Directional Antennas with Omni

User Interface Group

Antenna Power Supply

Features and Benefits

- **Integrated CDL terminal with high-gain directional antenna**

- **Integrated Omni antenna for near-field operations**

- **CDL (Std-CDL and BE-CDL) specification compliant**

- **Software Configurable for surface (SCE) or airborne (PCE) operation**

- **Transmit and receive data rates up to 45 Mbps**

- **Type-1 encryption.**

- **Ship motion compensation for the directional antenna**

- **Ku-band digital TX and RX, 14.4 to 15.35 GHz**

Sharklink Surface Data Terminal (SDT)

Wide Band Surface Terminal

Cubic's current-generation Surface Data Terminal is available now, and is optionally exportable!

Cubic's Sharklink SDT is a new, high performance surface data terminal that supports secure, long range, high data rate communications with airborne and shipboard platforms equipped with a DoD standard Common Data Link (CDL) data terminal. Sharklink's real-time imagery, full-motion video, audio, and other sensor data are instantly available to provide the ship with the detailed information they need for operations ranging from humanitarian relief to surface combat. Sharklink is specifically designed to operate in harsh maritime environments.

Sharklink supports Standard and Bandwidth-Efficient CDL waveforms with Cubic's Multiband Miniature Transceiver, omni and directional antennas, and a solid state power amplifier.

Sharklink supports communication with Ku-band CDL-equipped aircraft. S- and C-band operation is available as an option.

Sharklink provides data security with selectable Type 1 or AES encryption to protect all information from exploitation, and maintains compatibility with older airborne terminals with a crypto bypass option.

Product Description

The Sharklink SDT uses Common Data Link (CDL), the DoD's intelligence, surveillance, and reconnaissance (ISR) data link standard. It supports data transfers to and from off-ship data terminals at data rates ranging from 200 kbps to 45 Mbps. The system integrates a high-gain directional Ku-band antenna for long range operations with an omni-directional antenna for signal acquisition and robust close-in operations. Automatic handoff between the directional and omni antennas is provided.

The Sharklink architecture is scalable and supports up to 16 above-deck antenna groups and multiple below-deck user interface groups. Any of the multiple below-deck users can connect to any of the above-deck antennas for maximum operational flexibility.

Each above-deck antenna can support an independent link to an off-ship CDL terminal, or multiple antennas can be operated together in paired handoff mode to mitigate line-of-sight blockages by the ship's superstructure.

Specifications

Performance Characteristics RF
Ku-band digital TX and RX, 14.4 to 15.35 GHz
S-band digital TX or RX, 2.2 to 2.5 GHz (Option)
C-band digital TX or RX, 4.4 to 4.99 GHz (Option)

Data Rates
Full duplex 200 kbps – 45 Mbps

Antenna, Ku-Band
27 dBi gain (Ku Directional)
4 degrees half-power beamwidth (Ku Directional)
4.5 dBi gain (Ku-band Omni Antenna)

Antenna, S- & C band (Option)
1.5 dBi gain (C-band Omni Antenna)
-1.5 dBi gain (S-band Omni Antenna)

Equivalent Isotropic Radiated Power (EIRP)
32 dBW, Ku-band Directional Antenna
9.5 dBW, C-band Omni Antenna
6.5 dBW, S-band Omni Antenna

Encryption
NSA Type-1
AES-256

Environmental Specifications	
Vibration and Shock	MIL-STD-810G
Shock	MIL-STD-901D, Grade B
EMI/EMC	MIL-STD-461F
Operating Temperature	-30°C to +60°C

Physical Characteristics	
Antenna Group	
Size	25" W x 33" L x 22" H
Weight	88 lbs
AC-DC Converter, Below Decks	Size: 19.0" W x 16" L x 3.42" H Weight: 20 lbs Power: 400 W, 115 VAC, 60 Hz (each antenna group)

User Interface Group	
Size	19" W x 22" L x 3.5" H
Weight	30 lbs
Power	130 Watts, 115 VAC

Interfaces	
Ethernet	10/100 BASE-T Ethernet interfaces
RS-422	
DS-102 key fill interface	
Analog RS-170 video	

Waveform-Programmable
STD-CDL
BE-CDL Rev A / Rev B
Tactical 1.6, 3.2, 6.4 and 466ER available
NET-T
VNW

Dual-channel
User Interface Group
with crypto

Ku-Band
Directional Antenna
with OMNI

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