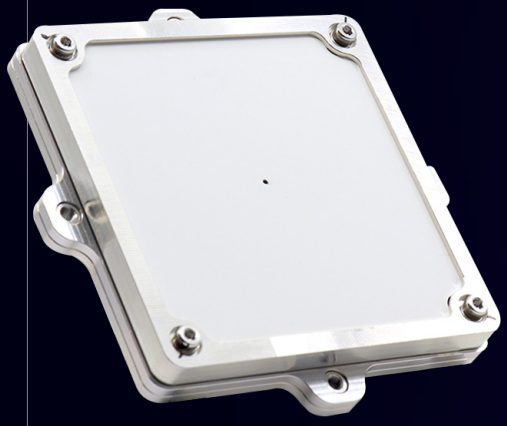
ANYWAVES

SPACE ANTENNA MAKERS

QUALITY SYSTEM CERTIFICATION DNV ISO 9001 AS/EN/JISQ 9100



cnesadvance

DATA DOWNLINK ANTENNAS

X-Band Antenna

ANYWAVES' X-band antenna is used for payload telemetry subsystem. It is flight proven and has flight heritage (TRL 9).

This antenna operates in X band which is one of the frequency bands used for the payload data transfer. ANYWAVES' X-band Payload Telemetry antenna covers from 8 025MHz to 8 400MHz and is provided with right or left-hand circular polarization. It operates in circular polarization in order to overcome Faraday rotation in the ionosphere and also to avoid signal blackouts. Its size is less than 1U.

ANYWAVES' X-Band Payload Telemetry antenna is extremely compact making it the perfect choice to maximize the data rate for very small platforms.

Tx | Medium Gain | HPBW ~ 40° | Size < 1U

Benefits

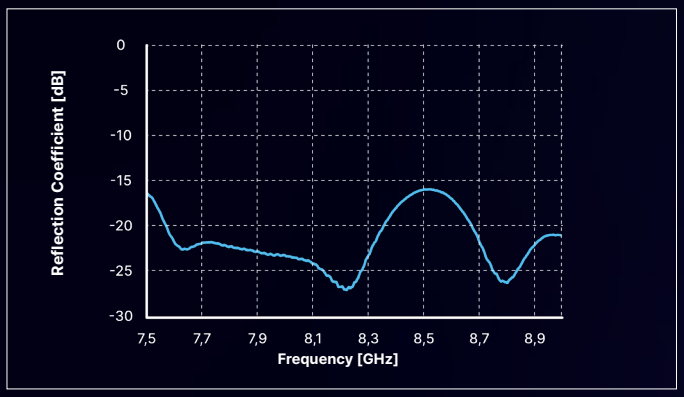
- High data rate for payload data downlink
- ITAR Free
- Acceptance Tests (RF, Mechanical, Thermal) included:
  - Return loss
  - Z-axis random vibration
  - Thermal cycling
- Radome protection against harsh environment: temperature & ESD
- In orbit since 2019

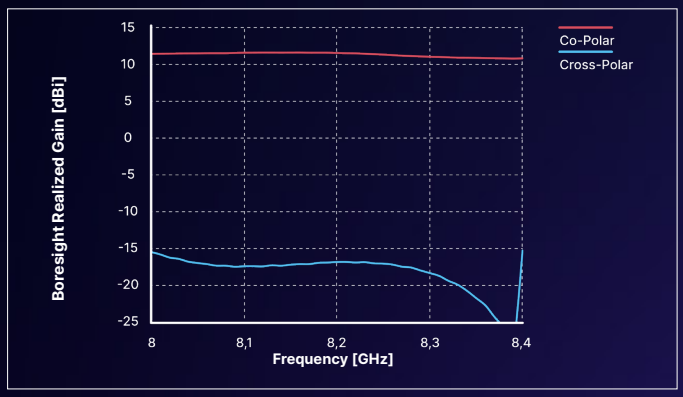
  CNESAdvance Label

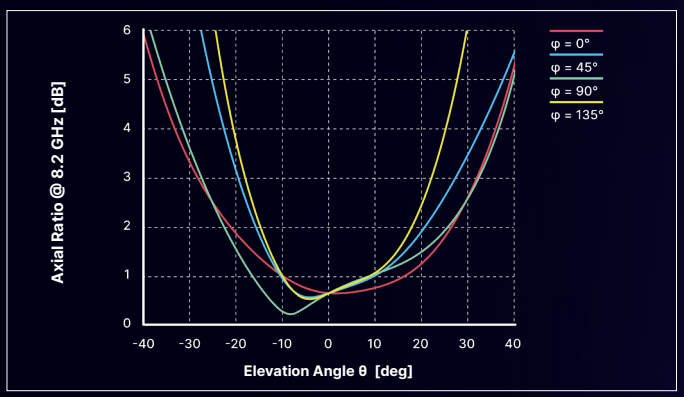
X-BAND ANTENNA

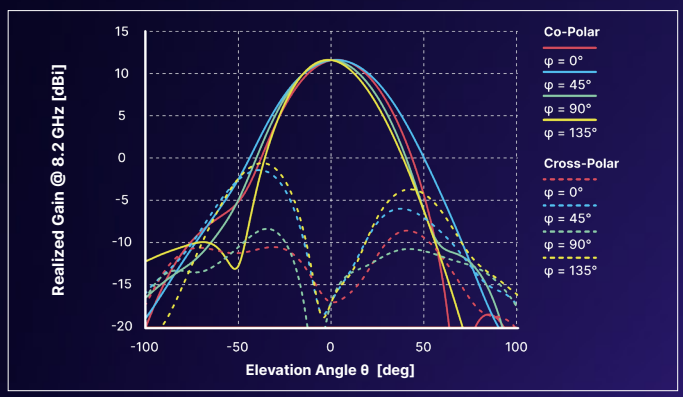
Typical Measured Performance

Tx | Medium Gain | HPBW ~ 40° | Size < 1U









Typical Performance

Frequency Bands	**From 8.025 GHz to 8.4 GHz**
Bandwidth	> 375 MHz
Polarization	Left or Right Hand Circular Polarization
Reflection Coefficient	< -15 dB (all frequency band)
Half Power Beam Width	~ 40° (±20°)
Efficiency	> 88% (worst case)
Gain @ 8.2 GHz	11.5 dBi
Axial Ratio @ 8.2 GHz	< 3 dB from 0° to ±10°

Physical Characteristics

Envelope Size Without Connector	L 72.6 x W 72.6 x H 11 mm^3 Protruding height: 11 mm
Mass With Connector	59 ± 3 g
Connector	SMA female 50 Ω
Mechanical Interface	4 x M2.5 (unthreaded hole)
Qualification Temperature	-120°C / +120°C
Protective Radome	VESPEL coated with SG121FD white paint (on Flight Models only) resistant to thermal and radiation environments and preventing electrostatic discharges.
Acceptance Tests on Flight Models	- Radio Frequency - Mechanical - Thermal
Acceptance Tests on Engineering Models	Radio Frequency Only

Disclaimer: facts and figures herein are for information only and do not represent any warranty of any kind.