

LL701

User Manual

Version: V1.0

Read this manual carefully prior to use to ensure fast and correct operation of the product. No prior notice will be given for any changes made to the appearance, color, or accessories of the product.

Product Overview



Standard Parts List

| Item | Quantity |
|-------------------|----------|
| LL701 | 1 |
| Magnetic mount | 1 |
| Double-sided tape | 1 |
| Batteries | 3 |

Specification

GNSS

| | |
|-------------------------|--|
| Positioning system | GPS+LBS+WiFi+Bluetooth GPS+WiFi+Bluetooth GPS+WiFi+Bluetooth, LBS (optional) |
| Frequency | GPS L1 C/A supported QZSS L1 C/A supported |
| Positioning accuracy | < 2.5m CEP |
| Tracking sensitivity | -155dBm |
| Acquisition sensitivity | -145.5 dBm (cold start); -147 dBm (hot start) |
| TTFF (open sky) | Avg. hot start: ≤ 1 second Avg. cold start: ≤ 36 seconds |

Cellular

| | |
|-----------------------|--|
| Communication network | LTE |
| | LTE CAT-M1: B1, B2, B3, B4, B5, B8, B12, B13, B14, B18, B19, B20, B25, B26, B28, B66 |
| Frequency bands | LTE CAT-NB1/NB2: B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66 |

Power

| | |
|---------------|---|
| Working modes | Mode 1: Power-saving mode Mode 2: Regular GPS mode Mode 3: Power-off mode |
| Standby time | Up to 5 years (one fix per day) |

Interface

| | |
|----------------|--|
| LED indication | GNSS (Blue), Cellular (Green), Power (Red) |
| SIM | Micro-SIM |
| Tamper proof | Light sensor |

Product Setup

- Open the socket lid;
- Place the SIM card into the socket (metal side downward);
- Close the socket lid (if the SIM card is incorrectly placed, the lock will fail).

LED Indication

Battery Indication

When the device runs in recycling mode, press its function button ⑤ for 3 seconds and the power LED ② will light on for 4 seconds to tell you the strength of the internal battery.

| LED Status | Battery Strength | Min. standby time |
|----------------|------------------|-------------------|
| 4 LEDs on | 80% to 100% | 1550 days |
| 3 LEDs on | 50% to 79% | 950 days |
| 2 LEDs on | 30% to 49% | 550 days |
| 1 LED on | 10% to 29% | 190 days |
| 1 flashing LED | 1% to 9% | Exhausting |

Note:

The min. standby time is estimated on the ground that the device generates one fix per day.

GNSS Indication

The GNSS LED ③ is used to show the working status of the device's GNSS module, where:

- Flashing rapidly [on-off (0.1s–0.1s)]: The device is searching for satellite signals;
- Always on: A position has been fixed;
- Off: The GNSS module isn't working.

Cellular Indication

The cellular LED ④ is used to show the network status of the device, where:

- Flashing slowly [on-off (0.1s–0.5s)]: The device is identifying the SIM card;
- Flashing rapidly [on-off (0.1s–0.1s)]: The device is receiving cellular signals;
- Flashing slowly [on-off (0.1s–0.1s)]: The device is online;
- Off: The device fails to receive cellular signals or no SIM card is identified.

Configuration

APN Setting (If no network is available, you are advised to set the APN via the mobile app – JIMI IoT LAB)

Command: APN,<N>[,U][,P]#

N: Network name

U: User name

P: User password

Note: The parameters "U" and "P" can be left empty. The command is "CMNET#" by default.

APN adaptation switch: ASETAPN,<SW>#

SW: Switch to enable or disable the APN adaptation feature, whose value is either "ON" or "OFF".

Note: The default value for "SW" is "ON". Comparing these two setting methods, the priorities of manually-set APNs are higher than the self-adapted ones. Once an APN is manually changed (via a command sent by the user), the adaptation feature will turn invalid (auto switched to OFF). This auto switch-off protects the device against failing to go online in the event of an APN recognizing failure or an incorrect APN.

Working Modes

Recycling mode (Mode1)

In recycling mode, the device will disable the cellular and GNSS modules, which means it will neither fix positions nor upload location data.

Standby mode (Mode2)

In standby mode, the device uploads a position fix every 24 hours by default. You can change the interval and time point of upload via a command delivered by the platform or via the Jimi IoT LAB mobile app.

Set command:

MODE,2,Time,Interval#

Time: 00:01 to 23:59 (default: 07:00)

Interval: 60 to 1440 (default: 1440 minutes)

Tracking mode (Mode3)

In tracking mode, the device uploads a position fix every minute. You can change the upload and positioning duration via a command delivered by the platform or via the Jimi IoT LAB mobile app.

Set command:

MODE,3,interval,Working Time#

Interval: 60 to 360 (unit: seconds; default: 60 seconds)

Working Time: 0 to 1440 (unit: minutes; default: 10 minutes)

Note: If the working time is set to "0", the device will not exist tracking mode.

Switching Modes

Switch by command:

MODE,[A]#

A: 1 for recycling mode, 2 for standby mode, 3 for tracking mode

Query current working mode:

MODE#

Switch by key press:

- If the device is in recycling mode, press the function button ⑤ for 5 seconds to switch to standby mode;
- If the device is in standby mode, short press the function button ⑤ for 3 times in 5 seconds to switch to recycling mode.

Troubleshooting

When a problem arises, you can troubleshoot it by the following solution. If the problem persists, please don't hesitate to contact your dealer or service provider.

| Common Issues | Possible Causes | Solutions |
|------------------------------|--|---|
| Poor signal | The device is used in an area where radio waves is hard to reach, such as near high-rise buildings or in a basement. | Try it in a place where satellite signals can be well received. |
| Power-on failure | No SIM | Insert a SIM. |
| | Battery switch is not set to ON. | Slide the battery switch to ON. |
| | The battery is exhausted. | Charge the device. |
| Failed to access the network | The SIM card may be attached improperly. | Check the SIM. |
| | The metal side of the SIM card is stained. | Wipe it with a clean cloth. |
| | The SIM is invalid. | Please contact your network service provider. |
| | The device is out of service areas. | Try it in a service area. |
| | The signal is extremely weak. | Try it in an area with strong signals. |
| Failed to query a location | The SIM is not activated with data service. | Please contact your network service provider and activate the data service. |
| | The device keeps replying with "No data found, please try again". | Please contact your dealer. |

Warranty Instructions

Special Statement

- ① No prior notice will be given if the product is upgraded due to technological reasons.
- ② The appearance or color of the product is subject to the actual.
- ③ The warranty card applies to the services of repair, replacement, and refund of the product with the following IMEI.
- ④ Please keep this warranty card and the original purchase receipt together in a safe place, as these will be needed at time of services.

Warranty Terms

For damages not caused by human factors, this warranty lasts for 2 (two) years (including one-year replacement service) from the date of the original purchase.

You can choose to pay for the repair services in any of the following cases:

- ① The warranty card expires;
- ② No warranty card or valid proof of purchase;
- ③ The product, including its accessories, is not in the warranty period;
- ④ Damage caused by unauthorized repairs, crash, liquid spillage, incident, accident, modifications, or incorrect voltage input; or the label, IMEI, or counterfeit mark of the product is broken or scribbled;
- ⑤ Damages caused by installation or use not in accordance with the user manual;
- ⑥ Damage caused by force majeure such as fire, flood, or lightning;
- ⑦ The device model is inconsistent with the warranty card or the warranty card has been altered;
- ⑧ Other damages caused by force majeure.

FCC warning

Any Changes or modifications not expressly approved by the party responsible for compliance 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 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 RF radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.