SPECIFICATIONS

GNSS Features

Channels	1760
GPS	L1C/A, L1C, L2C, L2P, L5
GLONASS	L1C/A, L2C/A, L2P, L3CDMA
BDS	B1I, B1C, B2I, B2a, B3
GALILEO	E1, E5A, E5B, E5AltBOC, E6
SBAS	EGNOS, WAAS, GAGAN, MSAS. SDCM(L1,L5)
QZSS	L1C/A, L1C, L2C, L5, L6
Navic	L5
On module L-Band (Reserve)	
Positioning output rate	1Hz~50Hz
Initialization time	< 10s
Initialization reliability	> 99.99%

Positioning Precision

Code differential GNSS	Horizontal: 0.25 m + 1 ppm RMS Vertical: 0.50 m + 1 ppm RMS
Static(long observations)	Horizontal: 2.5 mm + 0.1 ppm RMS Vertical: 3 mm + 0.4 ppm RMS
Static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 3.5 mm + 0.5 ppm RMS
Rapid static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
PPK	Horizontal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
RTK(UHF)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS
RTK(NTRIP)	Horizontal: 8 mm + 0.5 ppm RMS Vertical: 15 mm + 0.5 ppm RMS
RTK initialization time	2 ~ 8s
SBAS positioning	Typically < 5m 3DRMS
BANDA-L	Horizontal: 5-10cm (5-30min) Vertical: 10-30cm (5-30min)
IMU	Less than 10mm + 0.7 mm/° tilt to 30°
IMU tilt angle	0° ~ 60°

Hardware Performance

Dimension	130mm(W) ×130mm(L) × 80mm(H)
Weight	790g (battery included)
Material	Magnesium aluminum alloy shell
Operating temperature	-45°C ~ +75°C
Storage temperature	-55°C ~ +85°C
Humidity	100% Non-condensing
Waterproof/Dustproof	IP68 standard, protected from long time immersion to depth of 1m IP68 standard, fully protected against blowing dust
Shock/Vibration	Withstand 2 meters pole drop onto the cement ground naturally MIL-STD 810G
Power supply	9-28V DC, overvoltage protection
Battery	Inbuilt 7.2V 6800mAh rechargeable, Li-ion battery
Battery life	15h(Rover Bluetooth mode)

WIFI

Modem	802.11 b/g standard
WIFI hotspot	AP mode, Receiver broadcasts its hotspot form web UI accessing with any mobile terminals
WIFI datalink	Client mode, Receiver can transmit and receive correction data stream via WIF datalink

Communications

I/O Port	5-PIN LEMO external power port + RS232 Type-C(charge, OTG to USB disk, data transfer with PC or phone, Ethernet) 1 UHF antenna TNC interface
Internal UHF	2W radio, receive and transmit, radio router and radio repeater
Frequency range	410 - 470MHz
Communication protocol	Farlink, Trimtalk450s, SOUTH, HUACE, Hi-target, Satel
Communication range	Typically 8km with Farlink protocol
Bluetooth	Bluetooth 3.0/4.1 standard, Bluetooth 2.1 + EDR
NFC Communication	Realizing close range (shorter than 10cm) automatic pair between receiver and controller (controller requires NFC wireless communication module else)

Data Storage/Transmission

Storage	4GB SSD Automatic cycle storage (The earliest data files will be removed automatically while the memory is not enough) Support external USB storage
Data transmission	Plug and play mode of USB data transmission Supports FTP/HTTP data download
Data format	Static data format: STH, Rinex2.01, Rinex3.02 and etc. Differential format: RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2 GPS output data format: NMEA 0183, PJK plane coordinate, SOUTH Binary code Network model support: VRS, FKP, MAC, fully support NTRIP protocol

Sensors

Electronic bubble	Controller software can display electronic bubble, checking leveling status of the carbon pole in real-time
IMU	Built-in IMU module, calibration-free and immune to magnetic interference
Thermometer	Built-in thermometer sensor, adopting intelligent temperature control technology, monitoring and adjusting the receiver temperature

User Interaction

Operating system	Linux
Buttons	One button
Indicators	5 LED indicators(Satellite, Charging, Power, Datalink, Bluetooth)
Web interaction	With the access of the internal web interface management via WIFI or USB connection, users are able to monitor the receiver status and change the configurations freely
Voice guidance	It provides status and operation voice guidance, and supports Chinese/English/Korean/Spanish/Portuguese/Russian/Turkish
Secondary development	Provides secondary development kit, and opens the OpenSIC observation data format and interaction interface definition
Cloud service	The powerful cloud platform provides online services like remote manage, firmware update, online register and etc.

*Items marked with * will be upgraded along with the update of assigned firmware version*

The data comes from the SOUTH GNSS Product Laboratory, and the specific situation is subject to local actual usage.

CE FC

SOUTH
Target your success

SOUTH SURVEYING & MAPPING TECHNOLOGY CO., LTD.

Add: South Geo-information Industrial Park, No.39 Si Cheng Rd, Guangzhou, China
Tel: +86-20-23380888 Fax: +86-20-23380800
E-mail: mail@southsurvey.com export@southsurvey.com impexp@southsurvey.com gnss@southsurvey.com
http://www.southinstrument.com http://www.southsurvey.com

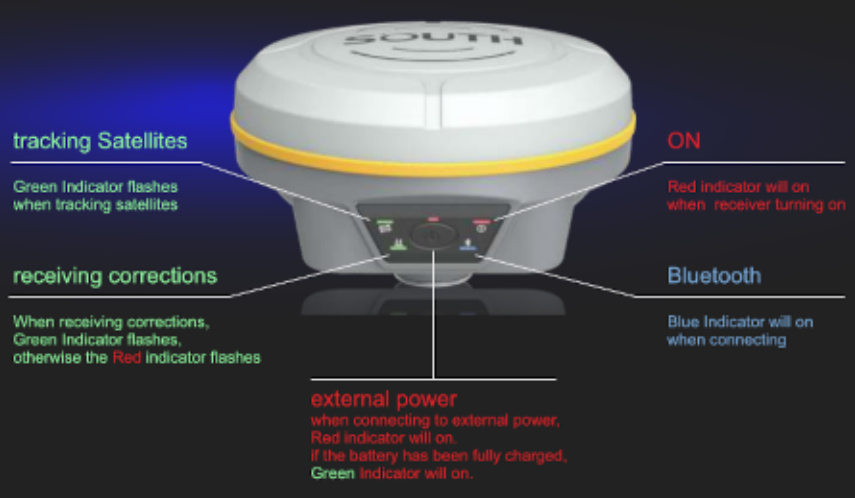
SOUTH
Target your success

GALAXY G3

— Supercharged Pocket RTK —

Colourful LED indicators

The colorful LED indicators can briefly show the current status.



Lighter and Faster

Only **790g** in weight, G3 is still packaged with the magnesium alloy shell. Highly intergrated design, smaller and lighter, easy to use in the field.

Battery life checking:

we can quickly check the battery life by pressing the button, after pressing the button, some of the Indicators will turn on.

Supercharged by SoC technology

Galaxy G3 is a new product from **SOUTH SoC** platform, most components of G3 (GNSS module, Wi-Fi, Bluetooth, etc.) are integrated on one circuit board. G3 has lower power consumption, and efficiently improves the ability of receiving higher quality satellites signals.

Powerd by the new SoC GNSS board, new generation sensitivity satellite antenna, new ROS platform and GNSS RTK engine, G3 can fully track GPS, GLONASS, BDS, GALILEO and QZSS toobtain centimeter-level positioning in few seconds.

Now G3 supports the BeiDou-3 B2b L-band BDS-PPP corrections to get real-time centimeter level positioning services.

Thanks to the new function **"Fixed-keep"**, now it is possible for G3 to keep centimeter-level accuracy for few minutes when the RTK corrections is missing.

Longer battery life

Thanks to the SOC technology, G3 achives higher performance and lower power consumption. The built-in 6800mAh Li-ion battery can continuously work 15 hours(Rover Bluetooth mode).

G3 adopts Type-C charging interface which supports PD protocol quickly charging, the battery can be fully charged in **3 hours** and then supports full-day work.

Now G3 also supports the external phone portable battery, to continue the work even internal battery is used

IMU for tilt survey

Galaxy G3 is intergrated with the latest **Inertial Measurement Unit (IMU)**. Featured with anti-magnetic chracteristic, you can start the tilt survey in any place. Shaking to initialize the IMU sensor, no need to calibrate. Up to 200Hz IMU data output rate, boosting the speed of field work.

Super radio and Farlink protocol

Galaxy G3 is packaged with SOUTH "Beaver" super radio and the exclusive **"Farlink"** protocol. The "Beaver" super radio is more power saving, "Farlink" protocol has larger bandwidth. The combination of "Beaver" super radio and "Farlink" protocol makes better performance on signal capturing.