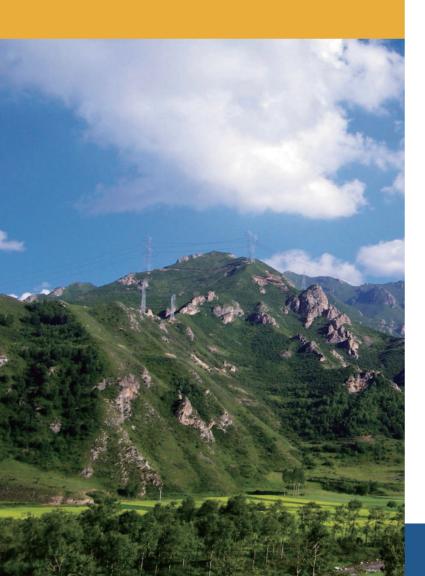# i70

Survey & Engineering

- Cost-effective, high performance RTK receiver
- Innovative and rugged design built for harsh environment
- 128 × 64 dpi sunlight readable LCD panel
- Internal TRx UHF
- 3.75G network modem
- RTK data forwarding
- Built-in Bluetooth and WiFi communication
- Dual hot-swappable batteries
- 32 GB internal memory

i70 is one of the most cost-effective smart GNSS receiver selected by large number of surveyors for its outstanding performances and reliability. It leverages the latest GNSS technology by integrating 120 channels with field software dedicated to topographic and construction surveying.

i70 incorporates dual hot-swappable batteries, allowing continuous uninterrupted work. Integrated 3.75G network modem, TRx UHF module, E-bubble, Bluetooth and WiFi connectivity provides seamless solution in field. High resolution LCD panel also exploits new method for surveyors to check receiver working states. All these features integrated into a small, ergonomic package allows the most productive day of a surveyor.

■ Technical Specifications

GNSS Characteristics

- 120 channels with all in view simultaneously tracked satellite signals
    - GPS: L1, L2, L2C
    - GLONASS: L1, L2
    - SBAS: WAAS, EGNOS, MSAS
    - BDS: B1, B2, B3
    - Galileo: E1, E5B (optional)
- 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: < 10 s
    - Initialization Reliability: > 99.9%
- Post-processing Static:
    - Horizontal: 5 mm + 1 ppm RMS
    - Vertical: 10 mm + 1 ppm RMS

Hardware

- Size (H × W): 135 mm × 116 mm (5.3 in x 4.6 in)
- Weight: 1.1 kg (2.4 lb)
- Environment
    - Operating: -40°C to +85°C (-40°F to +185°F)
    - Storage: -55°C to +85°C (-67°F to +185°F)
- Humidity: 100% condensation
- Dust and Water Proof: IP67
- Shock and Vibration: 2 m (6.56 ft) fall onto concrete
- LCD: 128 x 64 dpi sunlight readable with function/accept buttons

Certifications and Calibrations

- FCC Part 15 (class B Device), FCC Part 22, 24, 90; CE Mark; C-Tick; Bluetooth EPL; IGS & NGS Antenna Calibration; MIL-STD-810G, Method 514.7

Communications and Data Recording

- Serial:
    - 1 x 7-pin LEMO port (external power, RS-232)
    - 1 x USB 2.0 port (USB data download, USB update)
- Network Modem: Internally integrated 3.75G modem
    - HSPA+ 21 Mbps (download), 5.76 Mbps (upload)
    - WCDMA 850/900/1700/1900/2100
    - EDGE/GPRS/GSM 850/900/1800/1900
- Bluetooth®: Internally integrated multimode system compatible with Android, Windows Mobile and Windows desktop operating systems
- WiFi: 802.11 b/g/n, access point mode
- UHF Radios: Protected TNC Female
    - Standard Internal Rx/Tx: 410 MHz to 470 MHz
      Transmit Power: 0.5 W to 2 W
      Protocol: CHC, Trimble, Pacific Crest
      Range: 5 km under optimal conditions
- Protocols:
    - CMR, CMR+ input and output
    - RTCM 2.x, RTCM 3.x input and output
    - NMEA 0183 output
    - HCN, HRC and RINEX static formats
    - NTRIP Client, NTRIP Caster
- Data Storage:
    - 32 GB high-speed memory

Electrical

- Power Consumption: 3.8 W (depending on user settings)
- Li-ion Battery Capacity: 2 × 3400 mAh, 7.4 V
- Operating Time [2]:
    - RTK UHF Base: Up to 6 h
    - RTK Rover: Up to 10 h
    - Static: Up to 12 h
- External Power: 12 V DC to 36 V DC

(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) Operating time varies based on temperature.

Specifications are subject to change without notice.

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