



## Features



### GNSS Global Correction Service

- Equipped with "Lyra" chip and "Athena" calculation engine

- International advanced GNSS Board  
GPS/Glonass/Beidou/Gallieo full frequency antenna
- GE nano Material shell/smart host/Cortex-M3 Processor/Linux Platform/Quick Firmware UpgradelTF card memory expansion /Multifunctional Composite Keys/OLED Display/Fast Self-check/Integrated Rubber-Circle/Industrial-grade Bluetooth Version 2.0/ 3G network Module/Support Self-built Ntrip Server
- Internal Radio Rx/Tx / External 35W Big UHF Radio/Compatible with all UHF Radio/UHF + ENET Dual Standby
- GIS Data Collector
- OriginalImported LEMO connectors/Pass the EMC

Equipped with the fifth generation of "Lyra" chip and "Athena" calculation engine, performance in the long baseline in weak signal environment particularly well, Support A-RTK aided measurement (Star chain continuation of the journey) technology, In the case of disconnecting the base station differential signal (whether radio or network signals), the rover continues to maintain a fixed accuracy solution of a certain time (15-30min), providing the user with uninterrupted measurement of new experience!

# Technical Specifications

## Signal Tracking

- 394 channels satellite signals
  - GPS: L1 CA, L1P, L1C, L2P, L2C
  - BeiDou: B1, B2, B3
  - GLONASS: G1, G2, P1, P2
  - GALILEO: E1BC, E5a, E5b
  - Atlas

## Performance Specifications

- Cold start: <50 s
- Warm start: <30 s
  
- Initialization time: <10 s
- Singal re-acquisition: <2 s
- Initialization reliability: >99.9%

## Positioning Specifications

- Post Processing Static
  - Horizontal: 2.5 mm + 1 ppm RMS
  - Vertical: 5 mm + 1 ppm RMS
- Real Time Kinematic
  - Horizontal: 10 mm + 1 ppm RMS
  - Vertical: 20 mm + 1 ppm RMS
  
- Atlas: H10:0.08m
- SBAS:0.3m

## Communications and Memory

- 1 Serial port (7 pin Lemo),
- 1 Serial port (5 Pin Lemo),
- 2 TNC antenna,
- Memory: 256 MB internal with up to 32GB pluggable memory card
  
- Baud rates Up to 115,200 bps
- Radio modem:
  - Integrated GSM/GPRS modem
  - Integrated Bluetooth V2.0 class 2
  - Radio modem internal Rx/TX: 410-470 MHz
  - External Tx : 5W 35W adjustable
- Communication protocol
  - Transparent,TT450S, South, TrimMask 111(19200), South 19200
- Position data outputs, 1Hz Standard, 5Hz/10Hz Optional

## Data Format

- Data inputs/outputs
  - Correction data 1/0: RTCM 2.X, 3.X, CMR , CMR+
- Position data outputs:
  - ASCII: NMEA-0183
  - Binary update to 50Hz

## Physical

- Size (W x H): 184mmx96mm
- Weight: 1.2kg (include battery)
- Button: FN + Power
- Display:128x 62 OLED Screen

## Environmental

- Operating temperature: -40 °C to +65 °C (-40 °F to 149 °F)
- Storage temperature: -40 °C to +75 °C (-40 °F to 167 °F)
- Humidity: 100% condensation
- Waterproof and dust proof: IP67 protected from temporary immersion to depth of 1 meter, floats
- Shock: survives a 2 meter drop on to concrete

## Electrical

- Input Voltage: 9-18 VDC
- Liion battery capacity: 2 x Rechargeable and Removable 3400 mAh Lithium-ion Battery up to 10 hours typically

## Software

Esurvey field data collection software  
SurveyCE data collection software

## P9 controller

- Operation system: Windows Mobile6.5
- Processor:TI Sitara™ AM335x 1GHz
- RAM:512MB ROM: 8G
- Screen: 3.7inch Blanview TFT transfective screen, 480x640VGAresolution ratio
- Battery: 25.16W big capacity battery, single battery endurance>10hours
- Communication:Bluetooth, Version2.1+EDR, USB OTG (directly conenct Uflash disk)
- Communication module: 3.5G WCDMA 900 / 2100MH:
- WIFI: WLAN 802.11b/g

