SPECIFICATIONS

Surveying Performance		
Channel	220 Channels	
Signal Tracking	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:	±0.25 m + 1 ppm
	Vertical:	±0.50 m + 1 ppm
	SBAS positioning accuracy:	typically<5m 3DRMS
Static GNSS Surveying	Horizontal:	±2.5 mm + 0.5 ppm
	Vertical:	±5 mm + 0.5 ppm
Real-Time Kinematic Surveying	Horizontal:	±8 mm + 1 ppm
(Baseline<30km)	Vertical:	±15 mm + 1 ppm
	Horizontal:	±8 mm + 0.5 ppm
Network RTK	Vertical:	±15 mm + 0.5 ppm
	RTK initialization time:	2~8s
Physical		
Dimension	12.9 cm×11.2cm	
Weight	970g (including installed battery)	
Material	Magnesium aluminum alloy shell	
Environmental		
Operating	-45℃ ~ +60℃	
Storage	-55℃ ~ +85℃	
Humidity	Non-condensing	
Waterproof/Dustproof	IP67 standard, protected from long time immersion to depth of 1m	
	IP67 standard, fully protected against blowing dust	
Shock and Vibration	Not operating:	Withstand 2 meters pole drop onto the cement ground naturally
	While:	Withstand 40G 10 milliseconds sawtooth wave impact test
Electrical		
Power Consumption	2W	
Battery	Rechargeable, removable Lithium-ion battery	
Battery Life	Single battery:	7h (static mode)
		5h (internal UHF base mode)
		6h (rover mode)
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	
NFC Communication (Optional)	Realizing close range (shorter than 10cm) automatic pair between Galaxy G1 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, PJK 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

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SOUTH
Target your success

GALAXY G1

SOUTH Galaxy G1, new generation integrated RTK system with smaller size and innovative design, leads the direction of new generation RTK with excellent performance, provides high-efficiency and intelligent surveying experience to customers. It isn't simply smaller, it's better in everywhere.

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

STANDARD SET

External radio transmitter (optional)
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 be 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

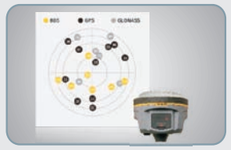
Innovative structure design
SOUTH Galaxy G1, with smaller size and innovative design, the weight is only 970g, is built with magnesium alloy materials. And the top edge is designed to decrease harm for receiver in case of fall down to ground.

Powerful new bluetooth module
Equipped with bluetooth 4.0 module, which supports receiver to work well with smartphone and tablet etc, also making bluetooth communication faster and more stable.

Tilt survey
The internal tilt sensor helps receiver to survey without centering, in order to improve survey efficiency, and tilt angle can reach 30 degree maximum.

Electronic bubble calibration
The internal electronic bubble sensor can correct the survey result, to support receiver to survey without level.

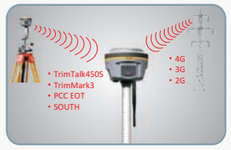
Easy to carry
Travel light, makes the surveying no longer bear heavy load. New miniature RTK surveying system, the receivers and bags have become more compact, and the weight of a full set of equipment reduces by 30% compare to the previous generation.



Full satellite constellations support
Equipped with most advanced GNSS boards, SOUTH Galaxy G1 system can track most signal from all kinds of running satellite constellation, especially support B1,B2 and B3 signal from BeiDou, also is able to get position result with only BeiDou signal.

Intelligent and open platform
A based on smart platform and powerful structure, which can make system work faster and more stable, less power consumption, and can also monitor the status of each parts real time, extend battery life in the field.

Cloud service
7*24 hour cloud service, which enable make service and support more quickly, such as online upgrade and register, remote diagnosis etc.



Advanced data-link module
Integrated with new and excellent datalink system, SOUTH Galaxy G1 is compatible with current radio protocols in the market, also supports all kinds of network types to access CORS seamlessly.

NFC function
The internal NFC module can make the complicated bluetooth communication more simple and easier.