



Key Features & Benefits

- An advanced RTK engine for faster initialization times when satellite lock is lost and enhanced performance near obstructions
- Support for the GPS modernized L2C and the planned L5 signals
- Support for GLONASS, Galileo, BeiDou
- Support for SBAS systems (including: WAAS, EGNOS, MSAS, QZSS)
- Single, rugged chassis or cab mountable unit - GPS antenna, receiver and isolation system
- 3 LED indicators that provide instant operational feedback
- Single cable connector (high cycle count connector)
- 100% sealed housing
- Meets EU Restriction on Hazardous Substance (RoHS) directives
- TCP/IP capable using a serial PPP connection
- An easy to use removable mounting bracket with quick release adjustment ratchet

Performance Characteristics

Tracking and performance:

Tracks up to 44 Satellites with 220 Tracking Channels:

- GPS: L1C/A, L2C, L2E (Trimble Method for tracking L2P), and L5 Code with Full Cycle Carrier
- SBAS: L1C/A and L5 (for WAAS, EGNOS, MSAS and QZSS)
- Fully operational during P-code encryption
- Upgradeable to GLONASS: L1C/A, L2C/A, and L2P Code with Full Cycle Carrier
- Upgradeable to Galileo: L1 CBOC, E5A, E5B & E5AitBOC8
- Upgradeable to BeiDou: B1, B2

Measurements

- Advanced Trimble® Maxwell™ 6 Custom GPS chip Trimble R-Track™ technology for tracking the new L2C Civil Signal, L5 Signal for GPS modernization and GLONASS
- High-precision multiple correlator for L1, L2 and L5 pseudorange measurements
- Unfiltered, unsmoothed pseudo-range measurements data for low noise, low multi-path error, low time domain correlation and high dynamic response
- Very low noise L1, L2 and L5 carrier phase measurements with <1mm precision in a 1 Hz bandwidth
- L1, L2 and L5 Signal-to-Noise ratios reported in dB-Hz
- Proven Trimble low elevation tracking technology

| | |
|--|---|
| Code differential Positioning ¹ : | GPS: |
| Horizontal accuracy: | 0.25 m + 1 ppm RMS (0.8 ft + 1 ppm RMS) |
| Vertical accuracy: | 0.50 m + 1 ppm RMS (1.6 ft + 1 ppm RMS) |
| Real Time Kinematic (RTK) positioning ¹ : | |
| Horizontal accuracy: | 8 mm + 0.5 ppm RMS (0.032 ft +0.5 ppm) |
| Vertical accuracy: | 15 mm + 0.5 ppm RMS (0.05 ft +0.5 ppm) |
| Initialization time: | Typically ² < 10 seconds + 0.5 times baseline length in km, up to 30 km (Regular RTK operation with base station) |
| Initialization Reliability: | Typically ³ > 99.9% |

Physical Characteristics:

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|--------------------------------|--|
| Size: (height x width x depth) | 118.9 mm x 190 mm x 194.6 mm |
| Weight: | 1.83 kg (4.03 lb) |
| Mounting: | Mast Mounting Bracket |
| Network Connector: | 16 pin Amphenol bayonet, sealed |
| Indicators (3 yellow LEDs): | |
| Upper: | DC Power |
| Middle: | GPS correction signal status (via radio link, cable or MSS-Band) |
| Lower: | GPS signal status (no signal, searching, or tracking) |

Environmental Characteristics:

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|------------------------|---|
| Operating Temperature: | -40°C to +70°C (-40°F to +158°F) |
| Storage Temperature: | -50°C to +85°C (-67°F to +185°F) |
| Humidity | waterproof, 100% fully sealed |
| Sealing | +/- 5 psi sealing |
| Shock - Survival: | 75 Gs, 6 milliseconds duration, 3 shocks in each of the three mutually perpendicular axes |
| Shock - Operating: | 40 Gs, 10 milliseconds duration |
| Vibration | 15.3 gRMS |
| EMC: | EN13309:2000, CE Mark, RCM |

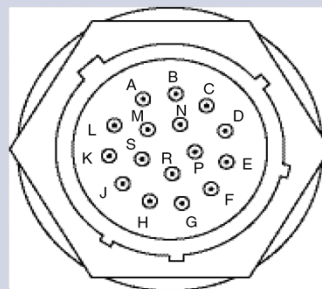
Technical Specifications:

| | |
|-----------------------------|--|
| Electrical Input Voltage: | 9 to 32 VDC |
| Electrical Input Power: | 18W maximum 5W nominal |
| Control Interface: | J1939 CAN network (two buses) RS-232 Serial (two ports) |
| Reverse Voltage Protection: | Yes |
| Load Dump Protection: | Yes |

Connector:

16 Pin Connector

A - RS232 GND
B - PWR -
C - CAN2 LO
D - CAN2 GND
E - Chassis
F - RS232-1 TXD
G - PWR +
H - Boot monitor
J - RS232-1 RXD
K - CAN1 GND
L - CAN1 LO
M - ID
N - CAN2 HI
P - CAN1 HI
R - RS232-2 RXD
S - RS232-2 TXD



Footnotes:

1. Accuracy and reliability may be subject to anomalies such as multi-path, obstructions, interference, satellite geometry and atmospheric
2. Accuracy and reliability may be subject to anomalies such as multi-path, obstructions, satellite geometry and atmospheric conditions.
3. May be affected by atmospheric conditions, signal multipath, obstructions and satellite geometry.

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