

W20

GPS ASSET TRACKER

Product Specifications

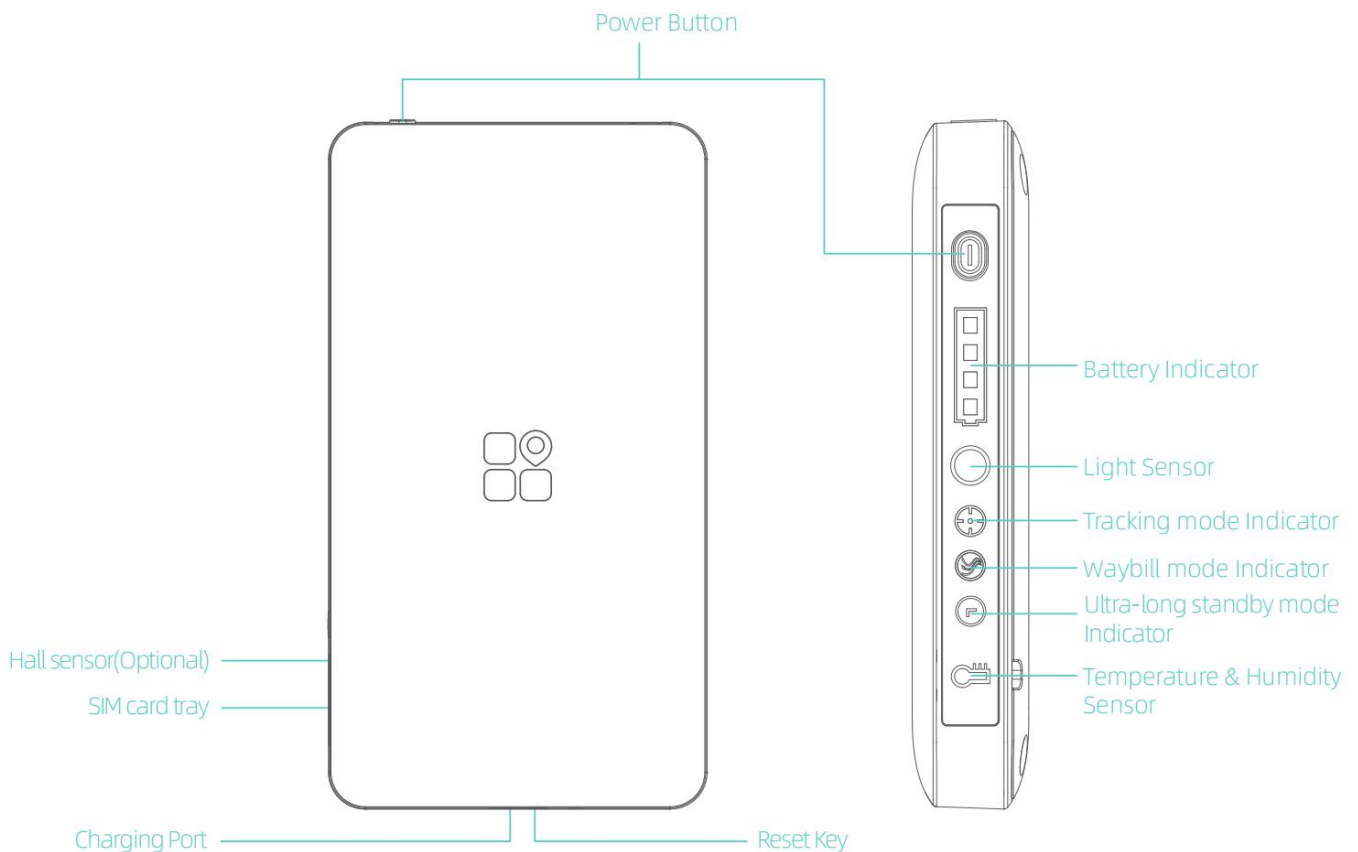
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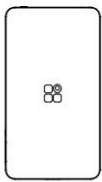
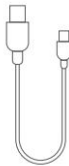
1、Introduction

1.1 Summary

W20 is a 4G CAT1 smart positioning terminal specially designed for asset and cargo transportation management. It adopts a card-shaped design, with a small body that is convenient for placement in more application scenarios. The device supports multiple positioning modes, including Beidou/GPS/Wi-Fi/Bluetooth/LBS, for faster and more accurate positioning. It also has built-in sensors such as light sensor, temperature and humidity sensor, Hall sensor, 3-axis/6-axis accelerometer, which can be used for functions such as open box reminder, temperature and humidity monitoring, door magnetic detection, and violent transportation. It supports Bluetooth 5.0 communication, which makes W20 have more application possibilities.



1.2 Packing List

 Main Device	 SIM Card Ejector Pin	 Charging Cable	 SIM Card Tray
1 pc	1pc	1pc	1pc

2、Hardware Specifications

#	Functions		Description	
Electricity Character	Work Voltage		5V/1A	
	Standby Current		≤5mA (With Built-in Battery)	
	Internal Battery		2500mAh/3.7V	
Environment Character	Work Temp		-20℃ - 70℃	
	Storage Temp		-30℃ - 80℃	
	Work Humidity		10%-85% RH non-condensing	
	Frequency Bands	SA	LTE/4G	FDD-LTE: B2/B4/B7/B8/B20/B28 TDD-LTE: B38/B40/B41
		EU	LTE/4G	FDD-LTE: B1/B3/B5/B7/B8/B28 TDD-LTE: B38/B40/B41
		CN	LTE/4G	LTE-FDD:B1/B3/B5//B8 LTE-FDD:B34/B38/B39/B40/B41
	SIM card		Nano SIM 卡	
	Antenna		Built-in antenna	
	Antenna spec		fpc antenna	
GPS/BD Location Character	Chip Model		AT6558R	
	Location mode		BDS+GPS	
	Cold Start		32S(open sky)	
	Hot Start		1S(open sky)	
	Sensitivity (tracking)		-162 dBm	
	Locate the antenna		Built-in ceramic dielectric antenna	
	Antenna spec		18mm * 18mm * 2mm	
	GPS frequency bands		L1: 1575.42±1.023MHz	
	BDS frequency bands		B1: 1561.098±2.046MHz	
	Satellite channel		66	
	Location accuracy		<10m	
	Timing accuracy		<30ns	
	Speed measurement accuracy		<0.1m/s	
Shape	Device Dimension		112.5 (L)*62(W)*11(H) mm	
	Housing Material		ABS+PC plastic	
	Unit weight		86g	
Other	Temperature Detection		-40 - +125℃, error ±0.3℃, accuracy 0.1℃	
	Humidity Detection		0-99%RH, accuracy 0.1, error ±5%	

3、Key Features

Functions	Description
Tracking Mode	The terminal stays continuously online for real-time location updates with a high power consumption. Generally used for real-time tracking.
Waybill Mode	Default working mode for asset transport management. Configurable reporting intervals for movement status. In order to extend standby time the device enters into sleep mode when it's static.
Ultra-long Standby Mode	The terminal can be configured to wake up and report its position at scheduled intervals, entering sleep mode after reporting.
Temperature Abnormal Alarm	A normal temperature range can be configured, with alarms triggered when it exceeds the specified limits.
Humidity Abnormal Alarm	A normal humidity range can be configured, with alarms triggered when it exceeds the specified limits.
Geofence Alarm	Supports alarms for entering and exiting geofences.
Carton Open Alarm	After the device is packed in a carton box, it detects a sudden increase of the light, indicating that the box has been opened, and reports an carton open alarm.
Low Battery Alarm	Reports a low battery alert when the battery level drops below 20%.
Violent Transportation Alarm (Optional)	Reports alarms upon detecting free fall, collision, rolling, and other similar scenarios.
Door Open/Close Alarm (Optional)	With the door magnetic accessory, an alarm can be configured for the door opening and closing status change.

4、Installation

4.1 Main device

Check if the appearance is in good condition and verify all relevant accessories are present.

4.2 Insert SIM Card

4.2.1 Choose appropriate SIM Card

Please choose a 4G LTE-FDD supported nano SIM card like below:



Normal 



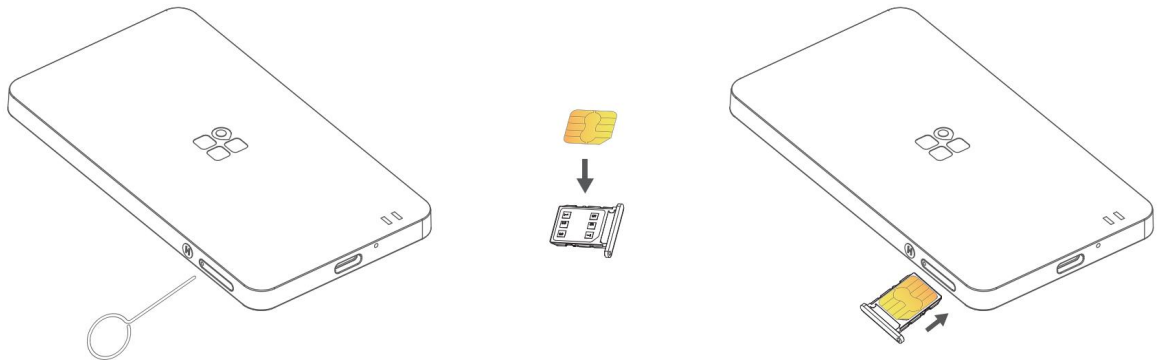
Micro 



Nano 

4.2.2 Insert SIM card

Use the card ejector pin to open the SIM card tray, as shown in the diagram. Place the SIM card with the metal side facing up and insert it into the SIM card slot in the correct direction.



Note:

When using the SIM card ejector pin, please exercise caution to prevent injury to your fingers or damage to the device. Keep the ejector pin in a safe place, out of reach of children, to avoid accidental swallowing or injury.

4.2.3 Power ON/OFF:

Power On: From the powered-off state, long-press the power button for 3 seconds. The LED light will illuminate, indicating a successful power-on.

Power Off: From the powered-on state, long-press the power button. The LED light will go off, indicating a successful power-off.

Power Status Check: Short-press the power button. If the LED light turns on, the terminal is in the power-on state; if it doesn't light up, the terminal is in the power-off state.

4.2.4 Charging precautions

- ❖ If the battery is completely depleted, it takes approximately 3 hours to fully charge.
- ❖ Use the provided charger or a certified charger to ensure compatibility and safety.
- ❖ Connect the charging cable securely to both the device and the power source.
- ❖ Avoid charging in extreme temperatures, either too hot or too cold.
- ❖ Unplug the charger when the device is fully charged to prevent overcharging.
- ❖ Slight heating during charging is considered normal, if you notice any unusual behavior or heating during charging, disconnect the charger and contact support.

- ❖ This product supports the power-on function while charging. If the battery is fully charged and you don't plan to use it immediately, please power off the device in a timely manner.

4.3 LED Indicators

Battery Level Indicator(Green)

Charging

Battery Level	LED1	LED2	LED3	LED4
Battery≤25%	1S ON, 1S OFF	OFF	OFF	OFF
26%≤Battery<50%	ON	1S ON, 1S OFF	OFF	OFF
51%≤Battery<75%	ON	ON	1S ON, 1S OFF	OFF
76%≤Battery<96%	ON	ON	ON	1S ON, 1S OFF
Battery>96%	ON	ON	ON	ON

Not Charging

Battery Level	LED1	LED2	LED3	LED4
Battery<1%	OFF	OFF	OFF	OFF
1%≤Battery<25%	ON	OFF	OFF	OFF
26%≤Battery<50%	ON	ON	OFF	OFF
51%≤Battery<75%	ON	ON	ON	OFF
76%≤Battery	ON	ON	ON	ON

Tracking Mode Indicator (Green)

Status	Meaning
Fast blink (0.3S on, 0.3S off)	Network initiating
Solid ON	Network connection is normal
Solid OFF	LED in sleep or not in tracking mode

Waybill Mode Indicator (Blue)

Status	Meaning
Fast blink (0.3S on, 0.3S off)	Network initiating
Slow blink (0.3S on, 2S off)	In Airplane mode
Solid ON	Network connection is normal

Ultra-long Standby Mode Indicator (White)

Status	Meaning
Fast blink (0.3S on, 0.3S off)	Network initiating
Slow blink (0.3S on, 2S off)	In Airplane mode
Solid ON	Network connection is normal

Note:

The indicator lights will turn off when the device is in sleep mode. Pressing the power button briefly can activate the LED indicator for 20 seconds.

5、APP

Please log in to the APP or the location services platform provided by your distributor to configure settings and operate device features.



iOS



Android

6、Appendix

6.1 Battery Security

- (1) Use only original batteries. Non-original batteries invalidate warranties and the manufacturer is not liable for any device damage caused.
- (2) Prevent metal objects from shorting battery terminals.
- (3) Do not bend or puncture the battery.
- (4) Do not immerse or incinerate the battery.
- (5) Charge battery near room temperature between 0°C and 45°C.
- (6) Do not use damaged, leaking or deformed batteries.

(7) Do not disassemble or modify the battery

6.2 Troubleshooting

Refer to the solutions below if you encounter the following common faults. Contact your distributor or service provider if problems persist.

Fault	Cause	Solution
Poor GPS Signal	Using the device in areas with poor signal reception, such as inside tall buildings or basements	Use the device in an area with good signal reception
	The device is placed facedown or obstructed by a metal layer, preventing it from receiving satellite signals	Place the device in the correct orientation or change the installation location
Unable to Power On	Battery is drained	Connect the external power supply to charge the battery
	Fuse blown	Contact the dealer for replacement with a fuse of the same specifications and model
Unable to Connect to Network	SIM card not installed properly	Check the SIM card and reinstall it
	The metal surface of the SIM card is dirty	Clean the metal surface of the SIM card with a clean cloth.
	SIM card is damaged or invalid	Replace the SIM card with a valid one
	Out of service area	Move to the service area of the network service provider.
	Weak signal	Move to a place with a strong signal and try again.
Unable to Charge	Poor contact	Check if the power cable of the device is properly connected
Location can't be fixed	SIM card data service is not activated	Contact the network service provider to activate data service
	SIM card is out of credit	Recharge the SIM card

	No reply to SMS commands	Ensure the device can connect to the network and the SIM card's SMS function is activated
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6.3 Warranty

Note:

- (1) The product may be modified in the future without prior notice.
- (2) The actual appearance and color of the product may vary.
- (3) This warranty card is only valid for the presented IMEI number.
- (4) Please keep this warranty card in a safe place. Please present this card and the original receipt when you need warranty service.

Clauses:

- (1) The product is covered by a one-year warranty for non-human-made damage from the date of purchase.
- (2) The following are not covered by the warranty, but may be repaired for a fee:
 - ❖ Beyond the warranty period;
 - ❖ You do not have a valid warranty card or receipt;
 - ❖ The equipment or accessories are out of warranty;
 - ❖ Product quality problems caused by unauthorized repairs, collisions, liquid ingress, accidents, modifications, incorrect input voltage, or tearing, altering stickers, device IMEI numbers, or anti-counterfeiting marks;
 - ❖ Damage caused by incorrect installation or use that does not comply with the product manual requirements;
 - ❖ Damage caused by force majeure such as fire, flood, or lightning strike;
 - ❖ Warranty certificate does not match the product model or warranty certificate is altered;
 - ❖ Damage caused by force majeure.