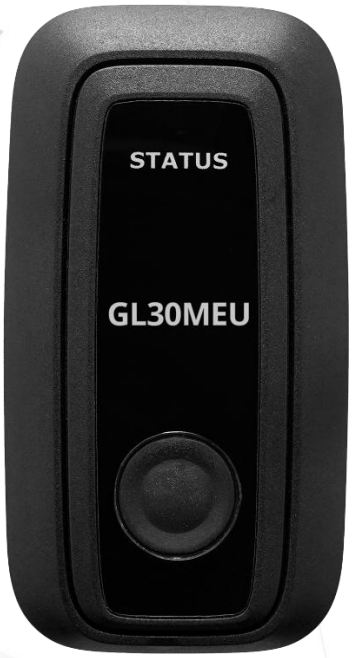
GL30MEU User Manual

EGPRS/LTE Cat M1/NB2
Micro Waterproof Real-Time Asset Tracker

TRACGL30MEUUM103

V1.03



Driving Smarter IoT

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0. History

Version	Date	Author	Description of Change
1.00	June 12, 2025	Hedy Yang	Initial.
1.01	Dec 12, 2025	Allison Zhang	Modify Example picture.
1.02	Jan 9, 2026	Hedy Yang	Modify the parts list and add functional descriptions.
1.03	Apr 16,2016	Mandy Wu	Add chapter 6

1. Introduction

The device is a micro size and waterproof real-time tracker with LTE Cat M1/NB2 and 2G fallback. It is used for a wide range of applications that require real-time location knowledge, such as personal safety, animal management, asset monitoring, package delivery, temporary tracking of vehicles, and endurance racing.

1.1. Reference

SN	Document Name	Remark
[1]	GL30MEU @Track Air Interface Protocol	The air protocol interface between GL30MEU and backend server.

Table 1: GL30MEU Protocol Reference

2. Product Overview

2.1. Product Appearance



Figure 1. Appearance of GL30MEU

2.2. Button interface description

Functions	Operation
Power on	Long press for more than 3 seconds until Red LED on.
Check the device status	Press the function button once.
Power off	Long press for more than 3s after power on.

Table 2: GL30MEU Button Description

2.3. LED Description

There is a tri-color led on the device, which can work separately to indicate the status of the device. Please refer to the following table:

LED	Device Status	LED Status
CELL LED (Green)	searching for network.	Fast flash
	The device has been registered on the network.	Slow flash
	SIM-PIN locked	Solid
	Out of network	Dark
GNSS LED (Blue)	GNSS has fixed a position	Solid
	GNSS is in the process of fixing.	Fast flash
	GNSS is on and GNSS gets fix.	Slow flash

	GNSS is off.	Dark
PWR LED (Red)	Power on and normal	Dark
	Charger inserted and charging completed	Solid(tri-color LEDs on)
	Charger inserted and charging	Slow flash
	Power Button pressed to power off the device	Fast flash
	Power low alert	Slow flash

Table 3. GL30MEU LED Description (work separately)

Note:

1. Fast flashing is about 60ms when the LED indicator is on and 780ms when it is off.
2. Slow flash is about 60ms when the LED indicator is on and 1940ms when it is off.

The Red led would be on after pushing the button for more than 3s when the device is powered off, if the push time is less than 3s that the push event would be ignored.

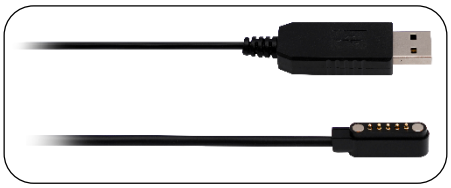
Green led would be on when pushing the button down when the device is waked up.

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

During power-on	Red LED will be on to indicate the device is powered on.
When checking the device status	Green LED will be on to indicate the device still works.
During power-off	Red LED will flash simultaneously to indicate the device is powered off.

Table 4. GL30MEU LED Description (work in combination)

2.4. Parts List

Name	Picture	Description
GL30MEU Locator		EGPRS/LTE Cat-M1/LTE Cat-NB2/GNSS Tracker
UART Cable (Optional)		It is used to configure the device and upgrade the BLE and tracker firmware, modem firmware. BLE firmware file: **GL30MEURxx_McuR0EVx.xx_upd.bin file** Tracker firmware file: **GL30MEURxxAxxVxxM512_upd.bin file** Modem firmware file: **GL30MEURxx_modem_xxxx_yyyy_upd.bin**

USB Cable (Optional)		It is used to upgrade the tracker firmware FULL package (**GL30MEURxxAxxVxxM512_FULL**).
Charging Cable		It is used to charge the device.

10-in-1 Magnetic Contact Charging Dock and Power-Adapter	 	It is used to charge ten devices simultaneously.

Table 5: GL30MEU Parts List

Note: The UART cable, the USB cable, and the 10-in-1 Magnetic Contact Charging Dock are optional accessories and may not be delivered along.

3. Getting Start

3.1. Battery Charging

- Connect the AC-DC power adapter to GL30MEU.
- Insert the AC-DC power adapter into the power socket.
- During charging, the PWR LED flashes fast. When the battery is fully charged, the PWR LED will be always on.
- You can also charge the battery via a USB cable that connects GL30MEU to the PC.

Note:
Before using GL30MEU for the first time, please fully charge the battery

3.2. Turing On/Off the Device

To turn on the device:

- Method 1: Press the power Button for at least 3 seconds and release it to turn on GL30MEU. At the same time, PWR LED also turns on.
- Method 2: Connect the device to the charger or external battery. The device will turn on automatically, and PWR LED will also turn on.

To turn off the device:

Press the power Button for at least 3 seconds. PWR LED will flash and then turn off. It indicates that GL30MEU is turned off. The time needs to power off the device depends on the quality of the network. The maximum time needed for power off is 90 seconds. This method is only valid for turning off the device when the internal battery is used.

4. Firmware Upgrade

4.1. Upgrade Tracker and Modem Firmware

4.1.1. Prepare

Item	Name
Cable	USB Cable
File	Tracker Firmware FULL package
Tools	Queclink_Firmware_Upgrade_Tool_MDM

Table 6. Upgrade preparation

4.1.2. Upgrade Steps

Install **Driver_qud.win.1.1_installer_10065.1** for the USB cable before upgrading the firmware with the tool.
Connect GL30MEU to the PC via the USB cable.
You can check the USB port in “Computer Management->Device Manager->Ports” when the device is well connected with USB cable.



Figure 2. Contact point between the device and the USB cable



Figure 3. USB cable connect with device.

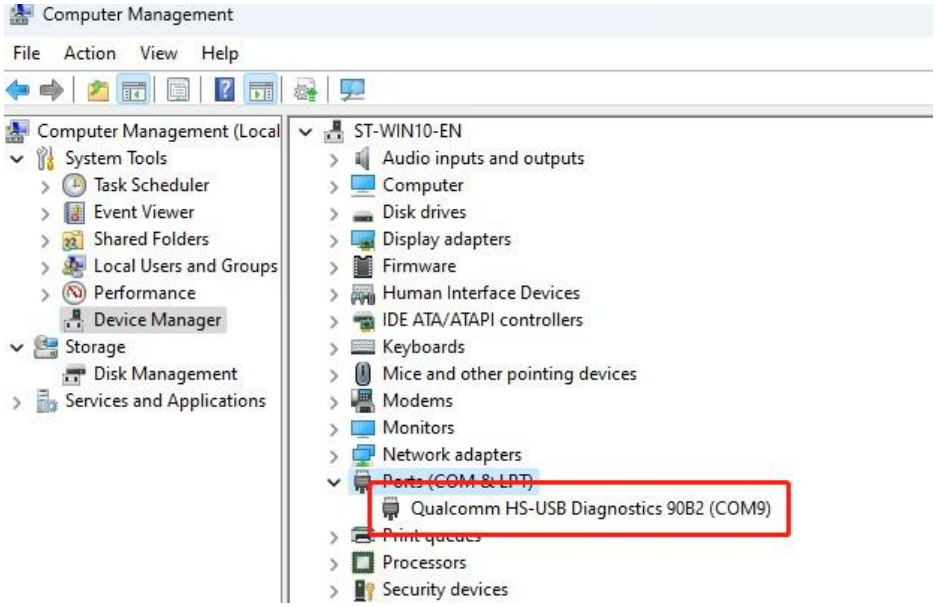


Figure 4. The USB port show in the Computer Management

Step 1

Open Queclink_Firmware_Upgrade_Tool_MDM_Vx.xx.exe. Click **Load FW Files** and select **qld.cfg** file in **GL30MEURxxAxxVxxM512_FULL** folder.

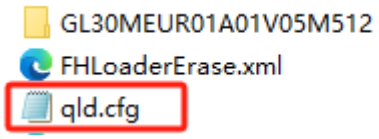


Figure 5. Load Firmware File

Step 2

For **Option**, you can choose whether to clear user data.

Step 3

Select **Start**.

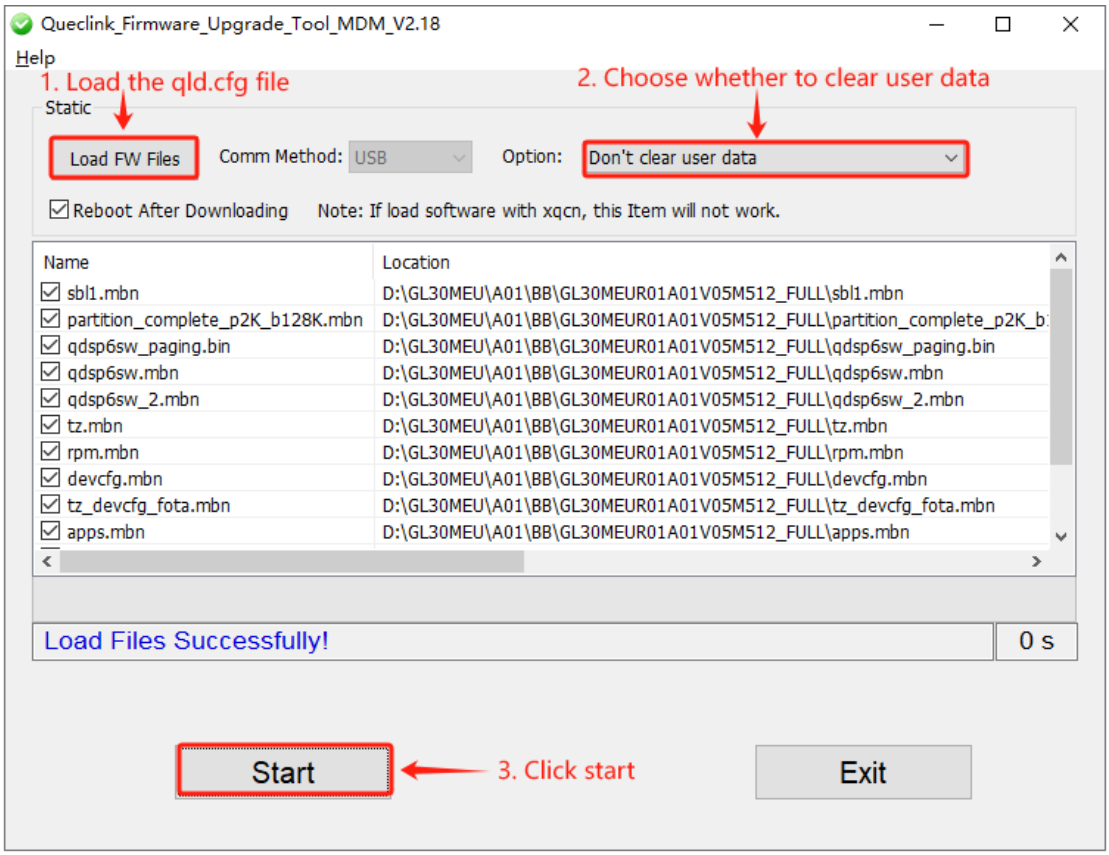


Figure 6. Basic setting

Step 4

Wait for the firmware upgrade to succeed.

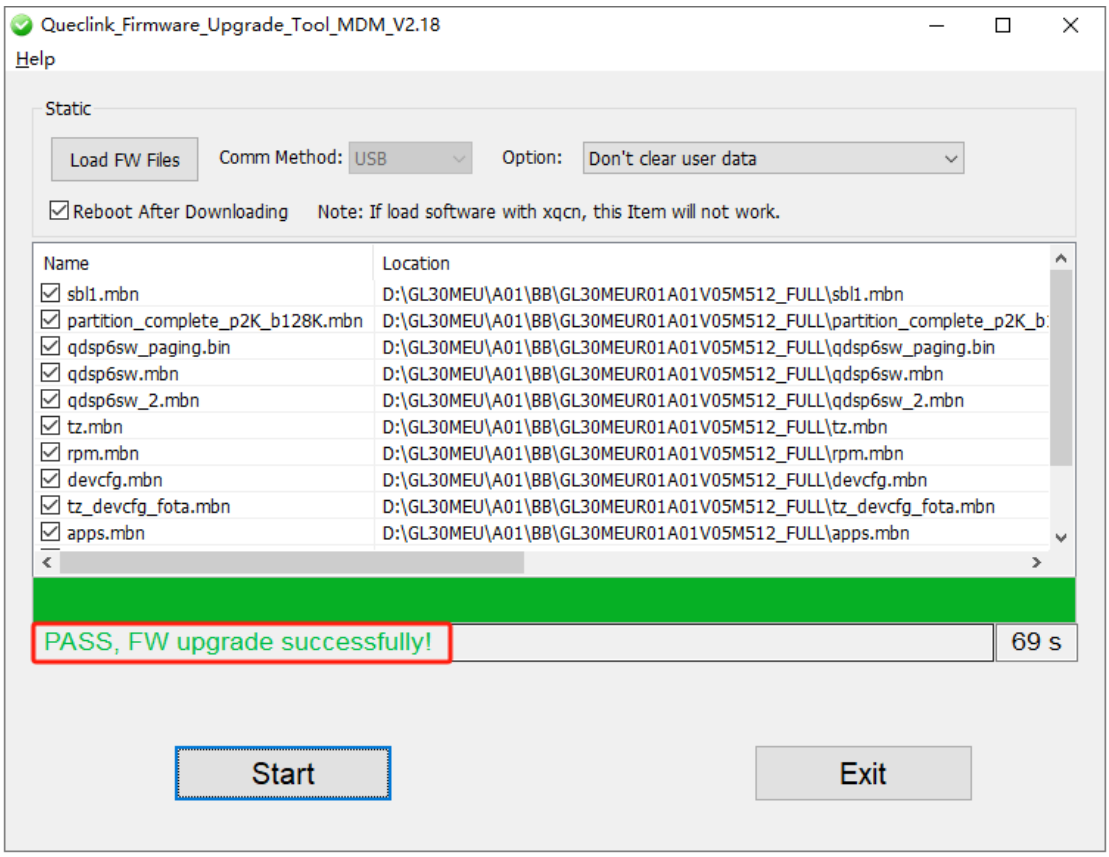


Figure 7. Upgrade success

4.1.3. Troubleshooting

a) If the USB port keeps disconnecting while downloading the firmware, the upgrade tool will stop downloading and prompt Download Fail in seconds. In this case, please power off the device and power on the device, then try again.

b) If the upgrade tool is closed while downloading the firmware, open the upgrade tool but an error message will appear. In this case, please power off the device and power on the device, then try again..

c) If other unexpected errors occur, please power off the device and power on the device, then try again.

4.2. Upgrade Tracker Firmware only

4.2.1. Prepare

Item	Name
Cable	UART cable
File	Tracker Firmware package
Tools	Queclink_Firmware_Upgrade_Tool_MDM

Table 7. Upgrade preparation

4.2.2. Upgrade Steps

Install the driver **CH340G_Cable_Driver_Installer_V3.8** for the UART cable before upgrading the firmware.
Connect GL30MEU to the PC via the UART cable, you can refer to section 4.1.2 on how to connect the device with the cable.
You can check the UART port in “Computer Management->Device Manager->Ports” when the device is well connected with UART cable.

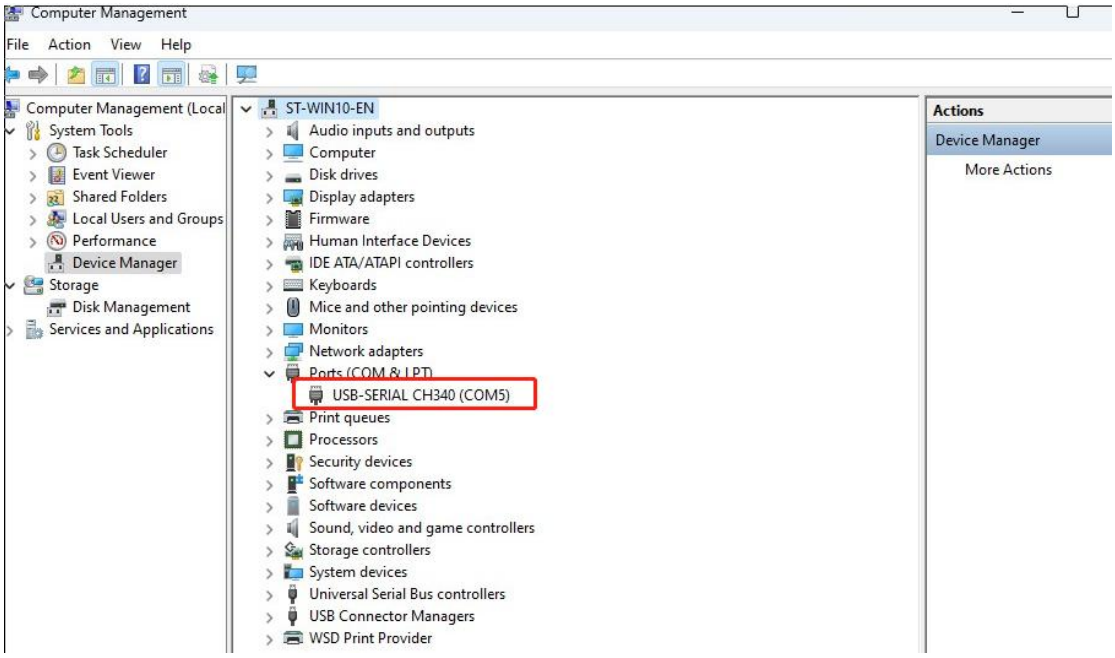


Figure 8. The UART port show in the Computer Management

Step 1

Open Queclink_Firmware_Upgrade_Tool_MDM_Vx.xx.exe. Click **Load FW Files** and select **qld.urt** file in **GL30MEURxxAxxVxxM512_UPD** folder.

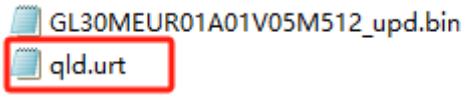


Figure 9. Load Tracker Firmware File

Step 2

Select the correct UART port for upgrading.

Step 3

For **Clear Mode**, you can choose whether to clear user data.

Step 4

Select **Start**.

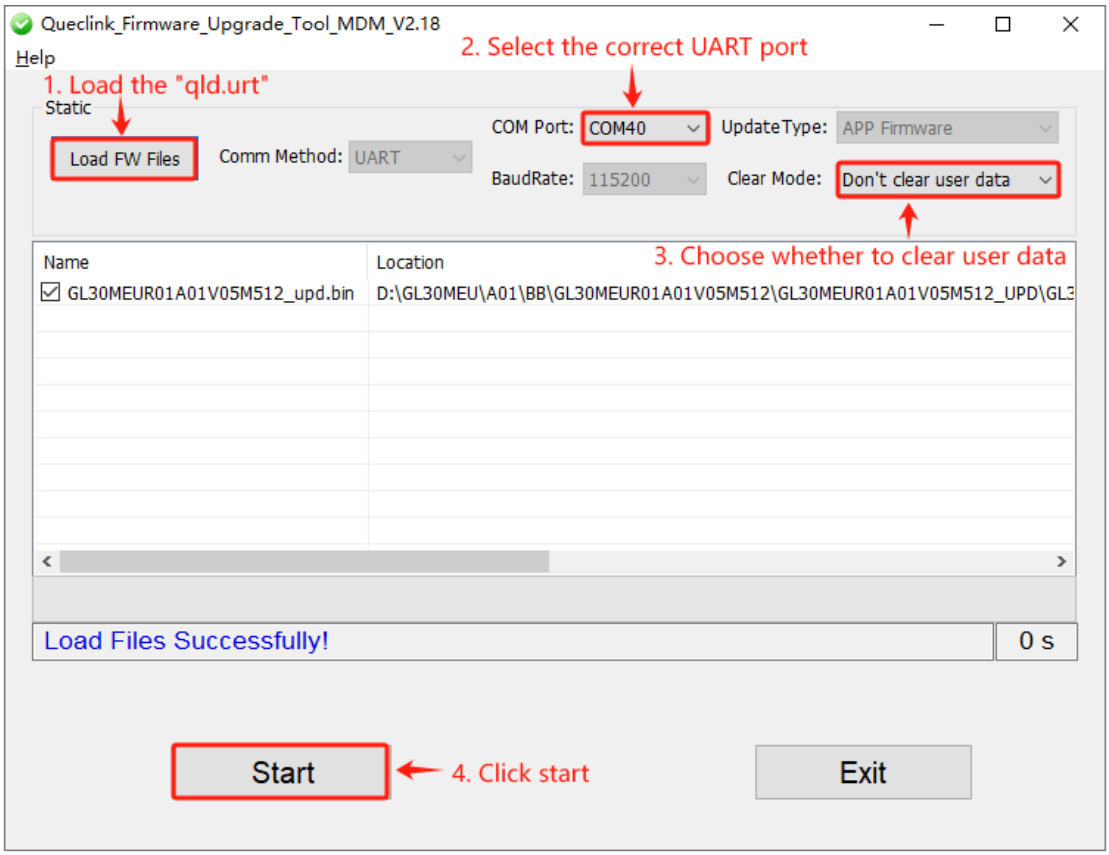


Figure 10. Basic setting

Step 5

Wait for the firmware upgrade to succeed.

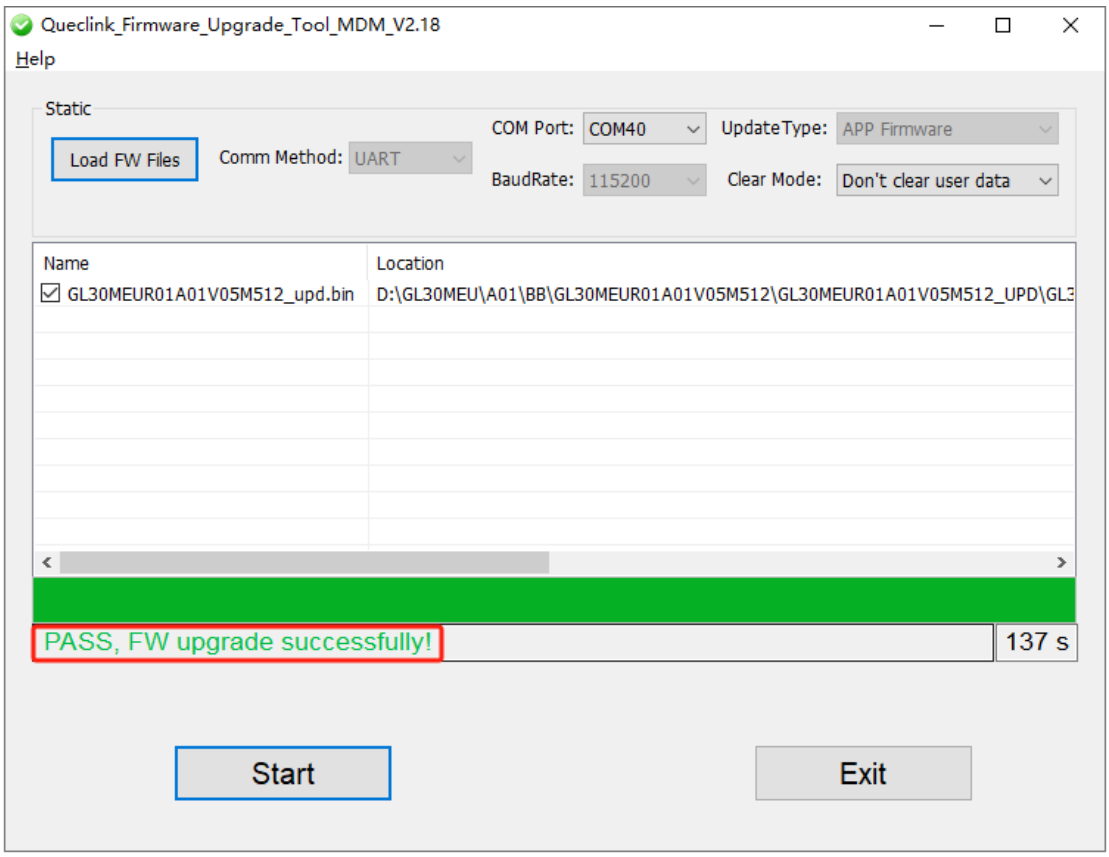


Figure 11. Upgrade success

4.3. Upgrade Modem Firmware only

4.3.1. Prepare

Item	Name
Cable	UART cable
File	Modem package
Tools	Queclink_Firmware_Upgrade_Tool_MDM

Table 8. Upgrade preparation

4.3.2. Upgrade Steps

Install the driver **CH340G_Cable_Driver_Installer_V3.8** for the UART cable before upgrading the firmware.

Connect GL30MEU to the PC via the UART cable, you can refer to section 4.1.2 on

how to connect the device with the cable.
You can check the UART port in “Computer Management->Device Manager->Ports” when the device is well connected with UART cable. (Please refer to the picture **The UART port show in the Computer Management** in section 4.2.2)

Step 1
Open Queclink_Firmware_Upgrade_Tool_MDM_Vx.xx.exe. Click **Load FW Files** and select **qld.urt** file in **GL30MEURxx_modem_xxxx_yyyy_UPD** folder.

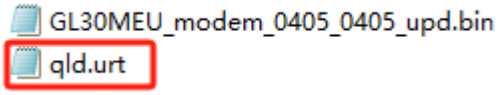


Figure 12. Load Modem Firmware File

Step 2
Select the correct UART port for upgrading.

Step 3
Select **Start**.

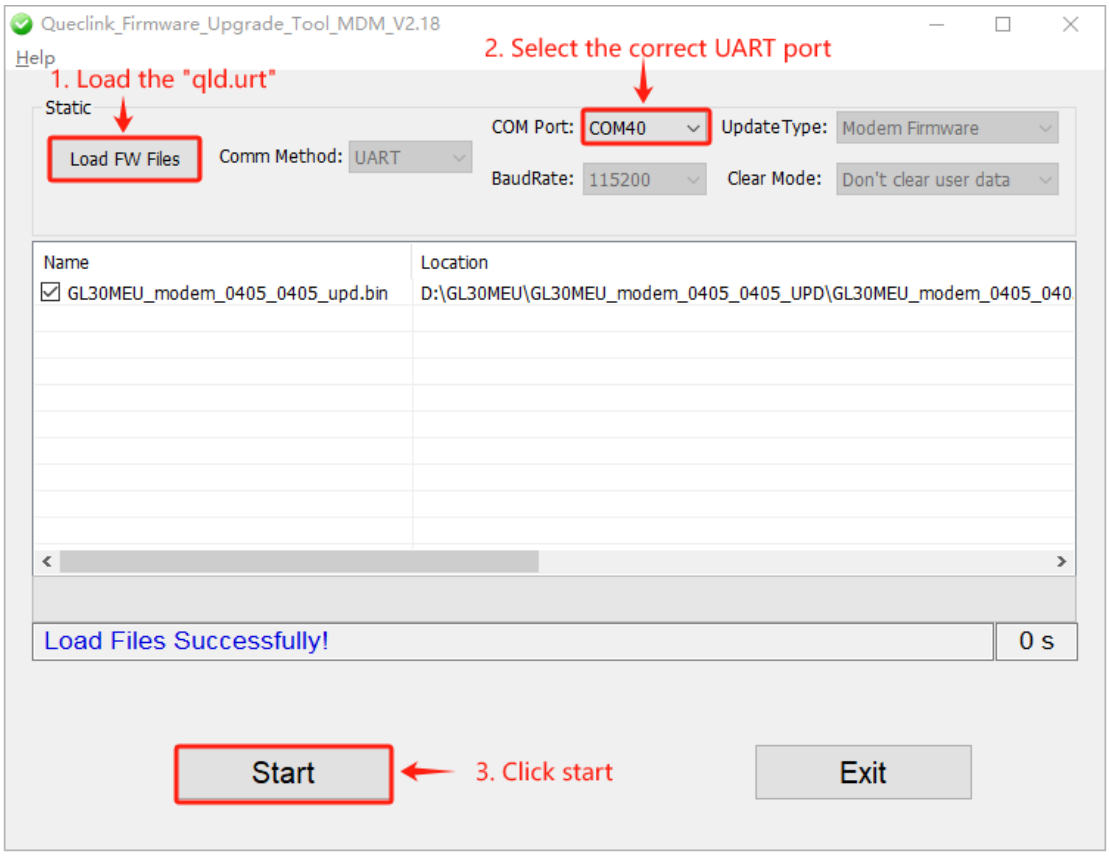


Figure 13. Basic setting

Step 4

Wait for the firmware upgrade to succeed.

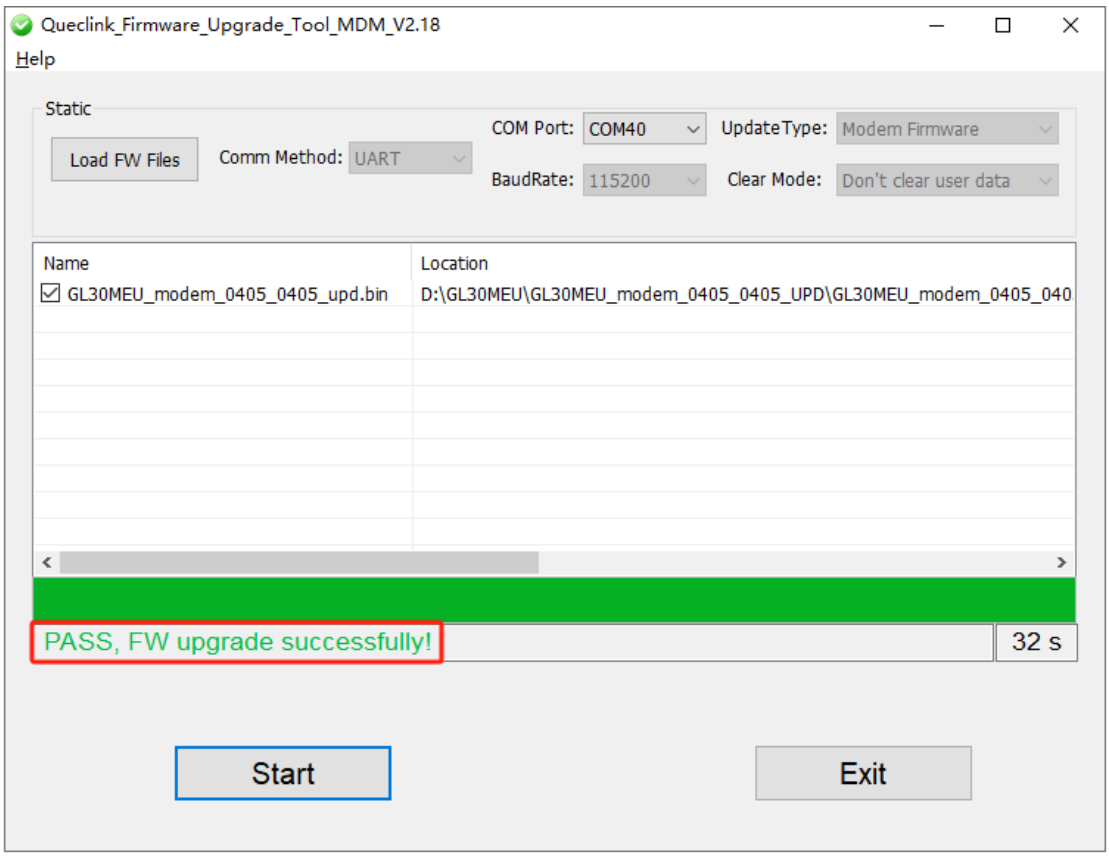


Figure 14. Upgrade success

4.4. Upgrade BLE Firmware

4.4.1. Prepare

	Name
Cable	UART cable
File	BLE Firmware package
Tools	Queclink_Firmware_Upgrade_Tool_MDM

Table 9. Upgrade preparation

4.4.2. Upgrade Steps

Install the driver **CH340G_Cable_Driver_Installer_V3.8** for the UART cable before upgrading the BLE firmware with the tool.
Connect GL30MEU to the PC via the UART cable, you can refer to section 4.1.2 on how to connect the device with the cable.
You can check the UART port in "Computer Management->Device Manager->Ports" when the device is well connected with UART cable.(Please refer to the picture **The UART port show in the Computer Management** in section 4.2.2)

Step 1
Open Queclink_Firmware_Upgrade_Tool_MDM_Vx.xx.exe. Click **Load FW Files** and select **qld.urt** file in **GL30MEURxx_McuR0EVx.xx** folder.

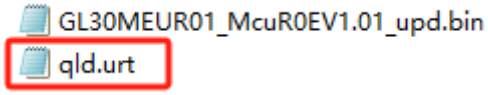


Figure 15. Load Firmware File

Step 2
Select the correct UART port for upgrading.

Step 3
Select **Start**.

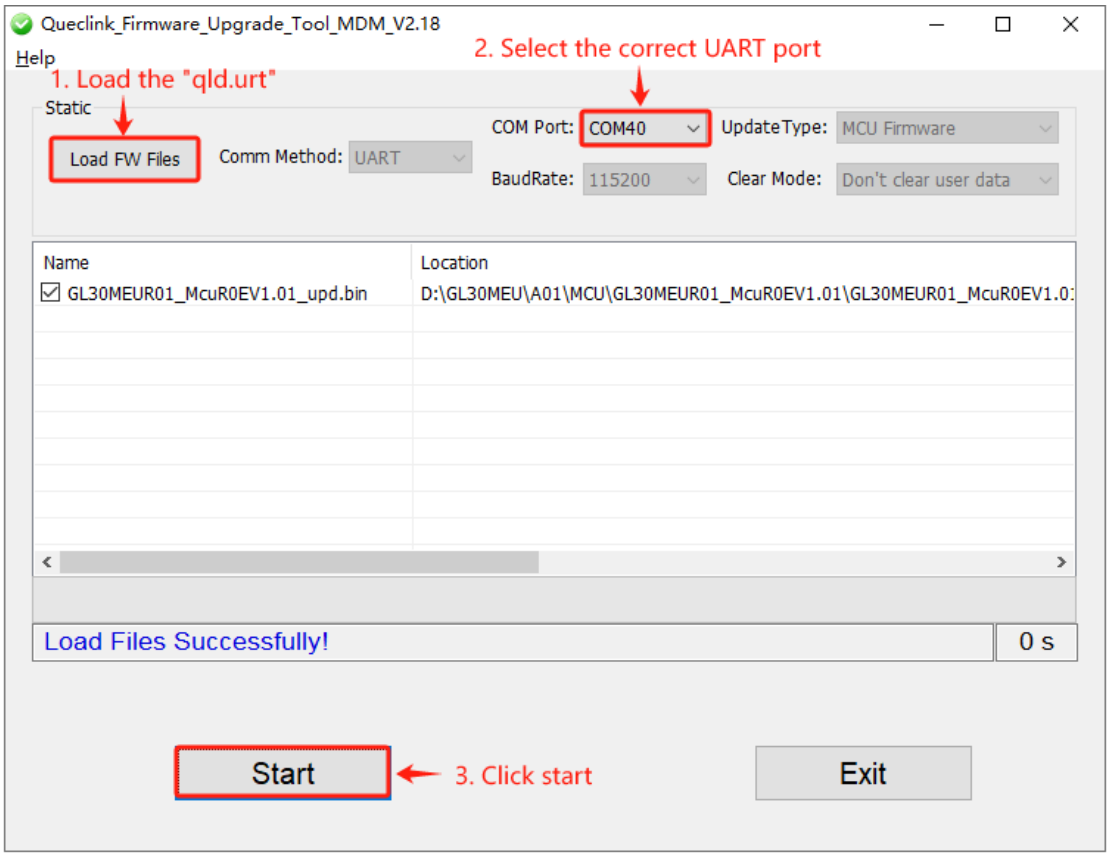


Figure 16. Basic setting

Step 5

Wait for the firmware upgrade to succeed.

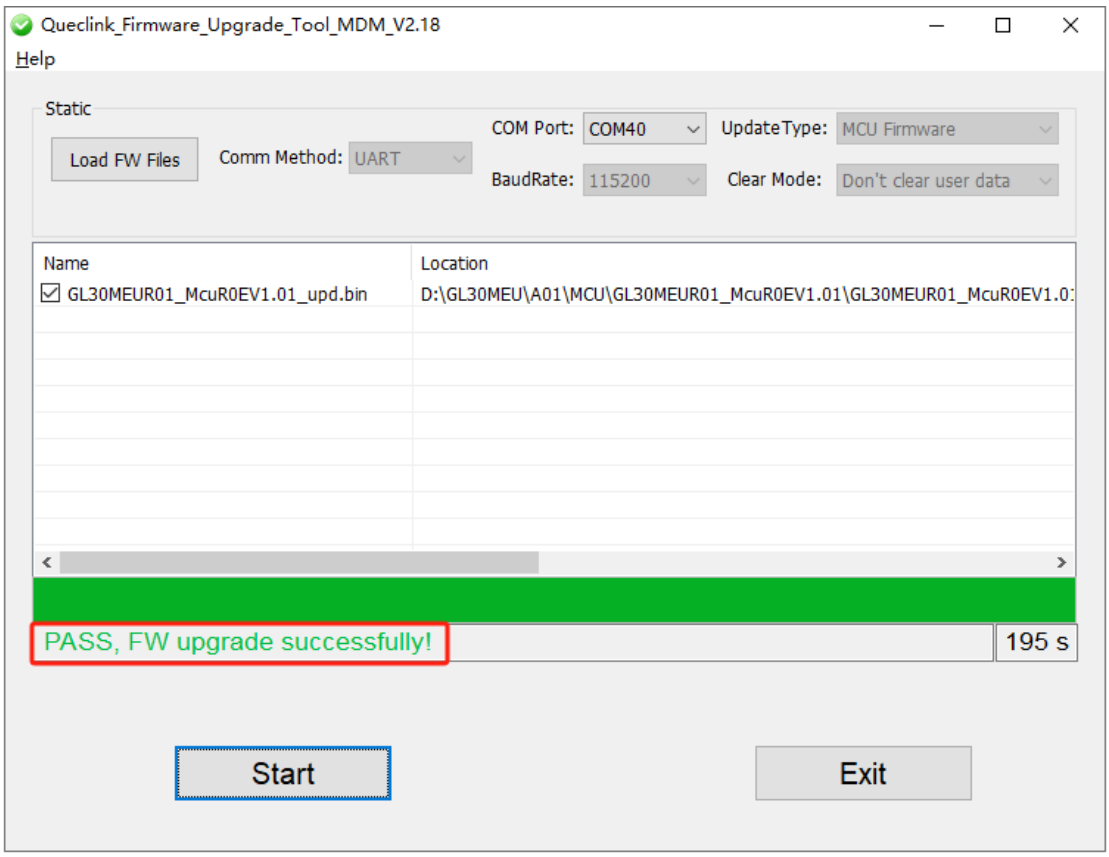


Figure 17. Upgrade success

5. Usage Reference

5.1. eSIM Card

The device is fitted with an eSIM Chip. If you are unsure about the eSIM's APN settings, please contact the Queclink FAE team.

5.2. AT+GTWFI

Set parameter <*Lost Times*> of **AT+GTWFI** command to 1 when using sample device to deploy in field. In daily use scenarios set its value to 3 or 5 times in order to reduce false positives by other obstacles.

6. Maintenance Instructions for Exposed Contacts

To ensure stable device charging, configuration, and data transmission, please keep the metal contacts clean and dry.

- After use, please promptly wipe the contacts to remove sweat, moisture, dust, and oil stains. After use in coastal, high-humidity, or dusty environments, it is recommended to properly clean and dry them.
- Do not touch the contacts with bare hands to prevent grease and salt from affecting the electrical conductivity.
- Do not use hard objects or rough tissues to scrape to prevent damage to the plating.
- Keep away from chemicals, cosmetics, and corrosive liquids. Avoid submerging the contacts in water for an extended period, and stay away from high temperatures, direct sunlight, impacts, and drops.
- Cleaning can be done using a lint-free soft cloth or cotton swab. For stubborn stains, dip a small amount of absolute ethanol and gently wipe.
- After cleaning, please ensure that the contacts are completely dry before charging or connecting to avoid the risk of short circuits.
- In case of charging failure or bad connection, please clean and dry the contacts and then try again.