 **PHEREFIX**

# **SP30Se**

**GNSS RTK SYSTEM**



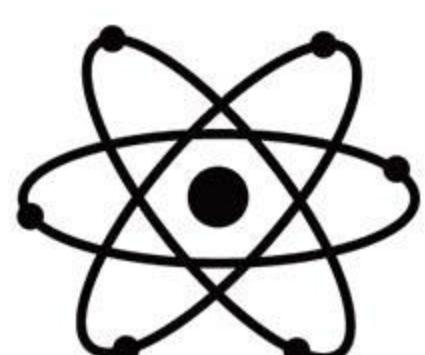
# SP30Se GNSS Receiver

SP30Se is a multifunctional GNSS receiver with Linux operating system that supports receiving all satellite signals. The new generation measurement engine supports tilt surveying and has built-in 4G full network communication, Bluetooth, WIFI and 5W digital transmission radio. The transmission distance in open areas can reach 16km. Combined with a lightweight and portable design, it makes your surveying and mapping work more intelligent and efficient.



HEIGHT	DIAMETER	WEIGHT
86.6mm	145.7mm	1000g

## RECEIVE ALL SATELLITE SIGNALS



SP30Se integrates high-precision positioning module, configures 1408 high-speed channels, supports BDS B1I, B2I, B3I, B1C, B2a, B2b(PPP-B2b), GPS L1C/A, L1C, L2C, L5, GLONASS L1, L2, L3, Galileo E1, E5a, E5b, E6(PPP-E6), QZSS L1, L2, L5, SBAS and NavIC(IRNSS).

## 5W BUILT-IN RADIO



When SP30Se is used as a base station, transmitting at 5W high power in open areas, with a distance of up to 16KM.

## 4G FULL-NETCOM



Combining a lightweight and modern design, SP30Se is equipped with a 4G modem, providing fully integrated communication options.

## ULTRA-LONG ENDURANCE



The built-in large-capacity battery enables it to operate continuously for more than 10 hours in the Base mode.

# CHARACTERISTIC



- ARM Cortex-A7
- Linux intelligent system



- BDS, GPS, GLONASS, Galileo, QZSS, SBAS, NavIC
- 4G, Radio, Bluetooth, WiFi



- Centimeter level positioning
- Positioning accuracy of *less than 2cm* within the tilt *range of 60°*



- High-capacity lithium battery
- ultra long battery endurance



- Solid *magnesium alloy* shell
- In line with *IP68* design requirements, safe and reliable



## C100 Data Controller

C100 control terminal is a multi-functional data controller specially designed for the surveying industry. It has an impressive battery life of up to 15 hours. The 5.5-inch sun readable display screen and IP67 protection level make it suitable for various harsh outdoor conditions. The powerful 8-core processor and Android 11 operating system ensure that C100 runs efficiently and smoothly, and is compatible with various measurement software applications, making it the ideal companion for your surveying tasks.

## KEY FEATURES

- 5.5-inch sunlight readable HD touch screen
- 8-core 2.0GHz CPU
- Android 11 operating system
- 3GB RAM + 32GB ROM
- 13MP rear camera
- IP67 certified grade, water/shock/dust proof
- 7700mAh
- Wi-Fi, Bluetooth and 4G
- USB Type-C.



ITEM	SPECIFICATION		REMARKS
HARDWARE SYSTEM	OS	ARM Cortex-A7 Linux	
GNSS	GPS	L1C/A, L1C,L2P(Y), L2C,L5	
	GLONASS	L1, L2, L3	
	BDS	B1I, B2I, B3I, B1C, B2a, B2b	
	GALILEO	E1, E5a, E5b, E6	
	QZSS	L1, L2, L5	
	SBAS	L1	
	NavIC(IRNSS)*	L5*	
	Channel	1408 channels	
	Data format	NMEA-0183	
	Correction I / O Protocol	RTCM3.X	
POSITIONING ACCURACY	Data update frequency	20Hz	
	Recapture Time	<1s	
	Cold Boot	<40s	
	Single(RMS)	Horizontal: 1.5m; Vertical: 2.5m	
	DGPS(RMS)	Horizontal: 0.4m; Vertical: 0.8m	
SYSTEM	RTK(RMS)	Horizontal: $\pm(8\text{mm}+1\text{ppm})$ ; Vertical: $\pm(15\text{mm}+1\text{ppm})$	
	Time Accuracy(RMS)	20ns	
	Static Accuracy(RMS)	Horizontal: $\pm(2.5\text{mm}+1\text{ppm})$ ; Vertical: $\pm(5\text{mm}+1\text{ppm})$	
	Speed Accuracy(RMS)	0.03m/s	
	Tilt compensation Accuracy (within 60°)	<2cm	
INDICATOR	Bluetooth	BR+EDR+BLE	
	WIFI	802.11 b/g/n	
	Network	LTE FDD: B1/2/3/4/5/7/8/18/19/20/25/26/28 LTE TDD: B38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM: B2/3/5/8	
	Data Radio	Transceiver station Frequency: 410~470MHz Power: 1W/2W/5W Air baud rate: 9600, 19200bps Protocol: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT	
BATTERY	Storage	32GB	
	Power Indicator	Show power status	
	Satellite Indicator	Show position status	
	Bluetooth Indicator	Lights up when Bluetooth is connected	
ENVIRONMENT	Data link Indicator	Show differential signal status	
	Battery	7.4V,10000mAh	TBD
	Battery Endurance	$\geq 10$ hours(as Base), $\geq 24$ hours(as Rover)	TBD
	Charge	Support USB PD 12V/2A, USB DCP 5V/3A Support external power supply 9~24VDC	
PHYSICAL	Working Temperature	-20°C~+60°C	
	Storage Temperature	-20°C~+70°C	
	Anti-vibration	Resistant to 1.5m drop with pole at room temperature	
	Protection	IP68	
	Material	Magnesium alloy shell+ABS/PC plastic top cover	
	Dimension	Φ145.7mm*93.6mm	
	Weight	1000g	TBD

► Manufacturers may update parameters at any time, please refer to the latest product information.

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.