# Antennas GPS-704-WB

## HIGH PERFORMANCE PINWHEEL® ANTENNA TRACKS ALL AVAILABLE GNSS SIGNALS

### GNSS PLUS L-BAND

The GPS-704-WB receives all GNSS frequencies and offers combined GPS, GLONASS, Galileo and BeiDou signal reception as well as L-Band signal reception. This enhances antenna performance by providing access to popular differential services. Customers can use the same antenna for GPS-only or multi-constellation applications, resulting in increased flexibility and reduced equipment costs.

### STABLE PHASE CENTER

The phase center offset 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 antennas can be easily completed. With the phase center in the same location for all GNSS signals and with minimal phase center variation between the antennas, the GPS-704-WB is ideal for baselines of any length.

### DURABLE, FUTURE-PROOF DESIGN

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

### BENEFITS

+ Enhanced differential performance with L-Band reception
+ Choke ring antenna functionality without the size and weight

### FEATURES

+ Supports all GNSS frequencies
  GPS L1, L2, L5;
  GLONASS L1, L2, L3;
  BeiDou B1, B2, B3;
  Galileo E1, E5a/b, E6
+ GPS, GLONASS, BeiDou, Galileo and SBAS signal reception
+ L-Band signal reception
+ Excellent multipath rejection
+ Highly stable phase center
+ RoHS compliant
+ TNC connector

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

# GPS-704-WB

## PERFORMANCE

**Signals Received**

| | |
|---|---|
| GPS | L1, L2, L5 |
| GLONASS | L1, L2, L3 |
| Galileo | E1, E5a/b, E6 |
| BeiDou | B1, B2, B3 |
| L-Band | |

**3 dB Pass Band**

| | |
|---|---|
| L1/B1/G1/E1 | 1559 to 1610 MHz (typical) |
| L2/L5/E5a/b/E6/G2/B2/B3 | 1165 to 1300 MHz (typical) |
| L-Band | 1525 to 1559 MHz (typical) |

**Out-of-Band Rejection**

| | |
|---|---|
| L1 ± 100 MHz | 30 dBc (typical) |
| L2 ± 130 MHz | 30 dBc (typical) |
| L1 ± 200 MHz | 50 dBc (typical) |
| L2 ± 200 MHz | 50 dBc (typical) |

**LNA Gain** 31 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 | 12 dB |
| L5 | 12 dB |

**Noise Figure** 2.0 dB (typical)

**VSWR** ≤2.0 : 1

**L1-L2 Differential Propagation Delay**
5 ns (maximum)

**Group Delay Ripple**
<10 ns across L1/L2 frequency band

**Nominal Impedance** 50 Ω

## PHYSICAL AND ELECTRICAL

**Dimensions** 185 mm diameter[1] × 69 mm

**Weight** 530 g

**Mounting** 5/8" x 11 threaded nut

**Power**

| | |
|---|---|
| Input voltage | +4.5 to +18.0 VDC |
| Current | 40 mA (typical) |

**Connectors** TNC female

## ENVIRONMENTAL

**Temperature**

| | |
|---|---|
| Operating | -40°C to +85°C |
| Storage | -55°C to +85°C |

**Altitude**
MIL-STD-810G/CH1, Method 500.6, Procedure II

**Humidity**
MIL-STD 810G/CH1, Method 507.6, Procedure II

**UV Protection**
MIL-STD-810G/CH1, Method 505.6, Procedure II

**Salt Exposure**
MIL-STD-810G/CH1, Method 509.6

**Corrosion**
MIL-STD-810G/CH1, Method 518.2

**Water Resistance**
MIL-STD-810G/CH1, Method 506.6, Procedure 1
IEC 60529, IPX6 & IPX7

**Vibration**

| | |
|---|---|
| Random | MIL-STD-810G/CH1, Method 514.7, Category 21<br>MIL-STD-810G/CH1, Method 514.7, Category 24<br>MIL-STD-810G/CH1, Method 514.6, Category 4 (Non- Operating) |
| Sinusoidal | MIL-STD-810G/CH1, Method 528.1<br>IEC 60068-2-6, Test Fc |

**Shock**
MIL-STD-810G/CH1, Method 516.7, Procedure I
MIL-STD-810G/CH1, Method 516.7, Procedure II

**Bump**
IEC 60068-2-27, Test Ea, 25g
IEC 60068-2-27, Test Ea, 100g, (Non-Operating)

## COMPLIANCE

**FCC**
**IC**
**CE Marking**

| | |
|---|---|
| » RoHS | 2011/65/EU |
| » RTTE | 1999/5/EC |

For the most recent details of this product:
www.novatel.com/products/gnss-antennas/high-performance-gnss-antennas/gps-704-wb/


**novatel.com**

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Europe 44-1993-848-736

SE Asia and Australia 61-400-883-601



**Version 2** 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.