



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 cab or blade 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:

Size: (height x width x depth)	147 mm x 231.9 mm x 251.1 mm
Weight:	3.8 kg with mounting bracket
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:	GNSS signal status (no signal, searching, or tracking)

Environmental Characteristics:

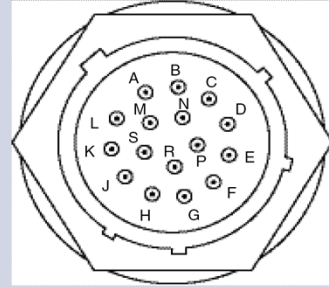
Operating Temperature:	-40°C to +70°C (-40°F to +158°F)
Storage Temperature:	-50°C to +85°C (-67°F to +185°F)
Humidity	waterproof, 100% fully sealed
Sealing	+/- 5 psi sealing
Shock - Survival:	75 Gs, 6 milliseconds duration, 3 shocks in each of the three mutually perpendicular axes
Shock - Operating:	40 Gs, 10 milliseconds duration
Vibration	20.4 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. May be affected by atmospheric conditions, signal multipath, obstructions and satellite geometry.
3. May be affected by atmospheric conditions, signal multipath, and satellite geometry. Initialization reliability is continuously monitored to ensure highest quality.

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