# GPS-703-GGG

## Triple Frequency Pinwheel™ Antenna Maximizes Tracking Capabilities

### Benefits

Receives 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+Galileo signal reception

Excellent multipath rejection

Highly stable phase centre

RoHS compliant

### Maximize Performance with Multi-Constellation Reception

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

### Stable Phase Centre

The phase centre 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 centre in the same location for the L1, L2 and L5 signals and with minimal phase centre variation between antennas, 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. With 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.

Meeting the European Union's directive for Restriction of Hazardous Substances (RoHS), integrators can be confident the GPS-703-GGG antenna can be used in system designs for years to come.

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

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# GPS-703-GGG

## Performance

**3 dB Pass Band**

| | |
|---|---|
| L1 | 1580.5±28.5 MHz (typical) |
| L2/L5 | 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 dBic (minimum) |
| L2 | +3.0 dBic (minimum) |
| L5 | +3.0 dBic (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 diameter[1] x 69 mm

**Weight** 500 g

**Power**

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

**Connector** TNC female

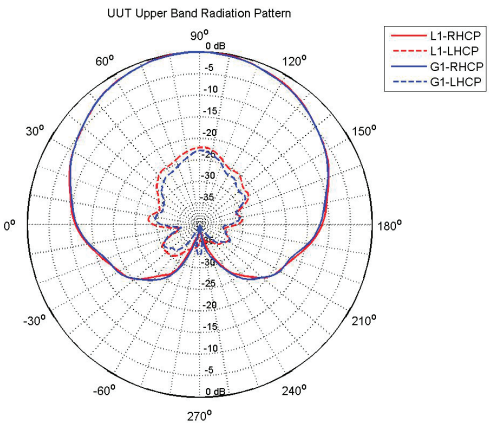
## Environmental

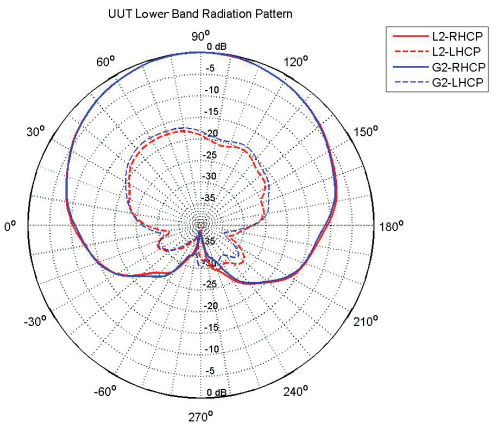
| | |
|---|---|
| **Temperature** | |
| Operating | -40°C to +85°C |
| Storage | -55°C to +85°C |
| **Humidity** | 95% non-condensing |
| **Vibration** (operating) | |
| Random | MIL-STD-810F |
| Sinusoidal | SAEJ1211, Section 4.7 |
| **Shock** | IEC 68-2-27 (Ea) |
| **Bump** | IEC 68-2-29 (Eb) |
| **Salt Spray** | MIL-STD-810F, 509.4 |
| **Waterproof** | IEC 60529 IPX6/IPX7 |

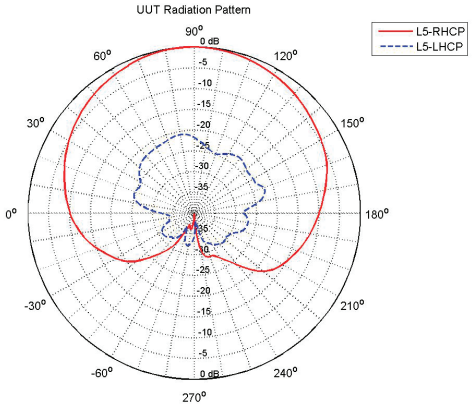
**Compliance** FCC, CE
**RoHS** EU Directive 2002/95/EC

## Elevation Gain Patterns

These plots represent the typical right-hand polarized (RHP) and left-hand polarized (LHP) normalized radiation patterns for the L1 frequency, the L2 frequency and the L5 frequency, respectively.




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

Version 4 -Specifications subject to change without notice.

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novatel.com/Documents/Papers/GPS703GGG.pdf