SPHEREFIX

SP30Pro
GNSS RTK SYSTEM

Photogrammetry

AR Real-scene Stakeout

SP30Pro *GNSS Receiver*

SP30Pro is a multi-functional GNSS receiver that integrates AR and Photogrammetry modules. It has a built-in high-precision positioning module, which supports the tracking of satellite signals at all frequency points. The device is completely equipped with 4G Full-netcom, Bluetooth, WIFI, and a built-in 5W data transmission radio. Its high-precision inertial navigation module integrates Photogrammetry and AR real scene stakeout, greatly expanding the boundaries of surveying & mapping.

HEIGHT	DIAMETER	WEIGHT
86.6mm	145.7mm	1000g

Receive all satellite signals

SP30Pro 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).

AR real-scene stakeout

Professional ultra-wide-angle camera, providing high-definition real-scene staking function, and more convenient real-scene stakeout application, makes your stakeout easier and more intuitive.
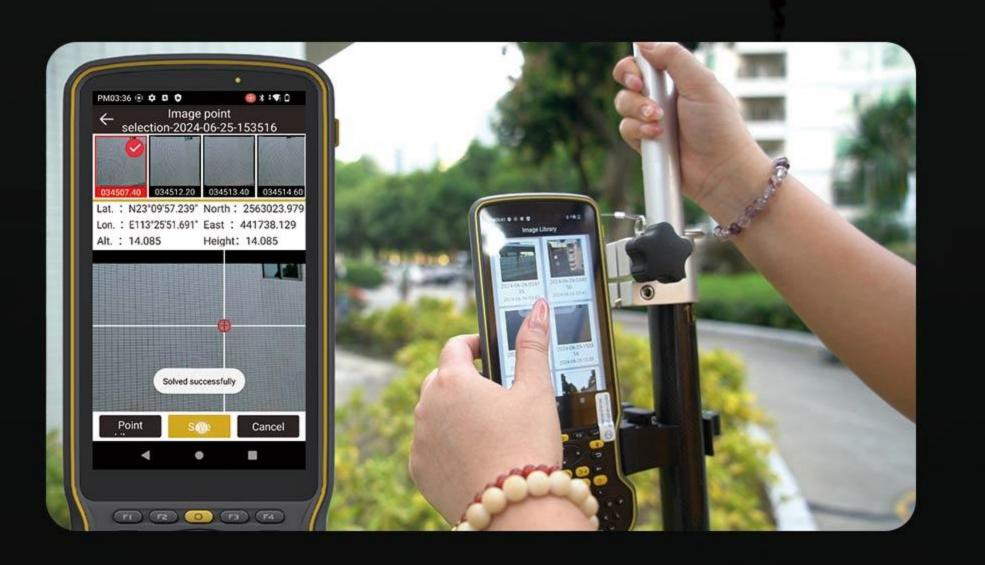
Photogrammetry

SP30Pro is equipped with a 1/2.6-inch high-definition wide-angle camera, integrated with high-precision inertial navigation algorithms, and combined with a high-performance Android controller to achieve high-precision Photogrammetry.

Ultra-long endurance

The built-in large-capacity battery enables it to operate continuously for more than 24 hours in the Rover 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

C500 Data Controller

C500 control terminal is a new Android 12 data collector launched by Spherefix, using Qualcomm's latest industrial grade processor. Equipped with a standard all English keyboard and a 5.5-inch 500nit display screen made of Gorilla glass, it is clear and easy to read in sunlight. In addition, C500 is equipped with Bluetooth 5.0, dual band 2.4G/5G WiFi, and a 4G modem that supports global networks. The built-in 9000mAh battery provides long-lasting endurance, and IP68 protection makes C500 perform well in challenging environments, making data collection tasks easier and more efficient.

Key Features

- 5.5-inch sunlight readable HD touch screen
- 8-core 2.0GHz CPU
- Android 12 operating system
- 4GB RAM + 64GB ROM
- 13MP rear camera
- IP68 certified grade, water/shock/dust proof
- 9000mAh(Support Rapid Charing)
- Wi-Fi, Bluetooth and 4G
- Type-C (USB3.0 Supports OTG) .

ITEM		SPECIFICATION	REMARKS
HARDWARE SYSTEM		ARM Cortex-A7	
OS		Linux	
GNSS	GPS	L1C/A, L1C,L2P(Y), L2C,L5	Support PPP-B2b
	GLONASS	L1, L2, L3	Support PPP-E6
	BDS	B1I, B2I, B3I, B1C, B2a, B2b	Support SBAS
	GALILEO	E1, E5a, E5b, E6	
	QZSS	L1, L2, L5	
	SBAS	L1	
	NavIC(IRNSS)*	L5*	Requires latest firmware support
	Channel	1408 channels	
	Data format	NMEA-0183	
	Correction I / O Protocol	RTCM3.X	
	Data update frequency	20Hz	
	Recapture Time	<1s	
	Cold Boot	<40s	
POSITIONING ACCURACY	Single(RMS)	Horizontal: 1.5m; Vertical: 2.5m	
	DGPS(RMS)	Horizontal: 0.4m; Vertical: 0.8m	
	RTK(RMS)	Horizontal: ±(8mm+1ppm); Vertical: ±(15mm+1ppm)	
	Time Accuracy(RMS)	20ns	
	Static Accuracy(RMS)	Horizontal: ±(2.5mm+1ppm); Vertical: ±(5mm+1ppm)	
	Speed Accuracy(RMS)	0.03m/s	
	Tilt compensation Accuracy (within 60°)	<2cm	
SYSTEM	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	
	Storage	32GB	
	AR Camera	Sensor Size: 1/2.8 inch Aperture: f/2.5 Pixel: 1920*1080px Angle of view: D: 70.3° H: 62.7° V: 38.6° Distortion: <0.38%	
	Photogrammetry Camera	Sensor Size: 1/2.6 inch Focal Distance: 3.27mm Aperture: f/2.8 Pixel: 1920*1080px Angle of view: D: 51.8° H: 42.4° V: 32.4° Distortion: <0.5%	
INDICATOR	Power Indicator	Show power status	
	Satellite Indicator	Show position status	
	Bluetooth Indicator	Lights up when Bluetooth is connected	
	Data link Indicator	Show differential signal status	
BATTERY	Battery	7.4V,10000mAh	TBD
	Battery Endurance	More than 24 hours (In Phone network data link mode)	TBD
	Charge	Support USB PD 12V/2A, USB DCP 5V/3A Support external power supply 9~24VDC	
ENVIRONMENT	Working Temperature	-20℃~+60℃	
	Storage Temperature	-20℃~+70℃	
	Anti-vibration	Resistant to 1.5m drop with pole at room temperature	
	Protection	IP68	
PHYSICAL	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.