

MANTIS II GROUND DATA TERMINAL

WIDEBAND RF GROUND TERMINAL

Cubic's Mantis II is a new, high performance data terminal that supports long range, high data rate communications with airborne platforms equipped with a multitude of DoD standard Common Data Link (CDL) waveforms.

Designed for harsh environments, Mantis II can be deployed in less than 10 minutes providing ground forces with secure expeditionary communications. With Mantis II, real-time imagery, full-motion video, audio and other sensor data are instantly available to provide users with the detailed information they need in any military or peacekeeping mission. Additionally Mantis II performs automatic calibration, making remote set-up easy.

Mantis II provides data security through selectable Type-1 (via the KI-16 encryption module) or AES-256 encryption to protect all information from exploitation. The Mantis II is able to maintain compatibility with legacy airborne transmitters utilizing a crypto bypass option.



WAVEFORM-PROGRAMMABLE

- STD-CDL
- BE-CDL Rev A / Rev B
- Tactical 1.6, 3.2, 6.4 and 466ER available



Mantis II supports data transfers from Ku-band CDL-equipped aircraft, including Predator, Reaper, Sky Warrior, Fire Scout, Litening targeting pod and others. The Mantis II provides operating ranges to 250 nmi or more, depending on airborne terminal characteristics.

PRODUCT DESCRIPTION

Mantis II implements the DoD's intelligence, surveillance, and reconnaissance data link standard, the Common Data Link, and enables data transfers to and from airborne data terminals at rates ranging from 200 kbps to 45 Mbps.

Based on a successful, off-the-shelf antenna design, Mantis II incorporates a full auto-tracking of maneuvering transmitters and quick recovery from momentary signal blockage.

KEY FEATURES AND BENEFITS

- Integrated CDL terminal with high-gain antenna
- CDL specification compliant
- Transmit and receive data rates up to 44.73 Mbps
- Type 1 encryption
- Automatic switching to the integrated Omni antenna for close-range operations

PERFORMANCE CHARACTERISTICS

RF BAND

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

DATA RATES

- Full duplex 200 kbps – 44.73 Mbps (upgradeable to 274 Mbps)

ANTENNA

- 40 dBi gain, 77.8 dBm max EIRP
- 1.2 degree 3 dB beamwidth

ENCRYPTION

- NSA Type 1
- Commercial AES-256

VIDEO COMPRESSION/DECOMPRESSION

- MPEG-2
- H.264/MPEG-4

ENVIRONMENTAL

- Environmental: MIL-STD-810G
- EMI/EMC: MIL-STD-461F
- Operating temperature: -30°C to +60°C

TRACKING

- RF Tracking (for operation in GPS denied environments)
- Navigational Tracking

PHYSICAL CHARACTERISTICS

ANTENNA GROUP

- Size: 48" dish on 45" tripod
- Weight: 170 lbs.
- Power: 475 W, 110-220 VAC (at 10 W output)

USER INTERFACE GROUP (UIG)

- Weight: 25 lbs.
- Power: 70 W, 110-220 VDC

USER INTERFACES

- RS-232/422
- DS-101 / DS-102 key fill interface
- Analog RS-170 video
- Ethernet: 10/100 BASE-T Ethernet interfaces

SIZE & WEIGHT

- UIG: 20" D x 19" W x 8.5" H, 25 lbs
- GDT Case 1: 47.3" D x 24.3" W x 23.6" H
 - Weight: 125 lbs.
- GDT Case 2: 39" D x 23" W x 17.3" H
 - Weight: 128 lbs.
- GDT Case 3: 31" D x 25.3" W x 26.5" H
 - Weight: 75 lbs.
- GDT Power Supply: 12" D x 8" W x 10" H
 - Weight: 33 lbs.