A90 Intelligent GNSS Receiver

- Compact design, more productive
- Professional GNSS satellites tracked simultaneously(GPS,Glonass,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/L2/15

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)*1

- Single-point positioning(RMS):
  Horizontal: 1.5m, Vertical: 2.5m
- DGPS(RMS):
  Horizontal: 0.4m, Vertical: 0.8m
- RTK(Best condition):
  Horizontal: ±(2mm+1ppm)RMS
  Vertical: ±(5mm+1ppm)RMS

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

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)
- Total Station support
- Import and stake directly from a DXF File

Environmental

- Operating temperature:
  -30℃ to 65℃
- Storage temperature:
  -40℃ to 80℃
- Humidity: 100% condensing
- Waterproof: IP67(IEC60529)
- Shock: 2 m (6.56 ft) pole drop
  1.2m(3.94ft) free drop

Power

- 7.2V, 6800mAh(2x3400mAh),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/P9IV

*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.

Solutions

Field Software Suite
FOIFPad(Android) ,FOIF FieldGenius

Main functions include:

- A90 GNSS Supports: 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
- Data import/Export: DXF, SHP

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

Related Products

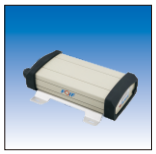

A30 Receiver

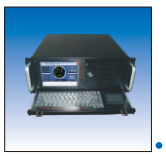

A60 Receiver


A3 Static Receiver


A50 Receiver


F59 GNSS Handhelder


A100 Reference Receiver


A200 CORS Receiver

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

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