

Revolutionary GNSS Wideband Antenna Enhances Accuracy and Performance

Benefits

High precision measurements

More signal observations ensure higher performance

Eliminates need to upgrade as future GNSS signals become available

Withstands harsh environments

Features

Stable phase centre

Ultra-wideband Dorne-Margolin element

Aluminum alloy construction

Tracks signals when visible, down to the horizon and below

Supports GPS, GLONASS, Galileo and Compass

NovAtel's multi-constellation GNSS-750 antenna delivers next generation choke ring technology, ensuring functionality with existing and planned satellite constellations. Its robust, low profile construction makes it ideal for reference stations, geological monitoring and other applications requiring a robust high performance antenna.

Superior Performance and Accuracy

The innovative design of this 3D antenna improves low-elevation tracking. An insert has been added to the choke ring design to enhance multipath rejection based on results from live GIOVE-A, GIOVE-B and L5 signals.

Proven Robust Technology

Utilizing an ultra-wideband Dorne-Margolin antenna element, the GNSS-750 optimizes antenna gain, enabling use with most manufacturers' geodetic receivers. Its sturdy aluminum alloy construction ensures it can withstand the most difficult environmental conditions.

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



novatel.com

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GNSS-750

Performance

Signals Tracked

GPS L1, L2, L2C, L5
GL0NASS L1, L2, L3
Galileo E1, E5a, E5b, E6, AltB0C
Compass B1, B2, B3
L-band (including 0mniSTAR and CDGPS)

3 dB Pass Band

L1 1568.5±55 MHz (typical) L2 1232±80 MHz (typical)

Out-of-Band Rejection

L1 (fc=1568.5 MHz)

 fc±100 MHz
 30 dBc (typical)

 fc±150 MHz
 50 dBc (typical)

L2 (fc=1232.5 MHz)

Other Bands

f<900 MHz 80 dBc (typical) F>150 MHz 80 dBc (typical)

LNA Gain 43 dB (typical)

Gain at Zenith (90°)

L1/E1/B1 +5.0 dBic (minimum) L2 /L5/E5 +5.0 dBic (minimum) B2/B3/E6 +5.0 dBic (minimum)

Noise Figure 2.0 dB (typical)
VSWR 1.5:1

Phase Centre Offset <2 mm¹

Altitude IEC-68-2-13

(-400 to +10,400 m)

Physical and Electrical

Dimensions 380 mm diameter x 200 mm

7.6 kg

Power

Weight

Input Voltage +3.3 to +12.0 VDC Power Consumption 100 mA (typical)

Nominal Impedance $50~\Omega$

Connector N-type with

TNC adapter supplied

Environmental

Temperature

Operating -55° C to $+85^{\circ}$ C storage -55° C to $+90^{\circ}$ C

Humidity ISO-9022-13-06 100% non-condensing

Solar Radiation IEC-68-2-5

Resistance to Corrosion

IEC-60950-22

Water Ingress

IEO COEGO IDVO

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IEC-60529 IPX6 and IPX7

Dust Ingress

Salt Fog

s IEC-605929 IPX6 IEC-68-2-11

Sinusoidal Vibration (operating)

ISO 9022-3 Method 36

Shock

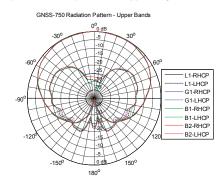
MIL-STD-810F, 516.5

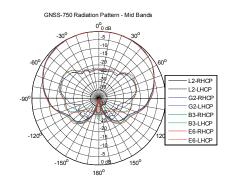
Compliance

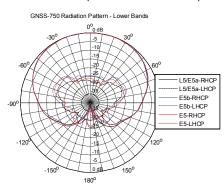
FCC, CE

Elevation Gain Patterns

The plots below represent the typical right-hand circular polarized (RHCP) and left-hand circular polarized (LHCP) normalized radiation patterns for all GNSS frequencies.









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For the most recent details of this product: novatel.com/Documents/Papers/GNSS-750.pdf

Antenna calibration data is published on the NGS website: http://www.ngs.noaa.gov/ANTCAL/and Geo++ website: http://gnpcvdb.geopp.de/pcvdb/GNPCVDB. html.

