

SPECIFICATIONS

GNSS Features

Channels	1698
GPS	L1C, L1C/A, L2C, L2P(Y), L5
GLONASS	G1, G2, G3
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GALILEOS	E1, E5a, E5b, E6, A/BOC*
SBAS	L1*
IRNSS	L5*
QZSS	L1, L2C, L5*
Mode	Base/Rover
MSS L-Band	Reserve
Positioning Output Rate	1 Hz~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	H, horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 3.5 mm + 0.5 ppm RMS
Static (Long Observation)	Horizontal: 2.5 mm + 0.1 ppm RMS Vertical: 3 mm + 0.4 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	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
Laser measurement	1 cm + 5 mm/m
SBAS Positioning	Typically<5m 3DRMS
RTK Initialization Time	2~8s
IMU Accuracy	8 mm+0.7 mm/°tilt
IMU Tilt Angle	Accuracy within 120°

Hardware Performance

Dimension	134mm(φ)×79mm(H)
Weight	860g (battery included)
Material	Magnesium aluminum alloy shell
Storage Temperature	-55°C~+85°C
Humidity	1.00% Non-condensing
Waterproof/Dustproof	IP68 standard
Shock/Vibration	Withstand 2 meters pole drop onto the cement ground naturally
Power Supply	6-28V DC, overvoltage protection
Battery	Inbuilt 7.4v 6800mAh rechargeable Lithium-ion battery
Battery Life ¹	25h (static)

Communications

I/O Port	5-PIN LEMO interface (external power port + RS232) Type-C interface (charge+OTG+Ethernet)
Communication Protocol	Farlink, Trimtalk, SOUTH, HUACE, Hi-target, Satel

Communication Range	Typically 8-10km with Farlink protocol, (12-15km in optimal condition)
Bluetooth	Bluetooth 5.0, Bluetooth 3.0/4.2 standard, Bluetooth 2.1 + EDR
NFC Communication	Support
Modem	802.11 b/g/n standard

Data Storage/Transmission

Storage	16GB SSD internal storage Support automatic cycling storage Support external USB storage (OTG) 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, etc. Differential data format: 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 Support: VRS, FKP, MAC, fully support NTRIP protocol

Sensors

IMU	Built-in IMU, calibration-free, 120 Degree
Camera	Front Camera: 8MP, Bottom Camera: 2MP, (Live View AR stakeout)
Laser	3R green laser, 30m working range
Electronic Bubble	Controller software can display electronic bubble, checking leveling status of the carbon pole in real-time
Thermometer	Built-in thermometer sensor, intelligent temperature control technology, monitoring and adjusting the receiver temperature

User Interaction

Operating System	Linux
Buttons	SSingle button
Indicators	Data and power indicators
Web Interaction	With access to Web UI via WiFi or USB connection, users can monitor the receiver status and change the configurations Voice Guidance: Chinese/English/Korean/Spanish/Arabic/Portuguese/Russian/Turkish/French/Italian/
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 management, firmware updates, online registers, etc.

*Reserve for future upgrade.

Remarks: Measurement accuracy and operation range might vary due to atmospheric conditions, signal multipath, obstructions, observation time, temperature, signal geometry and number of tracked satellites. Specifications subject to change without prior notice.
1. Actual battery life can vary depending on usage patterns and other factors. The listed parameter was obtained under controlled testing conditions.

SOUTH
Tar get your success

GNSS Receiver ALPS2

REACH NEW HEIGHT



MEASUREMENT &
REMOTE STAKEOUT

LIVE-VIEW AR STAKEOUT
WITH DUAL CAMERA

SOUTH
Tar get your success

SOUTH SURVEYING & MAPPING TECHNOLOGY CO., LTD.

Add: South Geo-Information Industrial Park, No. 39 Si Cheng Road, Tian He IBD, Guangzhou 510663, China
Tel: +86-20-23380888 Fax: +86-20-23380800
E-mail: mail@southsurvey.com export@southsurvey.com impexp@southsurvey.com euoffice@southsurvey.com
http://www.southinstrument.com