



SMALLSAT GNSS All-bands ANTENNA

All GNSS bands
Very high accuracy
Compact size
Rx

ANYWAVES© GNSS Antenna is a high quality and compact antenna (<1U). Perfectly suited to SmallSats missions, this GNSS antenna is optimized to cover all GNSS frequencies and INMARSAT L-band.

ANYWAVES© GNSS Antenna has a hemispherical radiation pattern with an excellent axial ratio (<2dB) and a medium gain (>0.9dBi). This design has a very stable phase center providing a very high accuracy.

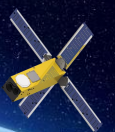
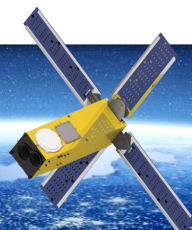
Materials and processes used for assembly has space heritage. The antenna radome protects from radiations and Electro-Static Discharges for polar orbit missions.

ANYWAVES© GNSS Antenna will be available in 2020.



Benefits

- ✓ Compact size (<1U)
- ✓ All GNSS bands (GPS, Galileo, Glonass, Beidou) and INMARSAT L-band with a single antenna
- ✓ High accuracy
- ✓ Space quality at affordable price
- ✓ Quick delivery
- ✓ Only antenna of this type on the market for SmallSats



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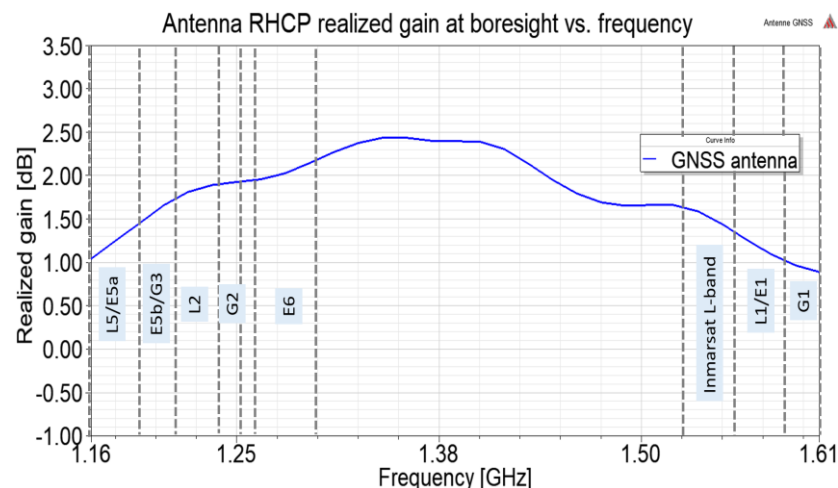
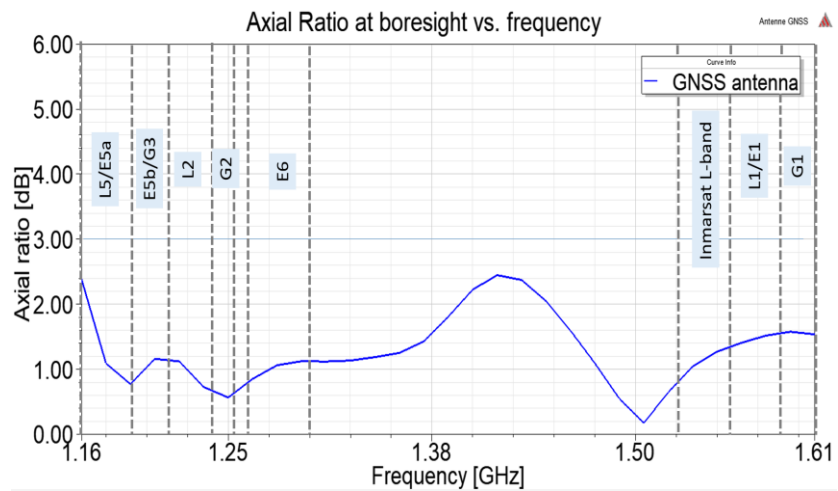
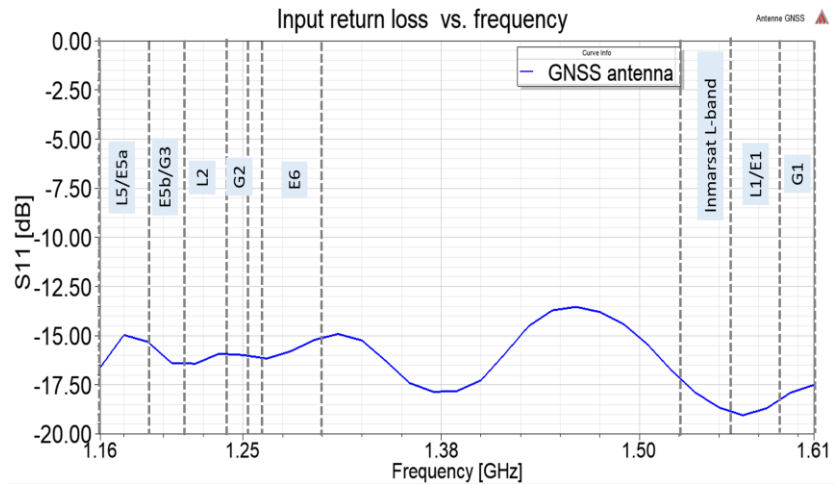
Typical Performance

Frequency band	All GNSS bands, Inmarsat L-band From 1.16 GHz to 1.61 GHz
Return loss	< -15 dB in all frequency bands
Axial Ratio	< 2dB at boresight
Phase centre position accuracy	<1mm
Phase centre variation	< 5 mm over 30-degree half cone
Phase centre variation (3D) in all individual sub-bands	< 1.1 mm over 30-degree half cone
Group delay variation	< 2 ns (for passive part) in all sub-bands
Antenna directivity	> 5.94 dB at boresight
Realized Gain (RHCP)	> 0.9 dB at boresight
Gain variation in all individual sub-bands	< 0.5 dB
Antenna coverage	Front to back ratio > 17 dB at boresight

Physical Characteristics

Size	Surface: 90 mm * 90 mm Height: 15mm (w/o connector)
Mass	130 g (including radome and connector)
Connector	Coaxial SMA female (50 Ω)
Mechanical interface	4*M3 screws
Temperatures	-120°C / +120°C
Radiation	TECAPEEK Radome
Electro Static Discharge	ESD free; an anti-ESD paint is applied on the radome

Simulated RF Performance



Model reference : ALIGNSS-RHCP-19v1