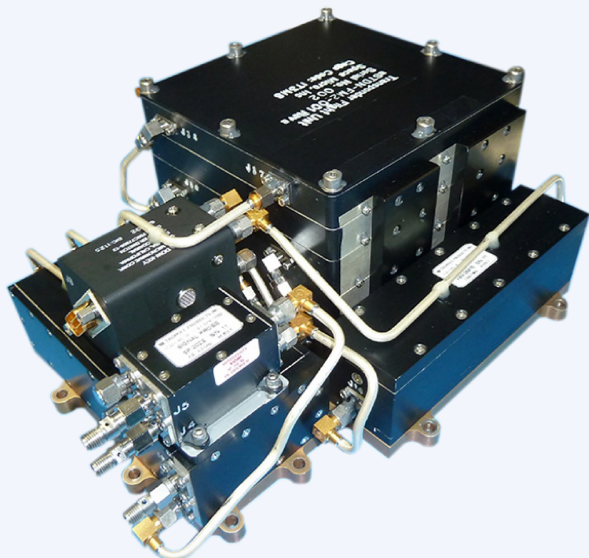


# μSGLS-100™ TRANSPONDER



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

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

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## SPECIFICATIONS: RECEIVER

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

## SPECIFICATIONS: OTHER

<b>INTERFACE</b>	RS-422
<b>ENCRYPTION</b>	Inquire for Encryption Options
<b>ENVIRONMENT</b> 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
<b>SWAP</b> 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