

Dual Frequency, Dual Constellation Antenna





- Featuring Topcon's High-performance
 Fence Antenna™ Technology
- Dual Frequency, Dual Constellation GNSS Antenna
- L-Band Compatible
- Rugged Enclosure with High Shock and Vibration Tolerance

PL-S1 Dual Frequency, Dual Constellation Antenna





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The PL-S1 is a newly designed dual-frequency and dual-constellation GNSS antenna offered at an affordable price. When accuracy requirements are flexible, this antenna is the best choice to provide maximum return on your investment. Like the geodetic-grade PG-S1 antenna, the new PL-S1 uses an integrated ground plane and Fence Antenna™ Technology for advanced multipath rejection and improved tracking sensitivity. For applications where Topcon's high-performance micro-centered antennas are not necessary, the PL-S1 delivers excellent signal tracking and mid-grade performance at an attractive price.

The PL-S1 antenna supports L1/L2 frequencies from GPS and GLONASS satellite constellations, as well as L-Band frequencies. The PL-S1 is designed to accompany all Topcon modular and handheld GNSS receivers when using Topcon's Spectrum RTK™ Technology.

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SPECIFICATIONS

Operating Frequency Range L1 GPS/GLONASS

 $\begin{array}{lll} \text{L1 GPS/GLONASS} & 1586.5 \pm 25 \text{MHz} \\ \text{L2 GPS/GLONASS} & 1236 \pm 20 \text{ MHz} \\ \text{L-Band} & 1535 \pm 10 \text{ MHz} \\ \end{array}$

Out of Band Rejection

 $\begin{array}{ccc} \text{L1} & & \pm 100 \text{ MHz} \text{ -30 dBc (typical)} \\ \text{L2} & & \pm 200 \text{ MHz} \text{ -60 dBc (typical)} \end{array}$

Gain, Noise Figure and VSWR

LNA Gain

Gain at Zenith (90°)

GPS L1 4.5 dBic (min)

GPS L2 3.5 dBic (min)

GLONASS L1 3.5 dBic (min)

GLONASS L2 2.5 dBic (min)

GLONASS L2 2.5 dBic (min) L-Band 1 dBic (min) 1.5 dB (typical)

VSWR \leq 2.0:1 Nominal Impedance 50 Ohms

Connector and Mounting

Noise Figure

Antenna Connector TNC

Mount 5/8-11 UNC-2B thread

Physical Characteristics

Dimension (W x H x L) 141.6 x 141.6 mm x 54.2 mm Diameter with Ground Plane 200 mm

Weight without ground plane 430 g
Weight with ground plane 615 g
Centering < 1 cm

Power

Input Voltage Range 3-18 VDC. Reverse Polarity Protected

Power Consumption 55 mA (typical)

Environmental

Enclosure Aluminum with Plastic Radome

Operating Temperature -50°C to 85°C Storage Temperature -55°C to 85°C

Waterproof & Dust Rating IP67

Random Vibration IEC 60068-2-34, Test Fd
Sinusoidal Vibration IEC 60068-2-6, Test Fc
Shock IEC 60068-2-29 Test Ea
Bump IEC 60068-2-29 Test Eb
Mechanical Drop 2m pole drop to concrete

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