

SPECIFICATIONS

Surveying Performance	
Signal Tracking	220 Channels BDS B1, B2, B3 GPS L1C/A, L1C, L2C, L2E, L5 GLONASS L1C/A, L1P, L2C/A, L2P, L3 SBAS L1C/A, L5 (Just for the satellites supporting L5) Galileo GIOVE-A, GIOVE-B, E1, E5A, E5B QZSS, WAAS, MSAS, EGNOS, GAGAN, SBAS
GNSS Features	Positioning output rate: 1Hz~50Hz Initialization time: < 10s Initialization reliability: >99.99%
Positioning Precision	
Code Differential GNSS Positioning	Horizontal: $\pm 0.25 \text{ m} + 1 \text{ ppm}$ Vertical: $\pm 0.50 \text{ m} + 1 \text{ ppm}$ SBAS positioning accuracy: typically < 5m 3DRMS
Static GNSS Surveying	Horizontal: $\pm 2.5 \text{ mm} + 0.5 \text{ ppm}$ Vertical: $\pm 5 \text{ mm} + 0.5 \text{ ppm}$
Real-Time Kinematic Surveying	Single base (<30km) Horizontal: $\pm 10 \text{ mm} + 1 \text{ ppm}$ Vertical: $\pm 20 \text{ mm} + 1 \text{ ppm}$
Network RTK	Horizontal: $\pm 10 \text{ mm} + 0.5 \text{ ppm}$ Vertical: $\pm 20 \text{ mm} + 0.5 \text{ ppm}$ RTK initialization time: 2~8s
Hardware	
Dimension	12.9 cm×11.2cm
Weight	970g (including installed battery)
Material	Magnesium aluminum alloy shell
Temperature	Operating: 45°C ~ +60°C Storage: -55°C ~ +85°C
Humidity	Non-condensing
Level of Protection	Waterproof: IP67 standard immersion to depth of maximum 1m Dustproof: IP67 standard against blowing dust
Shock and Vibration	Not operating: Withstand 2 meters high on the rod drop to the cement ground naturally While: Withstand 40G 10 milliseconds sawtooth wave impact test
Electrical	
	2W
Power Consumption	Single battery: 7h (static mode) 5h (internal UHF base mode) 6h (rover mode)
Battery Life	
Communications and Data Storage	
I/O Port	5PIN LEMO external power port + RS232 7PIN LEMO RS232 + USB 1 network/radio data link antenna port SIM card slot
Wireless Modem	Integrated internal radio receiver and transmitter 0.5W/2W External radio transmitter 5W/25W Working frequency 410-470MHz Communication protocol: TrimTalk450s, TrimMark3, PCC EOT, SOUTH
Cellular Mobile Network	WCDMA3.5G network communication module, GPRS/EDGE compatible, CDMA2000/EVDO 3G optional
Double Module Bluetooth	BLEBluetooth 4.0 standard, support for android, ios cellphone connection Bluetooth 2.1 + EDR standard
WiFi	802.11b/g
NFC Wireless Communication (Optional)	Realizing close range (shorter than 10cm) automatic pair between Galaxy One and controller (controller equipped NFC wireless communication module needed)
Data Storage/Transmission	4GB internal storage, more than 3 years raw observation data (about 1.4M/day), based on recording from 14 satellites Plug and play mode of USB data transmission
Data Format	Differential data format: CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2 GPS output data format: NMEA 0183, PK plane coordinates, binary code Network model support: VRS, FKP, MAC, supporting NTRIP protocol
Inertial Sensing System (Optional)	
Tilt Survey	Built-in tilt compensator, correcting coordinates automatically according to the tilt direction and angle of the centering rod
Electronic Bubble	Controller software display electronic bubble, checking leveling status of the centering rod real time
User Interaction	
Buttons	One-button operation, visual operation, convenient and efficient

SOUTH
Target your success

GALAXY G1

Smaller than smaller

12.9 cm

11.2 cm

SOUTH

All Constellations

Tilt survey

Bimodule Bluetooth

Build-In Radio

Communication Module

Hi-Speed USB

Industrial 3-Proofings

Cloud Service

SOUTH
Target your success

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The new RTK surveying system "Galaxy G1" of SOUTH integrates with outstanding technological design, excellent surveying properties and advanced Inertial navigation technology. Its small body with excellent performance will provide faster, efficient and secure surveying experience, makes you feel the technical charm of information age!



- | | | |
|------------------------|--------------------|------------------------------|
| 1. Bluetooth indicator | 4. Power key | 7. UHF/GSM antenna interface |
| 2. DATA interaction | 5. Battery housing | 8. Standard LEMO(5 pins) |
| 3. Satellite indicator | 6. Loudspeaker | 9. USB/RS232 |



STANDARD SET

External radio transmitter (standard supply)

Our high speed wireless digital radio is integrated with ten years radio design and production experience of SOUTH, adopting radio frequency and digital processing, baseband processing technology, air transmission rate reaches to 19200bp, radio-frequency emission power top to 25W, reliable performance, strong stability, is more suitable for RTK fieldwork.

RTK carrying case

The convenient RTK carrying case is customized for surveying workers, which adopts double oxford tabby textile fabric and YKK industrial grade waterproof zipper. It has strong abrasive resistance and waterproofness. Meanwhile the unique backpack design reduces the heavy burden of field work.

Surveying software

Galaxy G1 RTK surveying system can equipped with SOUTH professional surveying software for special industries, such as engineering star, SurvCE, FieldGenius and so on.

Engineering star (standard supply): it's our kernel surveying software, the main functions are detail survey, stake out point, stake out line, coordinate system transformation and so on. It's a powerful and efficient software for RTK survey.

KEY FEATURES



Miniaturization

11.2cm high, 12.9cm in diameter, extremely small compact type design, the weight is only 970g, the smallest and lightest RTK made in China, leads the miniaturization of the new trend of the times.



Convenience

Travel light, makes the surveying no longer bear heavy load. New miniature RTK surveying system, the receivers and bags have become more compact, and the weight of a full set of equipment reduces by 30% compare to the previous generation.



Double module long distance Bluetooth

The pioneered Bluetooth communication technology in the industry, equipped with 4.0 standard double module long distance Bluetooth, it can connect to the mainstream consumer digital products such as mobile phones, tablets. Backward compatible with 2.1 standard at the same time, connects to the industrial grade controller. Efficient and stable data transmission technology, long distance Bluetooth, supply users more free work experience.



Tilt survey

While working, the users don't need to center to the point, the built-in tilt compensator can correct the coordinates automatically according to the tilt direction and angle of centering rod, get the correct ground coordinates.



Electronic bubble

Checking whether the centering rod is level, users don't have to pay attention to the physical bubble of the rod, the electronic bubble of the controller survey software accurately displays the leveling status of centering rod in real time.



All constellations

Multiple constellations and multiband receiving technology, supports all existing and planned GNSS satellite signals, especially beidou frequencies B1, B2, B3, support single beidou positioning system.



Appearance and material

Tough appearance design, tasteful color collocation, makes survey also become high end. Small and light magnesium alloy shell makes it lighter, more wear-resisting, resistance to impact, promotes the receivers protection performance.



Intelligent platform

A new efficiently intelligent kernel platform, with faster computing power and lower power consumption, improving the whole stability of the receivers. Based on the platform, the receivers can monitor the running state of every section in real-time, the intelligent adjusting electricity mode can prolong the fieldwork time.



Cloud service

Cloud service support for 24 hours, to meet customers' diverse needs such as online upgrade, online registration, and remote diagnosis at all time.



Universal data communications

Supporting the mainstream radio communication protocols, realizing the interconnection and interworking with other brand products. New network module framework framework, supports for multiple network types, seamlessly compatible with CORS system.