

F90

GINTEC



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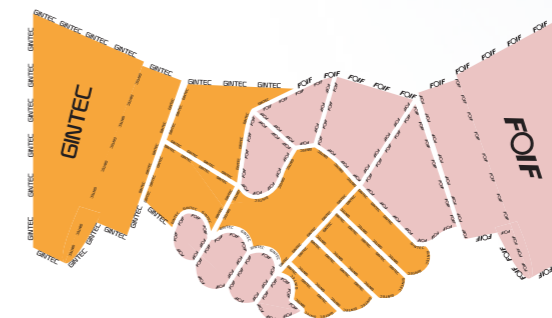
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Work as you want

Guangzhou Geosurv Information Technology CO., Ltd is a company specialized in surveying and mapping. Our business expands to more than 20 countries around the globe. Customer is always the top priority in our company culture. We work diligently for our clients by offering high quality products and good service. Our engineers are all very experienced. Rich experience and abundant knowledge in this industry guarantee every decision we made are on the basis of scientific jobsite test. At GINTEC we strive to provide great products and service with reasonable price. We believe this is the key to have more customer and gain more cooperation.

GINTEC TEAM

launch a new brand



More advanced & More excellent

F990

I'm advanced



I'm classic



NOVATEL 729, 555 channels, Terrastar Trimble BD990, 336 channels, RTX Hemisphere P328, 394 channels, Atlas

Quick to get fixed solution, can work well in harsh environment, the solution is more stable and reliable

Highly integrated inside, strengthen signal receiving

Third generation tilt survey technology

All protocol compatible internal radio enables long distance surveying

4G network

Bluetooth and Wi-Fi Connection, WEB UI control

Two hot-swappable batteries, same battery for handheld controller

140mmx157mmx76mm 1KG

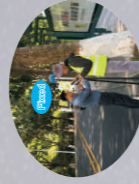
Several protection for ports; Marks to distinguish different ports

Cloud backup and upload data promptly

When base being moved, has low power or no satellites, Rover will alarm immediately



① GNSS



② Performance



③ Internal design



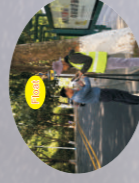
④ Tilt survey



⑤ Internal radio



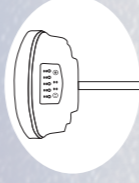
BD970



Need much time to get fixed solution, can't work well in harsh environment



Classic design



No tilt survey



Internal radio not compatible with all protocols



⑥ Network

3G network



⑦ Connectivity



Only Bluetooth connection



⑧ Battery



One battery, different from battery on handheld controller



⑨ Dim&Weight



165mmx188mmx94mm
1.22KGS



⑩ Port protection



Simple protection for ports



⑪ Cloud service



No cloud service



⑫ Alarm system



No alarm system





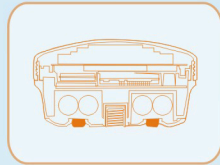
Full Sky and L-Band

Compatible with 3 kinds of GNSS board,^① CY 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. CY F90 also support L-Band^② function, can get CM accuracy just with one receiver.



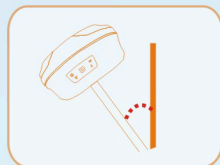
Performance

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



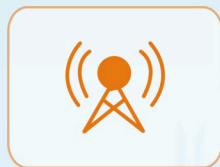
Highly integrated internal components

The innovative technology made CY 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 CY F90 enables full omnidirectional communications.



Third generation tilt surveying technology

Inserted with high-sensitive E-bubble and brand-new tilt survey algorithm, CY F90 is calibration-free. Immune to magnetic disturbance and free from limitation of tilt angles, CY 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, CY 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. CY F90 is able to work distance of 5KM with only 1W radio.



4G Network

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



Multi-Connectivity and WEB UI control

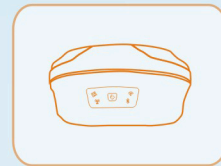
Distinguished from former GNSS, CY F90 provides two connecting methods for receiver and controller---Bluetooth connection and Wi-Fi connection. Data transmission proves to be more stable with these new connecting ways.

The second generation WEB UI on CY 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, CY 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--CY F90 is made extremely light and small. Even still equipped with magnesium alloy fuselage, CY F90 weighs only 1KG and measures only 140mmx157mmx76mm.



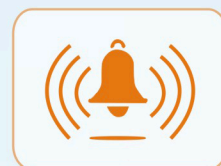
Port protection

Port covers prevent ports from water and dust. Inserted port manufactured lower than outer shell avoid damage when dropping. Marks that clearly demonstrates different port uses make sure they are plug correctly.



Cloud Service

Cloud service in SurPad software enables simultaneous work in field and office, enables data promptly upload and backup, which greatly improve surveying efficiency.



Alarm system

In UHF model, when base is moved or with low power or no satellites, Rover will alarm immediately.



Notes: 1: Novatel OEM 729, 555 channels Trimble BD990 336 channels Hemisphere P328 394 channels.

2: Novatel Terrastar, Trimble RTX portal, Hemisphere Atlas. It's not standard configuration. Need to pay for activation.



Professional Field Survey Software

Surpad 4.0

After so many years development, SurPad 4.0 is not just a version upgrading, it's more like a technology revolution. From Point survey, Road design and Stakeout, Cross section survey, Electric Line survey, Pipeline survey to Map(DXF, SHP) import, Field graphic drawing, Points to line and Photo record, SurPad 4.0 can solve them all easily. More important, SurPad 4.0 supports a wonderful solution applied to different projects such as Land Survey, City Construction, Power station construction, Agriculture Survey, Pipeline maintain etc.




1. SurPad 4.0 is available in multiple languages and compatible with different Android devices.



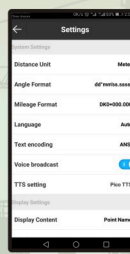
2. Compatible with Total Station, SurPad 4.0 can control Total Station.



3. Equipped with professional road design and stake out function, SurPad 4.0 can solve complex road data easily.




4. Support Geoid and Grid file import and RTCM 1021~1027 data analysis, SurPad 4.0 can easily meet the need of special coordinate systems.



5. Intelligent voice guidance. Every simple operation is accompanied with voice guidance, including connecting instruments, GPS solution, stake out and so on, makes surveying more intelligent and humanized.



6. New CAD Graphic drawing functions. You can collect points to line easily in field. SurPad 4.0 also supports Layers procession function, input/exput DXF, SHP file.



7. Predefined with multiple countries 1600 coordinate system, projection mode, units and file encode scheme. The coordinated system can be transmitted through QR code. Now SurPad 4.0 is truly a global surveying software.





| | Items | Specification | | |
|--------------------|-------------------|--|--|--|
| GNSS | GPS Board | OEM729 | BD990 | P328 |
| | Channel | 555 | 336 | 394 |
| | SATELLITES | GPS: L1C/A,L1C,L2C,L2P,L5 GLONASS: L1C/A,L2C/A,L2P,L3,L5 BeiDou: B1,B2,B3 Galileo: E1,E5 AltBOC,E5a,E5b,E6 NAVIC: L5 SBAS: L1,L5 QZSS: L1C/A,L1C,L2C,L5,L6 | GPS: L1 C/A,L2E,L2C,L5 GLONASS: L1C/A,L2C/A,L3 CDMA BeiDou: B1,B2,B3 Galileo: E1,E5A,E5B,E5AltBOC,E6 NAVIC: L5 QZSS: L1C/A,L1SAIF, L1C,L2C, L5,LEX SBAS: L1 C/A,L5 | GPS: L1C/A,L1P,L1C,L2P,L2C,L5 GLONASS: G1,G2, P1,P2 BeiDou: B1,B2,B3 GALILEO: E1BC,E5a,E5b QZSS: L1C/A,L2C,L5,L1C SBAS: L1 C/A,L5 |
| | Update rate | 5Hz (Standard 5 Hz, can pay to activate 100HZ) | 50Hz (Standard 50 Hz) | 5Hz (Standard to 5 Hz, can pay to activate 50HZ) |
| | Static Accuracy | Horizon: ± (2.5+1×10 ^{-D}) mm Vertical: ± (5+1×10 ^{-D}) mm | Horizon: ± (2.5+1×10 ^{-D}) mm Vertical: ± (5+1×10 ^{-D}) mm | Horizon: ± (2.5+1×10 ^{-D}) mm Vertical: ± (5+1×10 ^{-D}) mm |
| | RTK Accuracy | Horizon: ± (8+1×10 ^{-D}) mm Vertical: ± (15+1×10 ^{-D}) mm | Horizon: ± (8+1×10 ^{-D}) mm Vertical: ± (15+1×10 ^{-D}) mm | Horizon: ± (8+1×10 ^{-D}) mm Vertical: ± (15+1×10 ^{-D}) mm |
| | L-Band | Terrastar | RTX Portal | Atlas |
| | Power | Battery | Dual Batteries, 7.2V/3400mAh*2 Can work at least 10 hours | |
| Input | | 9~28V DC | | |
| 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 | All areas without North America: EC25-E, 4G FDD LTE: B1/B3/B5/B7/B8/B20 TDD LTE: B38/B40/B41 WCDMA: B1/B5/B8 GSM: B3/B8 | North America: EC25-A, 4G FDD LTE: B2/B4/B12 WCDMA: B2/B4/B5 | |
| | Internal UHF | TRM101: Power 1W, Frequency 410-470MHz Work Distance: 5km in good environment | | |
| | Protocol | SATEL, PCC-GMSK, TrimTalk 450S, South, TrimMark III(19200), GeoTalk, GeoMark | | |
| | Electric Bubble | Support, Support tilt survey | | |
| Interface | TNC | For UHF Antenna | | |
| | 5 pin | External radio and external power | | |
| | 7 pin | USB Port, NMEA Out put. | | |
| | Others | Micro SIM Slot and TF slot | | |
| Physical Operation | Button | Power button, also can show Power status | | |
| | Indicator | 5 indicators: Satellites, Datalink, Bluetooth, WIFI Status, Power Indicator | | |
| | Language | Supports TTS Multi language voice | | |
| Physical | D*H | 157mm*76mm | | |
| | Weight | 1.2KGS 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% | | |



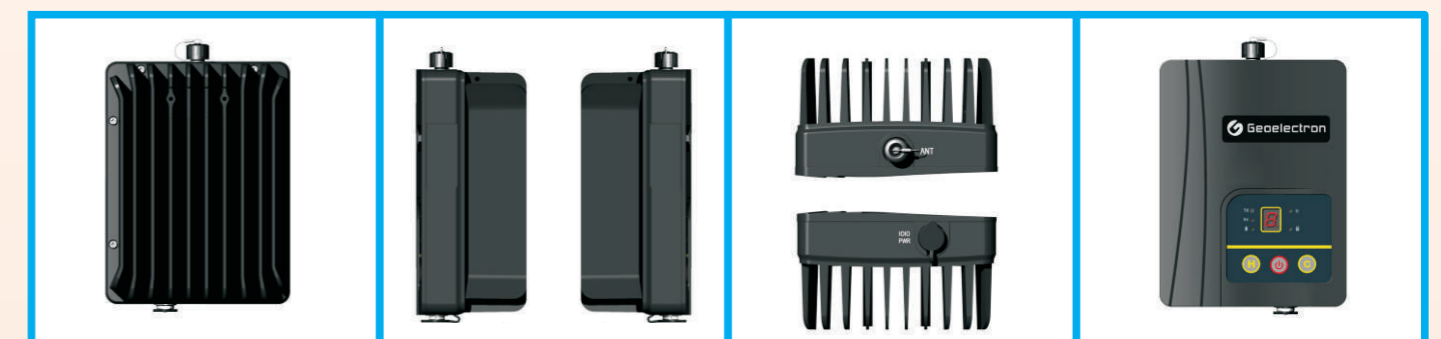
Innovative radio—TRU35

1. Featured with integrated body frame and excellent heat dissipation, ensuring TRU35 long-lasting high temperature resistant.
2. Wirelessly connect radio and base with SurPad software, transmitting data via Bluetooth. No longer worry surveying will be suspended due to wire damage.
3. Super-powerful radiowave-beaming technology guarantee the furthest of signal transmission within surveying area.
4. Battery voltage can be previewed and precautioned. Protection of opposite connection and open circuitry guarantee safety of radio use.

Technology parameters

Overall

| Type | Description | Receiver |
|-----------------------|-----------------------------|---|
| Frequency | 410~470MHz | Sensitivity Better than -116dBm@BER 10-5, 9600bps |
| Channel spacing | 12.5KHz / 25KHz | Common channel suppression >-12dB |
| Input voltage | 10.8~15V DC | Blocking >70dB |
| Dimension | 165mm×125mm×80mm | Adjacent channel selectivity >52dB@25KHz |
| Weight | 1680g | Stray immunity >55dB |
| Operating temperature | -40~+85°C | Modem |
| Storage temperature | -45~+90°C | |
| UHF antenna | TNC | Air rate 9600bps,19200 bps |
| Data interface | 5pin | Modulation method GMSK |
| Transmitter | Output power | 10w/30w (12.5V input) |
| | Power stability | ±1dB |
| | Adjacent channel inhibition | >50dB |
| | | |



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Side

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Front