

# Antennas GPS-701-GG & GPS-702-GG



## PINWHEEL® ANTENNAS ENHANCE FLEXIBILITY AND REDUCE COSTS



### DUAL CONSTELLATION FOR ENHANCED POSITIONING

The GPS-701-GG uses the L1 frequency while the GPS-702-GG uses the L1 and L2 frequencies. Both antennas offer 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 these two antennas 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 antennas can be easily completed. With the phase center in the same location for both the L1 and L2 signals and with minimal phase center variation between the antennas, these antennas are ideal for baselines of any length.

### DURABLE, FUTURE-PROOF DESIGN

These rugged antennas are enclosed in a durable, waterproof housing and meet 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-701-GG and GPS-702-GG antennas are compact and lightweight, making them highly portable and suitable for a wide variety of environments and applications.

Both antennas meet the European Union's directive for Restriction of Hazardous Substances (RoHS), so integrators can be confident these antennas can be used in system designs for years to come.

### BENEFITS

- + Choke ring antenna performance without size and weight
- + Reduces equipment costs
- + Placement flexibility and precision positioning, even on long baselines
- + Eliminates need for future redesign

### FEATURES

- + L1 or L1/L2 options
- + GPS+GLONASS signal reception
- + Excellent multipath rejection
- + Highly stable phase center
- + RoHS compliant

If you require more information about our antennas, visit [www.novatel.com/antennas](http://www.novatel.com/antennas)



Contact NavtechGPS for product details. [www.NavtechGPS.com](http://www.NavtechGPS.com)  
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# GPS-701-GG & GPS-702-GG

## PERFORMANCE

### 3 dB Pass Band

L1	1588.5 ± 23.0 MHz (typical)
L2	1236 ± 18.3 MHz (typical)

### Out-of-Band Rejection

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

**LNA Gain** 29 dB (typical)

### Gain Roll-Off (from Zenith to Horizon)

L1	13 dB
L2	11 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<sup>1</sup> × 69 mm

**Weight** 500 g

### Power

Input Voltage +4.5 to +18.0 VDC

Power Consumption 35 mA (typical)

**Connector** TNC female/N-Type<sup>2</sup>

## ENVIRONMENTAL

### Temperature

Operating -40°C to +85°C

Storage -55°C to +85°C

**Humidity** 95% non-condensing

### Vibration (operating)

Random MIL-STD-202F

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

**Compliance** FCC, CE

**RoHS** EU Directive 2011/65/EU

For the most recent details of this product:  
[www.novatel.com/products/gnss-antennas/high-performance-gnss-antennas/](http://www.novatel.com/products/gnss-antennas/high-performance-gnss-antennas/)

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**Version 6** Specifications subject to change without notice.

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1. Not including tape measure tab. Full diameter with tape measure tab is 195 mm.  
2. N-Type connector is available on the GPS-702-GG only.  
3. L2 specifications apply to the GPS-702-GG only.

