CHCNAV

P5E-Net

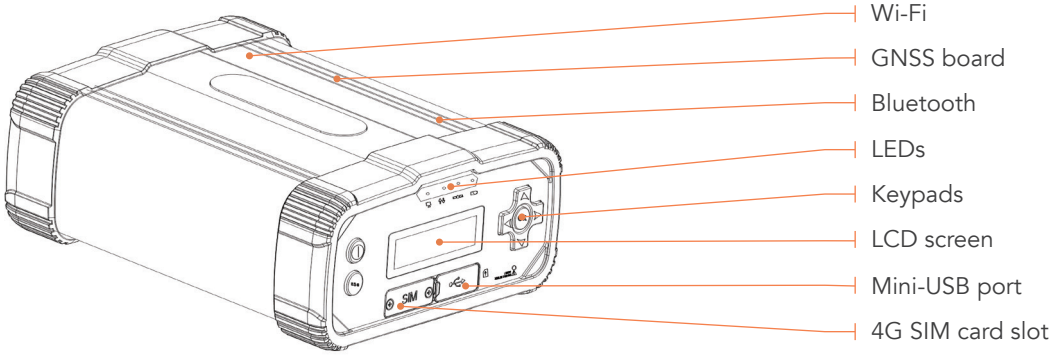
GNSS Infrastructure

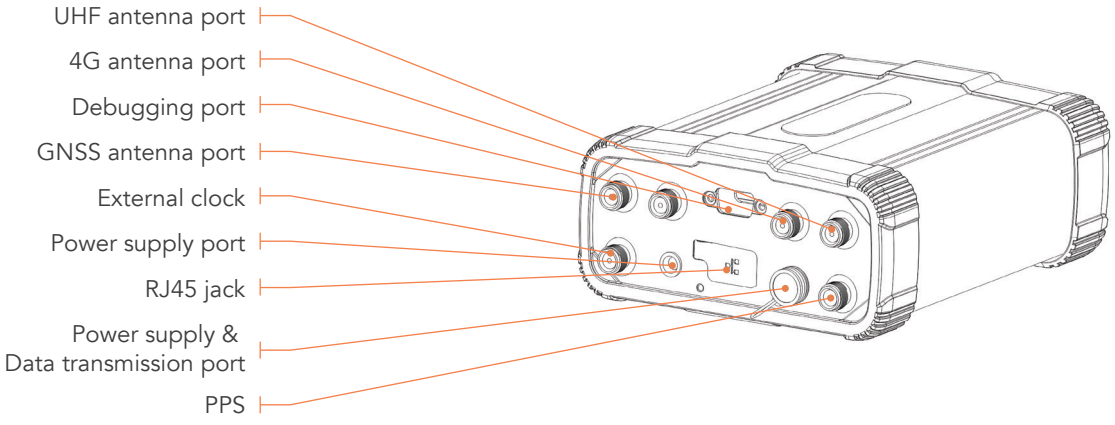
Make your work more efficient

Hardware Description

P5E-Net
High-end Reference Receiver

Smart and stable. The multifunctional P5E-Net GNSS reference receiver guarantees outstanding performance in all environments.
With an integrated Linux system, 336 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 reliable and easy.





Core Technology

336 Channels & Multi-Constellation

With 336 channels, the P5E-Net is designed for simultaneous tracking of GPS, GLONASS, Galileo, BeiDou, and SBAS satellite signals, including L-Band.

L-Band PPP[1]

Compatible with L-Band and RTX™, the P5E-Net can work either as a base or a rover without any limitation in remote regions where the cell tower and GNSS base are not easily available.

Multiple Power Supply Options

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

Smart Data Management

Cycling GNSS data 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.

Smart and Reliable

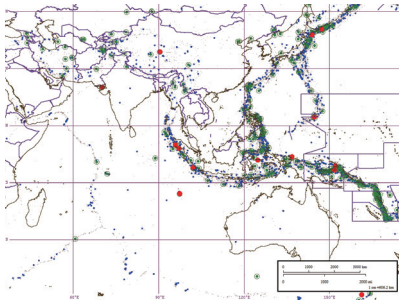
Email alarm and automatic reconnection can be activated by self-diagnose and receiver status monitoring. Multiple user rights, web interface restrictions and HTTPs encryption are applied to prevent unauthorized access. The integrated firewall, port and MAC filtering provide additional security layers.

Large and Reliable Storage

With 32GB internal storage and up to 1TB external disk storage, the P5E-Net provides reliable and considerable storage capacity for data logging in multiple industry formats. It delivers a sustainable solution of up to 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 and vehicle and ship navigation.



Specifications

GNSS characteristics	
Channels	336
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(2)
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 × W × 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%
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion to depth of 1 m
Shock	Survive a 1-meter pole drop

Electrical	
Power consumption	5.2 W (depending on user settings)
Internal battery Capacity	17,000 mAh, 7.4 V
Operating time on internal battery(4)	Up to 20 h (depending receiver configuration)
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 Vibration, Method 514.7

Communications and Data storage	
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 (data download, firmware update) 1 x LAN port HTTP / HTTPs, 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 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®	V4.1
Wi-Fi	802.11 b/g/n, access point mode
Network modem (Internal 4G modem)	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
UHF radio	Standard Internal Rx/Tx: 410 MHz to 470 MHz Transmit power: 0.5 W to 2 W Protocol: CHC, Transparent, TT450 Range: 5 km optimal conditions

*Specifications are subject to change without notice.

(1) Available with further firmware update.
(2) Subject to availability of BDS ICD and Galileo commercial service definition. GLONASS L3, BDS B3 and Galileo E6 will be provided through future firmware upgrade.
(3) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices.
(4) Battery life is subject to operating temperature.

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