

GNSS RECEIVER

F90

- › Multi-Constellation with L-Band and SBAS
- › GNSS measurement technology revolution
- › The F90 overturns the traditional and enlightens the future!

F90 tracks GPS, GLONASS, Galileo, BeiDou and can maximize the tracking to observe all visible GNSS satellite signals, thereby providing maximum performance for accuracy and real-time measurements. F90 also support RTX correction service, can get cm accuracy just with one receiver.

Performance

F90 can quickly search available satellites and soon get Fixed solution. F90 with its advanced technology ensures it works well even in harsh environment such as under heavy foliage.

Highly integrated internal components

The innovative technology made F90 has excellent combination with GNSS, 4G, Bluetooth and Wi-Fi antenna. F90 is also inserted with highly integrated Bluetooth, Wi-Fi and 4G network modules, which reduces the internal signals crosstalk. The powerful 360-degree omni-direction signal receiving in F90 enables full omnidirectional communications.

Third generation tilt surveying technology

Inserted with high-sensitive E-bubble and brand-new tilt survey algorithm, F90 is calibration-free. Immune to magnetic disturbance and free from limitation of tilt angles. F90 can measure points where a vertical placement of the pole is not possible such as house corners.

All protocol compatible internal radio

Initially adopt our independent R & D TRM series internal radio, F90 enables frequency band change ranges from 410-470MHZ. Enables communication with protocol like SATEL, PCC-GMSK, TrimTalk 450s, South, TrimMark III (19200) and GeoTalk, GeoMark. F90 is able to work distance of 5 kilometers with only 1 Watt radio.

4G Network

F90 with its advanced 4G module, guarantee 4G network can transmit world-widely. This results more convenient and stable network communication. will alarm immediately



Multi-Connectivity and WEB UI Control

Distinguished from former GNSS, F90 provides two connecting methods for receiver and controller—Bluetooth connection and Wi-Fi connection. Data transmission proves to be more stable with these new connecting ways.

The second generation WEB UI on F90 is full compatible with all devices and all browsers. It's more convenient with WEB UI control.

Long Life Battery

Inserted with 2 smart hot swappable Lithium batteries (same battery used with SXPad 1000P), F90 can work maximum of 10 hours without stopping. Battery level can be viewed at the press of one button. With new excellent design, more than 20% power consumption can be reduced.

Weight & Dimension

Without affecting accuracy and efficiency, this innovative GNSS Receiver F90 is made extremely light and small. Evens till equipped with magnesium alloy fuselage, F90 weighs only 1 kg and measures only 140mm x 157mm x 76mm.

SYSTEM

| | |
|-----------------|---|
| OS | Linux |
| Memory | Internal 8G, TF Extended, Max≥32G |
| Bluetooth | V2.1+EDR / V4.1 Dual Mode Class2 |
| Wi-Fi | 802,11 b/g/n |
| 4G | EC25-E, EC25-A: LTE, WCDMA, GSM |
| Data format | CMR, CMR+, RTCM 2,3, RTCM3.x, RTCA |
| Internal UHF | TRM101 Power 1 Watt Frequency: 410-470 MHz Work Distance: 5km in good environment |
| Protocol | SATEL, PCC-GMSK, TrimTalk 450S, South, TrimMark III(19200), South 19200 |
| Electric Bubble | Support, Support tilt survey |

INTERFACE

| | |
|-----------|--|
| TNC | For UHF Antenna |
| 5 pins | External radio and external power |
| 7 pins | NMEA output + USB Port |
| Others | SIM slot and TF slot |
| Buttons | Power button with indicators |
| Indicator | 4 indicators, Satellites, Datalink, Bluetooth, WIFI Status |
| Language | Supports TTS Multi language voice |

PHYSICAL

| | |
|------------|-------------------------------|
| Dimensions | 157 mm x 76 mm |
| Weight | 1.2KG with 2 batteries inside |

ENVIRONMENT

| | |
|-------------------|--|
| Work Temperature | -30 °C - + 65 °C |
| Stock Temperature | -40 °C - + 80 °C |
| Protection | IP67 |
| Shock | Withstand 2 meters pole drop, 1.2m drop without pole |
| humidity | 100% |

GNSS

| | |
|-----------------|--|
| GPS Board | BD 990 |
| Channels | 336 |
| Satellites | GPS: L1 C/A, L2C, L2E, L5 GLONASS: L1 C/A, L2C, L3 BeiDou: B1/B2/B3 Galileo: E1/E5 AltBOC/E5a/E5b/E6 IRNSS: L5 SBAS: L1/L5 QZSS: L1C/A, L1C, L2C, L5 |
| Update rate | 50 Hz |
| Static accuracy | Horizontal ± 2.5 mm + 1 ppm RMS Vertical ± 5 mm + 1 ppm RMS |
| RTK accuracy | Horizontal ± 8 mm + 1 ppm RMS Vertical ± 15 mm + 1 ppm RMS |

POWER

| | |
|---------|--|
| Battery | Dual Battery, 7.2V/3400mAh Can work at least 10 hours |
| Input | 9~28V DC |