Hydrographic Surveying

Drone Operations

SPECIFICATION

GNSS Signal Tracking

Channels: 1408
BDS : B1I, B2I, B3I, B1C, B2a, B2b
GPS: L1C/A, L1C, L2P(Y), L2C, L5
GLONASS: G1, G2, G3
Galileo: E1, E5a, E5b, E6
QZSS: L1, L2, L5, L6
SBAS: L1
NavIC: L5
Initialization Time: < 5 s (typical)
RTK Initialization Reliability: > 99.9%
Re-acquisition Time: < 1 s

Accuracy

Single Point Positioning:
Horizontal: 1.5m **; Vertical:** 2.5m
RTK Accuracy:
Horizontal: 8mm + 1ppm (RMS)
Vertical: 15mm + 1ppm (RMS)
Static Accuracy:
Horizontal: 2.5mm + 0.5ppm (RMS)
Vertical: 5mm + 0.5ppm (RMS)

Communication

Bluetooth: BT 2.1 + EDR / 3.0 / 4.1 / 4.2 LE
(BT 4.2 supported on Android 7.1 and above)
Wi-Fi: 2.4 GHz, 802.11 b/g/n
4G:
LTE-TDD: B38 / B40 / B41
LTE-FDD: B1 / B3 / B5 / B7 / B8 / B20
UMTS / HSPA+: B1 / B8
GSM / GPRS / EDGE: 900 / 1800 MHz
WEBUI: Supported

Data Output

Differential Data: RTCM 3.X
Positioning Data: NMEA-0183
Static Data: Binary format

UHF Radio

Frequency range: 410–470 MHz
Operating mode: Half-duplex radio
Power: 2 W / 5 W
Protocols Supported: SOUTH, TRIMTALK, TRANSEOT, TRIMMARK3, SATEL, TT450S, CSS, SP, etc.
Working Range: Up to 20 km under ideal

Tilt Measurement

Tilt angle range: 0–120°
Tilt accuracy: 2 cm (≤ 60°)

Physical & Environmental

Weight: 1.30 kg
Dimensions: 151 × 151.5 × 101 mm
Protection rating: IP67
Impact resistance: IK08
Drop resistance: 1.8 m
Indicator: Single button LED
Display: 1.39-inch LCD
Operating temperature: –45 °C to +75 °C
Storage temperature: –55 °C to +85 °C
Humidity: 100% non-condensing

Electrical

Operating time:
Rover (CORS mode): up to 36 hours;
Base station mode: up to 14 hours
Input voltage: 12 V / 2 A
Battery capacity: 13,200 mAh
Storage capacity: 32 GB

Data Interfaces

Data update rate: 1 Hz (default), up to 50 Hz
Interfaces: Type-C, SIM slot, TNC connector, 5-pin LEMO (9–14 V)

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SurveyGear

R92

iBase GNSS Receiver

Built for Distance

SurveyGear

ibase

FEATURE

Multi-Protocol Compatibility with Extended Transmission Range

Equipped with an integrated UHF transceiver radio module, the R92 delivers transmission distances of up to 20 km. It supports mainstream radio protocols, including TRANSEOT, TRIMTALK, TRIMMK3, TT450S, SOUTH, SATEL, CSS, and other proprietary formats.

Professional Design for Demanding Field Operations

The R92 features a 1.39-inch LCD display for intuitive status viewing. A built-in 13,200 mAh high-capacity battery eliminates power anxiety during long operations. The 32 GB internal storage enables real-time data logging, and support for external SIM cards allows flexible access to cellular networks.

NTRIP Caster Supported — Ideal for UAV Base Stations

With NTRIP Caster functionality, the R92 can communicate directly with UAVs to deliver stable differential corrections. Even in areas without network coverage or CORS services, it ensures reliable drone positioning and smooth flight operations.

Easy Operation, One Device for Multiple Roles

The R92 seamlessly switches between base station and rover modes, allowing a single device to handle multiple tasks. Its intelligent WEBUI platform provides fast, convenient configuration and real-time monitoring directly through a browser.

ADVANTAGE

- Radio Base Mode
- Network Base Station
- Rover Mode
- Tilt Measurement
- NTRIP Caster
- Static Survey
- WEBUI
- Full Wireless Connectivity

APPLICATION (BASE STATION)

Machine Control

Surveying and Mapping

Mining Surveying

Precision Agriculture