



### **Unmatched signal tracking and multipath reduction.**

Topcon's newly designed PN-A5 antenna combines the Topcon's new TA-5 full spectrum GNSS antenna element with an innovative convex impedance ground plane. The TA-5 antenna element utilizes an array of vertical dipoles to provide highly sensitive and stable Full Wave signal tracking for all existing and planned GNSS signals. Topcon's new convex impedance ground plane provides improved multipath mitigation while providing minimum signal loss for satellites tracked to the horizon.

- High-end Geodetic Antenna
- Topcon's TA-5 vertical convex dipole antenna element for full spectrum GNSS signal tracking
- Topcon newly design semi-hemispherical convex impedance groundplane
- Environmentally robust and sealed
- Minimized phase center offset variations in vertical within GNSS frequency band. Significant increase of low elevated satellites tracking.

## SPECIFICATIONS

### Physical

#### Diameter

Antenna without Anti-snow Dome	380 mm
With Topcon Anti-snow Spherical Dome	380 mm
With SCIGN Anti-snow Short Dome	415 mm

#### Height

Antenna without Anti-snow Dome	262 mm
With Topcon Anti-snow Spherical Dome	292 mm
With SCIGN Anti-snow Short Dome	287 mm

#### Weight

Antenna	6.7 kg
Topcon Anti-snow Spherical Dome	1.1 kg
Antenna w/ Topcon Anti-snow Spherical Dome	7.8 kg

#### Power

Input Voltage:	+3 to +12 VDC
Current Consumption:	100 mA (typical)
Connector:	N-type

### Environmental

#### MIL-STD-810G

Temperature	(Methods 501.5, 502.5)
Operating Range:	-50°C to +70°C
Storage Range:	-55°C to +85°C

<b>Humidity</b>	95%, Method 507.5
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<b>Vibration</b>	Method 514.6, Broad band noise (random vibration), Category 4, table 514.6C-IV)
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<b>Mechanical Shock</b>	Method 516.6. Procedure I - Functional Shock, Table 516.6-1, Fig. 516.6-8, accelerative forces up to 40g.
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<b>Waterproof</b>	IEC 60529 IPX7 (Antenna is located 1 meter below the surface of the water, duration of the test is 30 min)
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<b>Dustproof</b>	IEC 60529 IP6X
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<b>Drop Test</b>	Repeated drops from the height of 1 m on concrete surface. All sides – top, bottom and border. (with Topcon or SCIGN Dome).
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<b>RoHS Compliant</b>	Yes
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## PN-A5 Full Spectrum GNSS Antenna with Anti-Snow Spherical Dome

### Performance

#### Operating Frequency Range

Lower band	1230 MHz±70 MHz (L5, E5B, E3, L2, G2, E4, E6)
Upper band	1565 MHz±50 MHz (E2, L1, E1, G1, OmniStar, SBAS, CDGPS)

#### Out-of-Band Rejection

Upper band (1568.5 MHz ±100 MHz)	-30 dBc (typical)
Upper band (1568.5 MHz ±150 MHz)	-50 dBc (typical)
Lower band (1232 MHz ± 100 MHz)	-30 dBc (typical)
Lower band (1232 MHz ± 150 MHz)	-50 dBc (typical)
Other bands	
f < 1000 MHz	-80 dBc (typical)
f > 1750 MHz	-80 dBc (typical)

<b>LNA Gain</b>	48 dB (typical)
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#### Gain at Zenith (90°)

Lower band	-12 dB (typical)
Upper band	-10 dB (typical)

#### Gain Roll-Off (from Zenith to Horizon)

GPS L1	-15.5 dB
GPS L2	-18.5 dB
GPS L5	-18 dB
GLONASS L1	-15.5 dB
GLONASS L2	-18.5 dB

<b>Noise Figure</b>	1.0 dB (typical)
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<b>VSWR</b>	1.5 : 1
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#### Differential Propagation Delay (typical)

Lower band	3 ns (maximum)
Upper band	3 ns (maximum)

<b>Nominal Impedance</b>	50 Ohm
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Your local Authorized Topcon dealer is:

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