

Product Description

This Nxbeam integrated software-defined radio features a high-speed X-band DVB-S2X transmitter, along with S-band and UHF transceivers. The radio is housed in a compact form factor of less than 0.5U and weighs only 550 g. The X-band transmitter operates in the 8.025–8.4 GHz frequency band and supports data rates up to 3.2 Gbps, offering an exceptional size-to-performance ratio. The radio fully complies with DVB-S2X standards, including ACM and up to 256-APSK modulation, ensuring compatibility with most commercial ground station systems. The S-band and UHF transceivers are full-duplex and designed for TT&C as well as high-data-rate inter-satellite and satellite-to-ground communications.

Applications

- LEO/MEO Earth Observation

Key Specifications:

- X-band DVB-S2X Transmitter:
 - Frequency range: 8.025-8.4GHz
 - Modulation: DVB-S2/DVB-S2X up to 256-APSK
 - Symbol rate: 5 to 300 Msymbol/s, 1 KHz step
 - User data rate: 5 to 1728 Mbit/s
(3.2 Gbit/s raw data rate)
 - Date input: Nano-D or Ethernet 10G SFP
 - Max output power: 38dBm
- S-band TRx:
 - TX frequency: 2200-2290 MHz
 - TX data rate: 10 Mbps
 - TX output power: 30 dBm
 - RX frequency: 2035-2110 MHz
 - RX data rate: 10 Mbps
- UHF TRx:
 - TRX frequency: 430-440MHz
 - TX data rate: 128 Kbps
 - TX output power: 27 dBm
 - RX data rate: 128 Kbps
- Command Telemetry Interface: RS422
- Dimension: 95 x 95 x 31 mm
- Weight: 550 g
- DC Power: 28 W (X-band Tx) (@ 33dBm)
5W (S-band TRx),
2W (UHF TRx)
- Operating Temperature Range: -25°C – 65°C
- Radiation Tolerance: >15 krad
- Shock and Vib: Designed for Space-X launching

