DATASHEET GNSS/GPS ANTENNAS

Global GNSS Timing Antenna

GNSS/GPS Antenna – Timing

GNSS1-TMG-40N, GNSS1-TMG-40NMS, GNSS1-TMG-40NCM, GNSS1-TMG-40NCS

Description

Multiband GNSS timing reference antenna designed for long-lasting, trouble-free deployments in congested cell-site applications.

Technologies

- GPS L1
- GLONASS L1
- Galileo E1
- Beidou B1

Features

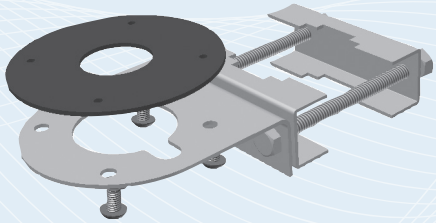
- Wideband coverage
- Industry leading out-of-band rejection
- 40 dB LNA Gain
- Low Noise Figure < 2.0 dB
- Weatherproof conical radome sheds water, ice, and minimizes bird perching

PCTEL
an **Amphenol** company

GNSS1-TMG-40N
Antenna

Mounting Hardware

GPS-TMG-MNT
Collar



GPS-TMG-LMNT
Pipe Clamp

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PCTEL's GNSS1-TMG-40N global GNSS timing reference antennas are specifically designed for long-lasting, trouble-free deployments in congested cell-site applications. The low noise, high gain amplifier is well suited to address attenuation issues associated with applications requiring longer cable runs. The proprietary quadrifiliar helix design, coupled with multi-stage filtering provides superior out-of-band rejection and lower elevation pattern performance than traditional patch antennas. These multiband antennas cover GPS L1, GALILEO E1, GLONASS L1 as well as BEIDOU B1 frequencies. Their unique radome shape sheds water and ice, while eliminating problems associated with bird perching. The antennas also feature transient voltage suppression as well as protection from reverse polarity and electrostatic discharge (ESD).

PCTEL offers an array of compatible mounting configurations. Custom models or site kits options are also available.

Features

- Versatile – covers GPS L1, GALILEO E1, GLONASS L1, BEIDOU B1 frequencies
- Powerful attenuation mitigation – via low noise, high gain amplifier, multi-stage filtering, superior out-of-band rejection and lower elevation pattern performance
- Designed for safety – with transient voltage suppression and protection from reverse polarity and electrostatic discharge (ESD)
- Protection from the elements – Unique radome shape prevents water, ice and bird perching issues

Certifications

RoHS COMPLIANT

SPECIFICATIONS

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Standard Confirguration

Model	Connector	Mount[1]	Radome
GNSS1-TMG-40N	N Female (one - bottom fed)	Does not include mounting hardware.	White
GNSS1-TMG-40NMS	N Female (one - bottom fed)	Includes universal mounting hardware consisting of collar (GPS-TMG-MNT) and pipe clamp (GPS-TMG-LMNT)	White
GNSS1-TMG-40NCM	N Female (one - bottom fed)	Includes collar mount (GPS-TMG-MNT)	White
GNSS1-TMG-40NCS	N Female (one - bottom fed)	Includes economy collar marine mount (GPS-TMG-MRNMNT)	White

Electrical Specifications - All Models

Specification	Measurement
Frequency Range	1554 - 1615 MHz
Antenna Gain	≥ 3 dBic
Amphlifier Gain	40 dB ± 4 dB @ GPS L1/GALILEO E1 38 dB ± 4 dB @ GLONASS L1/BEIDOU B1
Noise Figure	≤ 2.5 dB @ +25°C including pre-selector
Current Draw	< 40 mA
Filtering	3 stage filtering including pre-selector
DC Voltage	2.8 - 9.0 V (operating) ≤ 28.0 V (survivability)
VSWR	< 2.0:1
Nominal Impedance	50 ohms
Out-of-Band Rejection	≥ -60 dB @ f ≤ 1530 MHz ≥ -60 dB @ f ≥ 1660 MHz
Polarization	Right hand circular

Mechanical and Environmental Specifications - All Models

Specification	Measurement
Dimensions	5.0" H x 3.2" D inches (126 H x 81 D mm)
Shipping Dimensions	7.5" L x 4.4" W x 3.8" D (190 L x 112 W x 96 D mm)
Weight	0.6 lbs (0.3 kg)
Temperature Range	-40°C to +85°C
Humidity	95%

[1] *All mounting options fit pipes of 1"-1.45" inch (25 - 37 mm) maximum diameter.*

CONTACT US

For more information about this product contact your sales representative or visit

> pctel.com/antenna-products

Solving Complex Wireless Challenges

PCTEL, an Amphenol company, is a leading global provider of wireless technology solutions, including purpose-built Industrial IoT devices, antenna systems, and test and measurement products. Trusted by our customers for decades, we solve complex wireless challenges to help organizations stay connected, transform, and grow.

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