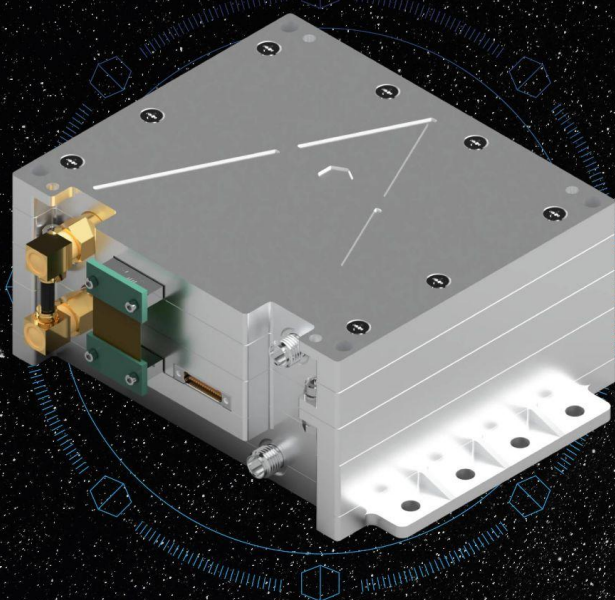


PICOSATS

SPACE TECHNOLOGIES SOLUTIONS

RADIOSAT

K/KA - BAND TRANSPONDER



MINIATURIZED NON-REGENERATIVE TRANSPONDER
DESIGNED FOR CUBESAT AND SMALL SATELLITES FOR LEO
AND GEO APPLICATIONS

OVERVIEW

A miniaturized non regenerative **bent-pipe** transponder designed for CubeSat and Small Satellites for LEO and GEO applications. With a volume of **0.5 U** and a mass of **700 g**, the transponder operates in **K/Ka-band** and it is characterized by **high performances** and **low power consumption**.

The transponder analog **bandwidth** can be **customized from 400 kHz to 500 MHz**. The receiver and transmitter can be tuned independently and the **gain can be set in 60 dB range** as fixed (**FGM**) or adaptive with automatic gain control mode (**AGC**). The transponder offers a versatile **CW beacon** mode as an option.

APPLICATIONS

- LEO small satellites services
- GEO satellites services



KEY FEATURES

FREQUENCIES

- Downlink: 17.8 - 20.2 GHz
- Uplink: 27.6 - 30.0 GHz

PERFORMANCE

- Customizable bandwidth: from 400 kHz to 500 MHz (20 MHz default)
- RF output power: up to 5 W
- Receiver noise figure: 3 dB

INTERFACES

- 2.92 mm RF connectors
- Space qualified data and power connectors
- Transponder telemetry and control over RS422
- Additional control over RS232

WORK ENVIRONMENT and TESTING

- Operating temperature range: -20 °C to +70 °C
- Non-operating temperature range: -30 °C to +90 °C
- Vibration and TVAC qualified by ECSS-E-ST-10-03C

POWER SUPPLY

- Power consumption: < 40 W
- Input supply: from 12 V to 24 V

ACCOMODATION

- Mass: 700 g
- Volume: 93.5 x 114.2 x 45.6 mm

ADDITIONAL FEATURES

- Fixed Gain Mode (FGM) and Automatic Gain Control mode (AGC) available
 - In-Orbit firmware updating
 - Optional CW beacon function
 - Optional programmable oscillator frequency correction
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