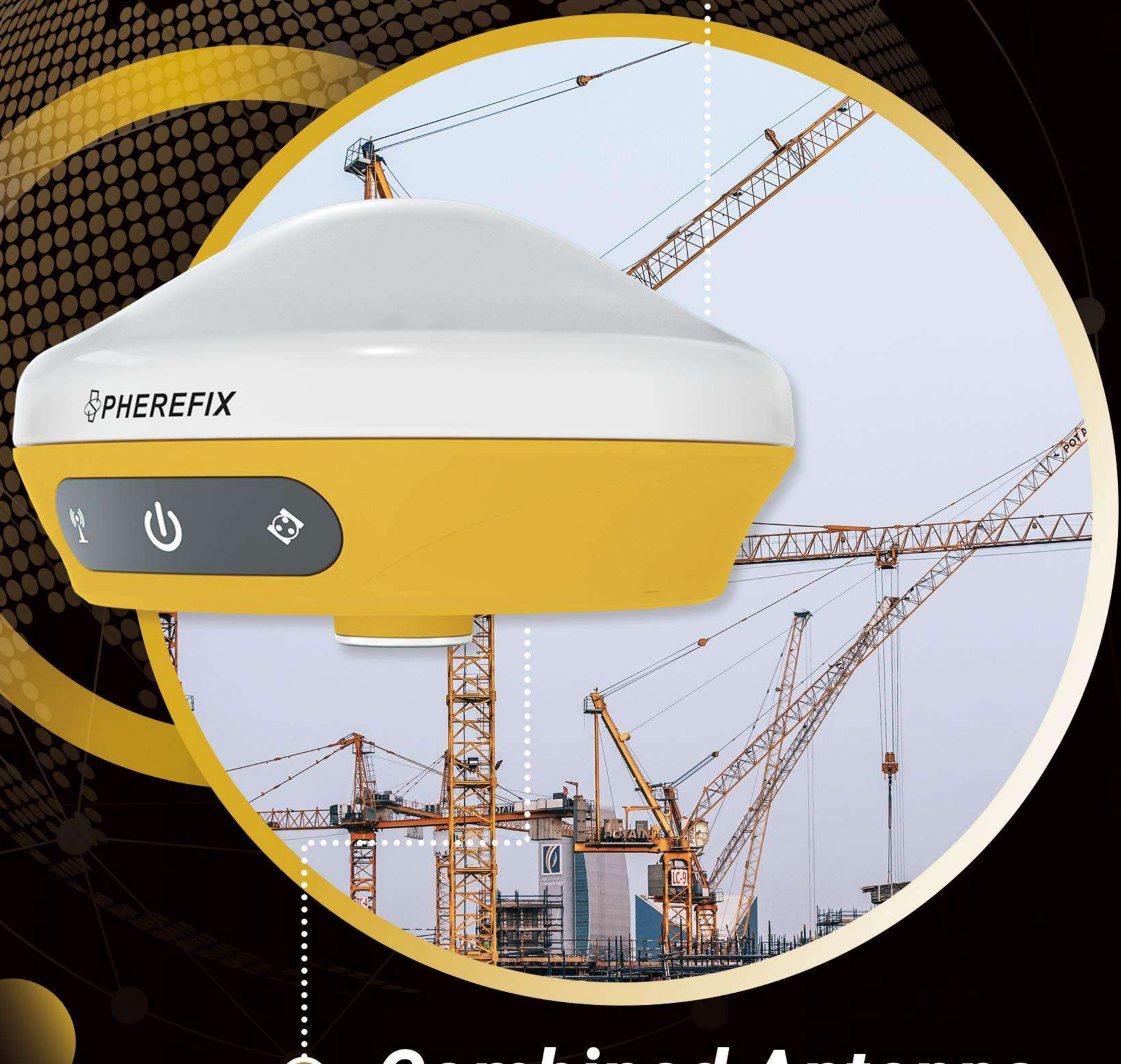
PHEREFIX

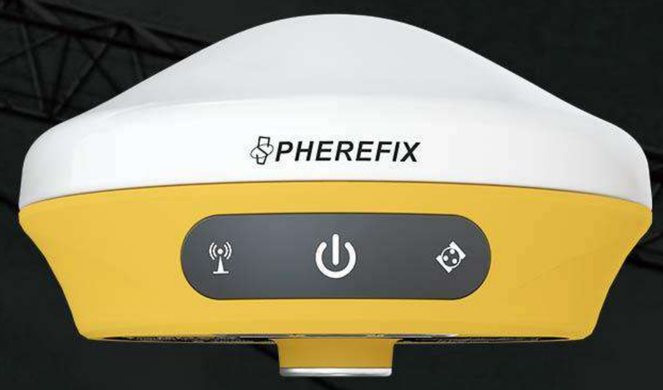
SP20

GNSS RTK SYSTEM



SP20 GNSS Receiver

SP20 is a portable multifunctional GNSS receiver, a new generation of measurement engine, supporting tilt measurement, NFC, built-in 4G modem, Bluetooth, WiFi and Radio. It adopts a new appearance design, magnesium alloy structure and Linux operating system. It is an extremely light-weight, fully functional and portable geodesic GNSS receiver.



HEIGHT	DIAMETER	WEIGHT
68mm	147.9mm	740g

IMU

SP20 has the IMU technology. Fast initialization, and up to 60° inclination.

Multi constellation

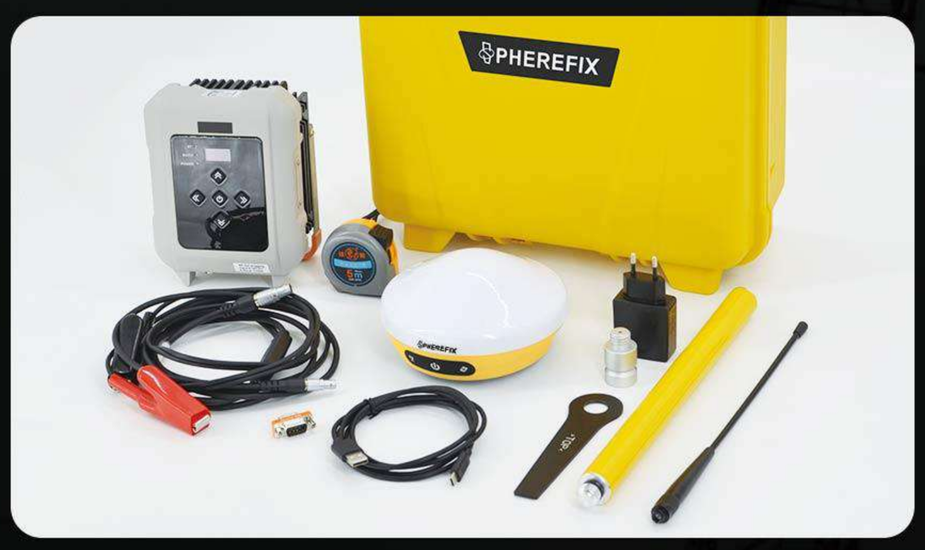
With its1408 channels, SP20 provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BDS, GALILEO, QZSS, SBAS, IRNSS) are included.

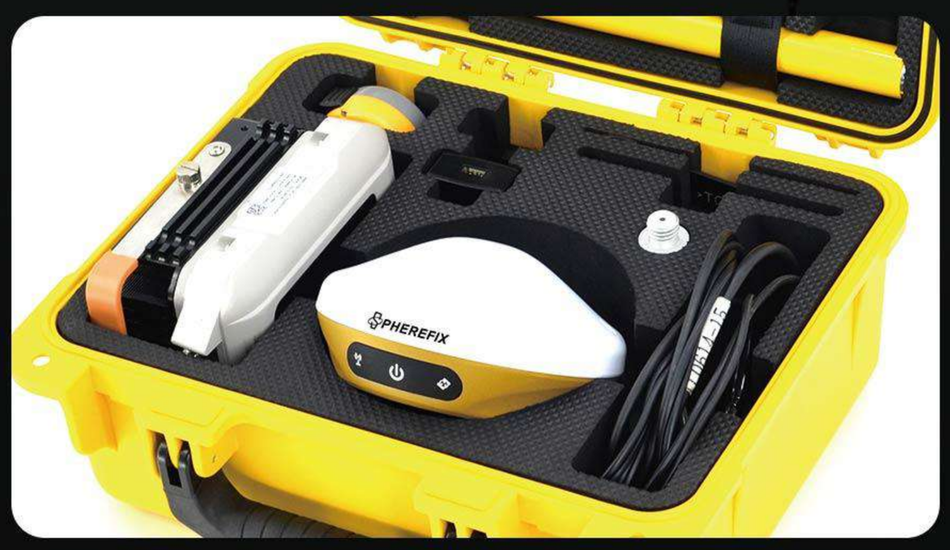
4G Modem

SP20 has an internal 4G modem that operates with more cellular network signals. A fast internet connection is guaranteed.

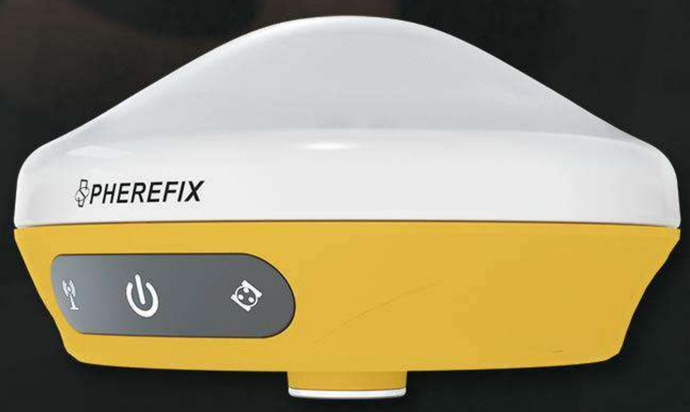
Combined antenna

With seamless inertial navigation, there's no need for calibration, which makes you ready to measure upon startup.





Characteristic



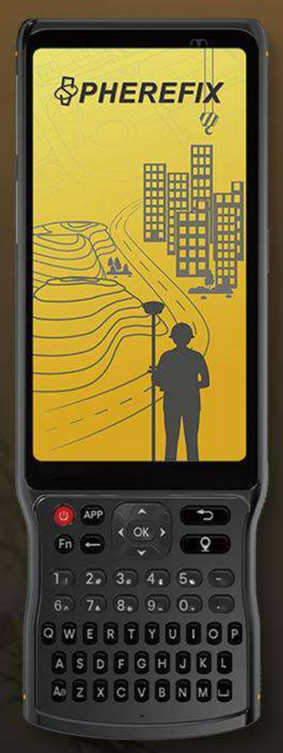
- ARM Cortex-A7 1.8GHz
- Linux intelligent system

- BDS, GPS, GLONASS, Galileo, QZSS, SBAS, IRNSS
- 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

C100T Data Controller



C100T control terminal is a versatile data controller crafted specifically for the surveying sector. It boasts an outstanding battery life of up to 18 hours. Its 5.45-inch display is readable in direct sunlight, and with an IP68 protection rating, it can withstand various harsh outdoor conditions. The powerful 8-core processor and Android 11 operating system ensure that the C100T operates efficiently and smoothly, and it is compatible with multiple measurement software applications, facilitating surveying tasks.

Key Features

- 5.45-inch sunlight readable HD touch screen
- 8-core 2.0GHz CPU
- Android 11 operating system
- 4GB RAM + 64GB ROM
- 13MP rear camera
- IP68 certified grade, water/shock/dust proof
- 9000mAh
- Wi-Fi, Bluetooth, Network and 4G

ITEM		SPECIFICATION	REMARKS
HARDWARE SYSTEM		ARM Cortex-A7 1.8GHz	
OS		Linux	
GNSS	GPS	L1C/A, L1C, L2P(Y), L2C, L5	PPP-B2b, PPP-E6, SBAS supported
	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*	Requires firmware support
	Channel	1408 channels	
	Data format	NMEA-0183	
	Correction I / O Protocol	RTCM3.X	
	Data update frequency	5Hz(Typ) 20Hz(max)	
	Recapture Time	<1s	
	Cold Boot	<30s	
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+0.5ppm); Vertical: ±(5mm+0.5ppm)	
	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: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 LTE TDD: B38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM: B2/3/5/8	
	Data Radio	Frequency: 410~470MHz Protocol: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT RF transmit power: 0.5W/1.5W Air baud rate: 9600, 19200bps	
	Storage	32GB	
INDICATOR	Power Indicator	Show power status	
	Satellite Indicator	Show position status	
	Data link Indicator	Show differential signal status	
BATTERY	Battery	3.7V, 9600mAh	
	Battery Endurance	More than 16 hours (Typical, Rover, GSM)	The static working mode supports continuous data collection for 24 hours under full power.
	Charge	MTK PE + 1.1/2.0 9V/2A USB PD 12V/1.25A 5V/3A	Support fast charging adapter and adaptively and dynamically adjust charging current.
ENVIRONMENT	Working Temperature	-20℃~+60℃	
	Storage Temperature	-40℃~+85℃	
	Anti-vibration	Resistant to 1.5m drop with pole at room temperature	
	Protection	IP68	
PHYSICAL	Material	Magnesium alloy main body, ABS/PC top cover	
	Dimension	Φ147.9mm*68mm	
	Weight	740g	

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