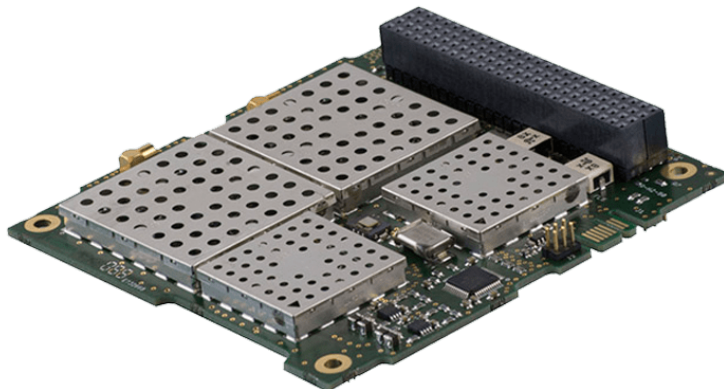




## **VHF uplink/UHF downlink Full Duplex Transceiver**

CubeSat / small satellite UHF downlink, VHF uplink full-duplex transceiver, adds telemetry and telecommand capability to your mission in a single board. Available in 1200 bps to 9600 bps downlink data-rate, and AFSK uplink.



### **FEATURES**

- Heritage in Space since 2016
- Full duplex operation (sending and receiving simultaneous)
- Compatible with all ISIS products
- Full compatibility with GomSpace Power System and On-Board Computer

### **PRODUCT PROPERTIES**

- Mass: ~ 75g
- Dimensions: 96 x 90 x 15 [mm]
- Power: < 4.0W (transmitter on), < 0.480W (receiver only)
- Interfaces:
  - 104 pin CubeSat Kit stack through connector carrying:
    - 6-20V DC power supply
    - I2C bus interface
  - RF input: MMCX 50 ohm
  - RF output: MMCX 50 ohm
- Operating Temperature: -20 to +60 deg C

### **UHF TRANSMITTER**

- Frequency range: 420-450MHz (Synthesized)
- Transmit power: Typical 500mW.
- Modulation:
  - Square Root Raised-Cosine Binary Phase Shift Keying (BPSK) with G3RUH scrambling
  - Gaussian Minimum Shift Keying (GMSK) with G3RUH scrambling
  - Other modulation schemes available upon request
- Data rate selectable: 1200, 2400, 4800, 9600 bit/s. Other values on request
- Data protocol: AX.25 or HDLC

## **VHF RECEIVER**

- Frequency range: 140-150MHz (Synthesized)
- Modulation: Audio Frequency Shift Keying, 1200Hz/2200Hz (Bell202)
- Data rate: 1200 bit/s.
- -100dBm Sensitivity for BER 10E-5
- On-board AX.25 frame decoding and integrity checking
- Data protocol: AX.25 or HDLC