Annual Government Advisory Committee Retainer, if applicable.

I hereby elect the following allocation for my 2022 Annual Committee Chair Retainer, Annual Committee Member Retainer and/or Annual Chairman of the Board Retainer (if any):

<table>
<thead>
<tr>
<th>Annual Committee Chair Retainer:</th>
<th>Annual Committee Member Retainer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash ___%</td>
<td>Cash ___%</td>
</tr>
<tr>
<td>Restricted Stock Units ___%</td>
<td>Restricted Stock Units ___%</td>
</tr>
</tbody>
</table>

**Total Percentage = 100%**

### 2022 Compensation Allocation — Deferral Election

The election to defer delivery of shares to be issued upon settlement of vested restricted stock units must be with respect to either 0% or 100% of shares to be issued upon settlement of vested restricted stock units.

By selecting “Deferred Settlement” below, I am electing to receive restricted stock units (if vested) that will not be paid out to me until six months and one day after my “separation from service” (as defined under Treasury Regulations Section 1.409A-1(h)) as a director (or, if earlier, on a Change in Control (as defined in the Iridium Communications Inc. Amended and Restated 2015 Equity Incentive Plan) that also constitutes a “change in control event” (as determined under Treasury Regulations Section 1.409A-3(i)(5)).

By selecting “Settlement Upon Vesting” below, I am electing to receive restricted stock units (if vested) that will be paid out to me on the applicable vesting date (or as soon as practicable thereafter), subject to the terms and conditions of the applicable form of RSU grant notice and agreement; provided, that payout will occur no later than the date that is the 15th day of the third calendar month of the year following the year in which such restricted stock units are no longer subject to a “substantial risk of forfeiture” within the meaning of Treasury Regulations Section 1.409A-1(d).

**Note:** This deferral election will apply to all restricted stock units granted pursuant to the Program in 2022.
I hereby make the following deferral election with respect to the 2022 restricted stock units granted pursuant to the Program (select only one):

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred Settlement ___</td>
</tr>
<tr>
<td>Settlement Upon Vesting ___</td>
</tr>
</tbody>
</table>

SIGNATURE

Director Date
<table>
<thead>
<tr>
<th>Subsidiary</th>
<th>Jurisdiction of Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iridium Blocker-B Inc.</td>
<td>Delaware</td>
</tr>
<tr>
<td>Syncom-Iridium Holdings Corp.</td>
<td>Delaware</td>
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<td>Iridium Holdings LLC</td>
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<td>Iridium Satellite LLC</td>
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<td>Iridium Constellation LLC</td>
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<td>Iridium Carrier Holdings LLC</td>
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<td>Iridium Carrier Services LLC</td>
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<td>Iridium Government Services LLC</td>
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<td>Iridium Satellite SA LLC</td>
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<td>OOO Iridium Services</td>
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<td>OOO Iridium Communications</td>
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<tr>
<td>Iridium Serviços de Satélites S.A.</td>
<td>Brazil</td>
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<tr>
<td>Iridium Satellite UK Limited</td>
<td>United Kingdom</td>
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</table>
Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements (Form S-3 Nos. 333-162206 and 333-165513 and Form S-8 Nos. 333-165508, 333-181744, 333-204236, 333-218073 and 333-231699) of Iridium Communications Inc. of our reports dated February 17, 2022, with respect to the consolidated financial statements of Iridium Communications Inc. and the effectiveness of internal control over financial reporting of Iridium Communications Inc. included in this Annual Report (Form 10-K) of Iridium Communications Inc. for the year ended December 31, 2021.

/s/ Ernst & Young LLP

Tysons, Virginia

February 17, 2022
I, Matthew J. Desch, certify that:

1. I have reviewed this annual report on Form 10-K of Iridium Communications Inc.;

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 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: February 17, 2022

/s/ Matthew J. Desch

Matthew J. Desch
Chief Executive Officer
(principal executive officer)
Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
Pursuant to Section 302 of The Sarbanes-Oxley Act of 2002

I, Thomas J. Fitzpatrick, certify that:

1. I have reviewed this annual report on Form 10-K of Iridium Communications Inc.;

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 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: February 17, 2022

/s/ Thomas J. Fitzpatrick
Thomas J. Fitzpatrick
Chief Financial Officer
(principal financial officer)
CERTIFICATIONS OF
PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the Chief Executive Officer and the Chief Financial Officer of Iridium Communications Inc. (the “Company”) each hereby certifies that, to the best of his knowledge:

1. The Company’s Quarterly Report on Form 10-K for the fiscal year ended December 31, 2021, to which this Certification is attached as Exhibit 32.1 (the “Form 10-K”), fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Form 10-K fairly presents, in all material respects, the financial condition of the Company at the end of the period covered by the Form 10-K and results of operations of the Company for the periods covered in the financial statements in the Form 10-K.

Dated: February 17, 2022

/s/ Matthew J. Desch
Matthew J. Desch
Chief Executive Officer

/s/ Thomas J. Fitzpatrick
Thomas J. Fitzpatrick
Chief Financial Officer

This certification accompanies the Form 10-K and shall not be deemed “filed” by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.