



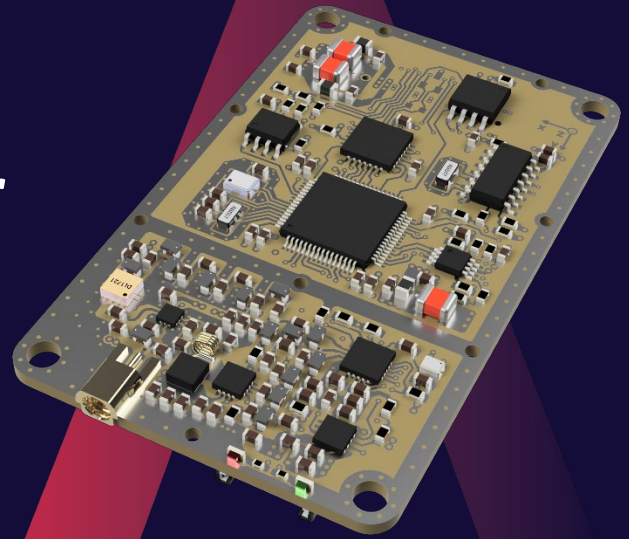
SPACEMANIC

Murgas

The Space Transceiver

SM-TRX-VHF-UHF-MURGAS

Space grade, reliable and software configurable UHF/VHF transceiver for satellite communication



FEATURES

- Plug&Play design
- Compatible with Spacemanic cubesat standard
- Compatible with cubesat components from other vendors
- Robust design
- Advanced high-performance narrow-band transceiver for UHF and VHF
- Half-duplex operations
- Two modules for full-duplex
- Amateur radio services
 - CW and AX.25 messages
 - CW and AX.25 telemetry beacons
 - Always on digipeater (AX.25)

PRODUCT PROPERTIES

- Operating temperature: -40 °C to +85 °C
- Dimensions: 67x42x7 mm
- Power Supply:
 - 3.3V
 - 5V (if CAN required)
- Mass: 25g
- Power consumption:
 - <40 mA in receiving mode
 - <1A transmitting mode

SOFTWARE

- Cubesat Space Protocol compatible

FUNCTIONAL CHARACTERISTICS

- GFSK/GMSK, CW
- Amateur UHF 430-440MHz,
- Amateur VHF 144-146MHz,
- Commercial UHF 400-402MHz
- TX data rate from 0.1 kbps to 38.4 kbps
- Regulated power output up to +30dBm (1W)
- Integrated heat sink (also works as EMI shield)
- RF parameters are fully configurable in orbit

INTERFACES

- 1 x I2C (CSP)
- 1 x RS485 (CSP)
- 1x CAN (CSP)
- 1 x UART (CLI)
- External reset output (1kHz square wave)
- MMXC antenna connector
- Debug LEDs

TESTING & HERITAGE

- Flight Heritage Hardware
- Successful vibration & heated vacuum tests