X900+

Survey & Engineering

- 120 channels mulit-constellation receiver
- CHC LandStar, MicroSurvey Field Genius or Carlson SurvCE field data collection software supportable
- Integrated Bluetooth, network and UHF modem
- Innovative and rugged design built for harsh environment

X900+ GNSS receiver from CHC leverages the latest GNSS technology by integrating 120 channels with the ability to track GPS, GLONASS, Galileo and BDS. It offers greater performances with proven and innovative GNSS functionality.

It's innovative design integrates a built-in GNSS core, multi-constellation antenna, Bluetooth communication, optional UHF and 3G network modem in one single receiver. Meanwhile, It supports various field software dedicated to topographic and construction surveying.

CHC LandStar gives full control over data collection and stakeout, without compromising on easy-to-use and high productivity. Carlson SurvCE combines advanced functionality and an intuitive user interface. SurvCE is a complete data collection system for RTK and can be upgraded to take control of total stations and advanced road projects.

Technical Specifications

GNSS characteristics

- 120 channels with all in view simultaneously tracked satellite signals
  - GPS: L1, L2, L2C, L5
  - GLONASS: L1, L2
  - SBAS: WAAS, EGNOS, MSAS
  - BDS: B1, B2
- Advanced multipath mitigation technology
- Low noise carrier phase measurement

GNSS Accuracies(1)

- Real Time Kinematics (RTK)
  - Horizontal: 10 mm + 1 ppm RMS
  - Vertical: 20 mm + 1 ppm RMS
  - Initialization Time: typically < 10 s
  - Initialization Reliability: typically > 99.9%
- Post-processing Static
  - Horizontal: 5 mm + 1 ppm RMS
  - Vertical: 10 mm + 1 ppm RMS
  - Baseline Length: ≤ 300 km
- Precise Point Positioning (PPP)(2): 4 cm RMS

Communications

- Serial: 1 x 10-pin LEMO port (external power, USB data download, USB update, RS-232)
- Integrated 3G network modem
- Bluetooth®: V2.0
- CHC UHF Modem Internal Rx: 450 MHz to 470 MHz
- Optional UHF modem(3):
  - Internal Rx/Tx: 403 MHz to 473 MHz, up to 1 W
  - External Tx DL6: 5 W to 28 W adjustable
- Protocols:
  - RTCM2.x, RTCM3.x, CMR, CMR+ and RTCA input and output
  - NMEA 0183 output
  - HCN outputs for GNSS raw data (convertible to RINEX static format)
- Data Storage:
  - 4 GB internal memory
  - GPS device mounts as a USB external hard drive

Physical

- Size (H x D): 84 mm x 179 mm (3.3 in x 7.0 in)
- Weight: 1.4 kg (49.1 oz) with batteries
- Environment
  - Operating: -40°C to +65 °C (-40°F to +149°F)
  - Storage: -40°C to +75°C (-40°F to +167°F)
- Humidity: 100% condensation
- Dust and Water Proof: IP67
- Shock and Vibration: 2 m (6.56 ft) fall onto concrete

Electrical

- Power Consumption: 2.6 W (depending on user settings)
- Li-ion Battery Capacity: 3400 mAh
- Operating Time(4): Typical 6 h in RTK mode
- External Power: 9 V DC to 18 V DC

Software (optional)

- CHC Landstar 7 Android field data collection software
- CHC Landstar 6 Windows Mobile field data collection software
- MicroSurvey Field Genius field data collection software
- Carlson 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) If users enable Terrastar service, it will automatically disable BDS. (3) UHF type approvals are country specific. (4) Operating time varies based on temperature.

Specifications are subject to change without notice.

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