

## 40 dB GPS L1/GLONASS L1/GALILEO E1 Timing Antenna with Integrated Lightning Protection

The GPSGL-TMG-SPI-40NCB 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 L1 as well as GLONASS E1 frequencies.

Their unique radome shape sheds water and ice, while eliminating problems associated with bird perching. The antenna comes with surge compliant mounting that addresses industry grounding requirements. 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 provides integrated, on-board lightning protection capability that alleviates the need for downstream, in-line surge suppressors.

The antenna also features ESD, reverse polarity protection and transit voltage suppression.



### Antenna Element Electrical Specifications

Frequency Band	Antenna Gain	Nominal Impedance	VSWR	Polarization	Connector
1575.42 +/- 10 MHz 1602-1615 MHz	≥ 3.5 dBic ≥ 3 dBic	50 ohms	<1.5:1	Right hand circular	N, female (one - bottom fed)

### Mechanical Specifications

Antenna Dimensions	Shipping Dimensions	Antenna Weight	Radome Color
7.25" H x 3.2" D (184 x 81 mm)	7.5" L x 4.4" W x 3.8" D (190 x 112 x 96 mm)	0.75 lbs (0.34 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
GPSGL-TMG-SPI-40NCB	Includes heavy duty mount (GPS-TMG-MHD), a grounding screw and lug nut



### Low Noise Amplifier Specifications

<b>Frequency Band:</b> 1590 +/- 30 MHz
<b>Amplifier Gain:</b> 40 dB +/- 4 dB @ GPS L1 & GALILEO E1 38 dB +/- 4 dB @ GLONASS L1
<b>Nominal Impedance:</b> 50 ohms
<b>Output VSWR:</b> <2.0:1
<b>Maximum Noise Figure:</b> < 2.5 dB @ +25°C including pre-selector
<b>DC Voltage:</b> 3.3-9.0 V (operating) ≤28.0 V (survivability)
<b>DC Current:</b> < 40 mA
<b>Filtering:</b> 3 stage filtering including pre-selector
<b>Out of Band Rejection:</b> ≥ -60 dB @ f ≤ 1530 MHz ≥ -60 dB @ f ≥ 1660 MHz
<b>Lightening Protection Compliance:</b> Per EN61000-4-5 Level 4