



## A90 Intelligent GNSS Receiver



- Compact design, more productive
- Professional GNSS satellites tracked simultaneously(GPS,Glionass,Galileo,Beidou)
- Automatic data collection during centering
- IMU tilt function is adopted
- Applies WIFI connection to realize WebUI control designed to modify settings and monitor the receiver status
- Bundled Android field software brings a big change in user experience and accessibility

# A90 GNSS Receiver Specifications

## GNSS Engine

- Channels:1408
- Receiver type: GNSS multi-frequency RTK with carrier phase
- Update rate: 1Hz standard, 10, 20, 50Hz optional
- SBAS Tracking: 3-channel, parallel tracking
- Signal received: BDS B11/B21/B31/B1C/B2a/B2b\* GPS L1C/A/L2P (Y)/L2C/L5 GLONASS L1/L2 Galileo E1/E5a/E5b QZSSL1/L2/L5

## Performance Specifications

- Time to First Fix(TTFF): Cold start:<60 s typical (no almanac or RTC) Warm start:<30 s typical (almanac and RTC) Hot start:<10 s typical (almanac, RTC and position)
- Maximum Speed: 1,850 kph (999 kts) Maximum Altitude: 18,288 m (60,000 ft)
- Differential Options: SBAS, Autonomous, External RTCM,RTK, L-band (Atlas) DGPS

## Real-Time Accuracy (rms) <sup>\*1</sup>

- Single-point positioning(RMS): Horizontal:1.5m,vertical:2.5m
- DGPS(RMS): Horizontal:0.4m,vertical:0.8m
- RTK(RMS): Horizontal:±(8mm+1ppm)RMS Vertical:±(15mm+1ppm)RMS

## Solutions

Field Software Suite  
FOIFPad(WM/Android) ,FOIF FieldGenius or Carlson SurvCE

- Main functions include: A90 GNSS Support: configuration, monitoring and control
- Volume computation
- Background raster image
- Network connectivity
- Coordinate System Support: predefined grid systems, predefined datums, projections, Geoids, local grid
- Map view with colored lines
- Geodetic Geometry: intersection, azimuth/distance, offsetting, poly-line, curve, area
- Road Construction(3D)
- Survey Utilities: calculator, RW5 file viewing
- Data import/Export: DXF, SHP, RW5

## Data logging

- Recording Interval 0.1- 999 seconds

## Physical

- Flat design
- Size: 156mm\*76mm(Φ x H)
- Bottom cover: Aluminium magnesium alloy

## Memory

- Internal memory: 8GB standard; Supports extending to 32GB

## I/O Interface

- TNC port: connecting built-in radio antenna
- 5-pin lemo port: connecting external power supply and external radio
- 7-pin lemo port(USB+serial port): connecting PC and handheld

## Operating system

- Based on Linux; Supports Web UI

## Voice

- Multi-language supported

## Tilt survey sensor

Automatic correct system by 30degree

## Data Format

- RTCM V2.3
- RTCM V3.2
- CMR, CMR+

## Operation

- RTK rover/base, post-processing
- RTK Network rover: VRS, FKP, MAC
- Point-to-Point GPRS through Real-time Data
- Server Software (internal GPRS or external cell phone)
- LandXML(FOIF FieldGenius support) Total Station support (FOIF FieldGenius)
- Import and stake directly from a DXF File (FOIF FieldGenius)

## Office Software Suite:

### FOIF Geomatics office

Main functions include:

- Network post-processing
- Integrated transformation and grid system computations
- Pre-defined datums along with use -defined capabilities
- Survey mission planning
- Automatic vector processing
- Least-squares network adjustment
- Data analysis and quality control tools
- Coordinate transformations
- Reporting
- Exporting
- Geoid

## Environmental

- Operating temperature: -30°C to 65°C
- Storage temperature: -40°C to 80°C

- Humidity: 100% condensing
- Waterproof: IP67(IEC60529)
- Shock: 2 m (6.56 ft) pole drop 1.2m(3.94ft) free drop

## Power

- 7.2V, 6800mAh,removable battery

## Optional System Components

- Communication Module
- Internal radio -UHF-Link(410-470MHz) Rx&Tx both -1W
- External radio -FOIF external radio Rx & Tx(TRU35, 2/35W selectable)
- 4G LTE module: Fits various networks
- BlueTooth 2.1+EDR Class 2
- WiFi IEEE 802.11 b/g/n
- Antenna Built-in antenna,integrating GNSS, BT/WLAN and network antenna Controller
- P9III

\*1 Performance values assume minimum of five satellites, following the procedures recommended in the product manual. High-multipath areas, high PDOP values and periods of severe atmospheric conditions may degrade performance.

\*2 Long baselines, long occupations, precise ephemeris used.

## FOIF Geomatics CAD

Main functions include:

- DWG file format, compatible with AutoCAD
- Integrated transformation and grid system computations
- Full 3D least squares adjustment, blunder detection, graphical ellipse display
- DTM contouring/Modeling volumes/3D rendering
- Site Design: Ponds, ditches, stockpiles and slopes
- Road Design: horizontal and vertical alignments, cross sectional templates
- Completely customizable user interface -Toolbars - can be arranged with "drag and drop" functionality -Menus - can be re-organized with our graphical menu editor -Screen - items can be turned off for more graphics area -Layout - of command window - top or bottom
- Reporting, exporting and printing

## Related Products



A30 Receiver



A60 Receiver



A3 Static Receiver



A50 Receiver



F59 GNSS Handhelder



A100 Reference Receiver



A200 CORS Receiver

Illustrations, descriptions and technical specifications are not binding and may change

**FOIF** Since 1958  
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Suzhou FOIF Co.,Ltd.

TEL:+86 512 65224904

FAX:+86 512 65230619

Http://www.foif.com

E-mail:internationalsales@foif.com.cn

ADD: 18 Tong Yuan Road, Suzhou 215006, P.R. China

Local Dealer: