

Specifications

GNSS Characteristics

Channels	624
GPS	L1C/A, L2C, L2E, L5
GLONASS	L1C/A, L2C/A, L3 CDMA ⁽²⁾
Galileo	E1, E5A, E5B, E5AltBOC, E6 ⁽²⁾
BeiDou	B1, B2, B3 ⁽¹⁾
SBAS	WAAS, EGNOS, MSAS, GAGAN, IRNSS and QZSS
L-Band ⁽¹⁾	Trimble RTX™

GNSS Accuracies⁽³⁾

Real Time Kinematic (RTK)	Horizontal: 8 mm + 1 ppm RMS
	Vertical: 15 mm + 1 ppm RMS
	Initialization Time: < 8 s
	Initialization Reliability: > 99.9%
Post-processing Static	Horizontal: 2.5 mm + 0.5 ppm RMS
	Vertical: 5 mm + 0.5 ppm RMS
Post-processing Static (long observation)	Horizontal: 3 mm + 0.1 ppm RMS
	Vertical: 3.5 mm + 0.4 ppm RMS

Hardware

Size (L x W x H)	200 mm × 150 mm × 69 mm (7.9 in x 5.9 in x 2.7 in)
Weight	2.24 kg (79 oz) with battery
Environment	Operating: -40°C to +65 °C (-40°F to +149°F) Storage: -45°C to +80°C (-49°F to +176°F)
Humidity	100% condensation
Dust and Water Proof	IP67
Shock and Vibration	1 m (3.3 ft) fall onto concrete
Certification	FCC, CE

Electrical

Power Consumption	5.2 W (depending on user settings)
Internal Battery Capacity	17,000 mAh, 7.4 V
Operating Time ⁽⁴⁾	Up to 20 h (depending on user settings)
External Power	9 V DC to 36 V DC

Certifications and Calibrations

FCC Part 15 (class B Device), FCC Part 22, 24, 90; CE Mark; C-Tick; MIL-STD-810G, Method 514.7

Communications and Data Recording

Ports	1 x 7-pin LEMO port (external power, RS-232)
	1 x 10-pin LEMO port (external power, RS-232)
	1 x USB 2.0 port (USB data download, USB update)
	1 x LAN port
	– HTTP, TCP/IP, UDP, FTP, NTRIP Caster, NTRIP Server, NTRIP Client
	– Simultaneously transmits multiple data stream
	– Support proxy server and route table
	– Support Power over Ethernet (PoE)
	1 x DB9 port
	2 x GNSS antenna port
Protocols	1 x SIM card slot

Protocols	Correction formats: CMR, CMR+, SCMRX, RTCM2.x, RTCM 3.x, RTD
	Observables: RT17, RT27, BINEX, BINARY, RTCM 3.x, RINEX2.x, RINEX3.x
	Position/Status I/O: NMEA 0183 V2.30 and V4.0 output
	Met sensor
	Internal Data Logging and Position
	Output frequency up to 50 Hz, storage capacity 32 GB
	External Storage
	Up to 1 TB
	Bluetooth®
	Internally integrated multimode system compatible with Android, Windows Mobile and Windows desktop operating systems
Wi-Fi	802.11 b/g/n, access point mode
	LTE (FDD): B1, B2, B3, B4, B5, B7, B8, B20
	DC-HSPA+/HSPA+/HSPA/UMTS: B1, B2, B5, B8
	EDGE/GPRS/GSM 850/900/1800/1900 MHz
	Standard Internal Rx/Tx: 410 MHz to 470 MHz
	Network Modem (Internally integrated 4G modem)
	Transmit power: 0.5 W to 2 W
	Protocol: CHC, Trimble, Pacific Crest
	Range: 5 km optimal conditions
	UHF Radios

*Specifications are subject to change without notice.

- (1) Available with further firmware update.
(2) There is no public GLONASS L3 CDMA or Galileo E6 ICD. The current capability in the receivers is based on the publicly available information.
(3) Accuracy and reliability specifications may be affected by multipath, satellite geometry and atmospheric conditions. Performances assume the minimum of 5 satellites, follow up of recommended general GPS practices.
(4) Operating time varies based on temperature.



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P5E-Net

GNSS Infrastructure

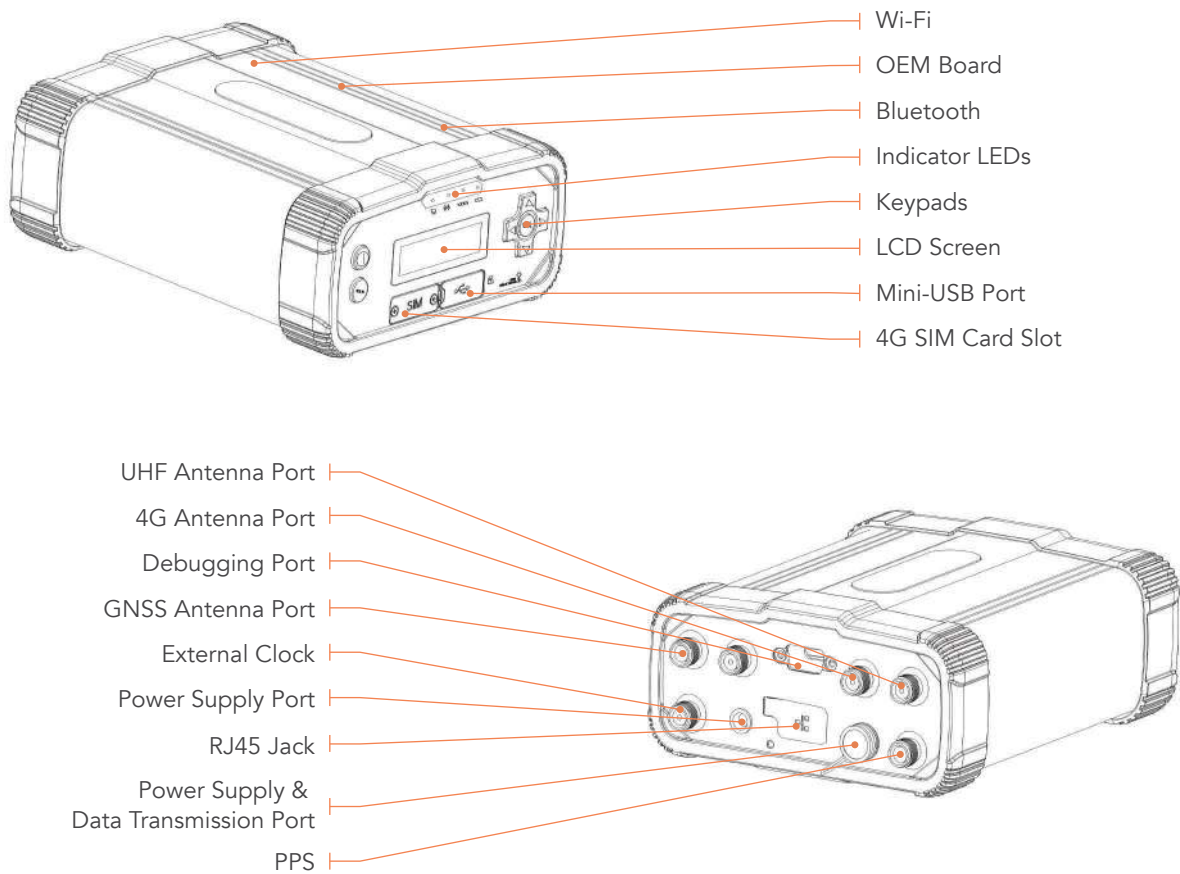


Make your work more efficient

Hardware Description

P5E-Net High-end Reference Receiver

Smart and stable, the multifunctional P5E-Net GNSS reference receiver guarantees the outstanding performance in various environments. With the integrated Linux system, 624 channels for multi-constellation data including L-Band signal, as well as the considerable storage and battery capacity, the operation of the P5E-Net GNSS reference receiver is safe and easy.



Core Technology



624 Channels & Multi-Constellation

With 624 channels, P5E-Net is designed for simultaneous tracking of GPS/GLONASS/Galileo/BeiDou/SBAS satellite signals, including L-Band, to get a high-precision coordinate.



L-Band PPP¹

Compatible with L-Band and RTX, P5E-Net can be more than a base but an ideal rover option in remote regions where the cell tower and GNSS base are not easily accessible.



Multiple Power Supply Options

Two external power inputs and Power over Ethernet make P5E-Net an ideal receiver for any GNSS base station deployment. Higher internal battery capacity with lower power consumption supports up to 20 hours operating duration.



Smart Data Management

Cycling storage, compressed data format option and up to eight independent logging sessions ensure the efficient use of memory. Data can be accessed via web interface, built-in FTP server, or configured to be pushed to remote FTP sites.



Intelligence & Reliability

Email alarm and automatic reconnection can be activated by self-diagnose and receiver status monitoring. Multiple user levels, web interface restrictions and HTTPs encryption are applied to prevent unauthorized access. Integrated firewall, port and MAC filtering provide additional security layers.



Considerable & Stable Storage

With 32GB internal storage and up to 1TB external storage, P5E-Net provides stable and considerable storage space for data logging in multiple industry formats, and delivers a sustainable solution of 15-year data storage without extra devices.

Applications

The P5E-Net GNSS reference receiver provides advanced solutions to various demanding industries, such as GNSS ground based augmentation system, deformation monitoring, atmospheric research, seismic study, precision farming, machine control, vehicle and ship navigation, etc.

