



# G3-A1 Antenna

A multiple GNSS constellation antenna, the G3-A1 delivers outstanding GPS L1, GPS L2, GPS L5 signal reception as well as GLONASS L1 and L2 bands and Galileo.

Performance	Physical and Electrical
Operating Frequency Range L1 GPS/GLONASS 1586.5 ± 25 MHz L2 GPS/GLONASS 1236 ± 20 MHz L5 GPS 1176 ± 12 MHz	<b>Size</b> 141.6 x 141.6 mm (without Ground Plane)
<b>Out-of-Band Rejection</b> L1 ± 100 MHz -30 dBc (typical) L2 ± 100 MHz -60 dBc (typical)	<b>Diameter</b> 179.4 mm (circumference, without Ground Plane) 200 mm (with Ground Plane) 205 mm (with GP and Anti-snow Spherical Dome)
<b>LNA Gain: 30 dB (typical)</b>	<b>Height</b> 53.7 mm 149.5 mm (with Anti-snow Spherical Dome)
<b>Gain at Zenith (90°)</b> GPS L1 6 dBic (minimum) GPS L2 5.5 dBic (minimum) GPS L5 4 dBic (minimum) GLONASS L1 4.5 dBic (minimum) GLONASS L2 4 dBic (minimum)	<b>Weight</b> 515 g (Antenna without Ground Plane) 185 g (Ground Plane) 700 g (Antenna with Ground Plane) 195 g (Anti-snow Dome) 895 g (Antenna with GP and Anti-snow Dome)
<b>Gain Roll-Off (from Zenith to Horizon)</b> GPS L1 -12 dB GPS L2 -13 dB GPS L5 -13 dB GLONASS L1 -12 dB GLONASS L2 -13 dB	<b>Power</b> Input Voltage: +3 to +18 VDC Current Consumption: 30 mA (typical)
<b>Noise Figure: 1.8 dB (typical)</b>	<b>Connector:</b> TNC female (G3-A1), N female (G3-A1M)
<b>VSWR ≤ 2.0 : 1</b>	<b>Mount: 5/8-11 thread</b>
<b>L1-L2 Differential</b> Propagation Delay: 6 ns (maximum)	<b>Environmental</b> <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  Humidity, 95% (Method 507.4)  Salt Fog, 5% (Method 509.4)  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)  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)
<b>Nominal Impedance: 50 Ohm</b>	<b>Waterproof: IEC 60529 IPX5</b> <b>Dustproof: IEC 60529 IP6X</b>  <b>Drop Test: Repeated drops of antenna with pole from the height of 2 m (the pole height) on asphaltic concrete surface.</b>  <b>RoHS Compliant: Yes</b>

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

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