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GALAXY G2
— Brand new diminutive RTK receiver —

Simple and elegant
without losing precision

SPECIFICATIONS

GNSS Features

Channels…………………………………………………………… 965
GPS…………………………………………...... L1, L1C, L2C, L2P, L5
GLONASS………………………………………………… G1, G2, G3
BDS…………………………………………………...... BDS-2: B1I, B2I, B3I
BDS-3: B1I, B3I, B1C, B2a, B2b*
GALILEOS………………………………….. E1, E5A, E5B, E6C, AltBOC*
SBAS……………………………………………………............... L1*
IRNSS………………………………………………………………L5*
QZSS………………………………………………... L1, L2C, L5*
MSS L-Band (Reserve)
Positioning output rate………………………………………… 1Hz~20Hz
Initialization time……………………………………………… < 10s
Initialization reliability…………………………………………> 99.99%

Positioning Precision

Code differential GNSS positioning…. Horizontal: 0.25 m + 1 ppm RMS
Vertical: 0.50 m + 1 ppm RMS
GNSS static………………………… Horizontal: 2.5 mm + 0.5 ppm RMS
Vertical: 5 mm + 0.5 ppm RMS
Real-time kinematic……………………… Horizontal: 8 mm + 1 ppm RMS
(Baseline<30km) Vertical: 15 mm + 1 ppm RMS
SBAS positioning………………………………….Typically < 5m 3DRMS
RTK initialization time……………………………………………2 ~ 8s
IMU tilt angle…………………………………………………0° ~ 60°

Hardware Performance

Dimension…………………………………………130.5mm(φ) × 84mm(H)
Weight……………………………………………. 850g (battery included)
Material………………………………… Magnesium aluminum alloy shell
Operating temperature………………………………………-25℃ ~ +65℃
Storage temperature…………………………………………-35℃ ~ +80℃
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
Power supply………………………… 6-28V DC, overvoltage protection
Battery…………………………………… Inbuilt 6800mAh rechargeable,
Li-ion battery
Battery life………………………………Single battery: 16h (static mode)
8h (Base)
15h (Rover + Bluetooth)

Communications

I/O Port……………………….... 5PIN LEMO external power port + Rs232
Type-C interface (charge + OTG + Ethernet)
SIM card slot (Micro SIM)
Communication protocol………………… Farlink, Trimtalk450s, SOUTH,
SOUTH+, SOUTHx, HUACE, Hi-target, Satel
Communication range…………….. Typically 8km with Farlink protocol
Cellular mobile network…………..………… 4G cellular module standard,
customizable 5G module
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)

WIFI

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

Data Storage/Transmission

Storage… 8GB SSD internal storage standard, extendable up to 64GB
Automatic cycle storage (The earliest data
files will be removed automatically while the
memory is not enough)
Support external USB storage
The customizable sample interval is up to 20Hz
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 data format: CMR, SCMRx, RTCM 2.1,
RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2
GPS output data format: NMEA 0183, PJK plane
coordinate, Binary code, Trimble GSOF
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 immue 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……………………………..………………………….. Single button
Indicators……………………………………………… 5 LED indicators
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
package, 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 with the update of the firmware version*

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