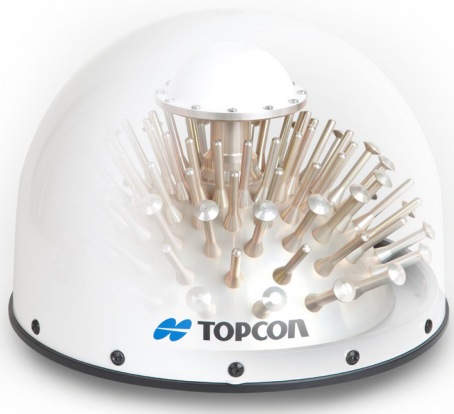
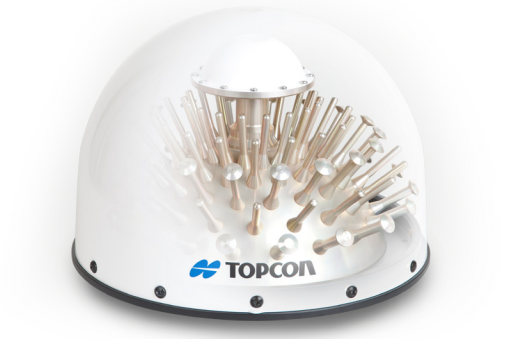
PN-A5

Full Spectrum GNSS Antenna



- 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.

PN-A5



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.

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SPECIFICATIONS

Dimensions	
Antenna without Anti-snow Dome	380 mm (D) x 262 mm (H)
With Topcon Anti-snow Spherical Dome	380 mm (D) x 292 mm (H)
With SCIGN Anti-snow Short Dome	415 mm (D) x 287 mm (H)
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
Humidity	95%, Method 507.5
Vibration	Method 514.6, Broad band noise (random vibration), along each of 3 axes, Category 4, table 514.6C-IV)
Mechanical Shock	Method 516.6, along each of 3 axes. Procedure I - Functional Shock, Table 516.6-I, Fig. 516.6-8, accelerative forces up to 40g.
IP Rating	IEC 60529 IP67
Drop Test	Repeated drops from the height of 1 m on concrete surface. All sides – top, bottom and border. (with Topcon or SCIGN Dome).
RoHS Compliant	Yes
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)
LNA Gain	43 dB (typical)
Gain at Zenith (90°)	Lower band: +6 dB (typical) Upper band: +4.7 dB (typical)
Gain Roll-Off (from Zenith to Horizon)	Lower band: -12 dB (typical) Upper band: -10 dB (typical)
Noise Figure	1.0 dB (typical)
VSWR	1.5 : 1
Differential Propagation Delay (typical)	Lower band: 3 ns (maximum) Upper band: 3 ns (maximum)
Nominal Impedance	50 Ohm

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