



ANYWAVES

CONTROL MATERIAL TO MASTER WAVES

cnesadvance

S-Band TT&C Antenna

Tx and Rx

Hemispherical coverage

HPBW > 90°

Size < 1U

Space Heritage

- **CNESAdvance Label** : material & processes used have French Space Agency heritage.
- **4 flight models in orbit since December 2019** : ANGELS (CNES Program, Hemeria 12U platform) EYESAT (CNES / CSUT JANUS Project, U-Space 3U platform).

Benefits

- **Full Duplex Telemetry & Telecommand**
- Radome protection against harsh environment : temperatures & ESD
- **Acceptance Tests** (RF, Mechanical, Thermal) included :
 - Return loss
 - Z-axis random vibration
 - Thermal cycling
- ITAR Free



ANYWAVES, a French space equipment manufacturer based in Toulouse, provides high-performance and high-quality antennas for satellite constellations.

Perfectly suited to LEO platforms, ANYWAVES S-Band antenna operates both in transmission for telemetry and in reception for telecommand.

Its wide beam coverage enables the best satellite availability for TT&C link.

ANYWAVES

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Waiver : Fact and figures herein are for information only and do not represent any warranty of any kind





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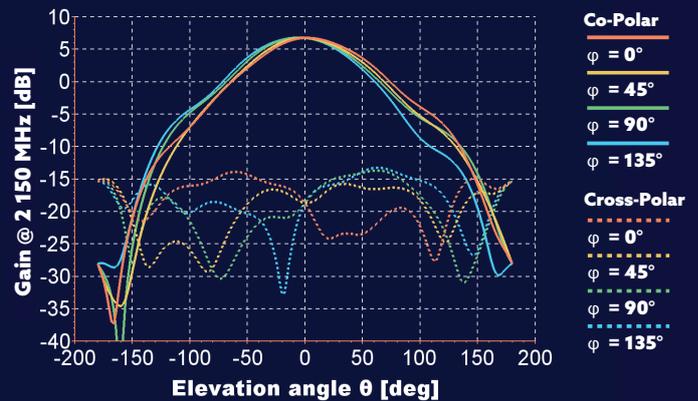
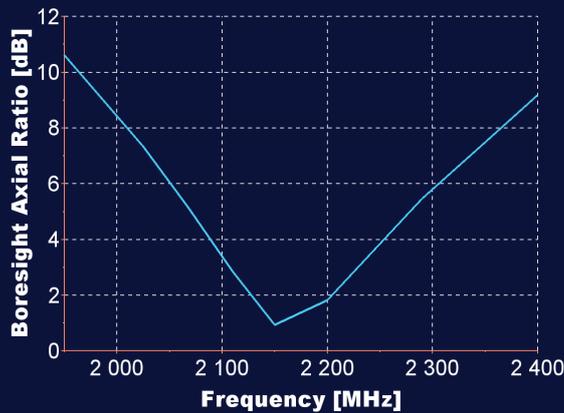
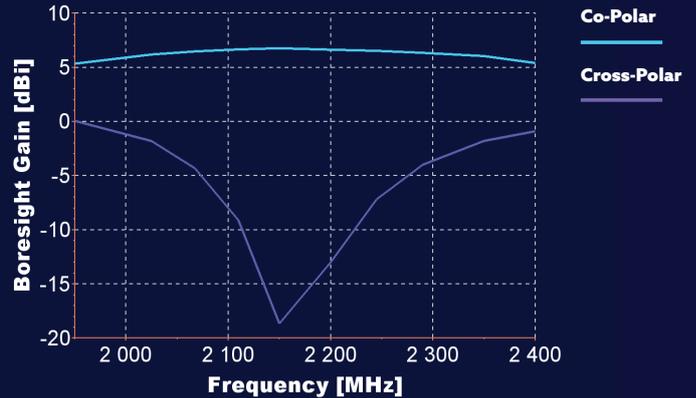
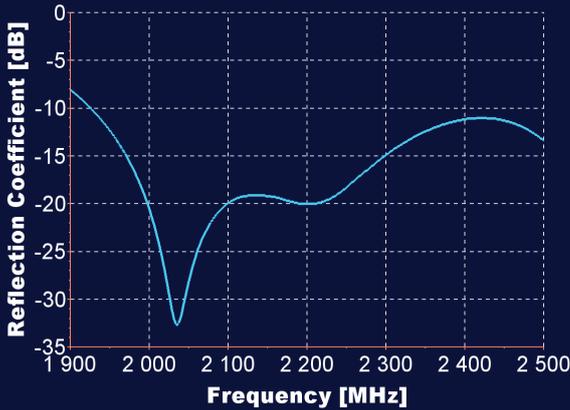
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Measured performance



Typical performance

Frequency band	From 2 025 MHz to 2 290 MHz
Bandwidth	> 265 MHz
Polarization	Left or Right Hand Circular Polarization
Reflection coefficient	< -15 dB (all frequency band)
Half Power Beam Width	> 90° (± 45° in all planes)
Efficiency	> 92%
Gain @ 2 150 MHz	Gain @ boresight > 6.5 dBi Gain @ ± 30° > 4.5 dBi Gain @ ± 60° > 0 dBi
Axial Ratio @ 2 150 MHz	< 3 dB from 0° to ± 30° < 5 dB from 0° to ± 60° < 8 dB from 0° to ± 90°

Physical characteristics

Envelope size without connector	L 79.8 x W 79.8 x H 12.1 mm ³ Protruding height : 6.25 mm
Mass with connector	132 g ± 2 g
RF Power	More than 3W
Operational Temperature	-120°C / + 120°C
Protective Radome	VESPEL coated with SG121FD white paint (on Flight Models only) resistant to thermal and radiation environment and preventing from electrostatic discharges.
Connector	Coaxial SMA female (50 Ω)
Mechanical interface	4 x M3 (unthreaded hole)
Acceptance Tests	Performed on Flight Models only