



## The New Generation full function GNSS Receiver G10



G10 brings you GNSS RTK measurement technology revolution, extreme compact Magnesium alloy body, equipped with the new level of RTK intelligent control platform. This device integrates electronic bubble, tilt correction surveying and WebUI control.

In addition to upgrading hardware, SunNav brings RTK survey cloud services to more users, helps you to enhance the core competitiveness of mobile Internet era.

G10 overturns the traditional and enlightens the future!

## Key features



**Innovative Design!!  
High Precision!!**

### TILT CENTERING

The tilt compensator installed inside can automatically correct the coordinates of the points collected in accordance with the tile angle and tilt direction of the range pole. In this way, it is not necessary to center it precisely.



### FULL CONSTELLATIONS

G10 integrated intelligent RTK product uses top GNSS board and latest antenna technology, realizes the full compatibility of GPS, GLONASS, Beidou, Galileo and other satellite signals, and reserved the QZSS system.

### CLOUD SERVICE

This function enables the realization of real-time remote control, remote upgrade, remote smart check and real-time position monitoring to rovers via network.

### TRIPLE DATA SAFE-GUARD

Positioning data is saved on the controller, on receivers as well as on the cloud storage, which ensures 100% data safety with no worry to lose any valuable data tracked.

### SMART BATTERY

G10 is delivered with smart batteries. The power level can be checked from the controller and directly from a simple led on the battery by the simple press of a button.

# G10 TECHNICAL SPECIFICATION

## RECEIVER

- Channels :220 GNSS
- Satellites Tracked
  - GPS: Simultaneous L1C/A, L2C, L2E, L5
  - GLONASS: Simultaneous LI C/A, LIP, L2 C/A, L2P,L3
  - SBAS: Simultaneous LI C/A, L5
  - GALILEO Simultaneous EI, E5A, E5B(reserved)
  - COMPASS: BI (QPSK), BI- MBOC (6,1, 1/11), BI-2 (QPSK), B2(QPSK), B2-BOC (10,5), B3 (QPSK),B3BOC(15,2,5),I5(QPSK)
  - QZSS: LI C/A, LI SAIF, L2C, L5
- Position Rate: Up to 50 Hz
- Signal Reacquisition: < 1 sec
- RTK Signal Initialization: Typically < 10 s
- Hot Start: Typically < 15 s
- Initialization Reliability: > 99.9 %
- Internal Memory: 4 GB (Over 45 days of raw static data storage with recording sample every 1 second)
- Micro SD Card: Expansion slot with 4 GB internal memory (32 GB optional)

## POSITIONING

- HIGH PRECISION STATIC SURVEYING (Lon Time Observations)
  - Horizontal: 2.5 mm + 0.1 ppm RMS
  - Vertical: 3.5 mm + 0.4 ppm RMS
- FAST STATIC
  - Horizontal: 3 mm + 0.5 ppm RMS
  - Vertical: 5 mm + 0.5 ppm RMS
- CODE DIFFERENTIAL POSITIONING
  - Horizontal: 0.25 mm + 1 ppm RMS
  - Vertical: 0.45 mm + 1ppm RMS
- SBARS POSITIONING(Typical)
  - Horizontal: 0.5 m RMS<sup>2</sup>
  - Vertical: 0.8 RMS<sup>2</sup>
- REAL TIME KINEMATIC(<30km)-NETWORK SURVEYING<sup>3</sup>
  - Fixed RTK Horizontal: 8mm +0.8ppm RMS
  - Fixed RTK Vertical: 15mm + 1ppm RMS
- TILTED POSITINING(2m POLE)
  - 10°inclination 20 mm RMS
  - 20°inclination 30 mm RMS
  - 30°inclination 50 mm RMS

## COMMUNICATION

- Connectors I/O
- 7-pins Lemo and 5-pins Lemo Interfaces. Multifunction cable with USB interfaces for PC connection.
- Bluetooth device: 2.4 GHz class II
- Wi-Fi: IEEE 802.11 b/g/n
- Web UI: To upgrade the software, manage the status and settings, data download, etc. via smart phone, tablet or other internet enabled electronic device

- Navigation outputs: ASCII (NMEA-0183) GSV, AVR, RMC, HDT, VGK, VHD, ROT, GKG, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, Reference outputs: CMR, CMR+, sCMRx, RTCM2.1, RTCM2.3 RTCM3.0, RTCM3.1,GRS, GBS.

## INTEGRATED GNSS ANTENNA

- High accuracy four constellation micro-strip antenna, zero-phase center with internal multipath suppressive board.

## INTERNAL RADIO

- Frequency Range: 410-470MHz
- Channel Spacing: 12.5KHz/25 KHz
- Rx/Tx Power:2W
- Maximum Range: 3-4 Km in urban environment, up to 10 Km with optimal conditions.
- Protocol: Transparent EOT/EOC/FST, SATEL. South, TRIMTALX 11/11e, TRIMMARK 3, TRIMTALK 450S

## WIRELESS MODULE

- Band: GSM/GPRS/EDGE: 850/900/1800/1900 MHz  
WCDMA/HSDPA: 850/1900/2100 MHz
- Output Power: GSM850, EGSM900: 33 dBm(2W)  
GSM1800, PCS1900: 30 dBm(1W), WCDMA: 24 dBm

## POWER SUPPLY

- Battery: Rechargeable and replaceable 11.1 V -3400 -37.74Wh intelligent lithium battery
- Voltage: 9 to 22 V DC external power input
- Working Time in Static ( GPS+GLONASS):12hours
- Working Time in GSM RTK( GPS+GLONASS):6.5hours
- Charge Time(2batteries):Typically4hours
- Power Consumption:<6w

## PHYSICAL SPECIFICATION

- Size:  $\Phi$ 14cm $\times$ 14.4cm H
- Operating Temperature: -40°C to 65°C (-22°F to 149°F)
- Storage Temperature: -40°C to 85°C (-40°F to 185°F)
- Operating Temperature with UHF UHF Radio: -30°C to 50°C
- Waterproof/ Dustproof: IP67
- Shock Resistance: Designed to endure to a 2 m pole drop on concrete floor with no damage. Designed to endure a 1 m free drop on hardwood floor with no damage
- Vibration : Vibration resistan

