



CR-G3 Choke Ring Antenna

The Topcon CR-G3 all weather, newly-designed choke ring antenna provides GPS L1, GPS L2, GPS L5 signal reception as well as GLONASS L1 and L2 bands and Galileo for precision geodetic applications including GNSS reference networks and infrastructure monitoring.

Performance	Physical and Electrical
<p>Operating Frequency Range L1 GPS/GLONASS 1586.5 ± 25 MHz L2 GPS/GLONASS 1236 ± 20 MHz L5 GPS 1176 ± 12 MHz</p>	<p>Size</p> <p>Diameter 380 mm (Antenna without Anti-snow Dome) 380 mm (with Topcon Anti-snow Spherical Dome) 415 mm (with SCIGN Anti-snow Short Dome)</p> <p>Height 138.5 mm (Antenna without Anti-snow Dome) 292 mm (with Topcon Anti-snow Spherical Dome) 287 mm (with SCIGN Anti-snow Short Dome)</p> <p>Weight 4.7 kg (Antenna) 1.1 kg (Topcon Anti-snow Spherical Dome) 5.8 kg (Antenna with Topcon Anti-snow Spherical Dome)</p>
<p>Out-of-Band Rejection L1 ± 100 MHz -30 dBc (typical) L2 ± 100 MHz -60 dBc (typical)</p>	<p>Power Input Voltage: +3 to +18 VDC Current Consumption: 30 mA (typical)</p>
<p>LNA Gain: 30 dB (typical)</p>	<p>Connector: N female</p>
<p>Gain at Zenith (90°) GPS L1 7 dBic (minimum) GPS L2 7.5 dBic (minimum) GPS L5 6 dBic (minimum) GLONASS L1 5.5 dBic (minimum) GLONASS L2 6 dBic (minimum)</p>	<p>Environmental <i>MIL-STD-810F:</i> Temperature (Methods 501.4, 502.4) Operating Range: -50°C to +70°C Storage Range: -55°C to +85°C</p> <p>Humidity, Fully Sealed and Waterproof</p> <p>Salt Fog, 5% (Method 509.4)</p> <p>Vibration - Category 20, Composite Wheeled/Tracked Machine Exposure, along each of 3 axes (Method 514.5, Table 514.5C-VII and Figure 514.5C-3)</p> <p>Mechanical Shock, along each of 3 axes (Method 516.4, Procedure I, Functional Shock, Table 516.5-II, Figures 516.5-10 - accelerative forces up to 40g)</p> <p>Waterproof: IEC 60529 IPX7 Dustproof: IEC 60529 IP6X Drop Test: Repeated drops from the height of 1 m on asphaltic concrete surface. All sides – top, bottom and border.</p> <p>RoHS Compliant: Yes</p>
<p>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</p>	
<p>Noise Figure: 1.8 dB (typical)</p>	
<p>VSWR ≤ 2.0 : 1</p>	
<p>Differential Propagation Delay (typical) L1 1.5 ns L2 3 ns L5 1 ns</p>	
<p>Nominal Impedance: 50 Ohm</p>	

The antenna calibration is published on the NGS website at: <http://www.ngs.noaa.gov/ANTCAL/>.

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