



Triple Frequency Antenna provides GNSS Pinwheel™ Positioning Flexibility

Benefits

All usable GNSS frequencies in a single antenna

High quality measurements and stable phase centre for precision applications

Features

L1, L2 and L5

GPS+GLONASS signal reception

Excellent multipath rejection

Highly stable phase center

RoHS compliant

Triple Frequency, Dual Constellation

The GPS-703-GG uses the L1, L2 and L5 GPS frequencies. It also offers combined GPS+GLONASS signal reception. Customers can use the same antenna for GPS-only or dual constellation applications, resulting in increased flexibility and reduced equipment costs.

Stable Phase Center

The phase center of this antenna remains constant as the azimuth and elevation angle of the satellites change. Signal reception is unaffected by the rotation of the antenna or satellite elevation, so placement and installation of the antenna can be completed with ease. With the phase center in the same location for both the L1, L2 and L5 signals, and with minimal phase center variation between the antenna, this antenna is ideal for baselines of any length.

Durable, Future-Proof Design

This rugged antenna is enclosed in a durable, waterproof housing and meets MIL-STD-202F for vibration and MIL-STD-810F for salt spray. Sharing the same form factor as other NovAtel GPS-700 series antennas, the GPS-703-GGG antenna is compact and lightweight, making it highly portable and suitable for a wide variety of environments and applications.

This antenna meets the European Union's directive for Restriction of Hazardous Substances (RoHS), so integrators can be confident this antenna can be used in system designs for years to come.

If you require more information about our antennas,
visit novatel.com/products/antennas.htm



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Performance

3 dB Pass Band

L1	1580.5±28.5 MHz (typical)
L2	1210.0±45.0 MHz (typical)

Out-of-Band Rejection

L1±100 MHz	30 dBc (typical)
L2±200 MHz	50 dBc (typical)

LNA Gain 29 dB (typical)

Gain at Zenith (90°)

L1	+5.0 dBc (minimum)
L2	+3.0 dBc (minimum)
L5	+3.0 dBc (minimum)

Gain Roll-Off (from Zenith to Horizon)

L1	12 dB
L2	13 dB
L5	13 dB

Noise Figure 2.0 dB (typical)

VSWR ≤2.0 : 1

L1-L2 Differential Propagation Delay 5 ns (maximum)

Nominal Impedance 50 Ω

Altitude 9,000 m

Physical and Electrical

Dimensions 185 mm diameter¹ x 69 mm

Weight 500 g

Power

Input Voltage	+4.5 to +18.0 VDC
Power Consumption	36 mA (typical)

Connector TNC female

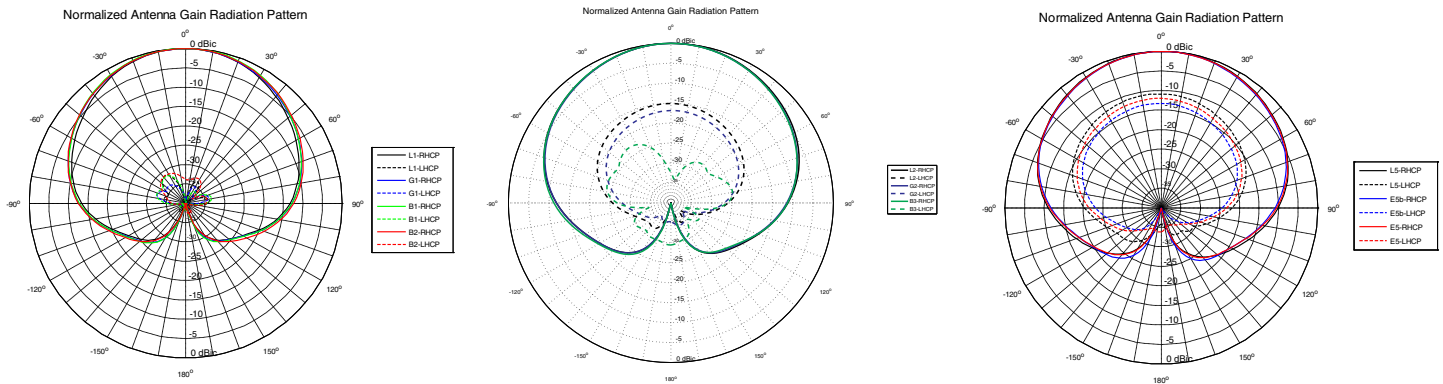
Environmental

Temperature	
Operating	-40°C to +85°C
Storage	-55°C to +85°C
Humidity	95% non-condensing
Vibration (operating)	
Random	MIL-STD-810F
Sinusoidal	SAEJ1211, Section 4.7
Shock	IEC 68-2-27 (Ea)
Bump	IEC 68-2-29 (Eb)
Salt Spray	MIL-STD-810F, 509.4
Waterproof	IEC 60529 IPX7
RoHS	EU Directive 2002/95/EC

Compliance FCC, CE

Elevation Gain Patterns

The plots below represent the typical right-hand polarized (RHP) and left-hand polarized (LHP) normalized radiation patterns for GPS L1/L2 and GLONASS L1/L2 frequencies, respectively.



Version 1 - Specifications subject to change without notice.

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For the most recent details of this product:

novatel.com/Documents/Papers/GPS703GGG.pdf

¹ Not including tape measure tab. Full diameter with tape measure tab is 195 mm.

