ANYWAVES

SPACE ANTENNA MAKERS

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



NAVIGATION ANTENNAS

GNSS All-Bands Antenna

ANYWAVES GNSS All-Bands antenna is perfectly suited for LEO platforms. Operating in the frequency band from 1.16 GHz to 1.61 GHz, our antenna covers all GNSS constellations simultaneously with its very stable phase center and circular polarization. This offers excellent signal stability, ensuring no signal blackouts occur even if one GNSS constellation breaks down.

This antenna has a TRL 8 and has successfully passed qualification tests. Developed under the European Space Agency Navisp contract, this antenna is reliable and efficient, giving you the accuracy and precision you need to ensure your satellite is always in the right position.

NB: compatible with ANYWAVES Test Cap for GNSS All-Bands Antenna.

Rx | Hemispherical Coverage | Very High Accuracy | Size < 1U

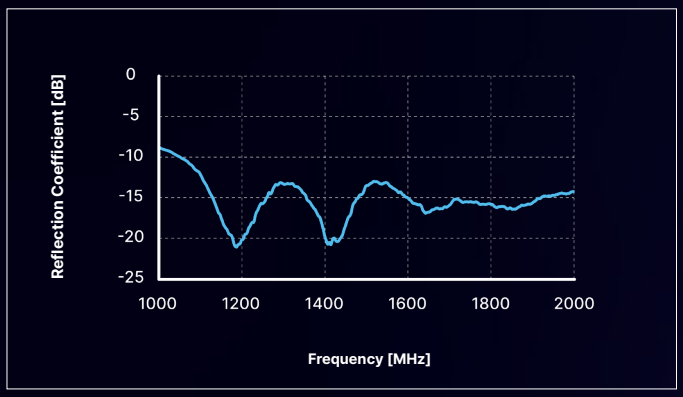
Benefits

- All GNSS bands: GPS, Galileo, Glonass, Beidou, IRNSS L5, QZSS L6, INMARSAT in L-band for precise point positioning (PPP).
- Unique GNSS All-Bands antenna on the market
- Acceptance Tests (RF, Mechanical, Thermal) included:
  - Return loss
  - Z-axis random vibration
  - Thermal cycling
- Radome protection against harsh environments: temperature & ESD
- ITAR Free

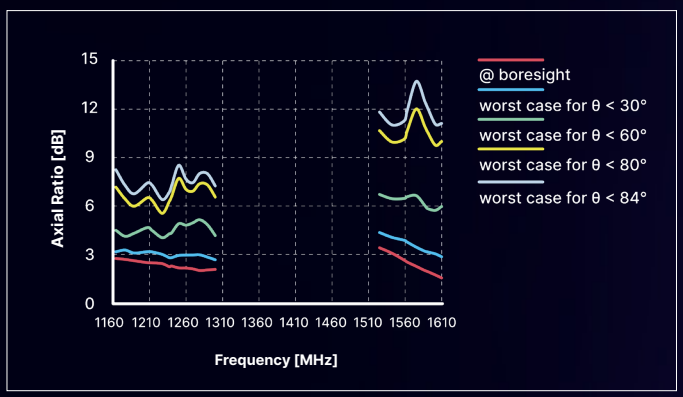
GNSS ALL-BANDS ANTENNA

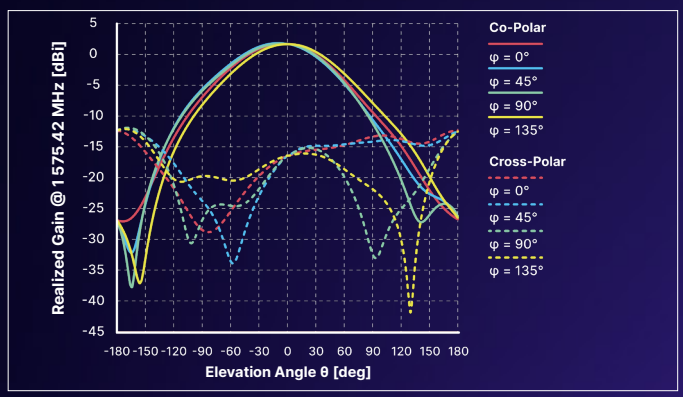
Typical Measured Performance

Rx | Hemispherical Coverage | Very High Accuracy | Size < 1U









Typical Performance

Frequency Bands	**1 160 MHz to 1 610 MHz:** GPS L1/L2/L5, Galileo E1/E5a/E5b/E6 Glonass G1/G2/G3, Beidou B1/B2a/B2/B3 **Inmarsat L-band:** 1 525 – 1 559 MHz
Polarization	Right Hand Circular Polarization
Reflection Coefficient	≤ -10 dB
Realized Gain	@ boresight > 0 dBi
Gain Variation	In all individual sub-bands: < 0.6 dBi
Axial Ratio	@ boresight < 3 dB
Phase Center Offset (± 30° FoV) Maximum Variation vs Frequency	Variation within a sphere of radius < 4.7 mm for all bands Variation within a sphere of radius < 1.8 mm for individual sub-bands
Phase Center Variation (± 30° FoV) Maximum Variation vs Elevation	Variation < 0.4 mm within ± 30° Variation < 2.6 mm within ± 60°
Group Delay Variation	< 1.2 ns

Physical Characteristics

Envelope Size	99.4 mm x 99.4 mm x 15.2 mm Protruding height: 8.7 mm
Mass With Connector	130 g
Connector	Coaxial SMA female 50 Ω
Mechanical Interface	4 x M3 (unthreaded hole)
Qualification Temperature	-120°C / +120°C
Protective Radome	PEEK coated with SG- 121FD 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.