P3E GNSS

KEY FEATURES

- **Embedded 220 channels GNSS core module GPS, GLONASS, Galileo and BeiDou**

- **Ethernet, Serial and USB support**

- **Convenient HTTP interface and configuration**

- **Multiple data file formats**

- **Powerful remote configuration and access**

- **Ultra-rugged case with multiple mounting options**

Designed for seamless integration, the CHC P3E is a powerful Multi-application GNSS sensor which delivers state-of-the-art positioning features in a rugged enclosure.

The P3E GNSS sensor provides a cost-effective answer to demanding applications where high performances and reliability are required, including: geodetic reference stations, academic centimeter accuracy RTK sensors for marine surveying, dredging, and GPS/GNSS machine's guidance.

Outstanding GNSS Performances
The P3E offers outstanding performances with proven and innovative GNSS functionality. P3E support tracking GPS/GLONASS/BDS/GALILEO/SBAS. This low noise GNSS carrier phase measurement and low level elevation tracking technology make the P3E a powerful reference station solution.

Simple and Powerful
P3E owns 220 channels. Support several Internet protocols, such as Ntrip client, Ntrip server and TCP. Support numerous data output in differential formats, like SCMRx, RTCM3.2 and so on. Numerous data formats and output messages can easily be configured to fit into existing GNSS equipment pool.

Exceptional Performances to Price Ratio
CHC P3E is the most affordable high-end multi-applications GNSS sensor solutions for demanding system integrators and RTK network providers.

Reliable Powerful Competitive

Technical Specifications

GNSS characteristics

- 220 channels with simultaneously tracked satellite signals
  - GPS: L1 C/A, L2E, L2C, L5
  - GLONASS: L1 C/A, L1 P, L2 C/A, L2 P, L3
  - BDS: B1, B2
  - SBAS: WAAS, EGNOS, MSAS
  - Galileo: L1 BOC, E5A, E5B, E5Alt8OC
  - QZSS: L1 C/A, L1 SAIF, L2C, L5

- Advanced multipath mitigation technology
- Low noise carrier phase measurement with <1 mm precision in a 1 Hz bandwidth

Performance specifications[1]

- Real Time Kinematics (RTK)
  - Horizontal: 8 mm + 1 ppm RMS
  - Vertical: 15 mm + 1 ppm RMS
  - Initialization time: typically < 10 s
  - Initialization reliability: typically > 99.9%

- Post Processing Static
  - Horizontal: 3 mm + 0.5 ppm RMS
  - Vertical: 5 mm + 0.5 ppm RMS
  - Baseline Length: ≤ 300 km

Communications

- 1x LAN port:
  - 1 port with RJ45 connector supports links to 10BaseT/100BaseT networks.
  - HTTP, HTTPS, TCP/IP, UDP, NTRIP Caster, NTRIP Server, NTRIP Client
  - Proxy server support
  - Routing table support
  - NTP Server, NTP Client support
  - UPnP and Zeroconf support
  - Email Alerts and Position Monitoring
- Protocols:
  - Correction formats; RTCM2.1, RTCM2.3, RTCM2.4, RTCM3.0, RTCM3.2, CMR+, CMR, sCMRx
  - Position/Status I/O: NMEA0183 v2.30 and v4.0, GSOF
  - Observables: RT17, RT27, BINEX, RTCM 3.x
  - Up to 50 Hz output standard

- Internal data logging storage capacity: 4 GB

Physical

- Size (LxWxH): 175.5 x 156 x 63.8 mm (6.9 x 6.1 x 2.5 in)
- Weight ≤ 2 kg (71 oz)
- Operating temperature: -25 °C to +65 °C (-13°F to 149°F)
- Storage temperature: -40 °C to +80°C (-40°F to 176°F)
- Humidity: 100% condensation
- Waterproof and dust proof: IP65 and MIL-STD 810F
- Shock: IEC68-2-27, Survival 1m drop onto hard surface
- Ground screw
- Colour: Gray
- Material: Metal

Electrical

- External power input:9-36 VDC
- Power Consumption: 4.2 W

User Interface

- PC Control Utility via Serial
- Web User Interface
  - Secure
  - Allows remote configuration, data retrieval and firmware updates
  - Setup of multiple streaming / monitoring ports

Antenna option

- A220GR GNSS Geodetic Antenna, and C220GR GNSS Choke Ring Antenna

(1) Accuracy and reliability specifications may be affected by multipath, satellite geometry and atmospheric conditions. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices. (2) Feature available on demand

Specifications are subject to change without notice.