N71 GNSS

KEY FEATURES

- **220 channels for unmatched GNSS tracking performance**
- **Ethernet, Serial and USB support**
- **Convenient HTTP interface and configuration**
- **Binary compatibility with industry leaders**
- **Multiple data formats**
- **Powerful remote configuration and access**
- **Ultra-rugged case with multiple mounting options**

Designed for seamless integration, the CHC N71 is a powerful multi-application GNSS sensor which delivers state-of-the-art positioning features in a rugged enclosure.

The CHC N71 GNSS sensor provides a cost-effective answer to demanding applications such as geodetic reference station, academic research, precision agriculture RTK network, deformation monitoring, centimeter accuracy RTK sensor for marine survey, dredging or any GPS/GNSS machine guidance when high performances and reliability are required.

Outstanding GNSS Performances

The N71 offers outstanding performances with proven and innovative GNSS functionality. The future proof multi-constellation tracking feature increases availability in obstructed sky conditions such as construction sites in urban areas while securing RTK accuracy. The very low noise GNSS carrier phase measurement and low level elevation tracking technology make the N71 a powerful reference station solution.

Versatile and rugged

The N71 innovative design integrates a built-in 220-channel GNSS core and optional UHF and GSM/GPRS modules in one single rugged aluminum enclosure. Numerous data formats and output messages can easily be configured to fit into existing GNSS equipment pool.

Exceptional Performances to Price Ratio

CHC N71 is the most affordable high-end multi-applications GNSS sensor solutions for demanding system integrators and RTK network providers.

Technical Specifications

GNSS characteristics

- 220 channels with simultaneously tracked satellite signals
  - GPS: L1C/A, L1C, L2C, L2E, L5
  - GLONASS: L1C/A, L1P, L2C/A, L2P, L3
  - SBAS: WAAS, EGNOS, MSAS
  - Galileo: E1, E5A, E5B (test)
  - BeiDou: B1, B2 (optional)

- 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, FTP, 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
- 1x Lemo 10 pin 1 shell, 3 wire serial with power input, 1x USB 4 wire
- Optional internal GPRS modem: - Quad-band international modem with SMA antenna connector
- Optional radio modem:
  - Internal Rx: 410-430[2] / 430-450[2] / 450-470 MHz
  - External Tx DL5: 1W - 20W adjustable [3]

- Protocols:
  - Correction formats; RTCM2.1, RTCM2.3, RTCM3.0, CMR+, CMR
  - Position/Status I/O: NMEA0183 v2.30, GSOF
  - Observables: RT17, RT27, BINEX, RTCM 3.x
  - Up to 50 Hz output standard
- Internal data logging storage capacity: 64 MB

Physical

- Size (LxWxH): 200 x 152 x 64 mm (7.9 x 6.0 x 2.5 in)
- Weight: 1.35 kg (48 oz)
- Operating temperature: -30 °C to +65 °C (-22°F to 149°F)
- Storage temperature: -40 °C to +75°C (-40°F to 167°F)
- Humidity: 100% condensation
- Waterproof and dust proof: IP65 and MIL-STD 810F
- Shock: survives a 1.5-meter drop on to concrete

Electrical

- Power consumption: 2.6 W nominal, dependent on user settings
- External power input: 9-18 VDC

User Interface

- PC Control Utility via Serial
  - Allows for advance receiver setup of UHF, GPRS Modem, data logging
- 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 (3) Use of UHF Tx is subject to country specific type approvals.

Specifications are subject to change without notice.