REAL-TIME MISSION CRITICAL VIDEO | DATA SOLUTIONS

STS-E

Symmetrical Transceiver System

> Key Features

- COFDM wireless transmission for reliable link
- Diversity reception to reduce multi-path interference
- 4.4-5 GHz frequency range for use with unmanned vehicles (UAV, UGV)
- 2.0-2.5 GHz and 6.425-6.525 GHz versions for use with manned and unmanned vehicles (Future Release)
- Gigabit Ethernet primary interface
- Small-size, low weight, and low power ideal for UAV systems
- Compatible with BMS Antenna Tracking Systems for longer range
- Local or remote system control over link
- BTP Encryption Standard, AES 128/256 Optional

> Interfaces

RF Input:	2x SMA (f) 50 Ω
RF Output:	SMA (f) 50 Ω
ASI:	Micro-BNC (f) 75 Ω
Gigabit Ethernet, Serial, Power:	Multi-connector

The STS-E is a Frequency Division Duplex transceiver designed for use in long-range un-manned vehicles, manned vehicles, and ground stations. It is a fully digital transmission using COFDM which exhibits exceptional performance in the face of multipath and high bandwidth efficiency. The COFDM signal format is protected by various levels of forward error correct (FEC) and interleaving to distribute and correct error events resulting from low operating signal to noise conditions.

The unit transmits over various bandwidths, multiple constellations, and FEC code rates. This adjustability allows for usable data rates over the RF channel from 3.7 MBits/sec to over 31 MBits/sec, of which up to 97% of this is available for user traffic. The variable size IP packets are efficiently packed into the underlying transport stream framing structure with only a typical 14 byte overhead and then transmitted over the RF channel.

Diversity reception using Maximum Ratio Combining (MRC) is built into the STS-E to allow the use of multiple receive antennas on the aircraft or the ground station to compensate for multi-path interference or for seamless transitioning from tracking to up-look antenna.

The STS may be controlled from either the ground or airborne side of the link using built-in web pages or WDTS binary control.

STS-E

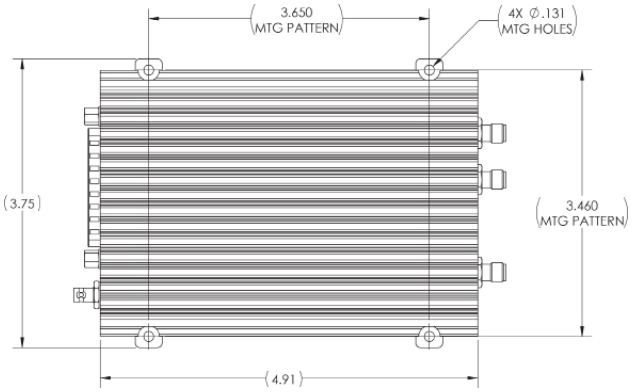
> RF Technical Specifications

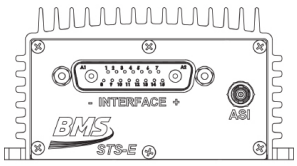
Transmit Frequency:	4400 MHz - 4625 MHz (selectable) 4775 MHz - 5000 MHz (selectable) 2000 MHz - 2500 MHz (Future Release) 6425 MHz - 6525 MHz (Future Release)
Receive Frequency:	4400 MHz - 5000 MHz 2000 MHz - 2500 MHz (Future Release) 6425 MHz - 6525 MHz (Future Release)
Tuning Step Size:	250 KHz
RF Bandwidth:	6 MHz, 7 MHz, 8 MHz
Receive Sensitivity:	< -98 dBm (QPSK, 1/2CR)
Transmit Power:	2W (1W, 500mW, 200mW in steps)
Transmit MER:	> 27 dB (at 2W)

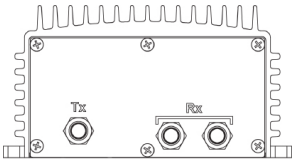
Electrical & Mechanical Specifications

Input Voltage Range:	+9 to +28 VDC
Power Consumption:	< 25W
Operational Temp:	–20° to +60°C
Storage Temp:	–40° to +80°C
Humidity:	0 to 95% non-condensing
Ingress Protection:	IP67 with mated connectors
Operating Altitude:	20,000 Ft (6000 m)
Size:	1.97" H x 3.46" W x 4.91" L (5.004 x 8.789 x 12.47 cm) without connectors or mounting flange
Weight:	24.9 oz (706 g)
Compliance:	CE marked in accordance with EU Low Voltage and EMC Directives EMC Compliance: EN55022, EN55024 DO-160 Compliance Sections 4, 5, 6, 7, 8, 16, 17, 20.4, 20.5, 25

> Mechanicals







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