

The Microsat X-band Transmitter brings state-of-the-art flight-proven transmitter technology to microsats and larger spacecraft, providing higher output power than our cubesat offering.

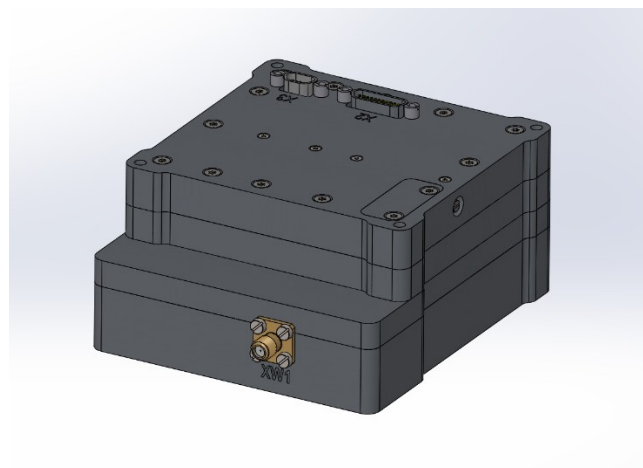
Applications

- Microsats
- Small satellites

Features

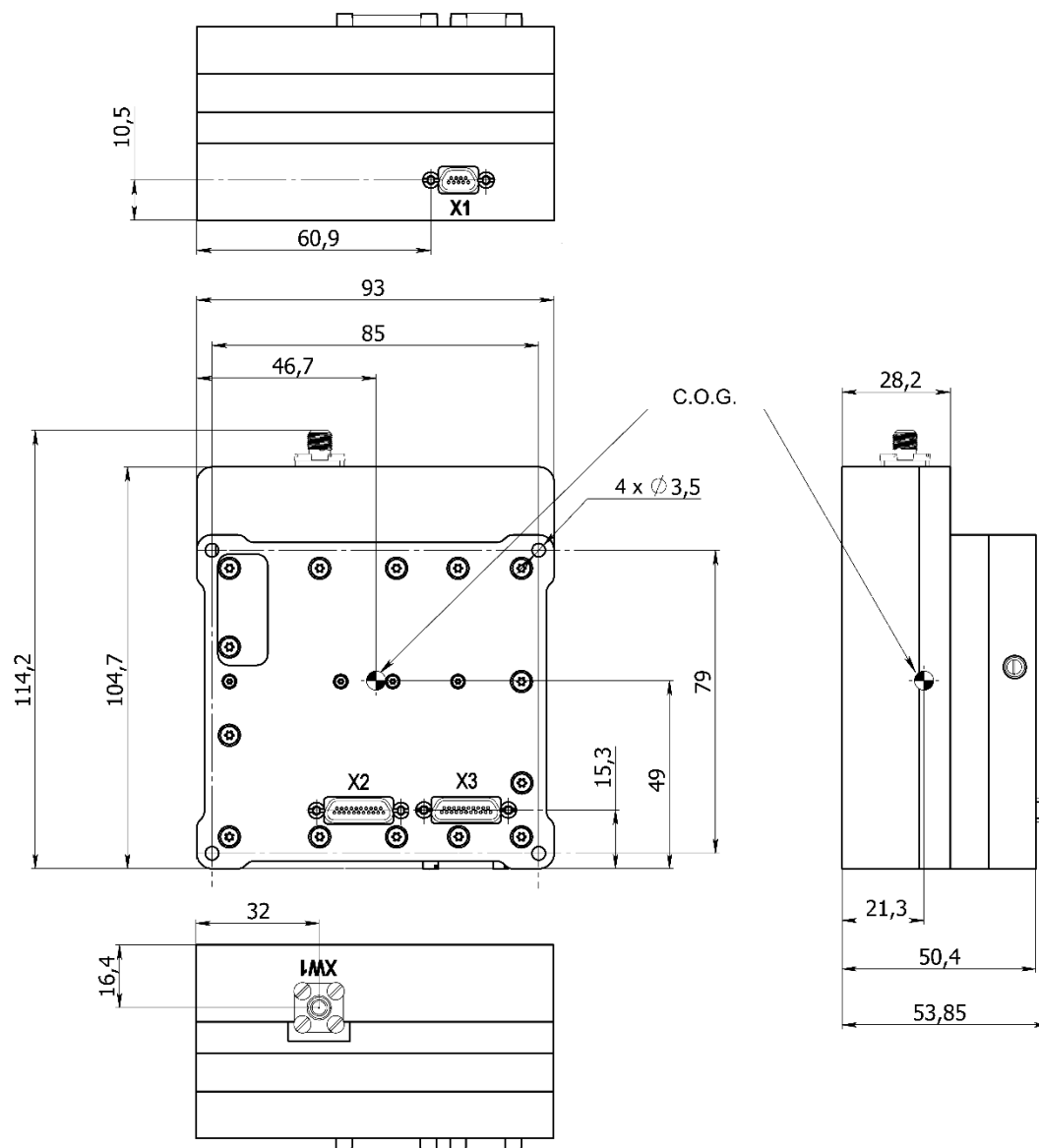
- High throughput in compact formfactor
- Flexible state-of-the-art modulation and error correction coding
- Adaptive coding and modulation to maximize throughput for various Es/No
- Customizable data and control interfaces, redundancy support
- Galvanically isolated power supply 28V

Specifications



Carrier frequency	8220 MHz		
Throughput	1.5 Gbps		
Output power (QPSK, max T, EOL)	4.0 W		6.0W
Power consumption	35 W		45 W
Modulation	QPSK, 8PSK, 16APSK, 32APSK		
Symbol rate	300 Msymb/s		
Error correction coding and framing	DVB-S2		
Spectral mask	SFCG-21-2R4; baseband SRRC 0.35		
Frequency stability, including temperature and aging	±10 ppm		
Power supply	28 V (14 - 34 V) isolated		
Weight	520g	Size	105x93x51 mm
Operating temperature	-20 °C to +50 °C		
Survival temperature	-50 °C to +65 °C		
MTTF	250k hours	Design life	5 years
Radiation at the component level	>10 krad (average enclosure shielding 0.8 g/cm ²)		
SEL tolerance	most parts >40 MeV·cm ² /mg, overcurrent protection		
Data interface (two inputs)	Customizable LVDS (clock input/output, data, enable) serial 2.5Gbps, Ethernet 1000Base-T		
Control and telemetry interface	RS-422 or CMOS UART / CAN-2B		

Mechanical Outline Drawing



Heritage

Flight proven in at least 12 missions since January 2023.

High-speed X-band transmitters designed by the team successfully work on the following spacecraft: ISS – 12 years, Egyptsat – 10 years and on other satellites.