AAC CLYDE SPACE

COMMUNICATIONS

RX-2000

CONFIGURATION CONTROL & COMPACT COMMUNICATIONS

Our adaptable low-power AAC SpaceQuest RX-2000 S-band transceiver is designed to offer high data rates that support a variety of data interfaces and modulation schemes. The AAC SpaceQuest RX-2000 have been in operation on-orbit for over 30 years for their own satellite and for a wide range of blue-chip clients around the globe. The transceiver operates on S-band frequencies with GMSK modulation and up to 26 customer programmable channels with 20 MHz bandwidth, enabling configuration control. The RX-2000 is an efficient space qualified FM S-Band receiver for MicroSats and small satellites. The RX-2000 component enables ease of integration with both individual and commercial ground station networks. Whilst not CubeSat Standard, this solution can be used in a CubeSat system design. 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 HIGHLIGHTS:

- Space Qualified
- Up to 26 Customer Programmable Channels
- 2.0 to 2.4 GHz Frequency Range
- Programmable Data Rates
- FM/GFSK Demodulation

DESIGN

This unit is a compact FM S-Band receiver optimized for the small satellite market. The chassis of the RX -200 employs a "clam-shell" design, allowing flexibility for spacecraft bus mounting options.

PERFORMANCE

The receiver and GMSK modem, allow for configuration control. The unit provides the ability to reconfigure data rates and frequencies on orbit through the selection from multiple channel presets.

HERITAGE

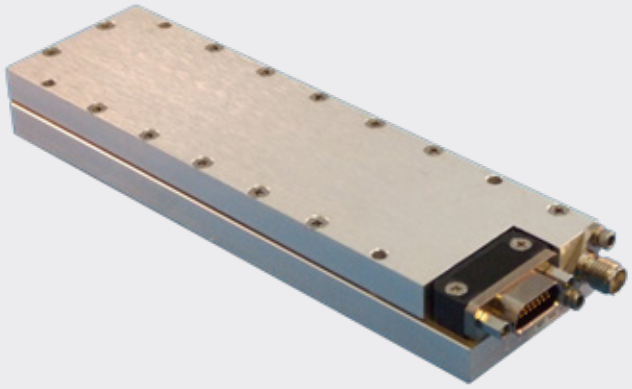
These units have been extensively tested. They have been in operation on-orbit for over 30 years for our own satellite and for a wide range of blue-chip clients around the globe.

TECHNICAL SPECIFICATIONS

General	
Frequency	2000 - 2400 MHz
Data Rate:	9.6 to 153.6 kbps
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	
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



To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact:
enquiries@aac-clydespace.com

AAC CLYDE SPACE

#SPACEISAWESOME

www.aac-clyde.space