

# CR-G5



## High-end Geodetic Antenna

The CR-G5 is a choke ring antenna based on Topcon's TA-5 full spectrum GNSS antenna element. The TA-5 antenna element utilizes an array of vertical convex dipoles. This antenna provides Full Wave tracking technology for existing and future GNSS signals.

The antenna addresses the evolving requirements for reference networks and infrastructure monitoring applications.

- High-end Geodetic Antenna
- Topcon's TA-5 vertical convex dipole antenna element for full spectrum GNSS signal tracking
- Topcon designed choke ring groundplane
- Environmentally sealed
- Improved phase center stability in vertical over expanded GNSS frequency band. Improved low elevated satellites tracking

### OPERATING FREQUENCY RANGE

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

### OUT OF BAND REJECTION

Lower band	(1232 MHz $\pm$ 100 MHz)	-60 dBc (typical)
Upper band	(1568.5 MHz $\pm$ 150 MHz)	-40 dBc (typical)
f < 1000 MHz		-60 dBc (typical)
f > 1750 MHz		-60 dBc (typical)

### GAIN, NOISE FIGURE AND VSWR

LNA Gain	43 dB (typical)	
Gain at Zenith (90°)	Lower band: +7.5 dB (typical)	Upper band: +5 dB (typical)
Gain Roll-Off (from Zenith to Horizon)	Lower band: -16.5 dB (typical)	Upper band: -13 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	

### ENVIRONMENTAL

Enclosure	MIL-STD-810G	
Temperature (Methods 501.4, 02.4)	Operating: -50°C to 70°C	Storage: -55°C to 85°C
Water / Dust Rating	IP67 IEC 60529	
Vibration	Method 514.6, Broad band noise (random vibration), along each of 3 axes, Category 4, table 514.6C-IV	
Humidity	95% (Method 507.5)	
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 40 g	
Salt Fog	5% (Method 509.4)	
Drop Test	Repeated drops from the height of 1 m on concrete surface. All sides – top, bottom and border. (with dome)	
RoHS Compliant	Yes	

### POWER

Input Voltage	3 to 12 VDC
Power Consumption	100 mA (typical)

### PHYSICAL

Dimensions (d x h)	380 x 155.5 mm (antenna without anti-snow dome) 380 x 292 mm (with Topcon anti-snow spherical dome) 415 x 287 mm (with SCIGN anti-snow short dome)
Weight	4.9 kg (antenna) 1.1 kg (Topcon anti-snow spherical dome) 6 kg (antenna with Topcon anti-snow spherical dome)
Connector	N-type