VEXXIS® Antennas  GNSS-802L

CUTTING EDGE ANTENNA TECHNOLOGY WITH SUPERIOR TRACKING PERFORMANCE

INNOVATIVE DESIGN WITH MULTIPLE PATENTS
The VEXXIS GNSS-800 series antennas feature a patented multi-point feeding network and radiation pattern optimization technology. In additional to having enhanced performance in multipath environments, the GNSS-802L antenna is able to maintain a low profile while achieving both high peak zenith gain and low gain roll-off from zenith to horizon, without sacrificing tracking performance. This new technology significantly enhances the low-elevation angle tracking capabilities, extending operation to the entire GNSS constellation. Furthermore, the antenna is able to achieve greater phase center stability through our innovative element design. This directly translates into improved carrier phase measurement and a better RTK solution.

TRACKING IN CHALLENGING ENVIRONMENTS
The ability to track low elevation satellites while maintaining a high gain for higher elevation satellites makes the GNSS-802L an excellent choice for any applications where the sky is partially visible, such as operating close to tree lines, under foliage, or in urban canyons. The antenna is able to track any visible satellites from horizon to zenith, providing the maximum number of observations for an enhanced positioning solution.

NOVATEL'S TOUGHEST PRECISION ANTENNA
GNSS-800 antennas are the toughest high precision antennas NovAtel has designed to date, ensuring their survivability even in the harshest operating environments. The antennas feature ultra-durable watertight enclosures and have been proven to sustain intense vibration, earning the MIL-STD-810G rating.

FEATURES
+ Supports dual-frequency GPS and GLONASS signals
+ L-Band signal reception, supporting correction services such as TerraStar
+ Multi-point antenna feed provides stable phase center and enhanced multipath rejection
+ Radiation pattern optimization technology yields exceptional low elevation satellite tracking
+ Provides exceptional tracking performance previously unachievable in a small form factor
+ Hermetically sealed enclosure to endure the toughest environments

If you require more information about our antennas, visit [www.novatel.com/antennas](http://www.novatel.com/antennas)
**PERFORMANCE**

Signal Received
- GPS L1, L2
- GLONASS L1, L2
- Galileo E1
- BeiDou B1
- L-Band

Pass Band (typical)
- Upper passband: 1569.0 ± 43.0 MHz
- Lower passband: 1234.0 ± 17.0 MHz

Out-of-Band Rejection
- Band edges ± 50 MHz: 40 dB minimum
- Band edges ± 100 MHz: 60 dB minimum

LNA Gain: 29 dB (typical)

Gain at Zenith (90°)¹
- L1/B1/E1/G1: +5.0 dBic minimum
- L2/G2: +5.0 dBic minimum
- L-Band: +5.0 dBic minimum

Gain Roll-Off (from Zenith to Horizon)
- L1/B1/E1/G1: 10 dB
- L2/G2: 12 dB
- L-Band: 10 dB

Phase Center Stability: <2.0 mm

Noise Figure: <2.0 dB (typical)

VSWR: ≤2.0:1

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

Group Delay Ripple: <15 ns

Nominal Impedance: 50 Ω

**ENVIRONMENTAL**

Temperature
- Operating: -40°C to +85°C
- Storage: -55°C to +85°C

Humidity: 95% non-condensing

Salt Fog: MIL-STD-810G (CH1), 509.6

Dust/Water Resistance: IP69K

Shock: MIL-STD-810G (CH1), 514.7 (7.7 g), Procedure 1, Category 24

Vibration (operating)
- Random: MIL-STD-810G (CH1), 514.7 (7.7 g) Annex E, Procedure 1, Category 24

Bump: IEC 60068-2-27 Ea (25 g)

Regulatory Compliance: FCC, CE

RoHS: EU Directive 2011/65/EU

¹ G1 zenith gain is 4 dBic (typical).

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**PHYSICAL AND ELECTRICAL**

Dimensions: 176 mm D x 55 mm H

Weight: 507 g

Connector: TNC female

Mounting: 5/8” thread mount

Power
- Input voltage: +3.8 to +18.0 VDC
- Current: 60 mA (maximum)

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For the most recent details of this product:  

novatel.com  
sales@novatel.com  
1-800-NOVATEL (U.S. and Canada) or 403-295-4900  
China 0086-21-68882300  
Europe 44-1993-848-736  
SE Asia and Australia 61-400-883-601

Version 3 Specifications subject to change without notice.  
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Printed in Canada.  
D21525 March 2019