NanoCom
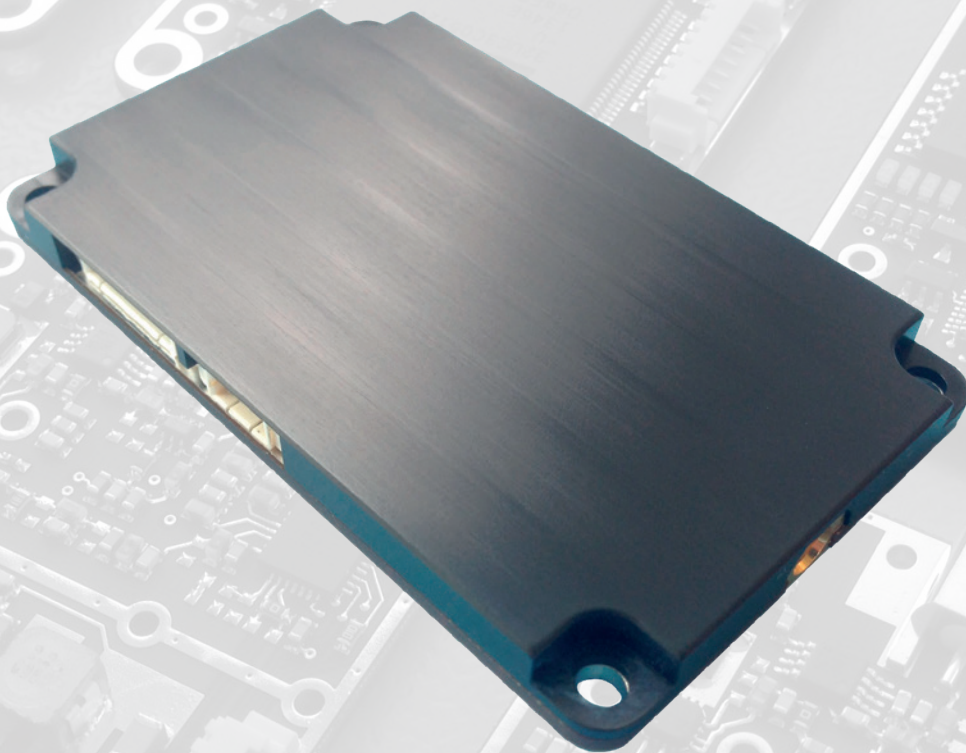## AX100

NanoCom AX100

Flexible & Miniaturised Transceiver for Cube, Nano and Microsat Missions

- Highly miniaturised form-factor for integration in many classes of space missions
- Modular design allows redundancy and flexible configurations of up and downlink frequencies
- Common interfaces with check-out console (GOSH) and Cubesat Space Protocol networking

Highlighted Technical Features

RF Features:
- UHF and VHF versions available
- Data rates from 0.1 kbps to 115.2 kbps
- Sensitivity down to –137 dBm
- Transmitter with 30 dBm output power at > 45 % PAE
- RF parameters are fully configurable on-orbit e.g. carrier frequency programmable in a 1Hz step in-orbit

Baseband and Protocol:
- Multiple frame and FEC formats:
    - HDLC (no FEC)
    - HDLC + Viterbi FEC
    - 32-bit sync word + RS.232 FEC
    - AX.25
- FSK/MSK/GFSK/GMSK modulation options

Interfaces:
- GOSH interface
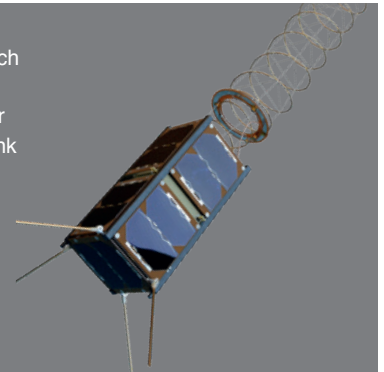- Cubesat Space Protocol (CSP)
- I2C, UART and CAN

Mechanical Features:
- Dimensions: 65 mm x 40 mm x 6.5 mm
- Mass: 24.5 gram
- 20 position FSI connector
- MCX antenna connector

Radiation Performance:
- Tested to ECSS-22900 level E (20 kRad(Si))

Advanced link management such as automatic frequency control (AFC) to perfectly track Doppler shift ensures optimal mission link reliability and maximum data return.

Flexible transceiver module for UHF and VHF bands with multiple databuses (I2C and CAN) allowing fully redundant architectures. Network centric approach using the Cubesat Space Protocol (CSP) approach to satellite networking.
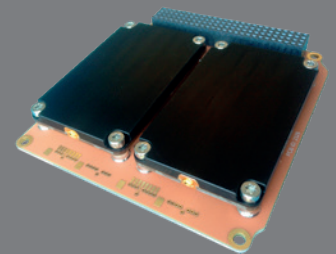
The AX100 integrates in a Cubesat using the NanoDock auxiliary board that can also host other miniaturised GomSpace avionics modules, e.g. the NanoMind A3200 On- Board Computer.