



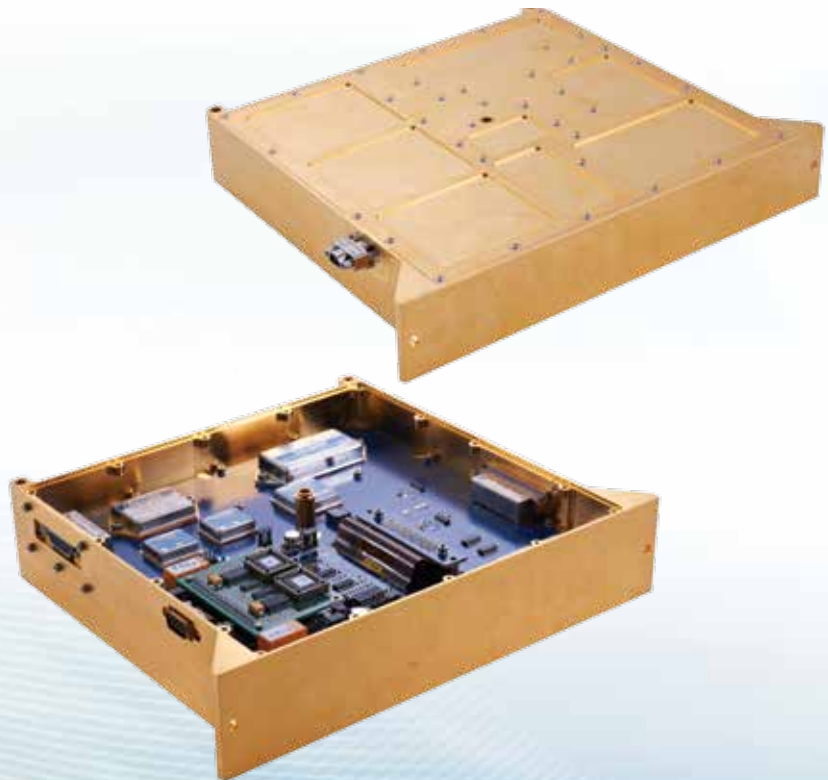
TTC-250 S-Band Transceiver Suite

TTC-250 series S-Band Transceiver Suite is a high performance communication transponder for satellite Telemetry, Tracking and Control (TT&C). It is designed to provide high data availability and reliability to meet the challenge for dependable satellite communication and control, from launch and early operation phase, to routine operations and Safe-Hold operations.

Designed to provide an omni-directional coverage and low power operations with a downlink data rate of up to 250kbps, the TTC-250 ensures a constant communication link over the ground station with high control confidence. The TTC-250 is configurable for up to 8 patch antenna, 2 receiver chains, 2 transmission chains for increased redundancy and reliability.

Key Features

- Light weight, low cost and high performance satellite communications and control
- Increased flexibility with omni-directional patch antennas
- Near realtime communications with high speed downlink of up to 250kbps
- Increased reliability with adoption of redundancy architecture design
- Proven design with heritage from X-SAT



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Technical Specifications

RECEIVER

Receiver Frequency	2025 MHz to 2100 MHz
Receiver Dynamic Range	-70 dBm to -120 dBm
Noise Figure	< 4 dB
Receiver Sweep Rate & Range	Rate: 50 kHz/s Range: \pm 200 kHz
Receiver Demodulation	BPSK Demodulation 4 kbps on 16 kHz subcarrier
Mass	1.90 kg / chain
Overall volume	260 x 220 x 40.5 mm ³

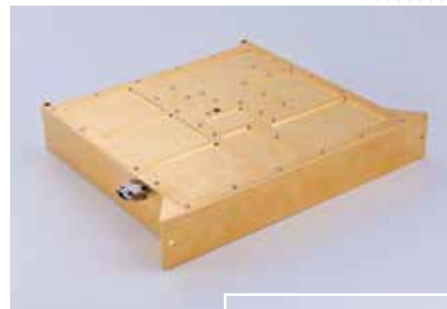
GENERAL

Power Consumption	< 5 W (Receiver) < 14 W (Transmitter) 28 V un-regulated supply
CAN Network Interface	Telecommand and telemetry interface for configuration of the S-Band Transmitter and Receiver CAN network interface for short packet transmission, 500 kbps
Random Vibration	20 Grms
Radiation Tolerance	10 kRad
Operating Temperature	-20°C to +70°C

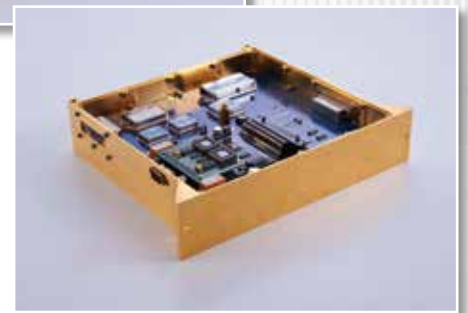
TRANSMITTER

Frequency Range	2200 MHz to 2300 MHz Centre @ 2210.769MHz
Stability	\pm 1 ppm
Modulation Format	BPSK
Data Rate	62.5 Kbps to 250 Kbps
RF Power	> 33 dBm (before antenna input)
Mass	2.1 kg / chain
Overall volume	260 x 220 x 54 mm ³

RF Communications



S-Band Receiver



S-Band Transmitter

Note: All specifications are subject to change without notice.
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