INNOVATIVE DESIGN WITH MULTIPLE PATENTS
The VEXXIS GNSS-800 series antennas feature a patented multi-point feeding network and radiation pattern optimization technology. In addition to having enhanced performance in multipath environments, the GNSS-850 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-850 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 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.

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

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

Pass Band (typical)
- Upper passband: 1569.0 ± 43.0 MHz
- Lower passband: 1232.0 ± 68.0 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°)
- L1/B1/E1/G1: +5.0 dBc minimum
- L2/B2/E5b/G2: +5.0 dBc minimum
- L5/E5a: +3.0 dBc minimum
- L-Band: +5.0 dBc minimum

Gain Roll-Off (from Zenith to Horizon)
- L1/B1/E1/G1: 10 dB
- L2/B2/E5b/G2: 12 dB
- L5/E5a: 60 dB minimum
- 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

PHYSICAL AND ELECTRICAL

Dimensions
- 176 mm D × 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)

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

Vibration (operating)
- Random: MIL-STD-810G (CH1), 514.7 (7.7 g) Annex E, Procedure 1, Category 24
- Shock: MIL-STD-810G (CH1), 516.7 (40 g), Procedure 1
- Bump: IEC 60068–2–27 Ea (25 g)

Regulatory Compliance
- FCC, CE
- EU Directive 2011/65/EU

For the most recent details of this product: www.novatel.com/products/gnss-antennas/vexxis-series-antennas/gnss-800-series-antennas/

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1 G1 zenith gain is 4 dBc (typical),
L5 zenith gain is 3 dBc (typical)