Precise thinking

## Novatel's Precise thinking makes it possible

NovAtel designs, markets and sells high-precision GNSS (Global Navigation Satellite System) receivers and other positioning components and subsystems used in a variety of applications within the aviation, geomatics (surveying and mapping), mining, precision agriculture, marine and defense industries.

We put our precise thinking to work by developing products that combine hardware, such as receivers and antennas, with software to enable customers to fully integrate our high-precision GNSS technology into their systems.

NovAtel is also the principal supplier of reference receivers to national aviation ground networks in the US, Japan, Europe, China and India.

To learn more about how NovAtel's precise thinking can benefit you, visit www.novatel.com.

Precise thinking


www.novatel.com

sales@novatel.com

U.S. & Canada
1 800 NovAtel or
+1 403 295 4900


RoHS COMPLIANT

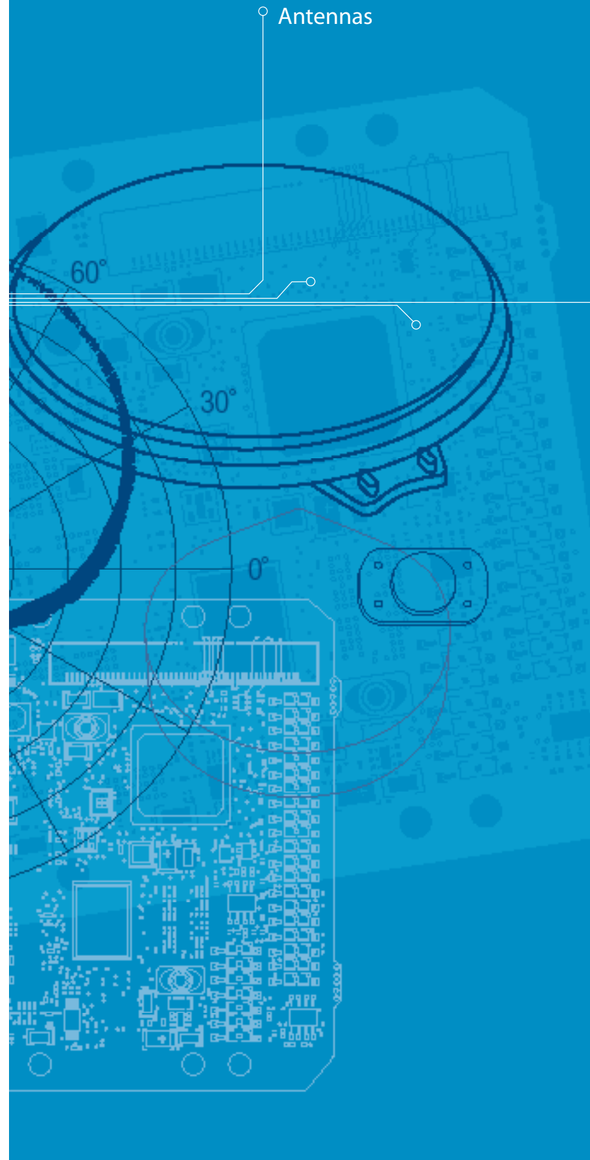
ISO 9001:2000
FM 92323


Version 2 - Specifications subject to change without notice.



Precise thinking

# Antennas



NovAtel provides a variety of antennas designed for single (L1) or dual (L1/L2) frequency coverage, as well as antennas designed for single (GPS) or dual (GPS+GLONASS) satellite constellation operation. Additional models offer L-band capability for reception of signals from the OmniSTAR and the Canada-wide Differential GPS (CDGPS) correction service. NovAtel antennas are designed to meet the European Union's Restriction of Hazardous Substances (RoHS) directive that came into effect on July 1, 2006. Our antennas are designed to complement the OEMV receiver family for satellite-based positioning and for the SPAN™ (Synchronized Position Attitude Navigation) Technology family for inertial augmentation.

NovAtel's antennas combine exceptional performance with unsurpassed reliability to suit a wide variety of markets including survey, agriculture, mapping/GIS, aerial and reference installations. FAA Airworthiness Certification is available on the A72GA-TW-N, A7GLA4-TW-N, and 35C50P1GLA-TW-N models. Patented Pinwheel™ technology is used in all 701 and 702 antennas to provide geodetic-level phase center stability and superior multipath rejection at a fraction of competiitors' size and weight.

## ANT-A72GA-TW-N

The ANT-A72GA-TW-N antenna is ideal for airborne and other high dynamic applications. This antenna is designed to the ARINC 743A standard, weighs less than 200 grams and includes a four-hole mounting system for secure installation. The ANT-A72GA-TW-N antenna includes an FAA airworthiness certificate.

## ANT-A7GLA4-TW-N

The ANT-A7GLA4-TW-N antenna is designed to receive dual frequency GPS signals as well as other L-band signals, such as OmniSTAR and CDGPS. The ANT-A7GLA4-TW-N antenna includes an FAA Airworthiness Certificate.

## ANT-C2GA-TW-N

The ANT-C2GA-TW-N is a high-performance L1/L2 choke ring antenna which substantially reduces the effects of multipath, making it ideal for use in a DGPS base station or other demanding applications. The antenna features an integrated protective radome to withstand harsh environments and meets DO-160D standards.

## ANT-35CIGA-TW-N

The ANT-35CIGA-TW-N antenna is designed for single frequency GPS reception, and it is intended for airborne use andothermobileapplications. The spherical radius molded radome provides enhanced protection against rain and ice. The ANT-35CIGA-TW-N antenna includes an FAA Airworthiness Certificate.

## ANT-26C1GA-TBW-N

This compact, versatile single frequency GPS antenna is designed for any mobile application. Its lightweight yet rugged design combined with low power consumption make it an ideal antenna for almost any environment.

## ANT-35C50P1GLA-TW-N

The ANT-35C50P1GLA-TW-N antenna is designed for a variety of mobile applications. It is an active antenna with a removable ground plane and survey mount. The ANT-35C50P1GLA-TW-N is designed to operate at the GPS L1 frequency, the GLONASS L1 frequency, as well as the L-band frequencies used by the OmniSTAR and CDGPS correction services. Its mechanical configuration is a spherical radius molded radome which provides enhanced protection against rain and ice.

## GPS-701-GG and GPS-702-GG

These antennas are designed to receive signals from the GPS and GLONASS satellite systems, and they include patented Pinwheel™ technology to provide superior multipath rejection in a compact and lightweight antenna. A highly stable antenna phase center makes the 701-GG (L1 only) and 702-GG (L1 and L2) antennas the perfect choice for high precision applications. Both antennas are waterproof to IEC 60529 IPX7 and meet the MIL-STD-810F specification for vibration and salt spray, resulting in an antenna suitable for adverse conditions.

## GPS-701-GGL, GPS-702-GGL, and GPS-702L

The GPS-702L offers a single antenna solution for GPS L1 and L2 frequencies, as well as the L-band frequencies used by the OmniSTAR and Canada-wide Differential GPS (CDGPS) correction services. This Pinwheel™ antenna features improved RTK performance with superior multipath rejection for high accuracy, real-time performance in any positioning mode.

The 701-GGL and the 702-GGL are dual frequency constellation antennas which are capable of receiving L-band signals.

| | ANT-532-C | ANT-534-C | | | | | | 701-GGL | 702-GGL | 702L |
|---|---|---|---|---|---|---|---|---|---|---|
| Size | 76 x 119 x 18 mm | 76 x 119 x 20 mm | 308 mm (diameter) x 223 mm | 89 mm (diameter) x 18 mm | 66 mm (diameter) x 18 mm | 89 mm (diameter) x 18 mm | 185 mm (diameter) x 69 mm | 185 mm (diameter) x 69 mm | 185 mm (diameter) x 69 mm | 185 mm (diameter) x 69 mm |
| Weight | 198 g | 191 g | 4.1 kg | 184 g | 113 g | 185 g or 385 g (with ground plane and adapter) | 500 g | 500 g | 500 g | 500 g |
| Input Voltage | +2.5 to +24.0 VDC | +2.5 to +24.0 VDC | +2.5 to +24.0 VDC | +2.5 to +24.0 VDC | +2.5 to +24.0 VDC | +2.5 to +24.0 VDC | +4.5 to +18.0 VDC | +4.5 to +18.0 VDC | +4.5 to +18.0 VDC | +4.5 to +18.0 VDC |
| Power Consumption | < 35 mA typical | < 35 mA typical | < 35 mA typical | < 30 mA typical | < 30 mA typical | < 39 mA typical | 35 mA typical | 35 mA typical | 35 mA typical | 35 mA typical |
| 3 dB Band Pass | L1: 1575 ± 12 MHz<br>L2: 1227 ± 12 MHz | L1: 1575 ±13 MHz<br>L2: 1227 ±13 MHz<br>L-band: 1542 ±17.5 MHz | L1: 1575 ± 20 MHz<br>L2: 1227 ± 15 MHz | L1: 1575 ±12 MHz | L1: 1575 ±12 MHz | L1: 1525 to 1616 MHz | L1: 1588 ± 23 MHz<br>L2: 1236 ± 18 MHz* | L1: 1575 ± 20 MHz*<br>L-band: 1543 ± 20 MHz | L1: 1575 ± 20 MHz*<br>L2: 1228 ± 20 MHz*<br>L-band 1543 ± 20 MHz | L1: 1525 to 1585 MHz<br>L2: 1217 to 1257 MHz<br>L-band 1525 to 1585 MHz |
| Noise Figure (typical) | ≤ 3.0 dB | ≤ 1.9 dB | ≤ 3.0 dB | ≤ 2.2 dB | ≤ 2.4 dB | < 2.1 dB | ≤ 2.0 dB | ≤ 2.5 dB | ≤ 2.5 dB | ≤ 2.5 dB |
| VSWR (typical) | ≤ 1.5 : 1 | ≤ 1.5 : 1 | ≤ 1.5 : 1 | ≤ 1.5 : 1 | ≤ 1.5 : 1 | < 1.5 : 1 | ≤ 2.0 : 1 | ≤ 2.0 : 1 | ≤ 2.0 : 1 | ≤ 2.0 : 1 |
| | | | | | | | *GPS-702-GG only | *Different if GLONASS is included (L1: 1588.5 ± 23.0 MHz) (L2: 1236.0 ± 18.3 MHz) | *Different if GLONASS is included (L1: 1588.5 ± 23.0 MHz) (L2: 1236.0 ± 18.3 MHz) | |