



WhatsGPS

GPS Tracker Mode:S21L



User Manual

Statement

Hello! Thank you for using the S21L vehicle terminal (mobile user terminal) product. Please read this manual carefully before you use it. Please pay attention to all precautions and warnings mentioned in this manual, and keep this manual properly for reference.

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1.Product Introduction

S21L is a GPS positioning terminal based on 4G communication technology and adopts AT6558R module, which features stable communication, high positioning accuracy, small static drift and low power consumption, etc. In addition to supporting GPS/BDS satellite navigation and positioning technology, the equipment also supports single base station and multiple base station positioning modes.

With intelligent power-saving mode based on the built-in 3-axis sensor design, it supports flexible switching of multiple working modes and can be applied to a variety of different applications. With the global positioning service platform, the location of the device can be checked anytime and anywhere.

2. Product Features

- Support the global 4G network;
- Support global Beidou and GPS satellite positioning mode;
- Adopt AGPS auxiliary positioning to speed up positioning;
- SIM card plug and play, no electricity leakage without card inserted;
- Support SOS button and timely report to SOS alarm;
- Support multiple working modes: tracking mode, intelligent mode, and power-saving mode;
- Built-in high-sensitivity SENSOR sensor, supporting

vibration alarm;

- Support remote OTA upgrade;
- Support remote switch on/off;
- Support remote pickup;
- Support Data supplementary transmission in the blind areas;
- Support overspeed alarm;
- Support single fence and multiple-fence alarms;
- IP65 waterproof design;

3. Product Specifications

| Project | Specifications |
|-----------------------------------|--|
| Working Current | ≈65ma 4V (Quiescent current≈8mA) |
| Positioning Model | GPS+BDS |
| Position Error | <10 Meters |
| Network Frequency Band | LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900MHz |
| GPS Positioning Time | Cold boot≈32 Hot boot≈1s |
| Working Temperature | -20℃~ +75℃ |
| Working Humidity | 10%-85% |
| Specification and Size (Optional) | 78mm*39mm*29mm |
| Weight | ≈123g |
| Waterproof Grade | IP65 |
| Warranty | 1 year |

4. Appearance Diagram



By looking at the status indicator, you can understand the working condition of the device. The status of the indicator is as follows:

| LED Models | LED Light Status | Meaning |
|-----------------|--|----------------------------------|
| Red | Normally On | Charging |
| | Off | Battery full or off |
| Yellow | Normally On | Devices works normally |
| | Flash once in 2 seconds | GPRS searching |
| | Off | GPRS shut down/dormant |
| Blue | Normally On | GPS/BDS positioning succeeded |
| | Flash once in 2 seconds | GPS/BDS positioning |
| | Off | GPS/BDS sleep mode |
| Yellow and Blue | The yellow light and blue light flash twice in one second at the same time (Automatically shutdown after 5 seconds) | SOS triggered |
| | Lighting | SOS not triggered |
| | Off | SOS not triggered/sleep mode/Off |

5.Instruction for Use

5.1.Startup and Card Insertion Process

Open the waterproof cover of the SIM card, insert the SIM card in the direction shown in the figure. After the device is inserted into the SIM card, insert the card and assemble the SIM card cover. Wait for the indicator light goes on, then you can log in through the APP or platform to view the location.

Precautions:

If no SIM card is installed, the communication part of the terminal will not be opened; When the SIM card is installed, the device will be powered on and work; When the SIM card is taken out, the communication terminal will be closed automatically; The terminal SIM card needs to enable SMS and network communication functions;

Please ensure that the terminal SIM card has credits; If your SIM card is turned on and SIM PIN is required, please refer to your mobile phone user manual to turn off the SIM PIN input function.

5.2.Charging Instructions

The device needs to be fully charged before use. It is recommended to use 5V charger that supports fast charging mode. The charging time is about 6 to 8 hours. Different chargers will vary. The red LED always lights up when charging, and the red LED goes out when the battery is full. The charging cable is the standard Type-C charging cable.

5.3.Working Mode Description

| | |
|----------------------|--|
| Normal Tracking Mode | <p>the working state transmits position once in 30 seconds by default, and then enters standby after 5 minutes of rest. The standby state device transmits a heartbeat every 5 minutes to keep the server connected. The device can be woken up to working state by vibration.</p> |
| Smart Mode | <p>Set the data upload interval, the device works according to the set interval of 2 minutes each time. The device is in sleep mode during the non-working time, and the vibration can not wake it up.</p> |

| | |
|---------------------|--|
| Power-Saving Mode | The device transmits data once in 30 seconds by default in this working mode, and then goes into sleep mode after 2 minutes of rest. The device in sleep mode does not transmit data. It disconnects the server to save power, and the device can be woken up to working state by vibration. |
| SOS Alarm | The device comes with external SOS button. By pressing the button 4 times continuously, the device sends an emergency alarm to the server. If the device sets a SOS number, it will send a distress message to the master number and call the set family number. |
| Remote Power On/Off | The device will be turned off by sending commands, and the device will be offline and cannot be woken up by vibration, so it needs to be turned on manually. |

(The device will execute the remote shutdown process when receiving remote shutdown command in the above three modes)

6.Common Instruction Specifications

6.1.Common Setup Instructions

| Sequence Number | Format | Example | Explanation |
|-----------------|--|---|---|
| 1 | IP,realm name,port | IP gps.whatsgps.com 6801 | Set up the server Domain name; Server Domain Port; Server Port |
| 2 | APN, password, APN Name# | apn,123456,cmnet | Set APN |
| 3 | FREQ,123456,T | FREQ,123456,30 | T range is 10-60, unit: second; The settings are all invalid in the timed power on/off and deep sleep mode. |
| 4 | 101#130*** *****# 102#130*** *****# 103#130*** *****# | 101#130000000000# 102#130000000000# 103#130000000000# | Set SOS alarm number 101#Indicates the owner's number 102#Indicates the first alarm number 103#Indicates the second alarm number |
| 5 | D101# D102# D103# | D101# D102# D103# | D101#Indicates to delete a number D102#Indicates to delete two numbers D103#Indicates to delete three numbers |
| 6 | CQ | CQ | Device reboot |

6.2.Common Query Instructions

| | | |
|---|--------|--|
| 1 | CXZT | Query device status Return content: Device software version, ID, IP, State-of-Charge, Mode, APN, GPS Status and signal value, GSM signal value, ICCID |
| 2 | CXWL | Query Network Status |
| 3 | RIMEI# | Query IMEI number |
| 4 | C10# | Query SOS number |
| 5 | G1234 | Query Positioning Location |

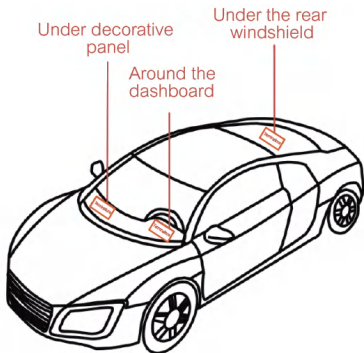
6.3.Working Mode Setting and Description

| | | | |
|---|---------------------|----------------|--|
| 1 | Tracking Mode | NMOD,123456 | Enable normal tracking mode |
| 2 | Smart Mode | Tmod,123456,60 | Turn on the smart mode, 60 means waking up every 60 minutes (5-720 minutes can be set) |
| 3 | Power-Saving Mode | SMOD,123456 | Turn on power-saving mode |
| 4 | Remote power on/off | Power,123456,T | T. Indicates the power status, 1 is on, 0 is off |

6.4.Alarm Setting and Description

| | | | |
|---|-----------------|------------------|---|
| 1 | Vibration alarm | vibtime,123456,n | A short command to set the vibration alarm duration, available in 1-15 seconds n (0-15). 0 is to cancel the vibration alarm. The default setting is 3 seconds, and the vibration alarm lasts for 3 seconds. |
|---|-----------------|------------------|---|

7.Installation Diagram



8.Troubleshooting

When operating the terminal, if you feel that the device is abnormal, please refer to the following problems and solutions. If the problem still cannot be solved, please contact the seller or service provider.

| Common Problem | Reason | Solution |
|----------------------------------|--|--|
| Poor signal reception | When terminals are used in areas with poor signal reception, such as near tall buildings or basements, the radio waves cannot be transmitted effectively | Use the terminal at the position with good signal |
| Unable to start | Battery depletion | Use after charging |
| Unable to connect to the network | SIM card is not installed properly | Check the SIM card |
| | There is dirt on the metal surface of the SIM card | Wipe with a clean cloth |
| | Invalid SIM card | Contact your network service provider |
| | Out of the GSM service area | Please move to the network service provider area |
| | Weak signal | Please move to a place with strong signal and try again |
| Unable to charge | The voltage is inconsistent with the range marked by the charger | Please use the voltage consistent with the charger label |
| | Use of non-standard charger | Please use the manufacturer's standard charger |
| | Poor contact | Check if the plug is connected properly |

Warranty Card

| Maintenance record | |
|-----------------------|--|
| Maintenance shop | |
| Sending date | |
| Fault description | |
| Maintenance situation | |
| IMEI number | |
| Maintenance person | |

FCC Statement

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

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

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.