LTE Container GNSS Tracker

# User Manual V1.0

CONTENTS

Overview

1.1 Main Features

- AGlobal roaming
- Remote configuration
- Magnetic mount
- IP65 dust and water proof
- Environment detection (Optional)
- 60 days working time (static mode)
- Installation/Remove alert
- Container door close/open alert

1.2 Specifications

Communication system	LTE/GSM
Frequency	LTE:B2/B4/B5/B7/B12/B17/B28 GSM:850/900/1800/1900MHz
Location Accuracy	<10 meters
Water/Dust proof	IP65
Battery	5200 mAh Li-Polymer battery
Standby time	60 days (upload one GPS data every 6hours in static mode)
Dimension	43×104×200 mm
Weight	370 g

Appearance
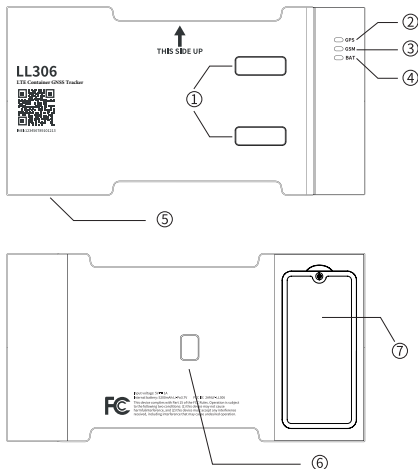
1. Door status detection button
2. GPS LED
3. GSM LED
4. Power LED
5. Micro USB charging port
6. Installation/Remove detection button
7. Battery/SIM

SIM card

3.1 Installation

If the device comes without SIM card, please install the SIM card first.
Please see the following pictures for SIM card installation.

· Remove the screw on the back cover of the device and take out the battery.
· Insert the SIM card.
· Put back the battery and cover, finally lock the screws.
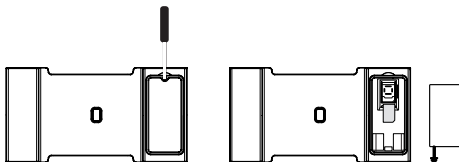
Operation and functions

4.1 Battery

· Before installing the device, momentarily press the installation detection button, the power indicator will light up. If the battery is less than 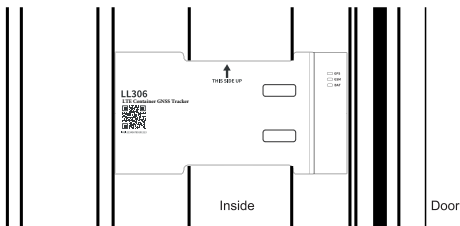80%, the power LED will flash (0.6s on and 2s off) 5 times before off. If the battery is more than 80%, power LED will be off after 10 seconds.

· If the battery is low, please use the 5V/2A Micro USB charger to charge the device.

4.2 Installation and power on

· Before closing the container door, attach the device to the right doorpost of the container (See above picture).

· The device will automatically turn on and the LED indicator will light up after installed.

· If the green LED flickers (0.2s on, 1s off), this indicates the device has been successfully connected to the network. Close the container door and view the location of your container on the monitoring platform.

4.3 LED

Power on	If the battery is less than 80%, the power LED will flash (0.6s on and 2s off) 5 times before off. If the battery is more than 80%, power LED will be off after 10 seconds.
Power off	1s on and 1s off (3 times)
Charging	Solid on during charging.Off while charging finished
Battery	If the battery is less than 80%, the power LED will flash (0.6s on and 2s off) 5 times before off. If the battery is more than 80%, power LED will be off after 10 seconds.
Installation and remove	0.2s on and 0.8 off (5 times)
Door open/close	0.2s on and 0.2 off (10 times)
GPS (Blue)	Searching satellite
	Positioning

4.4 SOS numbers setting

· Add SOS number

SMS command:

SOS,A, number1, number2, number3 # (A means add phone number). You could set 3 SOS numbers in maximum. If set successfully, the terminal will reply "OK".

e.g.

SOS,A, 13510****60,135116****6,136126****8# (set all 3 SOSnumbers)

SOS,A, 13510****60# (set the first SOS number)

SOS,A, ,135116****6# (set the second SOS number)

SOS,A, , ,136126****8# (set the third SOS number)

· Delete SOS number

SOS,D,1,2,3# (D means delete SOS number)

e.g.

SOS,D,1# means delete the first number

SOS,D,3# means delete the third number

If you do not know the sequence number, you can also delete the number by SMS command like this: SOS,D, number#

e.g.

SOS,D,13527852360# means delete this SOS number directly.

It will reply "OK"if the number is deleted successfully.

4.5 Working modes

· Automatic switching (default)

The device automatically identify the current environmentalof the container, and changes the mode between static mode, land transportation mode, and sea transportation mode.

· Manual switching

After the device is activated for the first time, it enters the static mode by default.

Mode switching instruction

SMS command for mode switching:

MODE,X#

X=0, automatic switching

X=1, static mode

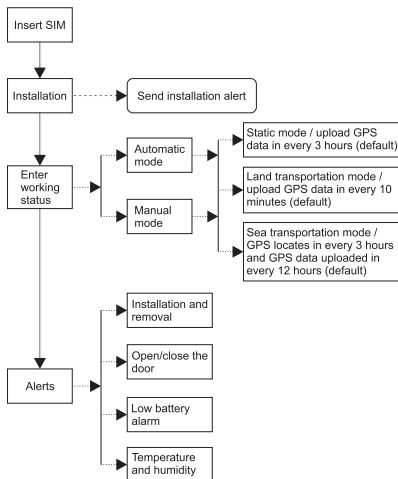X=2, land transportation mode

X=3, sea transportation mode

Default: X=0

· Query current mode

MODE#

Note:
For automatic switching, the device will work as the following flow chart shows.

```
Insert SIM
    │
    ▼
Installation  ┈┈┈┈►  Send installation alert
    │
    ▼
Enter           ┈┈►  Automatic  ┈┈►  Static mode / upload GPS
working              mode             data in every 3 hours (default)
status
                                     Land transportation mode /
                ┈┈►  Manual     ┈┈►  upload GPS data in every 10
                     mode             minutes (default)

                                     Sea transportation mode /
                                     GPS locates in every 3 hours
                                     and GPS data uploaded in
                                     every 12 hours (default)

Alerts          ┈┈►  Installation and
    │                removal
                ┈┈►  Open/close the
                     door
                ┈┈►  Low battery
                     alarm
                ┈┈►  Temperature
                     and humidity
```

In manual switching mode, the device will not work according to the flow chart.

· Different working modes has different GPS positioning intervals.
Positioning and upload interval setting commands are as follows:
MODESET, A, B, C, D#

A is the positioning and upload interval in static mode.
Ranges: 5-1440 minutes. The default is 180 minutes.

B is the positioning and reporting interval of land transportation mode.
Range: 5-1440 minutes. The default is 10 mintes.

C is the positioning time interval for sea transportation mode.
Range: 5-1440 minutes, and the default is 180 minutes.

D is the reporting interval for sea transportation mode.
Range: 5-1440 minutes, and the default is 720 minutes.

4.6 Installation/remove alert

· Alert and real-time location will be sent if the device is installed or removed.

4.7 Door open/close alert

· Alert and real-time location will be sent if the container's door is opened or closed.

4.8 Low battery alert

· Alert and real-time location will be sent if the device battery is low.

4.9 Working mode switch alert

· When the device's working mode changes, the device will send a mode switching notification. See the following notification contents:

Previous status	Current status	Notification content
Static mode	Sea transportation mode	Start shipping
Static mode	Land transportation mode	Start transport
Sea transportation mode	Static mode	Stop shipping
Land transportation mode	Static mode	Stop transport

FCC Warning：

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 and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an

uncontrolled environment. This equipment should be installed and operated with

minimum distance of 20 cm between the radiator and your body.