

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 completed with ease. 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-810G 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

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 diameter¹ × 69 mm

Weight 500 g

Power

Input Voltage +4.5 to +18.0 VDC

Current 35 mA (typical)

Connector TNC female
N-Type (optional)²

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-810G, 509.5

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/

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Version 8 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.