



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 & E5AltBOC8
 - 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:

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:

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

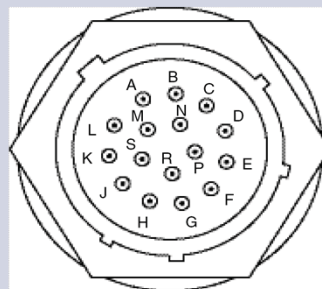
Technical Specifications:

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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