MMT

MULTIBAND MINIATURE TRANSCEIVER

Cubic's Multiband Miniature Transceiver (MMT) is a small, lightweight, integrated digital data link providing voice, data and imagery information for both airborne and ground applications. It is capable of receiving and transmitting video and telemetry data across four frequency bands while maintaining a very low size, weight and power footprint. Data security is ensured by Type 1 (removable) pending or Advanced Encryption Standard (AES), and it can operate in encryption bypass mode for compatibility with unencrypted terminals. The MMT can receive and transmit standard and bandwidth-efficient CDL compliant waveforms as well as other waveforms. The MMT was specifically designed to be interoperable with many intelligence, surveillance and reconnaissance (ISR) systems.

Potential ISR Applications

- Shadow
- Warrior
- Reaper
- Fire Scout
- Predator
- Apache
- STUAS/Tier II
- Kiowa
- Targeting pods
- Man-worn
- Remote viewing terminal
- Vehicle-mounted

Key Features	Benefits
Small size, weight and power footprint for installation flexibility	Compatible with short range tactical UAVs and larger manned and unmanned vehicles
Multi-band reception and transmission (L/S/C/Ku)	Enables operation anywhere in the world with most existing data links
AES encryption or Type 1 (removable) pending (U.S. only)	Facilitates flexible, secure communications
Integrated video compression/decompression engine	Simplifies integration and reduces required equipment
Transmit and receive data rates up to 100 Mbps	Provides plenty of throughput for multiple channels of voice and video
Web-browser GUI or SNMP control	Eases human or machine control

www.cubic.com

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Performance Characteristics

RF Transmit and Receive

- Ku-band.....14.40-14.83 and 15.15-15.35 GHz
- C-band.....4.40-4.95 and 5.25-5.85 GHz
- S-band.....2.20-2.50 GHz
- L-band.....1625-1850 MHz
- Other bands available

Waveforms and Data Rates

- Full-duplex standard CDL 200 kbps – 45 Mbps
- Full-duplex bandwidth-efficient CDL 512 Kbps –100 Mbps
- Other non-CDL rates and waveforms available

Encryption

- Type 1 (removable) pending
- Advanced Encryption Standard (AES)

Video Processing

- MPEG-2
- H.264/MPEG-4 AVC/Part 10
- H.261 (available)
- Motion JPEG (available)
- JPEG 2000 (available)
- Standard Metadata
  - Brite Star
  - MISB 601.1
  - MISB 601.2

Data Interfaces

- Ethernet
  - IPv4, IPv6 (available)
  - Unicast or Multicast
  - Router (available)
- RS-232/422
- Analog RS-170 video in/out (NTSC and PAL)
- Analog Audio in/out
- Control Interfaces
  - STANAG 4586
  - SNMP terminal control
  - Web browser GUI control

Reliability

- MTBF > 6,000 hours

Physical Characteristics

- Size .....5.4” x 3.5” x 1.2”
- Weight .....1.7 lbs
- Power.....31 W (10-33 VDC)

Environmental

- Vibration & shock.....MIL-STD-810
- EMI/EMC.....MIL-STD-461
- Operating temperature.....-40°C to +55°C
- Operating altitude .....up to 20,000 feet

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