GNSS mini antenna series

Ultra lightweight antenna for multi-frequency GNSS reception

GNSS mini antenna series are ultra lightweight circularly polarized antennas for applications demanding a miniature solution. These multi-band, multi-frequency antennas offers Global Navigation Satellite System (GNSS) coverage in the GPS, GLONASS, Galileo and BeiDou bands. For best performance, the GNSS mini antenna should be mounted to a metal ground plane to enhance its low frequency reception.

The GNSS mini antennas are available in passive and active (amplified) configurations. The active circuitry is designed to support a wide range of input voltages with ultra low current consumption for long battery life and low fuel consumption. The amplifier design includes dual-stage filtering for excellent performance, even with nearby interference sources. The passive design is ideal for installations where the antenna is located close to the receiver and eliminates any need to power the antenna.

XG-Mini-GNSSX-XX-X

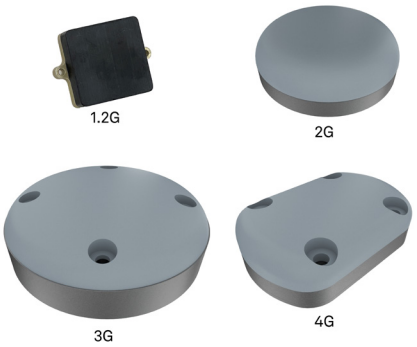
Shape
1.2
2
3
4

LNA Gain
A = 28 dB
A15 = 15 dB
P = Passive

Color (per AMS-STD-595)
1 = Gloss White #17925
2 = Lusterless Gray #36320
3 = Olive Drab Green #34094
4 = Lusterless Black #37038
5 = Desert Tan #33446

Connector *
S = SMA
T = TNC
N = Type N
TB = TNC Bulkhead

*SMA only on 1.2G-Mini-GNSSX-XX-X



Features

- Easy installation
- Single connector for antenna output and DC power input

Benefits

- Rugged yet lightweight for easier portability and longer airborne time on station
- Low power consumption with only 25 mA current draw and a wide input voltage compatibility range
- Multi-frequency GNSS capable including GPS M-Code & P(Y) signals and Galileo with Public Regulated Service (PRS) for high accuracy positioning, navigation and timing

Electrical

Signal support

GPS	L1, L2, L5 C/A, P(Y), M-Code
Galileo	E1, E5a, E5b PRS
GLONASS	L1, L2
BeiDou	B1, B2, B2a, B2b
NavIC	L5
L-Band corrections	

Passbands

Upper passband	1539 to 1610 MHz
Lower passband	1164 to 1252 MHz

VSWR (typical) <2.0:1

Impedance 50 ohms

Polarization RHCP

Environmental

Temperature -55°C to +85°C

Altitude 40,000 ft

Random vibration 20 G_{rms}

Typical LNA performance

LNA gain

A option	28 dB ±3 dB
A15 option	15 dB ±3 dB
P option	Passive

LNA noise figure 3.5 dB

LNA P1dB out +11 dBm

Power handling 1 Watt CW

Group delay ripple <8 ns

Differential propagation delay <3 ns

Physical

Dimensions

1.2G	1.25” x 1.45” x 0.55”
2G	Ø2.25” x 0.69”
3G	Ø3.12” x 0.74”
4G	1.90” x 2.75” x 0.67”

Weight (typical)

1.2G	1.42 oz (40 g)
2G	3.2 oz (91 g)
3G	5.4 oz (153 g)
4G	3.6 oz (103 g)

Power +2.7 to +15.0 VDC
25 mA

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For the most recent details of this product: antcom.com

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