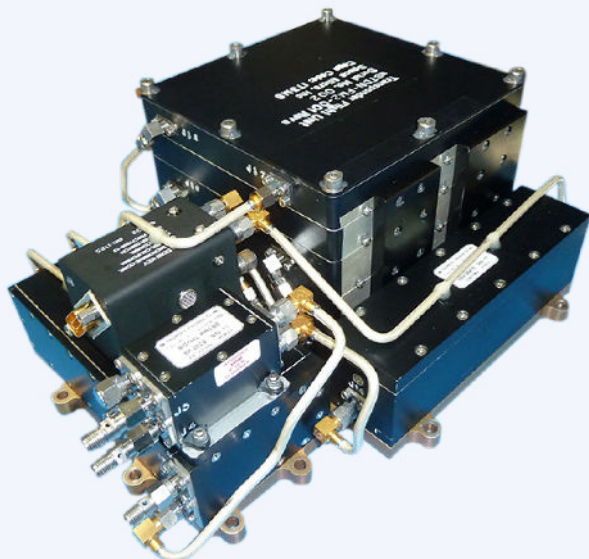


μSGLS-100™ TRANSPONDER



The high-reliability, low-SWaP μSGLS-100™ provides critical TT&C links between AFSCN ground stations and military spacecraft. The receiver detects and locks to an uplink signal, demodulates the telecommand signal, and outputs command data and bit timing. The transmitter receives data from the C&DH unit, encodes and modulates it on an internal subcarrier or directly on the carrier. The rad-hard μSGLS-100 is a Software Defined Radio with over 100,000 hours of DoD space flight heritage.

APPLICATIONS

- Telemetry, Tracking & Command Transceiver
- Mission Data Transmitter
- Crosslink Transceiver
- RF Receiver with onboard signal processing
- Signal Intelligence Receiver
- Compatible with MCU-110 and KG-237 NSA Type 1 cryptographic units

KEY FEATURES

- Low power consumption
- Coherency
- Ranging
- Frequency Agile, programmed ~8 weeks prior to delivery
- Radiation Hardened

SPECIFICATIONS: TRANSMITTER

FREQUENCY	2200 MHz - 2300 MHz
RF OUTPUT POWER	2 W to 10 W
MODULATION FORMATS	PCM/PSK
CHANNEL BANDWIDTH	100 Hz - 10 MHz
DATA RATE	Up to 5 Mbps
FEC	Reed-Solomon Convolutional
FREQUENCY STABILITY	±20 ppm standard (± 0.3 ppm available)
PHASE NOISE NON-COHERENT MODE	3° RMS Maximum

μSGLS-100™ TRANSPONDER

SPECIFICATIONS: RECEIVER

FREQUENCY	1760 MHz - 1840 MHz
DATA RATE	1 - 2 kbps
DYNAMIC RANGE	60 dB min
NOISE FIGURE	3 dB max
SENSITIVITY	-125 dBm

SPECIFICATIONS: OTHER

INTERFACE	RS-422
ENCRYPTION	Inquire for Encryption Options
ENVIRONMENT Temperature Vibration Parts Level Suitability	-30°C to + 65°C GSFC-STD-7000 (NASA GEVS) Acceptance Levels Commercial Space, NASA Level 1, 2, 3, Military Class S LEO, MEO and GEO
SWAP Dimensions Mass Power Consumption Input Voltage	5" x 5" x 4" 2.1 kg (4.6 lbs, Transponder Only) Tx: 35 W Max at 5 W RF Power Rx: 6 W Max +28 ± 6 VDC