SSTRX-1000 Satellite Transceiver

The **SSTRX-1000 S-Band Satellite Transceiver** features an extremely compact and robust design. It has been designed to operate very reliably within the severe environments of satellites and other space vehicles and has been qualified for the use within LEO-satellites.

The SSTRX-1000 System operates in the S-Band frequency band. It is optimized for bi-directional transmission of commands and telemetry data between the ground station and the satellite.

The SSTRX-1000 Transceiver System consists a BPSK Telemetry Transmitter, a Telecommand Receiver with integrated a Bit Synchronizer/Data Regenerator and a Diplexing Filter.

Telemetry Transmitter

Carrier Frequency	in range 2200 to 2290 MHz
Frequency Stability // Aging	±10ppm // 1ppm/a
Transmit Power	100mW to 5W (10W optional)
Modulation	10 kbps to 4 Mbps (BPSK)
Carrier Suppression	30 dBc
Spuria/Harmonics	-60 dBc
Phase Noise	2° rms
Supply	20 to 36VDC
Power Consumption	18 Watts, typ. (at 5W o/p power)
Dimensions	170 x 90 x 49 mm incl. mounting flange
Weight	730 grams

Telecommand Receiver

Carrier Frequency	in range 2025 to 2110 MHz
Frequency Stability // Aging	±10ppm // 1ppm/a
Modulation	2/4 kbps on 8/16 kHz subcarrier, 8 to 256 kbps SP-L
BER 10-6	-118 dBm typ. (at 4 kbps)
Supply	20 to 36VDC
Power Consumption	2.5 Watts, typ.
Dimensions	170 x 90 x 38 mm incl. mounting flange
Weight	750 grams

Mechanical Specifications

Connector	HD SUB-D acc. MIL-C-24308
Case	Aluminium
Finish	Alodine 1200

Diplexer

TX/RX Bandwidth	60 MHz
TX/RX Isolation	> 80 dB
Implementation Loss	< 1 dB
Dimensions	224 x 46 x 19 mm (excl. connectors)
Weight	280 grams
Case	Aluminium
Finish	Silver

Environmental Specifications

Operating Temperature	-20°C ... +50°C (extended range upon request)
Vibration	20 ... 2,000 Hz; 16grms random, 3-axis
Shock	100g, 11ms half sine
Radiation Tolerance	> 20 kRad