

GLONASS.....

GNSS Features Channels....

GPS...

1698	Communication Range Typically 8-10km with Farlink protocol,
L1C, L1C/A, L2C, L2P(Y),	(12-15km in optimal condition)
L5 G1, G2, G3	Bluetooth Bluetooth 5.0, Bluetooth 3.0/4.2 standard,
	Bluetooth 2.1 + EDR
	NFC Communication Support
AltBOC* L1*	Modem 802.11 b/g/n standard
L5*	Data Storage/Transmission
L1, L2C, L5*	Storage
BDS-PPP, GALILEO-HAS	Support automatic cycling storage
Rate <u>1</u> Hz~20Hz	Support external USB storage (OTG)
< 10s	The customizable sample interval is up to 20Hz
ity> 99.99%	Data Transmission
ision	Supports FTP/HTTP data download
ISS positioning Horizontal: 0.25 m + 1 ppm RMS	Data FormatStatic data format: STH, Rinex2.01, Rinex3.02, etc.
Vertical: 0.50 m + 1 ppm RMS	Differential data format: RTCM 2.1, RTCM
Horizontal: 2.5 mm + 0.5 ppm RMS	2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2
Vertical: 3.5 mm + 0.5 ppm RMS	GPS output data format: NMEA 0183, PJK
vation)Horizontal: 2.5 mm + 0.1 ppm RMS	plane coordinate, Binary code
Vertical: 3 mm + 0.4 ppm RMS	Support: VRS, FKP, MAC, fully support
Horizontal: 2.5 mm + 0.5 ppm RMS	NTRIP protocol
Vertical: 5 mm + 0.5 ppm RMS	
	Sensors
Vertical: 5 mm + 1 ppm RMS	IMUBuilt-in IMU module, calibration-free, 60°
Horizontal: 8 mm + 1 ppm RMS	Camera Video Shooting Camera: 8MP (can be
Vertical: 15 mm + 1 ppm RMS	used in AR stakeout)
Horizontal: 8 mm + 0.5 ppm RMS	AR stakeout camera: 2MP
Vertical: 15 mm + 0.5 ppm RMS	Laser
Typically<5m 3DRMS	Electronic BubbleController software can display electronic
ne	bubble, checking leveling status of the
	carbon pole in real-time
Optimal accuracy within 60°	ThermometerBuilt-in thermometer sensor, adopting
	intelligent temperature control technology,
mance	monitoring and adjusting the receiver
134mm(φ)×79mm(H)	temperature
	User Interaction
Magnesium aluminum alloy shell	Operating SystemLinux
ture45℃~+75℃	Buttons Dual buttons
re55℃~+85℃	IndicatorsSatellites, data and power indicators
100% Non-condensing	Display 1.14", 135*240
ofIP68 standard	Web Interaction With access to Web UI via WiFi or USB
Withstand 2 meters pole drop onto the	connection, users can monitor the receiver
cement ground naturally	status and change the configurations
	Voice Guidance Chinese/English/Korean/Spanish/
Inbuilt 7.4v 6800mAh rechargeable Lithium-	Portuguese/Russian/Turkish/French/
ion battery	Italian/Arabic
	Secondary Development Provides secondary development package,
20h (rover mode, optimal condition)	and opens the OpenSIC observation data
S	format and interaction interface definition
5-PIN LEMO interface (external power	Cloud Service
port + RS232)	online services like remote management,
Type-C interface (charge+OTG+Ethernet)	firmware updates, online registers, etc.
UHF antenna interface	
	*Reserve for future upgrade.
410-470MHz	

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.

	B1I, B2I, B3I, B1C, B2
GALILEOS	B2b E1, E5a, E5b, E
SBAS	AltBOC* L
IRNSS	L4
0755	L1, L2C, L4
MSSI_Band	BDS-PPP, GALILEO-HA
Resitioning Output Poto	<u>1</u> Hz~20+
	< 1(
	> 99.99
Positioning Precision	
Code differential GNSS positi	oning Horizontal: 0.25 m + 1 ppm RM
	Vertical: 0.50 m + 1 ppm RM
GNSS Static	Horizontal: 2.5 mm + 0.5 ppm RM
	Vertical: 3.5 mm + 0.5 ppm RM
Static (Long Observation)	Horizontal: 2.5 mm + 0.1 ppm RM
	Vertical: 3 mm + 0.4 ppm RM
Papid Statio	Horizontal: 2.5 mm + 0.5 ppm RM
	Vertical: 5 mm + 0.5 ppm RM
РРК	Horizontal: 3 mm + 1 ppm RM
	Vertical: 5 mm + 1 ppm RM
RTK(UHF)	Horizontal: 8 mm + 1 ppm RM
	Vertical: 15 mm + 1 ppm RM
RTK(NTRIP)	Horizontal: 8 mm + 0.5 ppm RM
	Vertical: 15 mm + 0.5 ppm RM Typically<5m 3DRM
SBAS Positioning	Typically<5m 3DRM
RTK Initialization Time	
IMU Accuracy	
IMU Tilt Angle	Optimal accuracy within 60
Hardware Performance	
Dimension	<u>1</u> 34mm(φ)×79mm(ł
Weight	
Material	
Operating Temperature	45℃~+75°
Storage Temperature	55°C~+85°
Humidity	
Waterproof/Dustproof	IP68 standa
Shock/Vibration	Withstand 2 meters pole drop onto th
	cement ground natural
Power Supply	
Detter/	. Inbuilt 7.4v 6800mAh rechargeable Lithiun
ballery	ion batte
Detternel (c.1	
Battery Life	
	25h (stati 20h (rover mode, optimal condition
Communications	
I/O Port	5-PIN LEMO interface (external pow
	port + RS23
	Type-C interface (charge+OTG+Etherne
	UHF antenna interfac
Internal UHF	
Frequency Range	410-470MF
Frequency Range	410-470MF Farlink, Trimtalk, SOUT

Farlink, Trimtalk, SOUTH

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LASER MEASUREMENT & REMOTE STAKEOUT

0. **VISUAL POSITIONING** & 3D MODELING **BY VIDEO SHOOTING**

Total RTK

D

MULTIP

SOUTH

DQ

ER

*

SOUTH Target your success

Video Shooting & Laser Measurement — Add Them Together to Multiply Your Power

Laser Stakeout & CAD AR Stakeout - Lift Your Efficiency to A New Level

Measure More & Farther, in shorter time

You are More Efficient than Ever



ALPS1 allows you to shoot a group of photos or videos in realtime, obtaining coordinates for hundreds of points within minutes. It outpaces traditional RTK in data acquisition speed.



With laser measurement, ALPS1 has a broader working range and fewer blind spots, enabling remote measurements in areas with poor GNSS signal quality. Previously challenging spots, like spaces under rooftops and areas with obstacles, are now easily measurable.

Measure at Day or Night, Real-time or Non-Real-time, by Your Need

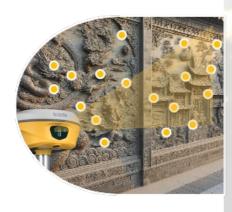
You are More Versatile than Ever



Image data, stored for an extended period, is reusable at any time. These capabilities are especially well-suited for unique tasks, such as documenting accident scenes and excavation sites for urban public facilities.



Laser measurement allows surveyors to collect target point at a dark environment such as night or semi-indoor environment. It also can measure distance indoor.







To Overcome the Difficulty

Lasers bring more possibilities to staking out.

Now, when you encounter tall obstructions near the target point in the field that block satellite signals, you will no longer be helpless.

Please just enable laser and continue the work.

Additionally, when it is inconvenient to carry instruments to the target point, you can also choose to stake out by laser from a distance of several meters away.



Large Area or Tiny Space? ALPS1 Suits Both You are More Flexible than Ever

Video Shooting allows surveyors to remotely measure points up to 10 meters or more (15m in ideal conditions), eliminating the need to physically approach each point. This method significantly reduces physical effort when surveyor is working in a large area.

Laser Measurement allow users to realize a very

quick non-contact measuring when there is only very

limited space to move, such as a narrow alley. In this

kind of scenario, laser is faster than video shooting.









ALPS1 Keeps You Away from Dangers

You are Safer than Ever

Video Shooting and Laser Measurement help users mitigate risks when surveying near hazardous areas, such as busy roads and sea or lakes, ensuring surveyors' safety. A secure working approach is not only a personal requirement but also essential for the well-being of your family.







Simplify Your Workflow with CAD

ALPS1 can integrate the content of CAD drawings with real-world scenes, helping you stakeout targets more quickly.

The front camera assists surveyors in finding a general direction from a distance and understanding the distribution of surrounding features. The bottom camera enables precise stakeout as you approach the target.

With dual camera's help, your stakeout will be easier and more intuitive.





Diverse Applications Prepared for Your Future Needs



SOUTH

CONSTRUCTION



Work Faster, Work Better

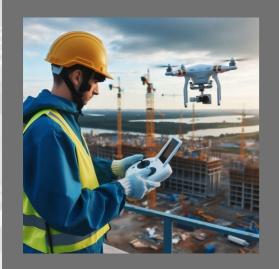
Through the further development of laser measurement, ALPS1 can directly measure road lengths from a distance, obtain area measurements for defined regions, calculate earthwork volumes, and more. This expands from simple point measurements to comprehensive calculations, helping you complete measurements more quickly in construction projects.

FORESTRY



Save Labor, Save Time

In forestry, ALPS1 combines laser measurement with eccentric measurement to help users quickly calculate the center position of tree trunks. When paired with 3D modeling, it not only provides intuitive and visual results, making complex data easier to understand and analyze, but also allows for the integration of data from other sources, resulting in more diverse and comprehensive outcomes.



UAV MAPPING



Create More with Less

ALPS1 utilizes SOUTH's 3D modeling technology, integrating image measurements seamlessly with UAV data from DJI and other brands, meanwhile laser measurement save time for recording extra control points, addressing data gaps in UAV surveys. Surveyors can integrate image data into SOUTH software and third-party modeling software for efficient 3D modeling.





Best Hardware To Win the Challenges

