



## The Future of Air to Ground Wave Relay® MANET

Broadcast Microwave Services (BMS) introduces the BMTS-MA MANET transceiver system as an airborne video and data solution with the power of the Wave Relay® MANET. The BMTS-MA transceiver contains everything needed for high quality, reliable, and secure streaming of high-definition video on Wave Relay® MANET networks.

The BMTS-MA ultra-long transceiver is optimized for air-to-ground, or air-to-air broadcasts of via a single radio channel using 3 x 3 MIMO technology. MIMO technology employs techniques such as Spatial Multiplexing & Maximum Ratio Combining to move data even faster. BTMS-MA transceiver configuration, control, and troubleshooting is performed in flight by the pilot-or crewmember operated DLC50 Control Panel—or securely from the ground by network administrators via a GUI.

### BMTS-MA Features

- Bidirectional broadband data, including HD video multicasting
- H.265 compression for efficient bandwidth usage
- Wave Relay® MANET - Automatic relay of information across all platforms and users on the same network
- 3x3 MIMO technology for superior connectivity and speed
- DO-I60 compliant aircraft equipment
- Integrates with Wave Relay® MANET networks
- AES 256 encryption
- Orthogonal Frequency Division Multiplexing (OFDM) and signal diversity for improved signal recovery
- Single radio channel transmission for streamlined operations and electromagnetic efficiencies
- Short antenna and radio connections to minimize signal loss

### BMTS-MA Wave Relay® Module

#### Compatibility

Built using the Wave Relay® Embedded Module, and compatible with all Persistent Systems products including the MPU5

#### Bandwidth

5, 10, 20 MHz SW configurable

#### RF Modulation

OFDM (64-QAM, 16-QAM, QPSK, BPSK)

#### RX/RX Operating Modes

All modes from SISO to 3x3 MIMO

#### RF Output Power

L-Band Freq. Range:

1350-1390 MHz - 10W (3.3W per RF Chain)

S-Band Freq. Range:

2200-2507 MHz - 10W (3.3W per RF Chain)

BAS Band Freq. Range:

2025-2150 MHz - 6W (2W per RF Chain)

Lower C-Band Freq. Range:

4400-5000 MHz - 6W (2W per RF Chain)

Upper C-Band Freq. Range:

5100-6000 MHz - 4W (1.3W per RF Chain)



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**BMTS-MA**  
Aircraft Transceiver

<b>Physical</b>	
Weight (lbs.)	4.65
Dimensions	Box - 4.9" W x 9.2" D x 5.62"H With connectors - 4.9" W x 9.9" D x 5.62" H With mounting tray - 5.12" W x 13.12" D x 6.77" H
<b>Power</b>	
Input	10-30VDC (+28VDC nominal) –
Power Consumption	75 to 80W
<b>Operating Temperature</b>	
Temperature	-30° to +65° C
<b>I/O</b>	
Compression Channels	Up to two (2) SDI embedded audio channels
Local Control	DLC50 Control Panel or Ethernet
Remote Control	Ethernet
Remote Configuration	Web GUI
Serial Ports	RS232 1 serial channel, up to 115 kB/s.
<b>HD Video</b>	
Compression	H.264 and H.265 encoding
Resolution/ Frame Rates	720x480i 60/59.94 Hz (NTSC) N/A 720x576i 50 Hz (PAL) 720p 60/59.94/50/30/29.97/25 Hz 1080i 60/59.94/50 Hz 1080p 60/59.94/50/30/29.97/25/24/23.98Hz
Network Protocols	Unicast or Multicast MPEG Transport Stream Secure Reliable Transport (SRT) Real-Time Streaming Protocol (RTSP)
<b>3x3 MIMO</b>	
3x3 MIMO	MRC, STBC and Spatial Multiplexing
<b>MANET</b>	
MANET	Advanced Wave Relay routing algorithms Self-Forming/Healing Peer-to-Peer No Master Node IPv4 and IPv6 compatible Integrated DHCP server

