

GL533CG User Manual

GSM/GPRS/LTE CAT1/GNSS Tracker

TRACGL533CGUM001

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Contents

Contents	2
Table Index	3
Figure Index.....	4
0. Revision History.....	5
1. Introduction	6
1.1. GL533CG Product	6
1.2. Reference.....	6
2. Product Overview.....	7
2.1. Check Parts List.....	7
2.2. Parts List	7
2.3. LED Description	8
3. Get Started	10
3.1. Open/Close the Case	10
3.2. Turn on/off the Device	10
3.3. Wake up the Device.....	11
3.4. Install a SIM Card.....	11
4. Installation Precautions.....	13
5. Troubleshooting and Safety Info	14
5.1. Troubleshooting	14
5.2. Safety Info.....	14

Table Index

Table 1.	GL533CG Product	6
Table 2.	GL533CG Protocol Reference	6
Table 3.	Parts List	7
Table 4.	GL533CG LED Description (Work Independently)	9
Table 5.	GL533CG LED Description (Work in Combination)	9
Table 6.	GL533CG Troubleshooting List	14

Figure Index

Figure 1.	Appearance of GL533CG	7
Figure 2.	GL533CG LEDS	8
Figure 3.	GL533CG Screw Position	10
Figure 4.	GL533CG Battery Switch and Key	10
Figure 5.	Wake up the Device.....	11
Figure 6.	Power off the Device	11
Figure 7.	Install a SIM Card.....	12
Figure 8.	Close the SIM Card Holder	12

0. Revision History

Version	Date	Author	Description of Change
1.00	2024-09-05	Daniel Cheng	1. Initial.

1. Introduction

The GL533CG is an IP67-compliant GNSS tracker that features up to 4 years of standby time powered by the internal battery. The device supports multiple bands of LTE CAT1 network. The full-featured @Track Protocol Pro provides complete documentation, so it's easy to learn system integration. It transmits the GNSS location information to the server via GSM/GPRS, and it can also be detected by a search device (detector device) operating (433/434MHz) through the RF signal.

1.1. GL533CG Product

Table 1. GL533CG Product

Model No.	Technology	Operating Band (MHz)
GL533CG	LTE Cat1	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B20/B28 EGPRS: 850/900/1800/1900MHz

1.2. Reference

Table 2. GL533CG Protocol Reference

SN	Document Name	Remark
[1]	GL533CG @Track Protocol Pro	The air protocol interface between GL533CG and backend server.

2. Product Overview

2.1. Check Parts List

Before starting, check whether all the following items have been included with your GL533CG. If anything is missing, please contact the supplier.



Figure 1. Appearance of GL533CG

2.2. Parts List

Table 3. Parts List

Name	Picture	Description
GL533CG Locator	 <p>97*45*21 mm</p>	LTE CAT1/GNSS Tracker
GL533CG Back Glue		Used to fix the device in a particular position.

GL533CG Magnetic Case (Optional)		Used to install the device on a metal surface for easy installation and removal.
GL530MG Plastic Bracket (Optional)		Used to hold the device on the plastics bracket which is installed on surfaces where screw holes can be drilled.
Micro_USB (Optional)		USB Data Cable, which can be used for firmware upgrade and configuration.

2.3. LED Description



Figure 2. GL533CG LEDs

There are two LED lights on the GL533CG device, which can work separately or together to indicate the status of the device. Please refer to the following table when the two LEDs work independently:

Table 4. GL533CG LED Description (work independently)

LED	Device Status	LED Status
STATUS LED (Green)	The device is searching for network.	Fast flashing
	The device has been registered on the network.	Slow flashing
	The SIM card needs a pin code to unlock.	Solid green
	The device isn't registered on the network.	Off
	The power button is pressed to check the device status.	Solid green (indicating the device is working)
GNSS LED (Blue)	GNSS is in the process of fixing.	Fast flashing
	GNSS is on and GNSS gets fix.	Slow flashing
	GNSS is off.	Off

Note:

1. Fast flashing is about 100ms when the LED indicator is on and 800ms when it is off.
2. Slow flash is about 100ms when the LED indicator is on and 2000ms when it is off.

Green LED would be on after pushing button for 3 seconds when the device is power off. Pushing button for 3 to 20 seconds is valid, otherwise green LED would be off, and the push event would be ignored.

After the device is turned on, the LEDs will turn on for 5 minutes and then turn off. Please refer to the following table when two LEDs work in combination:

Table 5. GL533CG LED Description (work in combination)

During power-on	Both the two LEDs will be on to indicate the device is powered on.
When checking the device status	The Status LED will be on to indicate the device still works.
During power-off	The Status LED will flash several times to indicate the device is powered off.

3. Get Started

3.1. Open/Close the Case

Loosen or tighten the 4 screws on the back to open/close the case.



Figure 3. GL533CG Screw Position

3.2. Turn on/off the Device

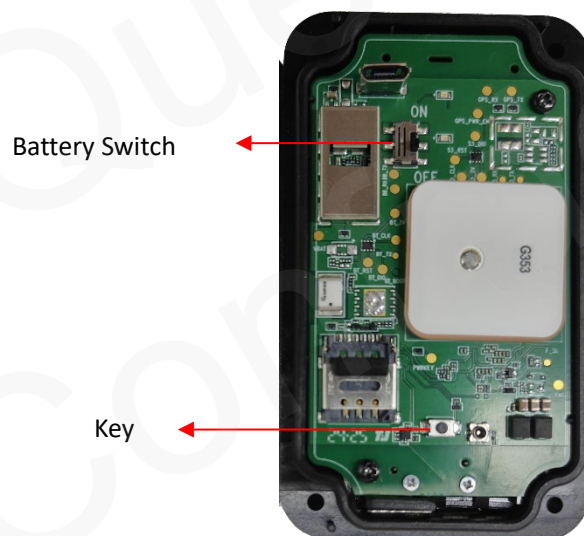


Figure 4. GL533CG Battery Switch and Key

To turn on the device, please toggle the battery switch on the PCB from OFF to ON. Or long press the power button for more than 3 seconds if the battery switch is already in the ON position.

To turn off the device (configuration is required), please long press the power button for more than 3 seconds after power on.

To completely cut off the power supply, please make sure the battery switch on the PCB must be OFF.

Note: If the SIM card is already installed and the battery switch is ON by default, then press the power button and the device will work. If the battery switch is in the OFF position, it is necessary

to install the SIM card by yourself.

3.3. Wake up the Device

If the device goes into sleep mode, press the button three times within 2 seconds to wake up the device.



Figure 5. Wake up the Device

3.4. Install a SIM Card

Step 1

Power off the device first.

The battery switch is
in the OFF position.

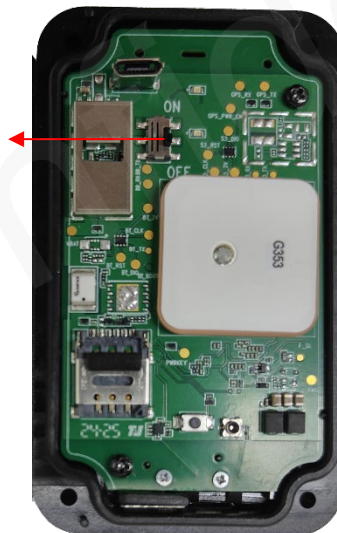


Figure 6. Power off the Device

Step 2

Open the flip SIM card holder. Make sure that the small notch in the corner of the SIM card matches the one in the SIM card tray for proper installation. Install a SIM card on the holder with the words or logo facing up.

Open the flip SIM card holder



Figure 7. Install a SIM Card

Step 3

Close the flip SIM card holder. Toggle the battery switch to the ON position to power on the device.

The battery switch is in the ON position.

The SIM card holder is secured.



Figure 8. Close the SIM Card Holder

Note: The SIM card holder **must** be secured at any time when the device is being turned **ON**. Failing to do so may cause incorrect functionality of the device.

4. Installation Precautions

- Firmly fix the device to a reliable surface to prevent falling off.
- Let the side with the GNSS antenna face up to have better signal reception.
- Don't install the device under a metal surface or in enclosed environments, which makes it difficult to get GNSS or network signals.

Note: If the magnetic or plastic bracket is used to hold the device, please make sure the force applied to screw the device (as follows) is no more than $0.6 \pm 0.2 \text{ kgf/cm}^2$. Otherwise, excessive force may cause damage to the device case.



5. Troubleshooting and Safety Info

5.1. Troubleshooting

Table 6. GL533CG Troubleshooting List

Issue	Possible Cause	How to Fix
The Status LED flashes fast when the device is on.	1. The cellular signal strength is weak; 2. The device isn't registered on the network.	Please place the device in an area with good network coverage.
Messages can't be reported to the backend server.	APN is not right.	Ask the network operator for the right APN.
	The IP address or port of the backend server is wrong.	Please check and make sure the IP address for the backend server is identified by the Internet.
There is no response from the UART port when the device is configured by using UART.	The UART port is not ready or the device is not powered on.	Please check and make sure the UART port and the device are working properly.
The device can't get GNSS fixed.	The GNSS signal is weak.	Please place the device in an open area;
		Let the side without LED indicators face up.

5.2. Safety Info

- Don't disassemble the device by yourself.
- Don't place the device in an environment with high temperature and high humidity. Avoid exposure to direct sunlight. The high temperature will damage the device and even cause a battery explosion.
- Don't use the device on an airplane or near medical equipment.

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