NETWORK INNOVATIONS

Critical Communications Kit CCK-1000 Series

Our Critical Communication Kits have been designed by our experts with over 20 years of hands-on experience in disaster response and recovery. All items in the kit have been chosen based on actual real-world usage in the field.

Overview

Our Critical Communications Kit CCK-1000 series is designed specifically for professionals who need reliable and dependable voice communications anytime and anywhere. The Kit comes in a rugged waterproof transit case, ready for shipment or airline carry on. It includes multiple power options to ensure your satellite phone is fully charged and ready for use. When you need vital emergency or routine voice communications in remote locations or disrupted service areas, our Critical Communications Kits are ready.

Key Features & Benefits

- **100% Global Network Coverage:** The only satellite network that covers the entire world - pole to pole.
- **Choice of Phone Models & Airtime Plans:** Choice of satellite phone models and flexible airtime service plans
- **Complete Kit with all Essential Accessories:** AC/DC power cables, external antenna, spare battery, solar panel.
- **Ruggedized Custom Case:** Custom foam case, shippable, and meets airline carry-on requirements.
- **Battery Operated:** Long battery life allows up to 4-6 hour talk time and up to 30 hour standby
- **Charge Anywhere by the Power of the Sun:** Solar panel power bank allows kit to be 100% off-grid.

Applications

- **Government/Military:** Federal, state, and local applications including DoD, park rangers, and border protection.

- **Humanitarian Assistance/Disaster Response Agencies (HA/DR):** DHS, FEMA, HHS, and NGO's

- **Utilities:** Power, water, oil fields, off-shore drilling, and rural areas.

CCK-1000 Series

Global Coverage

The CCK-1000 satellite phones all utilize the same Iridium Next Global Satellite Constellation. The Iridium Next constellation consists of more than 75 low earth orbit satellites provide ubiquitous coverage from anywhere on the planet including the poles, which are not covered by geostationary satellites.

SOS Button

Iridium Extreme integrates a programmable, GPS-enabled, one-touch SOS button. With a Satellite Emergency Notification Device (SEND) compliant SOS button design, Iridium Extreme will alert your programmed contact of your location and will help create a two-way connection to assist in the response. It includes GPS-enabled SOS with emergency services supported by GEOS Travel Safety Group Limited, at no additional charge.

Rugged Hard-Shell Case with Organizer

The CCK-1000 series kit has everything you need neatly stored in a transportable carrying case. The compact case can be carried on any major international or domestic flight or shipped in its own case without any additional packing required. The rugged waterproof case holds each component in its own molded foam compartment easily accessible an ready for immediate use.

Low Latency

The Iridium Satellite Constellation is the longest operational low earth orbit satellite constellation. With an orbit at 780 km (484 miles) above the earth signal propagation time is 40 -50 milliseconds. Actual call latency will dependent upon the number of inter-satellite links to the designated ground entry point.

Supports Push to Talk (PTT)

The network can support a handsets equipped with Push to Talk (PTT) capabilities. Up to 15 Call groups can be created within a defined coverage radius. Each device within the talk group can broadcast to all other authorized devices within the talk group. Phone provide on screen Device Talker ID with distance and bearing. Secure communications with AES-256 encryption.

Solar Panel Power Bank

The CCK-1000 series comes with a spare lithium-ion battery as well as multiple charging option to ensure that your satellite phone always has power. Along with the standard AC charging adapter the kit includes a 12 volt car charger and solar panel powered battery bank. The solar charge can be charging its own internal battery during the day the used to charge in phone battery over night to ensure full operation each day you're in the field.

What Comes In The Kit?

- Your choice of Satellite Phone
- Spare high-capacity battery
- Solar panel with internal battery
- Travel Charger
- Car Charger
- Leather Case
- USB Data Cable
- User Manual
- Accessory adapters x2
- Magnetic Vehicle mount antenna with 5' cable
- Hands-free earpiece with microphone
- Ruggedized case with custom foam insert
- Quick Start Guide

**ICOM accessories may differ*

CCK-1000 Series

The Iridium Constellation

The Iridium system is designed to be accessible by low power handheld phones, with an omni-directional antenna operating in the L-Band frequency range (1616.0 – 1626.5 MHz). The Iridium satellites orbit relatively close to the earth, in low earth orbit (LEO), about 781 kilometers (485 miles) above the surface. In comparison, most other communications satellites orbit in the geostationary orbit (GEO) at 35,785 km (22,300 miles). From LEO the transmission delay is on the order of 40 - 50 milliseconds, where geostationary satellites take 600 -1000 milliseconds round trip (1000 milliseconds = 1 second). With an orbital period of about 100 minutes, a satellite can only be in view of a phone for about 7 minutes, so the call is automatically "handed off" to another satellite when one passes beyond the local horizon. This requires a large number of satellites, carefully spaced out in polar orbits to ensure that at least one satellite is continually in view from every point on the Earth's surface. At least 66 satellites are required, in 6 polar orbits containing 11 satellites each, for seamless coverage. This design means there is excellent satellite visibility and service coverage, especially at the North and South poles. Orbital velocity of the satellites is approximately 27,000 kilometers per hour (17,000 mph).

Satellites communicate with neighboring satellites via Ka band inter-satellite links. Each satellite can have four inter-satellite links: one each to neighbors fore and aft in the same orbital plane, and one each to satellites in neighboring planes to either side. Signals route from one satellite to the next until they are route back to earth via one of the designated ground entry points. From there the signals are routed to the Public Switch Telephone Network (PSTN) or the Public Internet. In cooperation with the US Government there is a single ground entry point designated for all secure communications.

The original concept was to have 77 satellites, which is where the name Iridium came from, being the element with the atomic number 77 and the satellites evoking the Bohr model image of electrons orbiting around the Earth as its nucleus. This reduced set of six planes is sufficient to cover the entire Earth surface at every moment.

History

First Generation

The first-generation constellation was deployed in 1997–2002 by Iridium SCC. All the satellites needed to be in orbit before commercial service could begin. The first Iridium call was made by Vice President of the United States Al Gore to Gilbert Grosvenor, the great-grandson of Alexander Graham Bell and chairman of the National Geographic Society. Although the system met its technical requirements, it was not a success in the market.

The constellation continued operation following the bankruptcy of the original Iridium corporation. A new entity emerged, Iridium Communications, to operate the satellites and developed a different product placement and pricing strategy. This offered communication services to a niche market of customers who required reliable services such as journalists, explorers, and the US Government. No new satellites were launched 2002–2017 to replenish the constellation, even though the original satellites based on the LM-700A model had been projected to have a design life of only 8 years.

First Generation

The design of Iridium-NEXT satellites was complete by 2010, while the existing constellation of satellites would remain operational until Iridium NEXT was fully operational. Many of the original satellites are expected to remain in service until the early 2020s. The Iridium NEXT satellites would have higher speed capabilities while maintaining backward-compatible with the current system. Deployment of the constellation began in January 2017, with the launch of the first ten Iridium NEXT satellites and completed by January 2019. The Iridium Next satellites hosts the Certus® airtime service, with speed capabilities ranging from 22 Kbps to 704 kbps. In January 2020, the Iridium constellation was certified for use in the Global Maritime Distress and Safety System (GMDSS). The certification ended a monopoly on the provision of maritime distress services that had previously been held by Inmarsat since the system became operational in 1999.

CCK-1000 Series

Kit Comparison Guide

Kit Model	CCK-1100	CCK-1200	CCK-1200-USA	CCK-1200-PTT	CCK-1400-PTT
Phone	**9555**	**9575 Extreme**	**9575 Extreme GSA**	**9575 Extreme PTT**	**IC-SAT100**
Manufacturer	Iridium	Iridium	Iridium	Iridium	ICOM
Coverage	Global				
International Calling	YES				NO
Built-In Speakerphone	YES				
SMS Messaging	YES				
USB Data Port	YES				NO
SOS Button	NO	YES			NO
GPS-Enabled	NO	GPS location-based services, Online tracking, compatible w/ Google Maps			NO
Ruggedized Design	NO	Meets Mil-standard of 810 & IP-65			IP-67
Push to Talk	NO	NO	NO	YES	
Made in the USA	NO	NO	YES	NO	NO
Phone Size	143 x 55 x 30 mm	140 x 60 x 32 mm			135 x 57.8 x 32.8 mm
Phone Weight	266g (9.4 oz)	247g (8.7 oz)		268 g (9.4 oz)	360 g (12.7 oz)
Power Standby/Talk Time	30 hrs / 4 hrs	30 hrs / 4 hrs	Phone: 54hrs/6.5hrs PTT: 16.5 hrs / 5 hrs	30 hrs / 4 hrs	24 hrs / 5 hrs
Also Included in the Kit					
Solar Panel Power Bank	6-Watt Peak, Foldable 4 Solar Panels Built in 25000mAH Li-Polymer battery Two (2) USB Charging Ports Dimensions: 154 x 85 x 35 mm (6.1 x 3.3 x 1.4 inches) - Folded, Weight: 590 g (1.3 lbs)				
Spare Battery	YES				
Charging Cables & Adapters	Universal AC Power Adapter, Automotive 12 Volt DC Adapter, Solar Power Battery Adapter				
Auxiliary Antenna & Cables	Magnetic External Mount Antenna Included (GPS antenna optional)				
Auxiliary Headset	YES				
Transport Case	Customized Foam Mil Standard 810F & IP-65 Dimensions: 14.7 x 10.2 x 6.1 Weight: 3.28 kg (7.25 lbs.)				
Quick Start Guide	Conveniently Stored in Lid				