Antennas GPS-713-GGG-N & GPS-713-GGGL-N

PINWHEEL® TRIPLE-FREQUENCY ANTENNA, WITH INMARSAT REJECTION FILTER, MAXIMIZES TRACKING CAPABILITIES

MAXIMIZE PERFORMANCE WITH MULTI-CONSTELLATION RECEPTION

The GPS-713-GGG-N and GPS-713-GGGL-N receives L1, L2, L5 GPS; L1, L2, L3 GLONASS; B1, B2 BeiDou and E1, E5a/b Galileo frequencies. The GPS-713-GGGL-N also supports L-Band from 1525 to 1560 MHz. Customers can use the same antenna for GPS-only, dual or triple constellation applications, resulting in increased flexibility and reduced equipment costs. Both antennas provide enhanced Inmarsat interference rejection, which allows tracking of GNSS signals in the presence of high powered Inmarsat transmitters typically found on marine vessels.

STABLE PHASE CENTER

The phase center 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 antenna can be completed with ease. With the phase center in the same location for the GNSS signals and with minimal phase center variation between antennas, this antenna is ideal for baselines of any length.

DURABLE, FUTURE-PROOF DESIGN

This rugged antenna is enclosed in a durable, waterproof housing and meets MIL-STD-810G for vibration, corrosive environment and salt fog. The GPS-713-GGG-N and GPS-713-GGGL-N are similar in form factor to our other high performance GPS-700 series antennas. Both antennas meet IEC60945 specifications.

Meeting the European Union's directive for Restriction of Hazardous Substances (RoHS), integrators can be confident the GPS-713-GGG-N and GPS-713-GGGL-N antennas can be used in system designs for years to come.

BENEFITS

+ Choke ring antenna functionality without the size and weight
+ Reduces equipment costs and need for future redesign
+ High quality measurements and stable phase center for precision applications
+ GNSS reception even in the presence of Inmarsat transmitters

FEATURES

+ L1, L2, L3, L5, B1, B2, E1, E5 and E5a/b
+ GPS+GLONASS+BeiDou+Galileo signal reception
+ Increased Inmarsat rejection
+ Excellent multipath rejection
+ Highly stable phase center
+ RoHS compliant

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

GPS-713-GGG-N & GPS-713-GGGL-N

PERFORMANCE

3 dB Pass Band

Upper Band:	1568 ± 43 MHz (-GGGL) 1584 ± 27 MHz (-GGG)
Lower Band:	1210 ± 45 MHz (both variants)

Out-of-Band Rejection

GGGL variant

L1 ± 100 MHz / 30 dB (minimum)
L1 ± 150 MHz / 50 dB (minimum)
L2 ± 100 MHz / 30 dB (minimum)
L2 ± 150 MHz / 50 dB (minimum)

Inmarsat immunity	45 dB (minimum)

GGG variant

L1 ± 84 MHz / 30 dBc (minimum)
L1 ± 134 MHz / 50 dBc (minimum)
L2 ± 100 MHz / 30 dBc (minimum)
L2 ± 150 MHz / 50 dBc (minimum)

Inmarsat immunity	35 dB (minimum)
LNA Gain	35 dB (typical)

Gain at Zenith (90°)

GPS L1	4 dBi (minimum)
GPS L2	2.5 dBi (minimum)
GPS L5	0 dBi (minimum)

Gain Roll-Off (from Zenith to Horizon)

GPS L1	13 dB (maximum)
GPS L2	12 dB (maximum)
GPS L5	12 dB (maximum)
Noise Figure	2 dB (typical)
VSWR	≤2 : 1
L1-L2 Differential Propagation Delay	7 ns (maximum)
Nominal Impedance	50 Ω
Altitude	9,000 m

PHYSICAL AND ELECTRICAL

Dimensions	185 mm diameter[1] × 69 mm
Weight	<530 g
Power	
Input voltage	+4.5 to +18 VDC
Current	40 mA (typical)
Connector	N-Type

ENVIRONMENTAL

Temperature

Operating	-40°C to +85°C
Storage	-55°C to +85°C
Humidity	MIL-STD 810G/CH1, Method 507.6,Procedure II
Vibration (operating)	
Random	MIL-STD-810G/CH1, Method 514.7, Category 21 MIL-STD-810G/CH1, Method 514.7, Category 24 MIL-STD-810G/CH1, Method 514.7, Category 4
Sinusoidal	MIL-STD-810G/CH1, Method 528.1 IEC 60945, Section 8.7 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)
UV Protection	MIL-STD-810G/CH1, Method 505.6, Procedure II
Salt Fog	MIL-STD-810G/CH1, Method 509.6 IEC 60945 Section 8.12
Corrosive	MIL-STD-810G/CH1, Method 518.2
Water Resistance	IPX6/IPX7 IEC 60945 Section 8.8

COMPLIANCE

FCC
IC
CE Marking

» RoHS	2011/65/EU
» RTTE	1999/5/EC
» EMC	2004/108/EC IEC 60945 Sections: 9.3, 10.3, 10.4,10.5, 10.6 and 10.9 EN 13309 ISO 13766

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

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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.