A90 Intelligent GNSS Receiver



- Compact design, more productive
- Professional GNSS satellites tracked simultaneously(GPS,Glonass,Galileo,Beidou)
- Automatic data collection during centering
- When the pole is tilted in 30 degrees, A90 still could get the right point data by automatic correct system
- 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

- 555 channels
  Advanced interface detection and mitigation
  Maximum data rate: 100Hz
  - GPS: L1 C/A, L1C, L2C, L2P, L5
  - GLONASS: L1 C/A, L2 C/A, L2P, L3, L5
  - BeiDou: B1, B2, B3
  - Galileo:E1, E5 AltBOC, E5a, E5b, E6
  - NavIC (IRNSS) : L5
  - SBAS : L1, L5
  - QZSS : L1 C/A, L1C, L2C, L5, L6
  - L-Band: Up to 5 channels

Performance Specifications

- Time to First Fix(TTFF):
  Cold start:<40s(typical)
  Hot start:<19s(typical)
  Signal reacquisition:
  L1<0.5s(typical)
  L2<1.0s(typical)
- RTK Initialization time:
  <10 s
- RTK Initialization reliability:
  >99.9%

Real-Time Accuracy (rms)*1

- SBAS
  Horizontal: 60cm(1.97ft), Vertical:120cm(3.94ft)
- Real-Time DGPS position
  Horizontal: 40cm (1.31ft), Vertical:80cm(2.62ft)
- Real-Time Kinematic Position(fine mode)
  Horizontal:8mm(0.03ft)+1.0 ppm
  Vertical:15mm(0.05ft)+1.0 ppm

Post Processing Accuracy (rms)*2

Static, Rapid Static

- Horizontal 2.5 mm (0.008 ft) + 1.0 ppm
- Vertical 5 mm (0.016 ft) + 1.0 ppm

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

- RTCM2.1,2.3,3.0,3.1
- CMR,CMR+
- RTCA
- NOVATELX

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℃ to +65℃(-22°F to 149°F)
- Storage temperature:
  -40℃ to +80℃(-40°F to +176°F)
- 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
- Over 13 hours when simultaneous use of 2 batteries

Optional System Components

Communication Module

- Internal radio
  -UHF-Link(410-470MHz) Rx&Tx both -1W
- External radio
  -FOIF external radio Rx & Tx(FDL-5, 5/35W 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
  - F58

*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

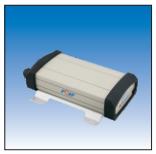

A30 Receiver

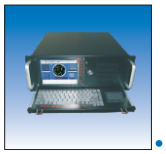

A60 Receiver


A3 Static Receiver


A50 Receiver


F58 GNSS Handhelder


A100 Reference Receiver


A200 CORS Receiver

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

FOIF Since 1958
It's professional

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: