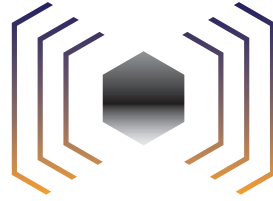


## RADIOSAT



RADIOSAT is the innovative miniaturized transceiver designed for CubeSat and Small Satellites in LEO, with the support of the European Space Agency. In its own small way, 1.5 U and 1 kg, a Ka-band radio is integrated with a DVB-S2 modem, overall characterized by low power consumption. The usage of this frequency band ensures data rates up to 100 Mbps. Signals are processed by the modem, which provides Variable and Adaptive Coding and Modulation (VCM, ACM) capabilities. The radio allows the separate management of the receiver and the transmitter.

## Key Feature

### Frequencies

- Uplink 27.5 - 30 GHz
- Downlink 17.8 - 20.2 GHz
- Signal bandwidth up to 56 MHz

### DVB-S2 modem

- VCM / ACM hardware capable
- High performance next-generation System-on-Chip

### Performance

- Data up to 100 Mbps
- Receiver and transmitter can be tuned independently
- Receiver sensitivity: -115dBm (@1MHz signal bandwidth)
- Maximum RF output power: 2W

### Interfaces

- 2.92mm gold plated RF connectors
- Space Qualified connectors
- DVB-S2 Baseband Frames over LVDS
- Optional ASI
- Additional TM/TC over CAN and RS485
- Debug and PC control over GbE or USB

### Power supply

- Transmitter: 16W
- Receiver: 9W
- Input supply from 3 V to 18 V
- Up to 3 input rails with integrated prioritizer
- Energy efficient design features and dedicated MCU

### Work environment

- Operating temperature range -20 °C to +70 °C
- Non-operating temperature range -30 °C to +90 °C
- Radiation tolerant design
- ECSS compliant design

### Accommodation

- Mass 1.5 kg
- Volume < 1.5 U

### Applications

- LEO CubeSat space missions
- FSS telecommunications
- Satellite Communications-on-the-Move
- Unmanned remote control
- HTS Terminals

Supported by:



European Space Agency