

J1 is designed to enhance your performance in the field survey and to provide the most reliable positioning result.

It integrates a 1598 channels world leading GNSS positioning engine, high precision IMU, long range UHF radio and new interact operating system.

More features are to be discovered by you...







More channels and all constellations tracking

With 1598 GNSS channels solution, J1 can support multi-constellation and multifrequency tracking with the help of high-performance GNSS antenna.

More powerful inbuilt radio

Coupling a high-performance UHF module with Farlink communication technology, which increases signal sensitivity and transmission efficiency, J1 really achieves the goal of a 8~15km ultra-long-distance working range. And the power consumption of this carrying new generation module is 60% lower than additional UHF, making the Base working time is much longer.

Superior Endurance, Up to 25 hours working

J1 uses a built-in 10000mAh ultra-large capacity Li-ion battery, which can last 25 hours of continuous work (Static) benefits from low power consumption circuit design. The Type-C interface is used on J1 that it can support fast charging through a charger with PD protocol, and it can be full charged in 4 hours.

Double data backup

The measured data can be simultaneously stored into both internal memory of receiver and controller, realizing the measured data double backup, which effectively avoid data loss.

Upward and hidden UHF antenna design

Upward UHF antenna design, achieving all-direction UHF signal receiving and transmitting. And the antenna interface is hidden into top cover that effectively avoid accident breaking, protect from water and dust.

Intelligent base signal locking technology

Using one-to-one signal tracking and locking technology, and the independent frequency under Farlink protocol, the J1 rover can continuously lock and capture the target base station signal to reduce cross-frequency interference even though other base stations are working nearby with the same channel.

Smart system management-ROS

J1 is integrated with the ROS system, which comes with intelligent deployment of multi-mode hardware components, strong computing power and an intelligent scheduling mechanism, and coupling with an ultra-fine memory management mechanism, making the fluency and running speed of the receiver comprehensively improved.

SPECIFICATIONS

GNSS Features

Channels	
GPS	L1C/A, L1C, L2C, L2P, L5
GLONASS	
BDS	B1I, B1C, B2I, B2a, B3
GALILEO	E1, E5A, E5B, E5AltBOC, E6
SBASEGNOS	, WAAS, GAGAN, MSAS, SDCM(L1,L5)
QZSS	L1C/A, L1C, L2C, L5, L6
Navic	L5*(reserved)
On module L-Band (Reserve)	
Positioning output rate	
Initialization time	< 10s
Initialization reliability	>99.9%

Positioning Precision*

Horizontal: 8. Vertical: 1	mm + 0.5 ppm RMS 5 mm + 1 ppm RMS
Horizontal: 2.5 Vertical: 5	mm + 0.5 ppm RMS mm + 0.5 ppm RMS
Horizontal: 1.2m	Vertical: 1.9m RMS
Horizontal: 0.4m	Vertical: 0.7m RMS
Horizontal: 0.6m	Vertical: 0.8m RMS
	Horizontal: 8 Vertical: 1 Horizontal: 2.5 Vertical: 5 Horizontal: 1.2m Horizontal: 0.4m Horizontal: 0.6m

Hardware Performance

Dimonsion	$165 mm(m) \times 108 mm(H)$
	(1) 25 km (k attam in alvide d)
Weight	1.35kg (battery included)
Material	Magnesium aluminum alloy shell
Operating temperature	45℃ ~ +65℃
Storage temperature	45°C ~ +85°C
Humidity	
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	
Battery	Inbuilt 10000mAh rechargeable,
	unremovable Li-ion battery
Battery life	Static: 20~25hrs
-	Base: 10~12hrs
	Rover: 16~20hrs

Communications

I/O Port	5-PIN LEMO external power port + RS232 Type-C interface (charge + OTG + Ethernet)
	1 LIHE antenna interface
	1 PPS ouput interface
	SIM card slot (Micro SIM)
Internal UHF	
Frequency range	
Communication protocol.	Farlink, Trimtalk450s, SOUTH,
	HUACE, Hi-target, Satel
Communication range	
Cellular mobile network	
Bluetooth	Bluetooth 4.2 standard, Bluetooth 2.1 + EDR
NFC Communication	Realizing close range (shorter than 10cm)
	automatic pair between receiver and controller

WIFI

Modem	
WIFI hotspot	Receiver broadcasts its hotspot form web UI
	accessing with any mobile terminals

Data Storage/Transmission

Storage 16GB SSD in	iternal storage standard, extendable up to 64GB
	Automatic cycle storage
	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
Static data format	
Differential data format	CMR, RTCM 2.x, RTCM 3.x(MSM included)
Position output data forma	atNMEA 0183, PJK plane coordinate, SBF
Network model supports	Fully support NTRIP protocol

Sensors

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

User Interaction

Operating system	Linux
Buttons	Dual-button
Indicators	
Web interaction	. With the access of the internal web interface
m	anagement 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,
Secondary development	Provides secondary development backage, and opens the OpenSIC observation data format and interaction interface definition

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

CE FC

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