

LTE Tracker

AT Plus 4E User Manual

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1 Introduction

AT Plus 4E is a powerful GPS locator which is designed for vehicle, human, pets and assets tracking. It works on LTE Cat M1 and NB-IoT FDD 1, FDD 3, FDD 8, FDD 20, FDD 28 and GPRS/EDGE 900/1800 with superior receiving sensitivity. Its location can be real time or schedule tracked by backend server or specified terminals. Based on the embedded wireless tracking protocol, AT Plus 4E can communicate with the backend server through LTE network, and transfer reports of emergency, Geo-fencing, device status and scheduled GPS position etc... Service provider is easy to setup their tracking platform based on the functional wireless tracking protocol.

2 Product Overview

2.1 Appearance



Figure 1-1

2.2 Buttons/USB Interface Description

| Button /12PIN Interface Description | |
|-------------------------------------|--|
| KEY/interface | Description |
| Power Key | Power on AT Plus 4E Power off AT Plus 4E (If power key is enabled) |
| Function Key | SOS mode |
| USB interface | Connected to a charger can power on AT Plus 4E Backend server developer or administrator can use the debug cable to configure AT Plus 4E (by engineer not by end user). |
| Reset Key | Click the key will turn off internal VBAT when OS is abnormal, and then press Power Key to restart AT Plus 4E. |

2.3 LED Description





Figure 1-2

There are four LED lights in AT Plus 4E device, the description as following.

| Light | Event | State |
|-----------|--|------------|
| GPS LED | GPS signal valid | Fast flash |
| | GPS turned off, GPS signal invalid | Dark |
| | Power key was pressed and prepare to power on | Solid |
| GSM LED | Network has been registered | Slow flash |
| | Power off | Dark |
| | Power key was pressed and prepare to power on | Solid |
| Power LED | Power on and normal | Dark |
| | Fully charged | Solid |
| | In charging | Slow flash |
| | Power key was pressed and prepare to power off | Solid |
| | Power key was pressed and prepare to power on | Solid |
| WIFI LED | WIFI on | Slow flash |
| | Power key was pressed and prepare to power on | Solid |

3 Getting Started

3.1 Parts List

| Name | Picture | Remark |
|-----------------------|--|--|
| AT Plus 4E Locater |  | The LTE/GPS locator. |
| AT Plus 4E charger |  | It used to be charging for the AT Plus 4E. |

3.2 Battery Charging

The following items are suggestion for battery charge, please pay more attention.

- ◆ During the charging process, the Power LED light will slow flash. When the battery is fully charged, the Power LED light will be Ever-dark.
- ◆ You can charge the battery using charging dock which connects AT Plus 4E device with the Adapter.
- ◆ Charging will last about 5 hours.

Note: If the AT Plus 4E device is firstly used, please make sure the battery is fully charged, which will make the life of battery much longer.

3.3 AT Plus 4E Charger

AT Plus 4E is charging with an AC Adapter.

The charger is used for device charging , which can be used for charging at the any time (by end user)..



Figure 2-1

3.4 Power on/Power off



Figure 2-2

Power on:

- ◆ Press the Power key at least 3 seconds and release it to power on AT Plus 4E device. Note that, the Power LED light will light for a moment and then turn off.

Power off:

- ◆ Press the power key about 3 seconds; Power LED light will light for a moment and then turn off, which indicates that AT Plus 4E device has been powered off.

Note: the user can not power off AT Plus 4E if the power key is disabled by protocol.

4 Frequency

LTE Cat M1 and NB-IoT : FDD 1, FDD 3, FDD 8, FDD 20, FDD 28

GPRS/EDGE : 900MHz/1800MHz

GPS:1575.42MHz

5 Trouble shooting and Safety info

5.1 Trouble shooting

| Trouble | Possible Reason | Solution |
|---|--|---|
| Messages can't be reported to the backend server by Mobile network. | APN is wrong. Some APN can not visit the internet directly. | Ask the network operator for the right APN. |
| | The IP address or port of the backend server is wrong. | Make sure the IP address for the backend server is an identified address in the internet. |
| Unable to power off AT Plus 4E. | The function of power key was disabled by AT+GTFKS. | Enable the function of power key by AT+GTFKS. |
| Battery can not be charged | The battery has not been used for too long time and has been locked. | Using a external power source with 3.6V to 4.2V DC power supply to active the battery or apply for after sale help. |
| AT Plus 4E can't fix GPS successfully. | The GPS signal is weak. | Please move AT Plus 4E to a place with open sky. |
| | | It is better to let the top surface face to the sky. (The same surface with indication LED) |

5.2 Safety info

The following items are suggestion for safety use, please pay more attention.

- ◆ Please do not disassemble the device by yourself.
- ◆ Please do not put the device on the overheating or too humid place, avoid exposure to direct sunlight. Too high temperature will damage the device or even cause the battery explosion.
- ◆ Please do not use AT Plus 4E on the airplane or near medical equipment.

FCC Caution.

§ 15.19 Labelling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

§ 15.21 Information to user.

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

§ 15.105 Information to the user.

Note: 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.

FCC Compliance:

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.

Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a 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.

Health and safety information Radio Frequency (RF) Energy

This model phone meets the government's requirements for exposure to radio waves. This phone is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government:

The exposure standard for UE employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/Kg. *Tests for SAR are conducted using standard operating positions accepted by the FCC with the UE transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

The highest SAR value for the model phone as reported to the FCC when tested for use towards ground is 1.214 W/Kg(1g). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model UE with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID: ZKQ-ATP4E