SMART2
Multi-constellation GNSS SMART antenna offering flexible positioning solutions

**Scalable performance**
From single-frequency standalone positioning to dual-frequency Precise Point Positioning (PPP), the SMART2 positions you for success. The SMART2 integrates a Hexagon | NovAtel OEM GNSS receiver and precision antenna in a single, rugged enclosure. Software upgradable, the SMART2 eliminates the need for costly hardware replacement as requirements change, while delivering scalable accuracy and performance.

**Multi-constellation for enhanced positioning**
The SMART2 is able to receive dual-frequency GPS, GLONASS, BeiDou, Galileo and QZSS signals. Multiple GNSS signals and constellations deliver better satellite availability under variable terrain and environmental conditions. The SMART2 also receives L-Band signals providing easy access to the world-wide TerraStar-L and TerraStar-C PRO Correction Services.

**Terrain compensation for increased accuracy**
With optional integrated terrain compensation, the SMART2 improves guidance and autosteer performance on uneven terrain and slopes by providing positions automatically corrected for vehicle pitch and roll.

**Integrated Bluetooth® connectivity**
The SMART2 is available with optional Bluetooth technology to provide wireless connectivity that simplifies integration with tablets and other devices commonly used for guidance and mapping applications.

**Multiple interfaces for maximum flexibility**
Three NMEA 0183 compatible RS-232 serial ports, a NMEA2000 compatible CAN port and Bluetooth wireless technology provide maximum flexibility. The SMART2 also provides simulated radar ground speed output, 1 PPS output, an event mark input, as well as a daylight-readable status LED. Built-in magnets simplify mounting. Fixed mounting options are also available.

**Benefits**
- Flexible positioning accuracy from entry level sub-meter to centimeter-level using TerraStar-C PRO
- 15 cm pass-to-pass accuracy using TerraStar-L
- Smooth, consistent positions for pass-to-pass applications with optional GLIDE technology
- Dual-frequency tracking increases position reliability and mitigates ionospheric effects
- Wireless connectivity to Bluetooth tablets and devices
- Terrain compensation corrects for vehicle roll and pitch to improve performance on uneven terrain
- Compact, waterproof, one-piece GNSS receiver and antenna solution

**Features**
- GPS, GLONASS, BeiDou, Galileo, QZSS plus TerraStar correction signal reception
- Optional Bluetooth
- Optional terrain compensation
- Simulated radar ground speed output
- Integrated magnetic mounting
Performance

Signal Tracking
- GPS L1, L2, L2C
- GLONASS L1, L2
- Galileo E1, E5b
- BeiDou B1I, B2I, B2b
- QZSS L1, L2
- SBAS L1
- L-Band (Galileo L5, Galileo E5a, BDS B3, GLONASS F1)

Horizontal Position Accuracy (RMS)
- Single point L1: 1.5 m
- Single point L1/L2: 1.2 m
- SBAS2: 60 cm
- DGPS: 40 cm
  - (95%) (RMS) for SBAS2: 50 cm
  - (95%) (RMS) for DGPS: 40 cm
  - (95%) (RMS) for L-Band: 3.0 cm

Pass-to-Pass Accuracy (95%)
- L1/L2 GLIDE Single Point: 35 cm
- TerraStar-L: 15 cm
- TerraStar-C PRO: 2 cm

Maximum Data Rate
- Measurements up to 20 Hz
- Position up to 20 Hz

Time to First Fix
- Cold start: <5 s (typ)
- Hot start: <3 s (typ)

Signal Reacquisition
- L1: <0.5 s (typ)
- L2: <1.0 s (typ)

Velocity Accuracy
- <0.055 m/s RMS

Time Accuracy
- 20 ns RMS

Terrain Compensation Accuracy (deg)
- Roll/Pitch <1.0 RMS
- Yaw/Pitch <1.0 RMS

Physical and Electrical

Dimensions
- 155 mm diameter by 81 mm height

Weight
- 470 g

Connector
- 14-pin Tyco Ampseal

Mounting
- 4 x M4 screw inserts integrated magnetic mount

Power
- Input voltage range: +7 to +30 VDC
- Power consumption: 2.5 W (typical)

Status LED
- Multi-colored, daylight viewable

Communication Ports
- RS-232 dedicated ports: 3
- CAN Bus: 1
- Event Mark Input: 1
- PPS: 1
- Ground speed output: 1
- Bluetooth: Optional

Environmental

Temperature
- Operating: -40°C to +70°C
- Storage: -45°C to +75°C

Humidity
- MIL-STD-810G(CH1), Method 507.6

Illumination
- MIL-STD-810G(CH1), Method 509.6

Vibration
- MIL-STD-810G(CH1), Method 510.6

Shock
- MIL-STD-810G(CH1), Method 514.7

Correlation Services
- TerraStar-L
- TerraStar-C PRO

Solar Radiation
- MIL-STD-810G(CH1), Method 505.6

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

Sand and Dust
- MIL-STD-810G(CH1), Method 510.6

Ingress Protection Rating
- FCC, ISED, CE and Global Type Approvals

Contact Hexagon | NovAtel
sales.novatex.com | 1-800-NOVATEL (U.S. and Canada) or 403-295-4900 | China: 0086-21-88882300 | Europe: 44-1993-848-736 | SE Asia and Australia: 61-400-883-601

For the most recent details of this product: novatel.com

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