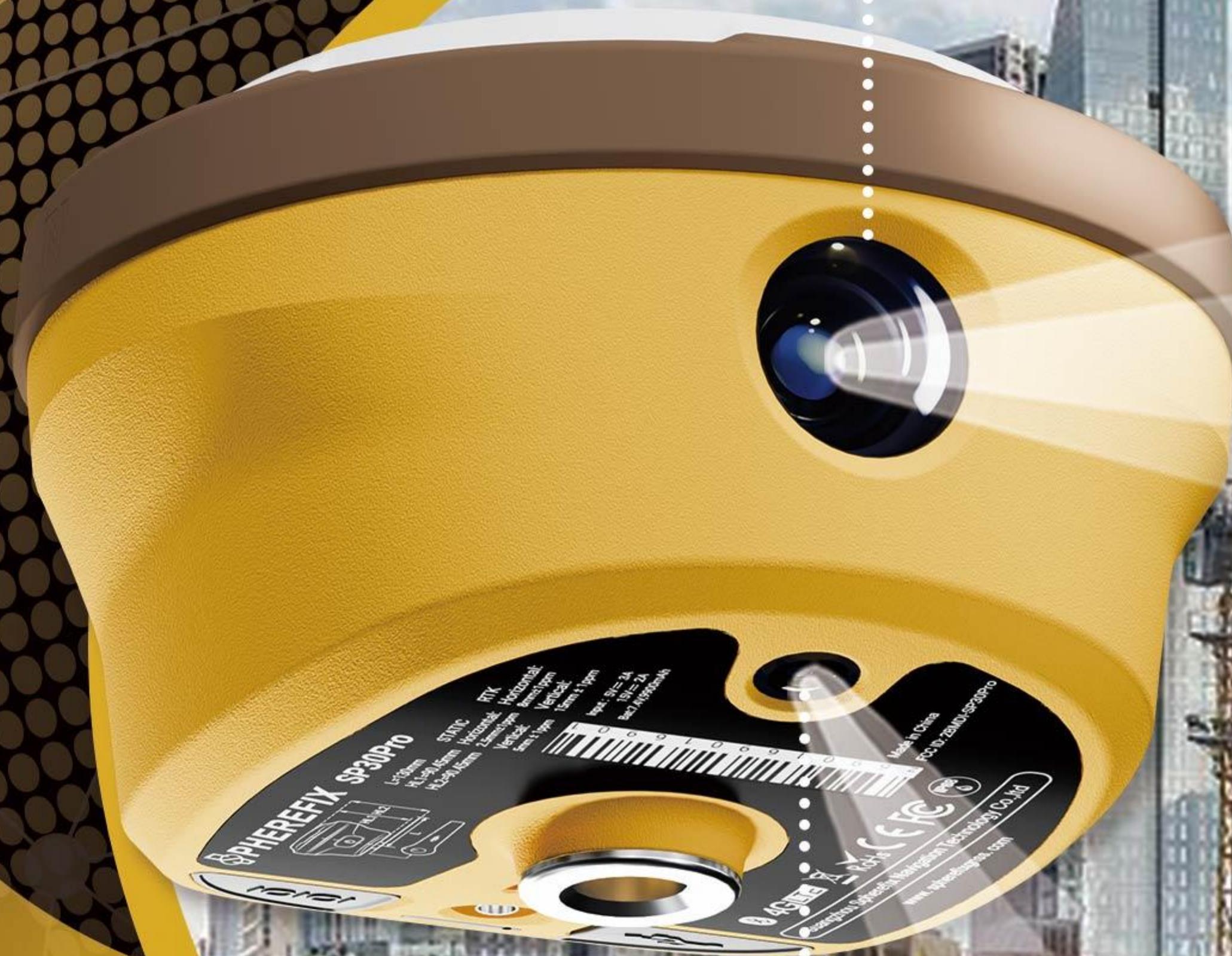


SP30Pro

GNSS RTK SYSTEM

○ **Photogrammetry**



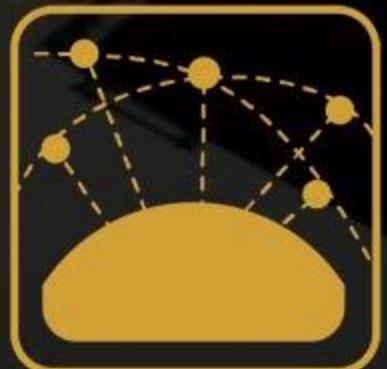
○ **AR Real-scene Stakeout**

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 LoRa radio. Its high-precision inertial navigation module integrates Photogrammetry and AR real-scene stakeout, greatly expanding the boundaries of surveying & mapping.



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

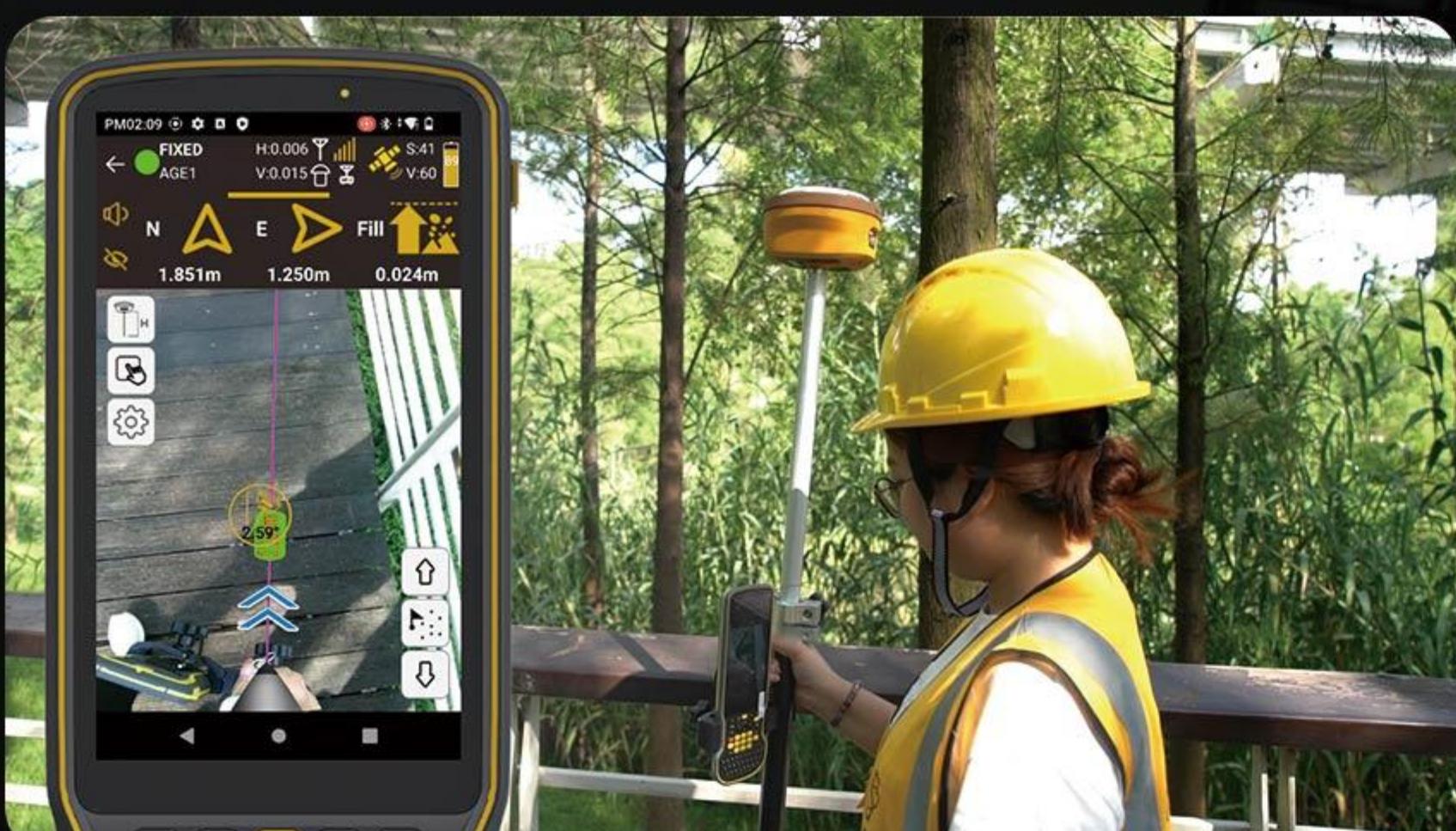


SP30Pro is equipped with a 1/2.6-inch high-definition wide-angle camera, integrated with high-precision inertial navigation algorithms, and combined with a high-performance Android controller to achieve high-precision Photogrammetry.

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	
	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	
	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, CSS-11000, CSS-12000, CSS-15000, CSS-18000 (lora)	
	Storage	32GB	
INDICATOR	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: 6mm Aperture: f/2.8 Pixel: 1920*1080px Angle of view: D: 51.8° H: 42.4° V: 32.4° Distortion: <0.5%	
	Power Indicator	Show power status	
	Satellite Indicator	Show position status	
	Bluetooth Indicator	Lights up when Bluetooth is connected	
BATTERY	Data link Indicator	Show differential signal status	
	Battery	7.4V,10000mAh	TBD
	Battery Endurance	More than 24 hours (In Phone network data link mode)	TBD
ENVIRONMENT	Charge	Support USB PD 12V/2A, USB DCP 5V/3A Support external power supply 9~24VDC	
	Working Temperature	-20°C~+60°C	
	Storage Temperature	-20°C~+70°C	
	Anti-vibration Protection	Resistant to 1.5m drop with pole at room temperature 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.