

GNSS1-TMG-40N, Global GNSS Timing Antenna

GNSS Systems Covered: GPS L1, GALILEO E1, GLONASS L1 & BEIDOU B1 (COMPASS)

The 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 quadrifilar helix design, coupled with multistage filtering provides superior out-of-band rejection and lower elevation pattern performance than traditional patch antennas. This multiband antenna covers GPS L1, GALILEO E1, GLONASS L1 as well as BEIDOU B1 (COMPASS) frequencies.

Their unique radome shape sheds water and ice, while eliminating problems associated with bird perching. PCTEL offers an array of compatible mounting configurations. Custom models or site kits options are also available.

This antenna is made of materials that fully comply with provisions stipulated by EU directives RoHS 2002/95/EC.

The antenna features transient voltage suppression as well as protection from reverse polarity and electrostatic discharge (ESD).



GNSS1-TMG-40N



Antenna Element Electrical Specifications

Frequency Band	Antenna Gain	Nominal Impedance	Polarization	Connector
1580 +/- 30 MHz	≥ 3 dBic	50 ohms	Right hand circular	N, female (one - bottom fed)

Mechanical Specifications

Antenna Dimensions	Shipping Dimensions	Antenna Weight	Radome Color
5.0" H x 3.2" D (126 x 81 mm)	7.5" L x 4.4" W x 3.8" D (190 x 112 x 96 mm)	0.6 lbs (0.3 kg)	White

Environmental Specifications

Temperature Range	Humidity
-40° C to +85° C	95%

Mounting

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

Model	Options
GNSS1-TMG-40NMS	Includes universal mounting hardware consisting of collar (GPS-TMG-MNT) and pipe clamp (GPS-TMG-LMNT).
GNSS1-TMG-40NCM	Includes collar mount (GPS-TMG-MNT).
GNSS1-TMG-40NCS	Includes economy collar marine mount (GPS-TMG-MRNMNT).



Low Noise Amplifier Specifications

Frequency Band: 1554 - 1606 MHz
Amplifier Gain: 40dB +/- 4dB @ GPS L1/GALILEO E1 38dB +/- 4dB @ GLONASS L1/BEIDOU B1
Nominal Impedance: 50 ohms
Output VSWR: <2.0:1
Maximum Noise Figure: < 2.5 dB @ +25° C including pre-selector
DC Voltage: 3-15 V (operating) ≤40.0 V (survivability)
DC Current: < 40 mA
Filtering: 3 stage filtering including pre-selector
Out of Band Rejection: ≥ -60 dB @ f ≤ 1530 MHz ≥ -60 dB @ f ≥ 1660 MHz