X91+ GNSS

KEY FEATURES

- *Embedded 220 channels GNSS core module GPS, GLONASS, Galileo and BeiDou*
- *Outstanding RTK initialization and centimeter level position accuracy*
- *Landstar or Carlson's SurvCE Field data collection software scale to your survey need*
- *Built-in GPRS modem and UHF data link*
- *Seamless interoperability with major GPS/GNSS manufacturers*
- *Small, lightweight and rugged design for demanding field work*

The CHC X91+ GNSS is a compact GNSS receiver designed for high accuracy and productivity - even in harsh environments. Powered by 220 channels GNSS core engine, the X91+ GNSS provides a cost-effective solution to any surveying project.

Easy-to-use, efficient and intuitive work flow, designed for advanced network RTK survey, compact and rugged, the X91+ is the perfect choice for demanding survey applications.

Fully Integrated

Built-in GNSS engine, antenna, UHF and GSM/GPRS modules, Bluetooth® communication in one single unit to make your everyday work simple.

Compact and lightweight

The size of 180 mm x 85 mm (7.1 in x 3.3 in) makes the X91+ only weights 1.35 kg (48 oz) with battery.

Optimized for Network RTK

Connection to GNSS RTK Networks is made easy and benefits from the unique X91+ auto-connect feature.

Compatibility

The X91+ RTCM compliance with major GPS brands allow a trouble-free integration into an existing pool of survey instrument.

Competitive and Reliable

By combining decades of positioning and surveying know-how, the X91+ GNSS is one of the most powerful GNSS RTK solutions, with no compromise with quality but at an affordable price for every surveyor.

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
- Advanced multipath mitigation technology
- Low noise carrier phase measurement

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 RS232 serial port
- 1x high speed USB
- Integrated GSM/GPRS modem
- Integrated Bluetooth® class 2
- CHC radio modem internal Rx: 430-450/450-470 MHz
- Optional radio modem (2):
  - Internal Rx/Tx: 403-473 MHz
  - External Tx DL5: 1W - 20W adjustable
- Protocols:
  - RTCM2.1, RTCM2.3, RTCM3.0, CMR, CMR+ input and output
  - NMEA0183 output
  - RINEX and HCN outputs for GNSS raw data
- Data Storage:
  - 4 GB internal memory
  - GPS device mounts as a USB external hard drive

Physical

- Size (HxD): 85 x 180 mm (3.3 x 7.1 in)
- Weight: 1.35 kg with battery (48 oz)
- Operating temperature: -40 °C to +65 °C (-40°F to 149°F)
- Storage temperature: -40 °C to +75°C (-40°F to 167°F)
- Humidity: 100% condensation
- Waterproof and dust proof: IP67 - protected from temporary immersion to depth of 1 meter, floats
- Shock: survives a 2-meter drop on to concrete

Electrical

- Power consumption: 2.6 W
- Li-ion battery capacity: 2200 mAh
- Battery life: typical 5 hours in RTK mode
- External power input: 9-18 VDC

Software (optional)

- CHC's Landstar field data collection software
- Carlson's SurvCE field data collection software

(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) UHF type approvals are country specific.

Specifications are subject to change without notice.