

Global GNSS Timing Antennas

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

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 quadrifilar helix design, coupled with multi-stage filtering provides superior out-of-band rejection and lower elevation pattern performance than traditional patch antennas. This multi-band antenna covers 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. PCTEL offers an array of compatible mounting configurations. Custom models or site kits options are also available.

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



GNSS1-TMG-40N (Top)
GPS-TMG-MNT (Bottom left)
GPS-TMG-LMNT (Bottom right)



STANDARD CONFIGURATION

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

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Model	Frequency Range	Antenna Gain	Amplifier Gain	Noise Figure	Current Draw
GNSS1-TMG-40N	1554-1615 MHz	≥ 3 dBic	40 dB \pm 4 dB @ GPS L1/GALILEO E1 38 dB \pm 4 dB @ GLONASS L1/BEIDOU B1	≤ 2.5 dB @ +25°C including pre-selector	< 40 mA

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Model	Filtering	DC Voltage	VSWR	Nominal Impedance	Out-of-Band Rejection	Polarization
GNSS1-TMG-40N	3 stage filtering including pre-selector	2.8-9.0 V (operating) ≤ 28.0 V (survivability)	< 2.0:1	50 ohms	≥ -60 dB @ $f \leq 1530$ MHz ≥ -60 dB @ $f \geq 1660$ MHz	Right hand circular

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Shipping Dimensions	Weight	Temperature Range	Humidity
GNSS1-TMG-40N	5.0" H x 3.2" D (126 H x 81 mm)	7.5" L x 4.4" W x 3.8" D (190 L x 112 x 96 mm)	0.6 lbs (0.3 kg)	- 40°C to + 85°C	95%

*All mounting options for sizes of 1.145"/28.27 mm maximum diameter

