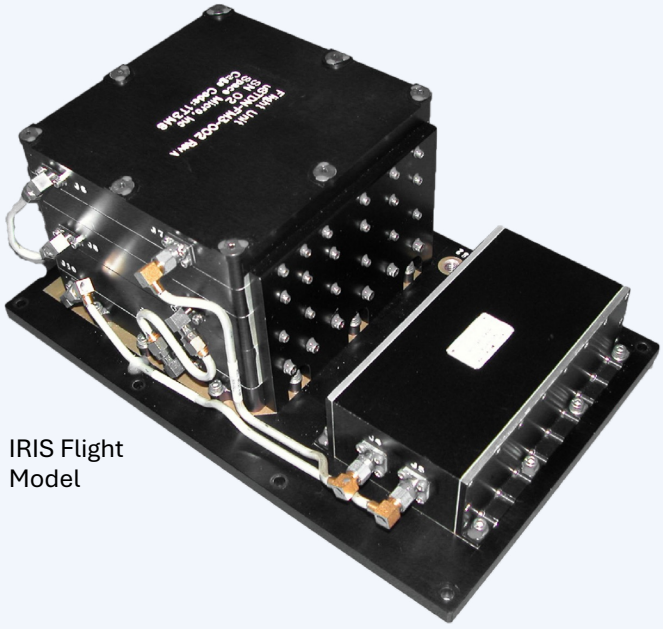
µSTDN-100™ TRANSPONDER



- IRIS Flight Model

µSTDN-100™ is a high-reliability, low-SWaP Software Defined Radio (SDR). This high data rate S-Band SDR supports various applications including downlinks of critical mission data, crosslinks and TT&C. The radiation hardened µSTDN is a tried and true workhorse with space flight heritage on NASA IRIS (continuous operation for 10+ years), and lunar missions for NASA LADEE and SpaceIL.

APPLICATIONS

- Telemetry, Tracking & Command Transceiver
- Mission Data Transmitter
- Crosslink Transceiver
- RF Receiver with onboard signal processing
- Signal Intelligence Receiver
- Satellite Orbits: LEO, MEO, GEO

KEY FEATURES

- S-Band STDN/USB Compatible
- TDRSS, NEN, DSN Validated
- Ranging Options: NEN/DSN tone, Digital
- Command Decrypter Available
- Various mounting configurations available including diplexer and RF Switches
- Radiation Hardened

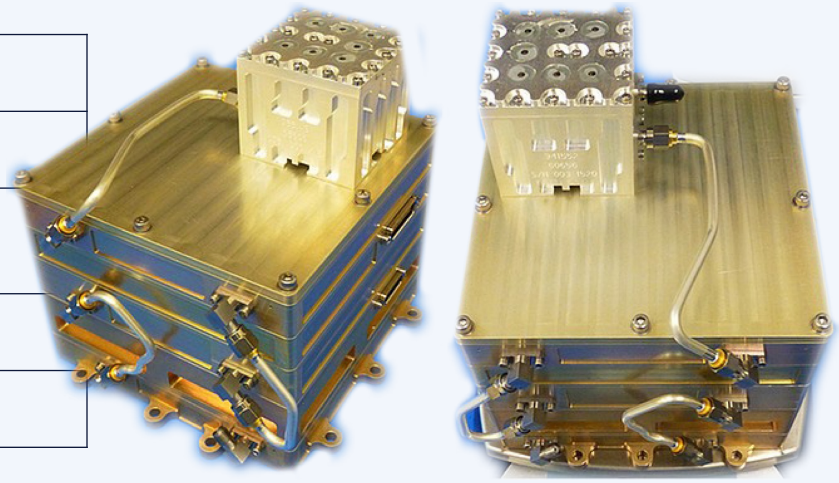
SPECIFICATIONS: TRANSMITTER

FREQUENCY	2200 MHz - 2300 MHz
RF OUTPUT POWER	5 W to 8 W
MODULATION FORMATS	BPSK PCM/PSK (option)
CHANNEL BANDWIDTH	100 Hz - 10 MHz
DATA RATE	Up to 5 Mbps
FEC	Reed-Solomon (255, 223) LDPC Turbo
FREQUENCY STABILITY	+20 ppm standard (+ 0.3 ppm available)
PHASE NOISE NON-COHERENT MODE	3° RMS Maximum

µSTDN-100™ TRANSPONDER

SPECIFICATIONS: RECEIVER

FREQUENCY	2025 MHz - 2120 MHz
DATA RATE	Up to 256 kbps
DYNAMIC RANGE	60 dB min
NOISE FIGURE	3 dB max
SENSITIVITY	-125 dBm



- Space IL Flight Model

SPECIFICATIONS: OTHER

INTERFACE	RS-422
ENCRYPTION	Inquire for Encryption Options
ENVIRONMENT **Temperature Range** **Vibration** **Suitability**	 -30°C to + 65°C GSFC-STD-7000 (NASA GEVS) Acceptance Levels 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