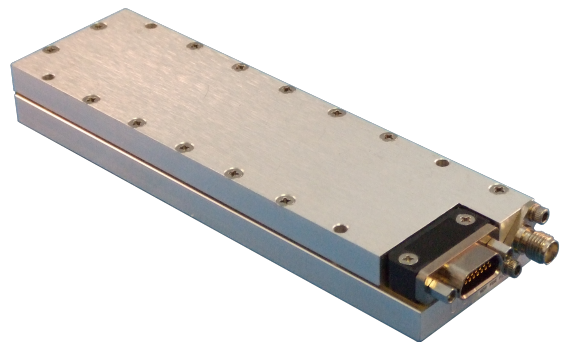# RX-2000 S-Band Receiver

The RX-2000 is an efficient space qualified FM S-Band receiver for microsats and small satellites. The receiver generates a clock and data output allowing customers the flexibility and control to implement customized or reconfigurable communication protocols on their flight computer or on an auxiliary communications processor.

Key Features

→ Space Qualified

→ Up to 26 Customer Programmable Channels

→ 2.0 to 2.4 GHz Frequency Range

→ Programmable Data Rates

→ FM/GFSK Demodulation

General Specifications

Frequency:	2000 - 2400 MHz
Data Rate:	9.6 - 153.6 Kbps (Fixed or Customer Programmable)
Modulation:	FM, GFSK
Sensitivity:	-117 dBm @ 9600bps, -110 dBm @128Kbps (With Programmable AGC)
Noise Figure:	2 dB Nominal
Channels:	Up to 26 Preset Channels with 20 MHz Bandwidth

Electrical and RF Specifications

RX-2000

Input Voltage:	6.0 to 16.0 Volts
Front-end Filter:	Built in Custom Ceramic Coaxial Resonators with 65 dB of Rejection
Power Consumption:	1.5 Watts (6 - 16 VDC @ 200mA)
IF Filter:	140MHz Custom Surface Mount Filter with 50 dB of Rejection
IF Bandwidth:	100, 150, or 200 KHz (Channel Specific, Customer Defined, Pre-wired)
Frequency Stability:	±1.5 ppm Over Internal Temperature Range of -30°C to +75°C
Sync Word Recognition:	Automatic or Programmable Recognition of 12, 16, 20 or 24 bits
RSSI Indicator:	Digital Out
Data Interface:	Received Data Output Recovered Data Clock Output (Differential or Single Ended) Receiver Control Input & Output
Data/Power Connector:	15 Pin Micro Miniature Military D
RF Connector:	SMA Female
Input Impedance:	50 Ohms Nominal

Mechanical and Environmental

Mass:	200 grams
Size:	135 mm x 50 mm x 25 mm
Operating Temperature:	-30°C to +75°C
Storage Temperature:	-40°C to +85°C

Heritage

→ AprizeSat 5, 8, and 10 (SpaceQuest)

→ exactView 5, 6, and 11 (exactEarth)

→ KestrelEye - Block 1 and Block 2 (Maryland Aerospace)

RX-2000-ver-20160707