

SPECIFICATIONS

Satellite Signals Tracked Simultaneously		
Signal tracking	965 channels, 336 channels (optional)	
	BDS B1,B2,B3	
	GPS L1C/A,L1C,L2C,L2E,L5	
	GLONASS L1C/A,L1P,L2C/A,L2P,L3	
	SBAS(WAAS,MSAS,EGNOS,GAGAN) L1C/A,L5	
	Galileo E1,E5A,E5B,E5AltBOC,E6	
	QZSS L1,L2C,L5	
	L-band(only supports in China)	
GNSS features	Positioning output rate:1Hz~50Hz	
	Initialization time:<10s	
	Initialization reliability:>99.99%	
Positioning precision		
Code differential GNSS positioning	Horizontal: ±0.25m+1ppm Vertical: ±0.50m+1ppm	
	SBAS positioning accuracy:typically<5m 3DRMS	
Static GNSS surveying	Horizontal: ±2.5mm+0.5ppm Vertical: ±5mm+0.5ppm	
Fast static	Horizontal: ±3mm+0.3ppm Vertical: ±5mm+0.5ppm	
Real-time kinematic surveying	Horizontal: ±8mm+1ppm Vertical: ±15mm+1ppm	
SLink	Horizontal: 3-10cm (5-30min) Vertical: 8-20cm (5-30min)	
RTK initialization time	2~8s	
User interaction		
Operating system	Linux	
Buttons	Two buttons operation	
Indicators	Five indicate lights	
Web UI	Freely to configure and monitor the receiver by accessing to the web server via Wi-Fi and USB	
Voice guide	iVoice intelligent voice technology provides status and voice guide	
	Supporting Chinese, English, Korean, Russian, Portuguese, Spanish, Turkish and user define	
Secondary development	Providing secondary development package	
Hardware performance		
Dimension	135mm(Diameter)x125mm(Height)	
Weight	1.39kg (with two batteries)	
Material	Magnesium aluminum alloy shell	
Operating	-40°C~+65°C	
Storag	-40°C~+80°C	
Humidity	95% 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	Withstand 2 meters pole drop onto the cement ground naturally	
Power Supply	9-25V DC, overvoltage protection	
Battery	Rechargeable, removable Lithium-ion battery, 7.4V 3400mAh/per; standard four batteries power package (optional)	
Battery solution	Supporting one or two batteries installed; supporting power pole connection	
Battery life	Single battery: >8h (static mode).And two installed hot swappable batteries works for more than 16 hours.	
Communications		
I/O port	5PIN LEMO external power port + RS232, 7PIN external USB(OTG)+Ethernet	
	1 radio antenna interface, SIM card slot	
Wireless modem	Built-in radio, 1W/2W/3W switchable, typically work range can be 8KM	
	Radio and internet repeater switchable	
Frequency Range	410-470MHz	
Communication Protocol	TrimTalk450s, TrimMark3, PCC EOT, SOUTH	
Cellular Mobile Network	WCDMA/CDMA2000/TDD-LTE/FDD-LTE 4G network modem, downward compatible with 3G GPRS/EDGE	
Double Module Bluetooth	BLEBluetooth 4.0 standard, support for android, ios cellphone connection	
	Bluetooth 2.1 + EDR standard	
NFC Communication	Realizing close range (shorter than 10cm) automatic pair between receiver and controller	
	(controller equipped NFC wireless communication module needed)	
External Devices	Optional external GPRS/EDGE dual-mode communication module, switchable;	
	allow to connect external WLAN card	
WIFI		
Standard	802.11 b/g standard	
WIFI Hotspot	The WIFI hotspot allows any mobile terminal to connect and access to the internal webserver for the control	
	and moditor receiver	
	To work as the datalink that receiver is able to broadcast and receive differential data via WIFI	
Data storage/ Transmission		
Data Storage	8GB SSD internal storage	
	Support external USB storage and automatical cycle storage	
	Changeable record interval, up to 50Hz raw data collection	
Data Transmission	USB data transmission, supporting FTP/HTTP data download	
Data Format	Differential data format: RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM3.2	
	GPS output data format: ASCII: NMEA 0183. Binary: SOUTH binary	
	Network model support: VRS, FKP, MAC, fully support NTRIP protocol	
Inertial sensing system		
IMU tilt angle	0° - 60°	
Electronic bubble	Controller software display electronic bubble, checking leveling status of the centering rod real time	
Thermometer	Built-in thermomter sensors, adopting intelligent temperature control technology which can mornitor and	
	adjust the temperature of receiver in real time	

SOUTH
Target your success

GALAXY G1 Plus

— Innovative IMU-RTK Receiver —



SOUTH
Target your success

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Behind every significant epoch-making change in human society, always accompanied by the birth of an important technology.

Computer and electronics make surveying and mapping industry achieve a span from the analog age to the digital age.

And the development of Internet technology further opens the prelude of surveying and mapping information age.

In the form of the ubiquitous, internet is penetrating and fusion in all corners of the surveying technology, and setting off an unprecedented reconstruction and transformation.

In the dawn of a new era, south is walking in front of it to craft Galaxy 1plus which opening a '+' era of high-precision positioning applications.



KEY FEATURES

Intelligent platform

Linux OS

New generation of embedded Linux operating system platform improves RTK performance and work efficiency. Its operating efficiency is higher; a unique core processing mechanism which can respond to more than one command at one time; it starts faster and more responsive in real time. While the stability of system is much higher, it can be adapt to the job of longer uninterrupted power.



Web UI management platform

Embedded Web UI management platform supports WIFI and USB mode connection. Users can monitor the receiver status and configure it via the internal Web UI management platform.

Wireless data communications

Wi-Fi

New Wi-Fi module, not only can be used as data link to access to internet, but also can be as a hotspot which can be accessed by any other smart devices to configure the receiver.



Full satellite constellations support

Equipped with most advanced GNSS boards, SOUTH Galaxy G1 Plus system can track most signals from all kinds of running satellite constellations, especially supports the signals from Beidou3, also is able to get position result only with Beidou signal.



IMU auxiliary tilt measurement

The uniquely capable IMU sensor is able to greatly improve the productivity of RTK measurement because of its excellent performances, fast initialization, calibration-free, not affected by magnetic environment. Rapidly measures points without leveling instrument, as long as pole tip reaches the target.



Shake tilt measurement

It's a tilt measurement technology based on the patented core algorithm. No magnetic sensor use, calibration-free, anti-jitter, unlimited tilt angle.

Intelligent data communication

Built-in network module

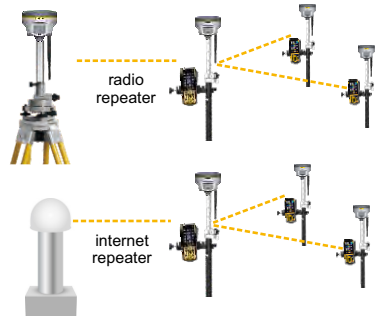
Equipped with standard 4G module which supports TDD-LTE/FDD-LTE 4G network, and downward compatible with WCDMA/CDMA2000 3G and GPRS/EDGE 2G network. Smart PPP dialing technology can auto dial which makes the Galaxy G1 Plus keeping online continuously during the survey.

Built-in functional digital radio

SOUTH self-developed digital radio which can fully support the communications with the mainstream radio protocols: Trimtalk450s, SOUTH, SOUTH+, SOUTHx, huace, ZHD, Satel. Realize the random switching of the radio range 403MHz-473MHz and the power level as well.

Radio repeater: The rover can broadcast the corrections via internal radio to other rovers after receiving the radio differential signal from Base station.

Internet repeater: The rover can broadcast the corrections via internal radio to other rovers after received the network differential signal from CORS station.



Intelligent technology

Storage technology

Internal 8GB SSD and it supports external USB storage. Supports STH, RINEX raw data storage and the sample rate can reach to 50Hz. Supports automatic data storage cycle, the data will be automatically deleted when the space is not enough. Disk-On-key which can easily copy the data to external U disk.



Dual-battery system

The new design for battery house can support 2 batteries installed, that is able to last longer time for common field work!

iVoice

Intelligent iVoice can voice broadcast the current receiver status and operation guide in real time, it supports multiple languages.



Smart power pole supply technology

External power pole can provide up to 10 hours of power. It also can display the remaining power in real time.