CHCNAV

# P5

## GNSS Infrastructure

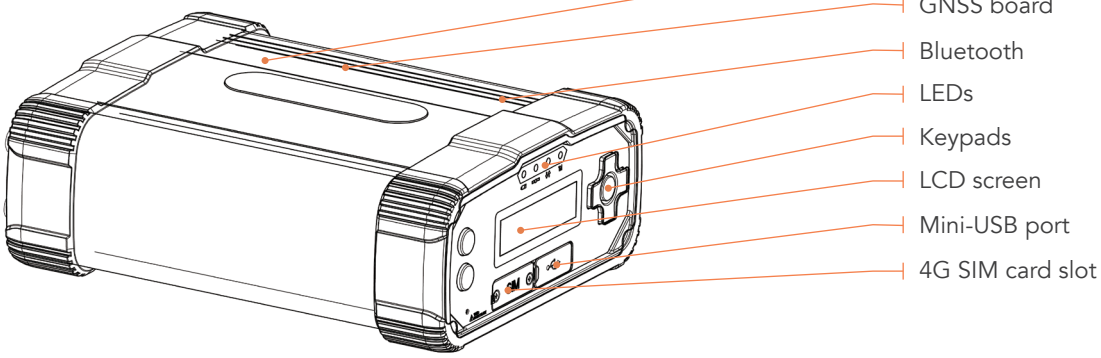

Make your work more efficient

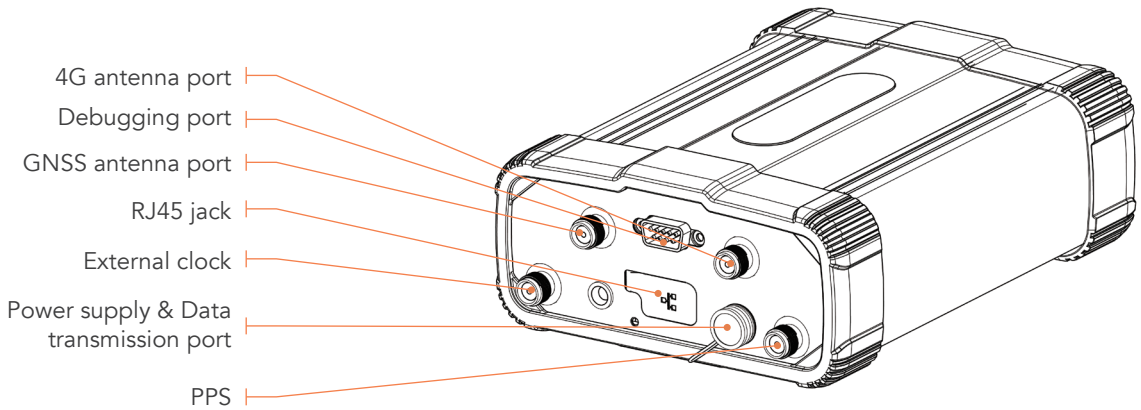
# Hardware Description

## P5
### High-end Reference Receiver

Smart and stable. The multi-functional P5 GNSS reference receiver guarantees outstanding performance in all environments.

With an integrated Linux system, 624 channels for multi- constellation data, as well as the considerable storage and battery capacity, the operation of the P5 GNSS reference receiver is reliable and easy.



# Core Technology

## 624 Channels & Multi-Constellation

With 624 channels, the P5 is designed for simultaneous tracking of GPS, GLONASS, Galileo, BeiDou, and SBAS satellite signals.

## 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

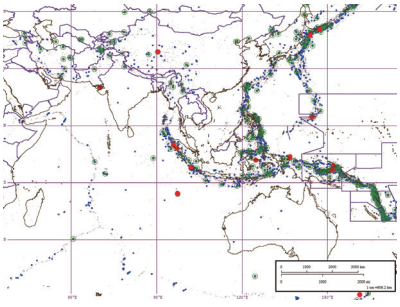
Email alarm and automatic reconnection can be activated by self-diagnose and receiver status monitoring. Multiple user rights, web interface restrictions and HTTPs encryption are applied to prevent unauthorized access. The integrated firewall, port and MAC filtering provide additional security layers.

## Large and Reliable Storage

With 32GB internal storage and up to 1TB external disk storage, the P5 provides reliable and considerable storage capacity for data logging in multiple industry formats. It delivers a sustainable solution of up to 10-year data storage without extra devices.

## Applications

The P5 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** | 624 |
| **GPS** | L1/L2/L5 |
| **GLONASS** | L1/L2 |
| **Galileo** | E1/E5a/E5b |
| **BeiDou** | B1/B2/B3 (1) |
| **QZSS** | L1/L5 |
| **SBAS** | L1 |
| **GNSS accuracies(2)** | |
| **Real time kinematic (RTK)** | Horizontal: 8 mm + 1 ppm RMS<br>Vertical: 15 mm + 1 ppm RMS<br>Initialization time: < 8 s<br>Initialization reliability: > 99.9% |
| **Post-processing static** | Horizontal: 2.5 mm + 0.5 ppm RMS<br>Vertical: 5 mm + 0.5 ppm RMS |
| **Post-processing static (long observation)** | Horizontal: 3 mm + 0.1 ppm RMS<br>Vertical: 3.5 mm + 0.4 ppm RMS |
| **Hardware** | |
| **Size (L × W × H)** | 200 mm × 150 mm × 69 mm<br>(7.9 in x 5.9 in x 2.7 in) |
| **Weight** | 2.15 kg (75.8 oz) with battery |
| **Environment** | Operating: -40°C to +65 °C (-40°F to +149°F)<br>Storage: -45°C to +80°C (-49°F to +176°F) |
| **Humidity** | 100% |
| **Ingress protection** | IP68 waterproof and dustproof, protected from temporary immersion to depth of 1 m |
| **Shock** | IEC68-2-27, survive a 1-meter pole drop |
| **Electrical** | |
| **Power consumption** | 5 W (3 W in the power saving mode) |
| **Internal battery Capacity** | 17,000 mAh, 7.4 V |
| **Operating time on internal battery** (3) | Up to 24 h (depending receiver configuration) |
| **External power** | 9 V DC to 36 V DC |

| Communications and Data storage | |
|---|---|
| **Ports** | 1 x 10-pin LEMO port (external power, RS-232)<br>1 x USB 2.0 port (data download, firmware update<br>1 x LAN port<br>HTTP / HTTPs, TCP/IP, UDP, FTP, NTRIP Caster, NTRIP Server, NTRIP Client<br>– Simultaneously transmits multiple data stream<br>– Support proxy server and route table<br>– Support Power over Ethernet (PoE)<br>1 x DB9 port<br>1 x GNSS antenna port<br>1 x SIM card slot |
| **Protocols** | Correction formats: CMR(4) RTCM2.x, RTCM 3.x<br>Observables: RINEX2.x, RINEX3.x, BINARY<br>Position/Status I/O: NMEA 0183 output,<br>Met sensor |
| **Internal data logging and position** | Output frequency up to 20 Hz (optional), 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, B3, B8, all bands with diversity<br>LTE (TDD): B38, B39, B40, B41, all bands with diversity<br>DC-HSPA+/HSPA+/HSPA/UMTS: B1, B5, B8, B9, all bands with diversity<br>TD-SCDMA: B34, B39<br>EDGE/GPRS/GSM 900/1800 MHz |

*Specifications are subject to change without notice.

(1) Available with future firmware update.
(2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. Performances assume minimum of 5 satelites, follow up of recommended general GPS practices.
(3) Battery life is subject to operating temperature.
(4) Available with future firmware update.



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