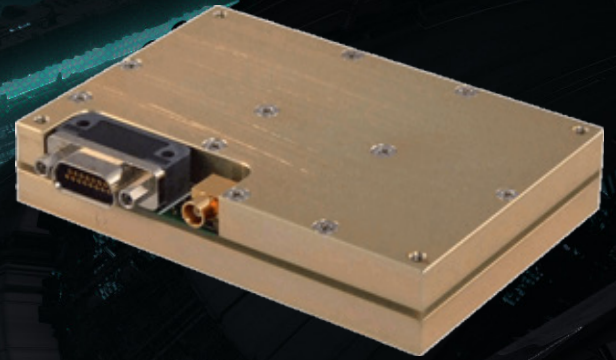


# CUSTOMIZABLE COMPACT COMMUNICATIONS



The AAC SpaceQuest TRX-U is a compact single board transceiver for satellite communications in the UHF Band. Designed for CubeSat and SmallSat missions our high-performance TRX-U satellite UHF transceiver is ideal for space missions where a low data-rate uplink and downlink are required and can be used as a robust lower data-rate back-up radio for a higher data-rate radio. With up to 8 programmable channels, which can be custom programmed, this solution has been designed for ease of use and offers transmit and receive frequencies covering both amateur and commercial bands. The flight-proven TRX-U is an ideal satellite TT&C Radio or Narrow Band Communication Payload for CubeSat and SmallSat missions.

## KEY HIGHLIGHTS:

- Space Qualified (Multiple Units On Orbit)
- Compact Single Board Design
- Up to 8 Programmable Channels
- Up to 5 Watts RF Output
- CubeSat Compatible



### FREQUENCIES

With UHF uplink & downlink the TRX-U serve both the commercial and amateur frequencies respectively.



### CUSTOM CONFIGURATION

With 1 to 8 Channels, which can be custom programmed in 300 Hz Steps. With transmit/receive data rates of 2.4 and 19.2 Kbps this solution is highly adaptable to meet your mission needs.



### HERITAGE

These units have been extensively tested and are in use by clients around the world. They have been deployed on orbit in various configurations for close to two decades of successful operations.

# TECHNICAL SPECIFICATIONS

General	
Frequency	390 MHz to 450 MHz
Transmit Power:	1 – 5 Watts RF Output
Transmit Data Rate:	Customer Defined Between 2.4 and 19.2 Kbps
Receive Data Rate:	Customer Defined Between 2.4 and 19.2 Kbps
Channels:	1 to 8 Channels, Custom Programmed in 300 Hz Steps
Modulation:	FSK, GFSK

Electrical and RF Specifications	
Input Voltage:	5.0 to 9.0 Volts
Power Consumption:	RX: 250 mW TX: 8 W for 2 W RF Out with 7.0 V Input
Clock and Data Output:	3.3 Volt CMOS
Power and Data Connector:	15 Pin Micro-D Socket
RF Connector:	MCX Socket
Nominal Sensitivity (BER 10 <sup>-4</sup> ):	-110 dBm @ 9600 bps -105 dBm @ 19.2 Kbps
Front-end Noise Figure:	2.5 to 3 dB w/ built-in LNA, filters, and TR-switch
Carrier Stability:	2.5 ppm from -20°C to +60°C
RF Impedance:	50 Ohms Nominal (Input and Output)
Max VSWR:	5:1 at All Phase Angles
Automatic Control:	Built in AGC and AFC for Gain and Doppler Control
Digital RSSI:	-120 dBm to 60 dBm

Mechanical and Environmental	
Mass:	140 grams
Size:	83 mm x 57 mm x 16 mm (3.27" x 2.25" x 0.63")
Operating Temperature:	-20°C to +60°C
Storage Temperature:	-30°C to +80°C
Vibration:	15G RMS (20 – 2000 Hz)

To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact:

[enquiries@aac-clydespace.com](mailto:enquiries@aac-clydespace.com)



**#SPACEISAWESOME**

[www.aac-clyde.space](http://www.aac-clyde.space)

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