Queclink_Firmware_Upgrade_Tool_MDM User Guide

TRACFUTMDM0113

V1.13

Driving Smarter IoT

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History

Version	Date	Author	Description of Change
1.00	February 21, 2019	King Sha	Initial.
1.01	April 25, 2019	Bob Fang	Added Chapter 2.3.
1.02	June 10, 2019	Leaf Ye	Modified the upgrade process in Chapter 2.3.
1.03	July 23, 2019	King Sha	Added firmware file check feature for different device types (See Figure 7).
1.04	July 29, 2020	Tammy Tian	Added GV76MG upgrade process.
		Leaf Ye	Deleted GV500MA/MAP upgrade process.
1.05	December 25, 2020	Leaf Ye	Added GL53MG/GV57MG upgrade information.
1.06	August 6, 2021	Leaf Ye	Added GL530MG/GV53MG upgrade information.
1.07	November 5, 2021	Mihoo Zhu	Added GB130MG upgrade information.
1.09	March 24, 2022	Jane Wang	Added GV57MG upgrade information.
1.11	June 1, 2022	Leaf Ye	Deleted Chapters 2.5 and 2.6.
1.12	November 24, 2022	Leaf Ye	1. Deleted Chapter 2.4. 2. Updated the screenshots. 3. Added Chapter 3.
1.13	May 22, 2024	Leaf Ye	1. Added more supported device types.

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1. Tool Introduction

Queclink_Firmware_Upgrade_Tool_MDM is a PC tool that can be used to upgrade firmware provided by Queclink.

1.1. Availability

Queclink_Firmware_Upgrade_Tool_MDM is currently available for GL53MG, GL53MG Plus, GL530MG, GV57MG, GV57MG V2, GV57MG Plus, GV53MG, GB130MG, GD530MG, CL30, GV50CNA, GV500CNA, CL16, GL30MG, GL31MG.

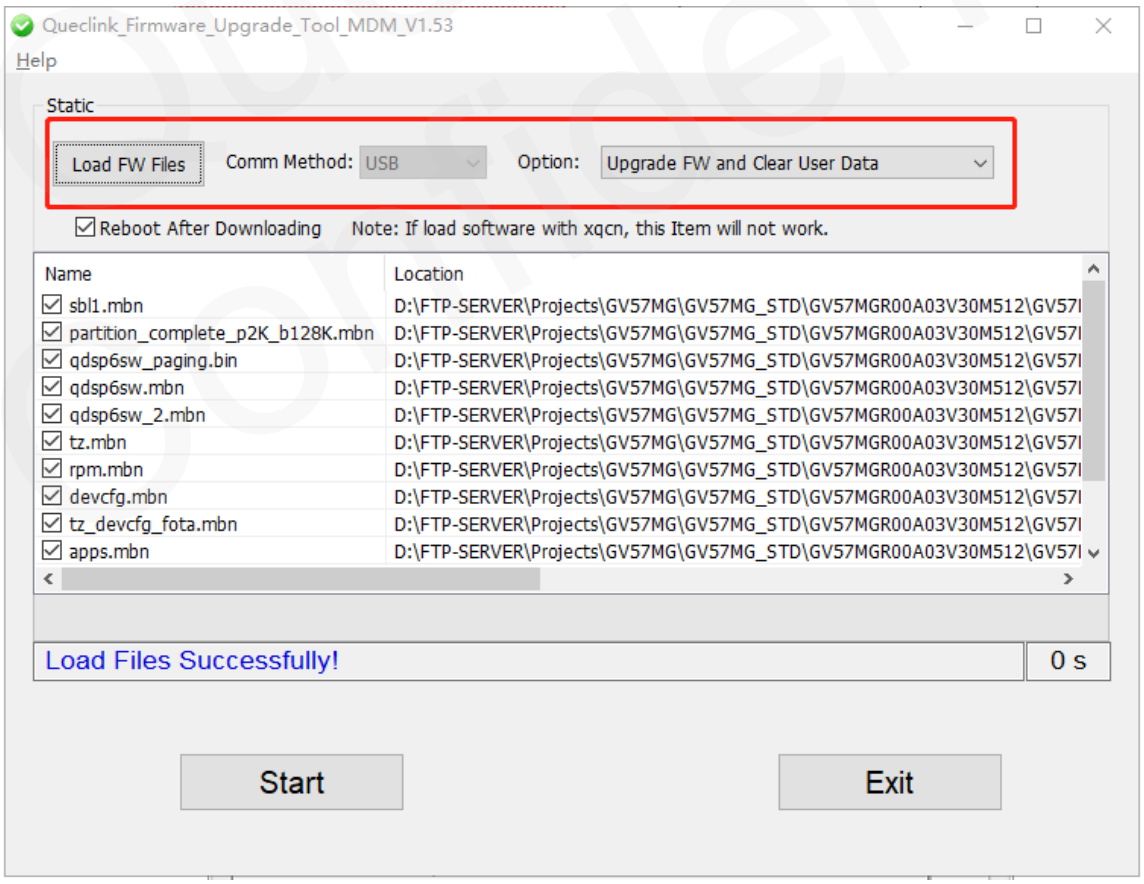
1.2. System Requirements

The tool can run directly on a PC with no installation required and can run on all Windows operating systems. You will receive a notification when there is an upgrade of this tool provided by Queclink.

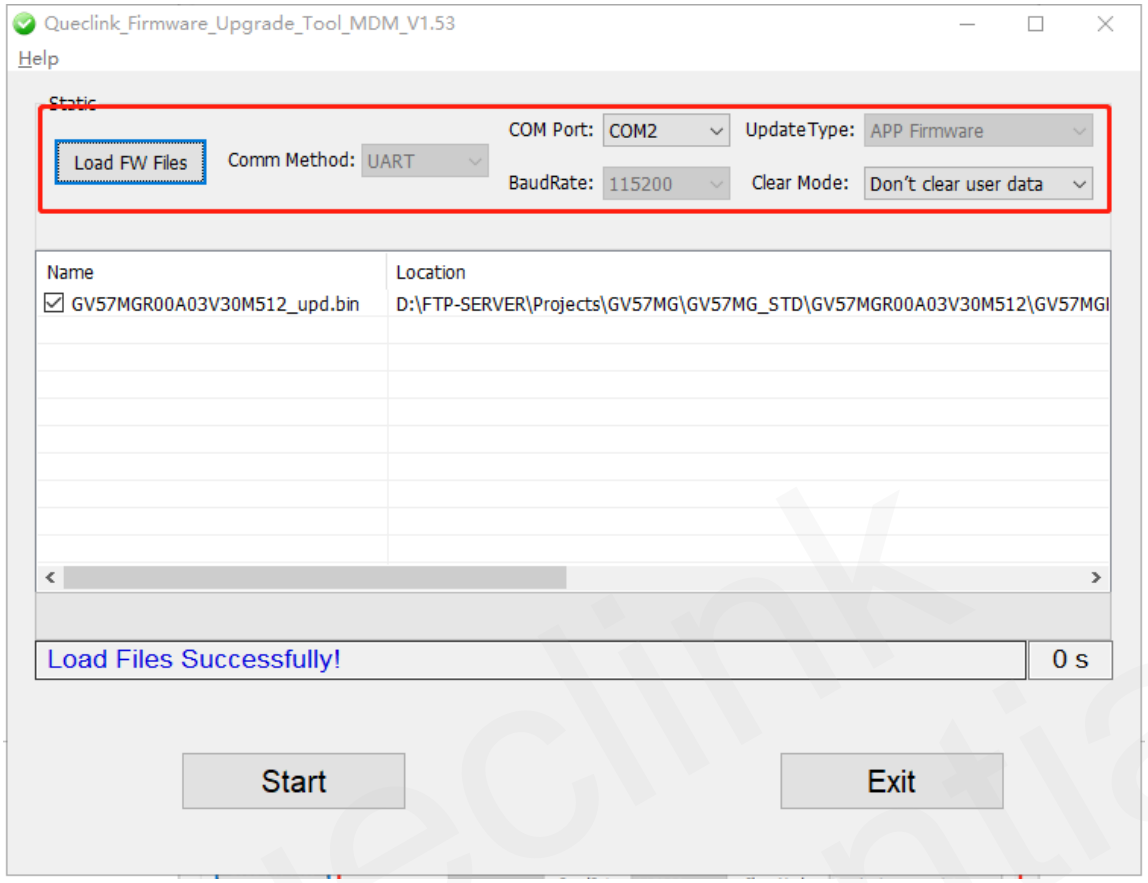
1.3. Tool Interface

1.3.1. Overview of the Main Interface

The following screenshots show the main interface of the tool.



The main interface when upgrading via USB cable



The main interface when upgrading via UART cable

1.3.2. Basic Information Setting

[Load FM Files]: It is used to load firmware files of the device for an upgrade. This tool supports upgrading APP Firmware and MCU firmware.

[COM Method]: It is the port type that connects the device to the PC. It is non-configurable and automatically matches the firmware image you select.

[Option] [Clear Mode]: It defines whether to "Clear User Data" when upgrading. The buffered messages will be deleted regardless of which method is selected.

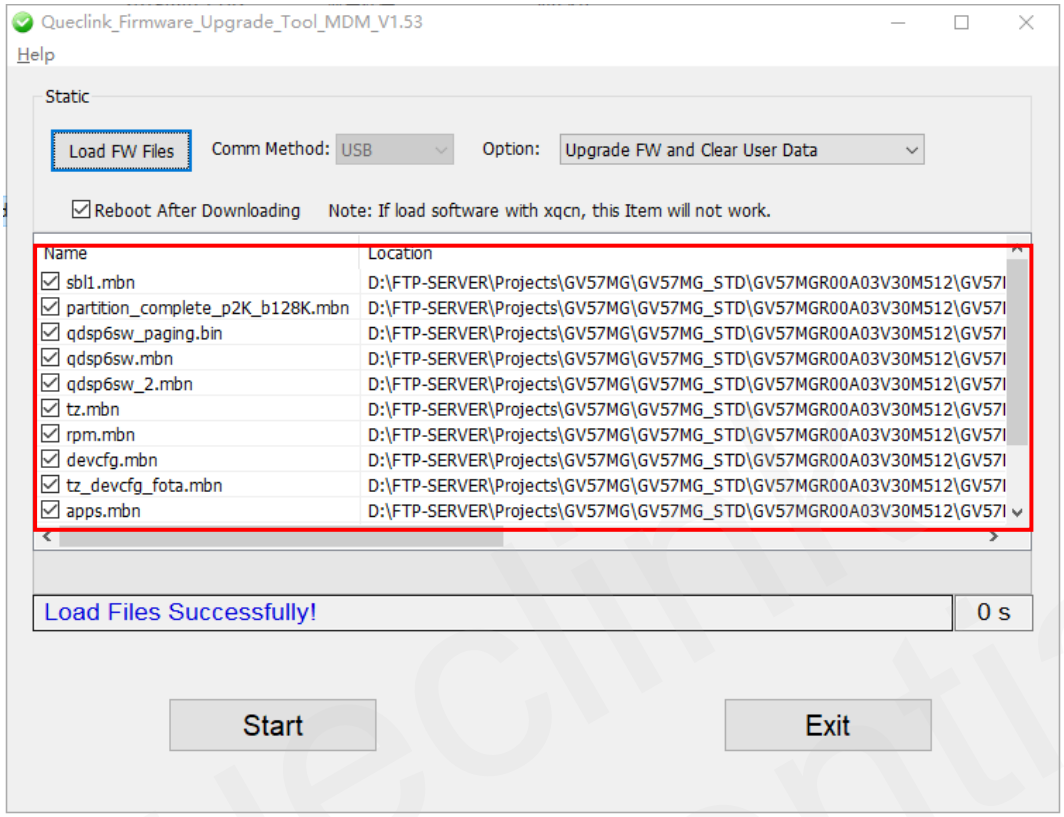
[COM Port]: It is configurable only when the "Comm Method" is UART.

[Update Type]: It is non-configurable and automatically matches the firmware image you select.

[BaudRate]: It is non-configurable and automatically matches the cable type to which the device is connected.

1.3.3. File List Pane

The file list pane below shows all the selected files for an upgrade.



Upgrade file list

1.3.4. Progress Bar Area

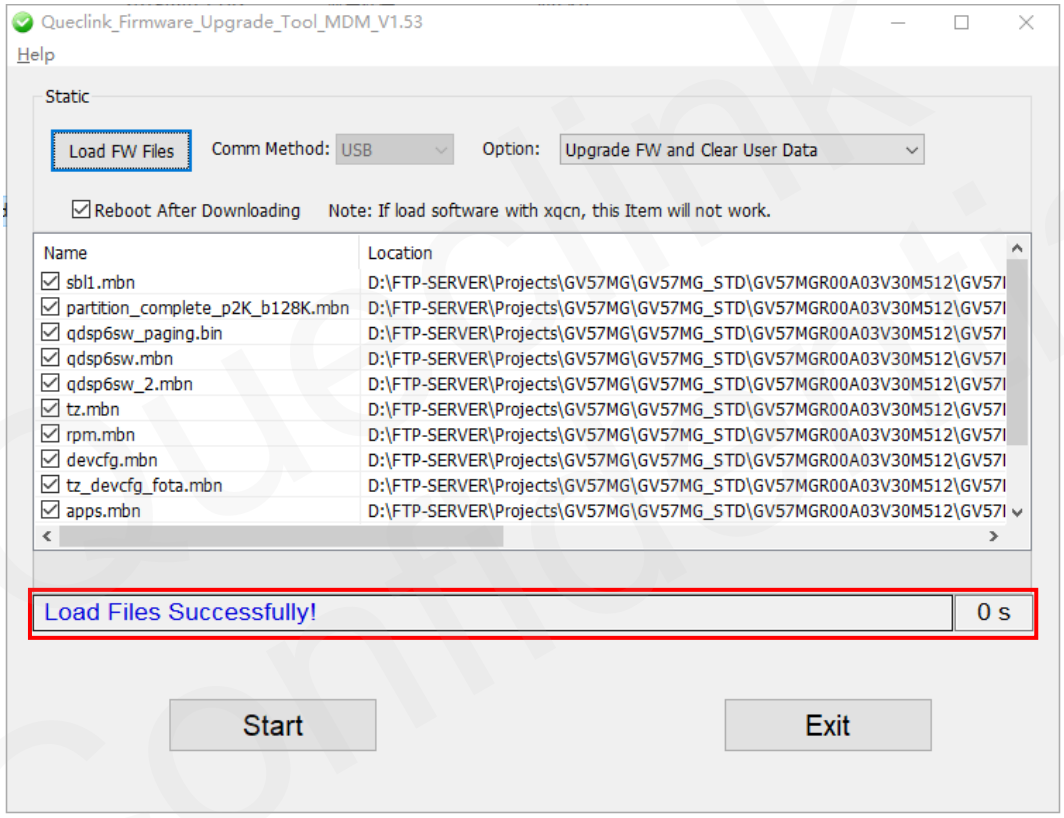
[Start]/ [Exit]: Start/Exit the upgrade process.

Note: After starting an upgrade, the “Exit” button Exit and the “Close” button will be invalid.

Warning:

1. If the upgrade process is interrupted, there will be no valid firmware in the device. We suggest not to stop the firmware upgrade process.
2. Please DO NOT remove the download cable during download.

[Progress Bar]: It indicates the progress of the upgrade process.



Progress bar

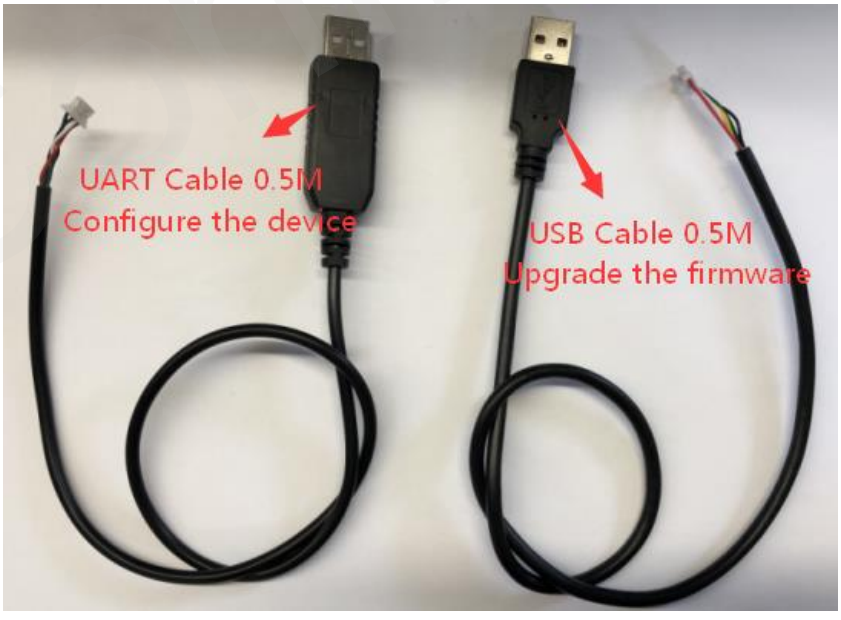
2. Upgrade Instructions

2.1. Upgrade Preparation

Get the following list of items ready:

NO.	Item	Remark
1	Device	Confirm the type of device.
2	Upgrade Cable	Each device type has its own upgrade cable. Please make sure the upgrade cable is correct before upgrading the firmware. Don't disconnect the cable from the PC during upgrading.
3	Upgrade Cable Driver	The driver for all upgrade cables is "Driver_qud.win.1.1_installer_10065.1".
4	Firmware Files	Provided by Queclink. The firmware files are normally compressed, so be sure to decompress the files.
5	Computer	Please refer to Chapter 1.2 system requirements.
6	Queclink_Firmware_ Upgrade_Tool_MDM	Provided by Queclink.

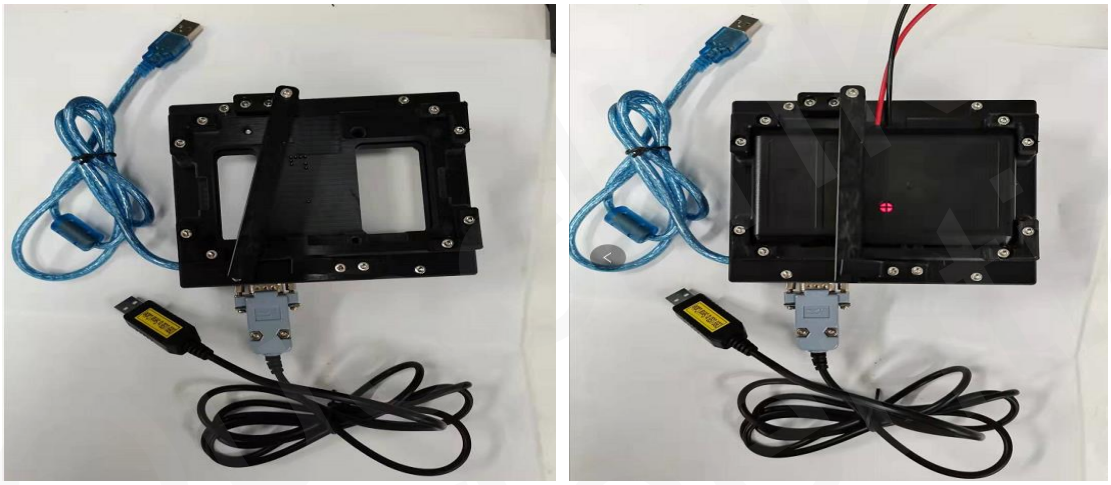
For more instructions, please refer to the document Firmware Upgrade User Guide for every device type.



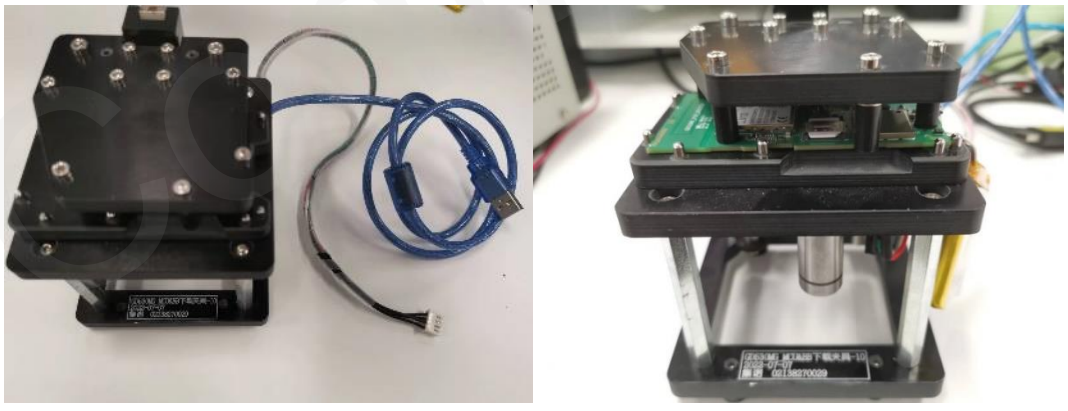
GL53MG/GL530MG/GV57MG Upgrade Cable



The upgrade jig of GV53MG



The upgrade jig of GB130MG

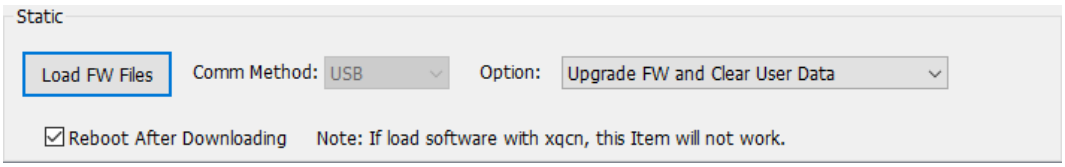


The upgrade jig of GD530MG

2.2. Basic Setting of the Upgrade Tool

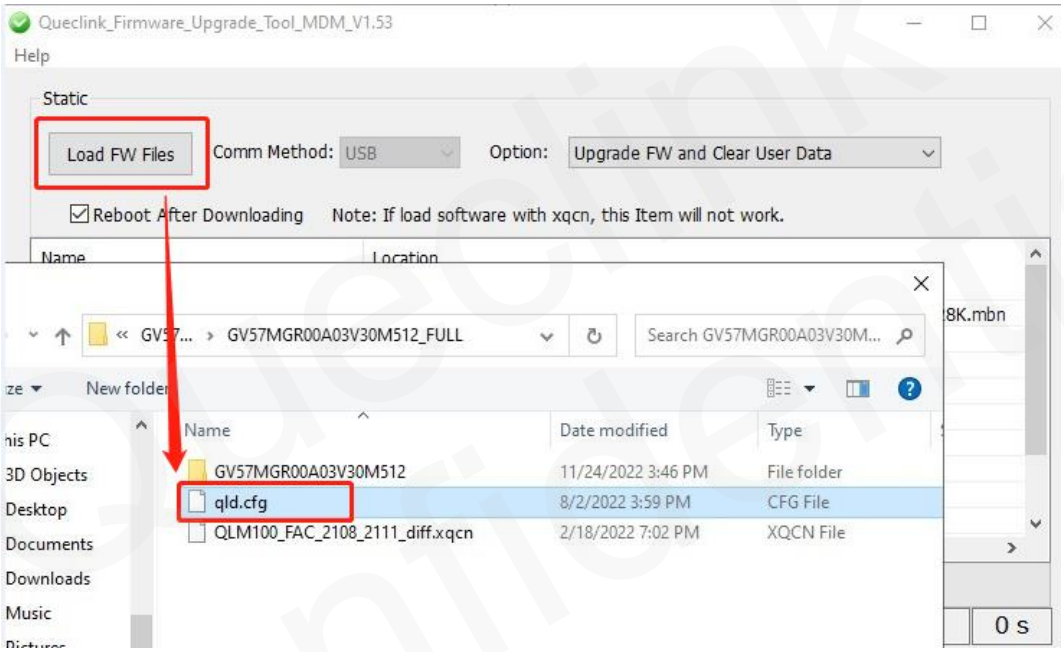
Firstly, please make sure the upgrade cable is connected to the PC.

Then, open Queclink_Firmware_Upgrade_Tool_MDM and configure the basic information in this tool, including “Load FW Files” and “Option”.

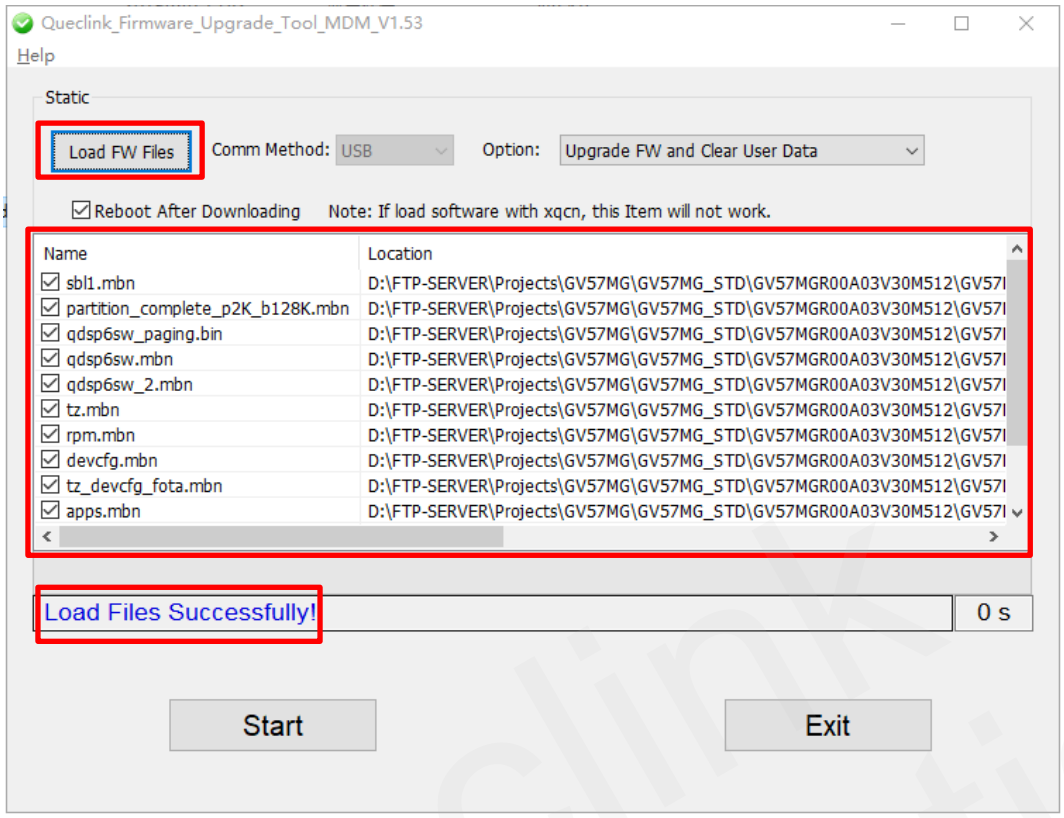


Basic setting

Click **Load FW Files** and select **qld.cfg** file in **Firmware Image** folder.

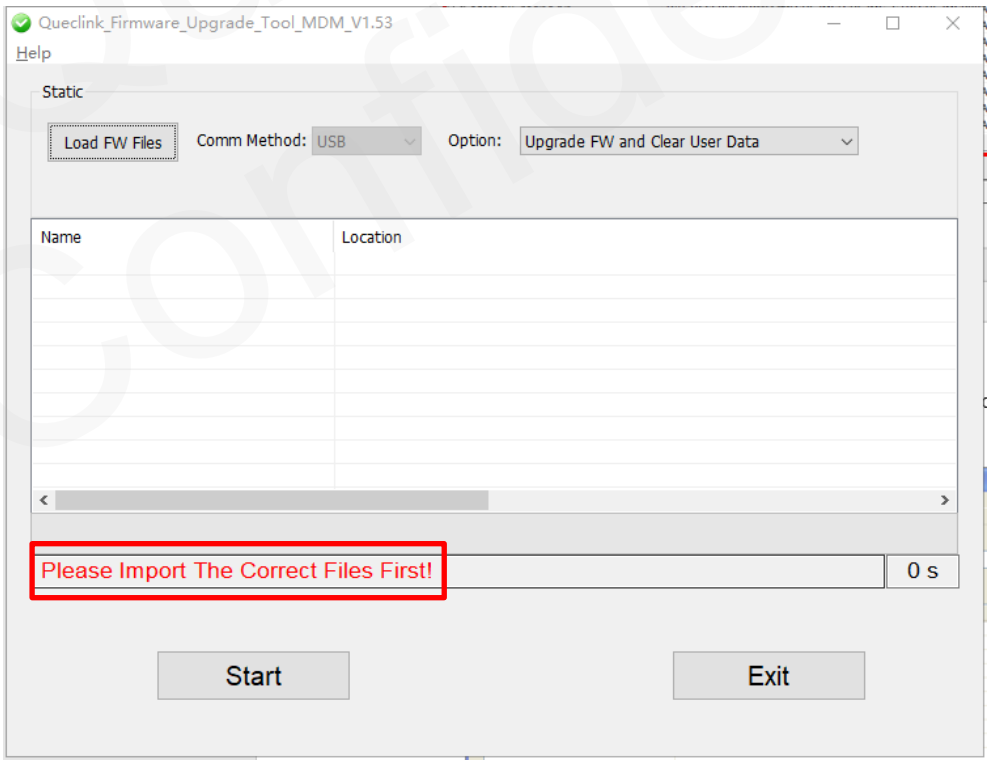


Loading FW files



After loading FW files

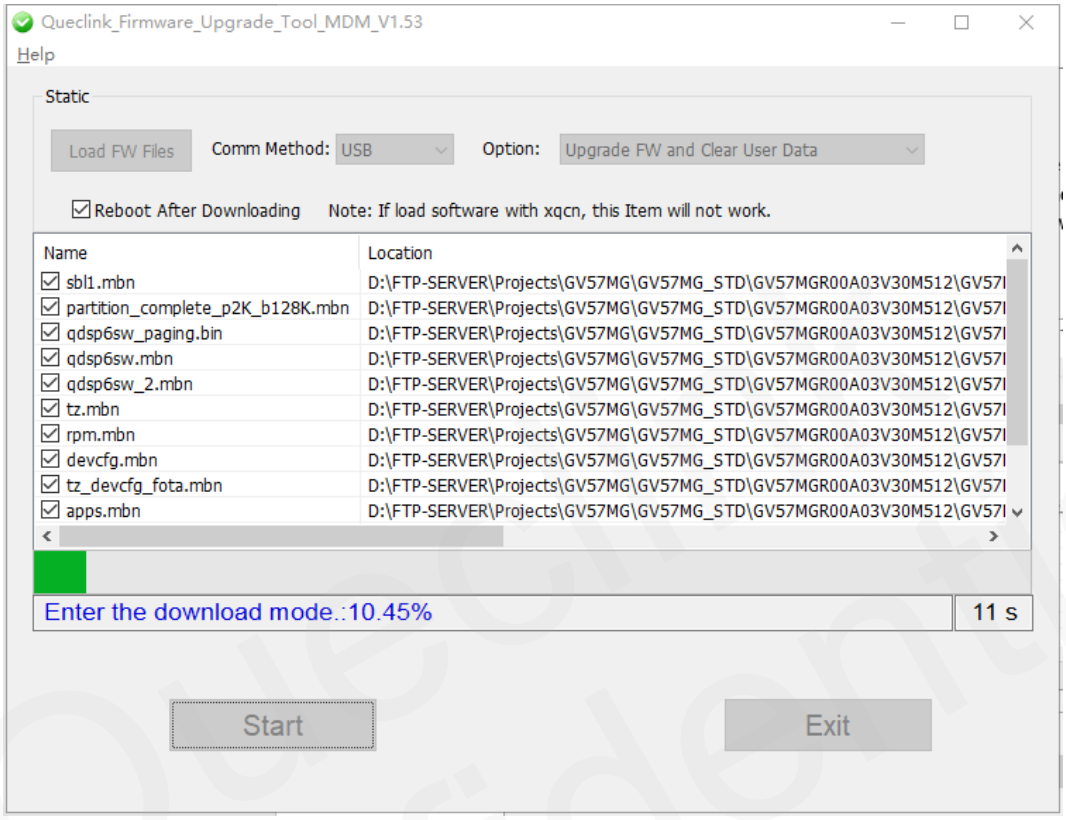
Please check your device type before the upgrade. If the firmware file doesn't match the device, error will be displayed below:



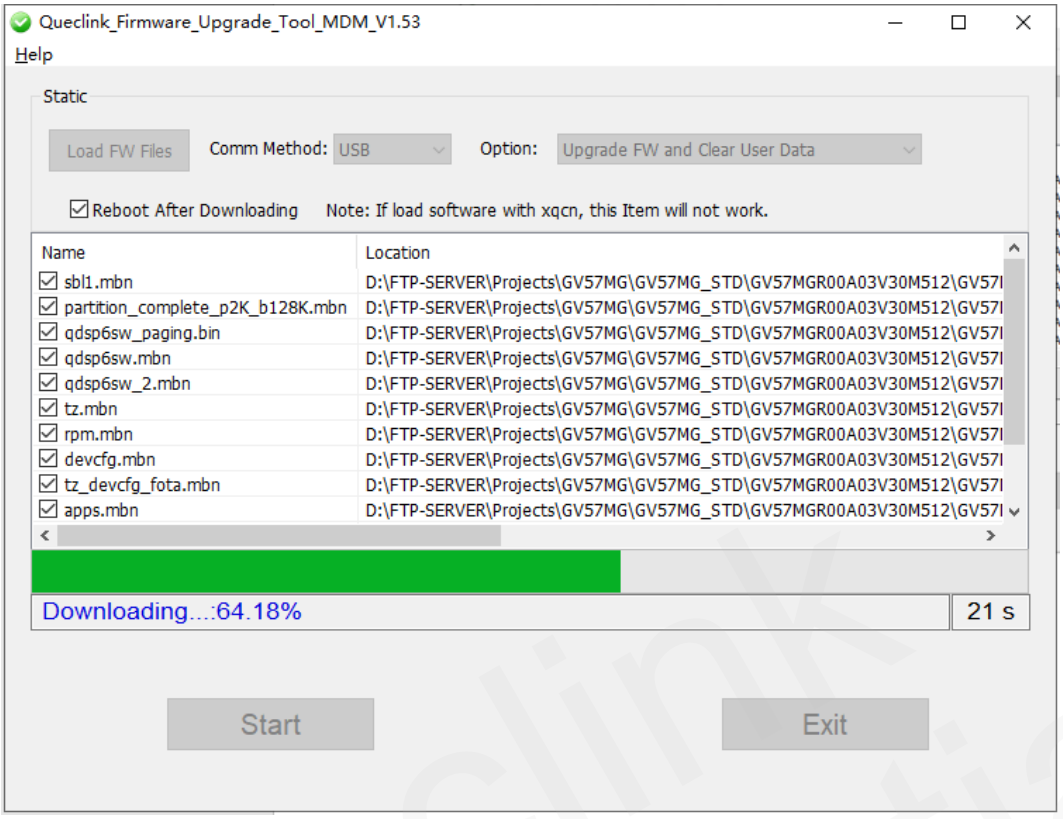
FW file error

2.3. Upgrade Process

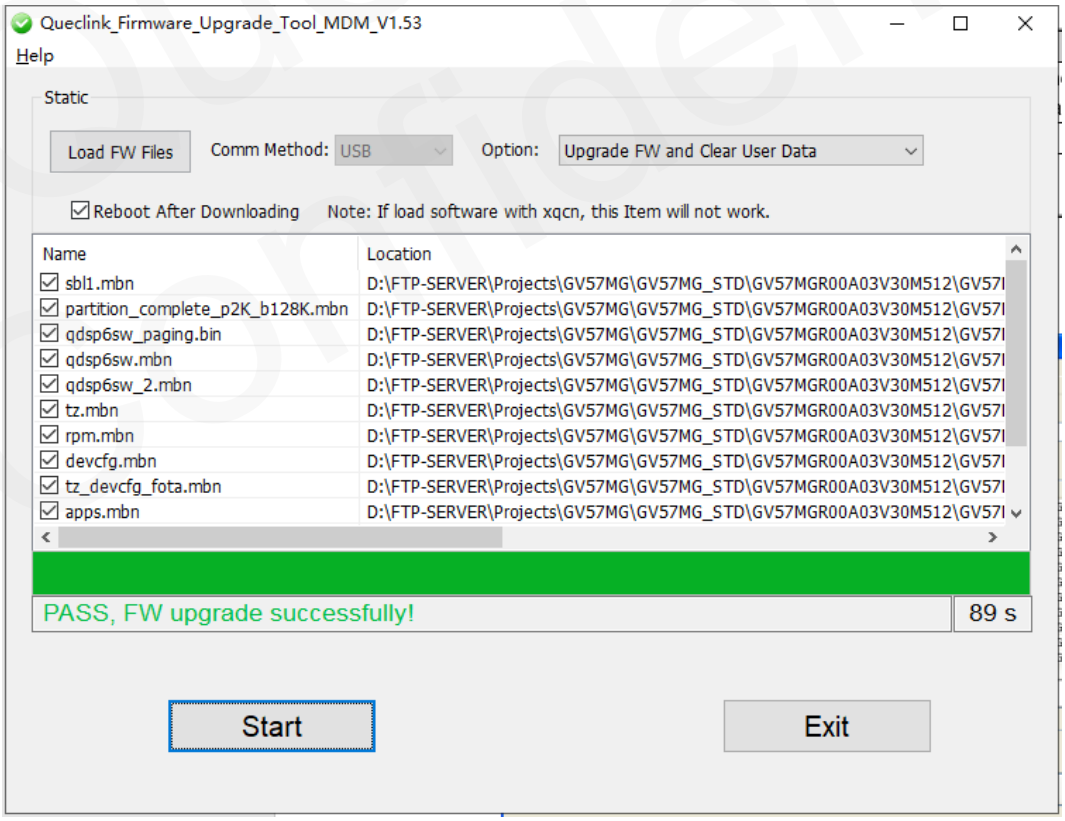
After the setup is completed, connect the device to the PC via the upgrade cable. Make sure to power on the device with an external power supply, and then click **Start** to start the upgrade. The device can't be upgraded when the external power supply is disconnected.



Enter the download mode



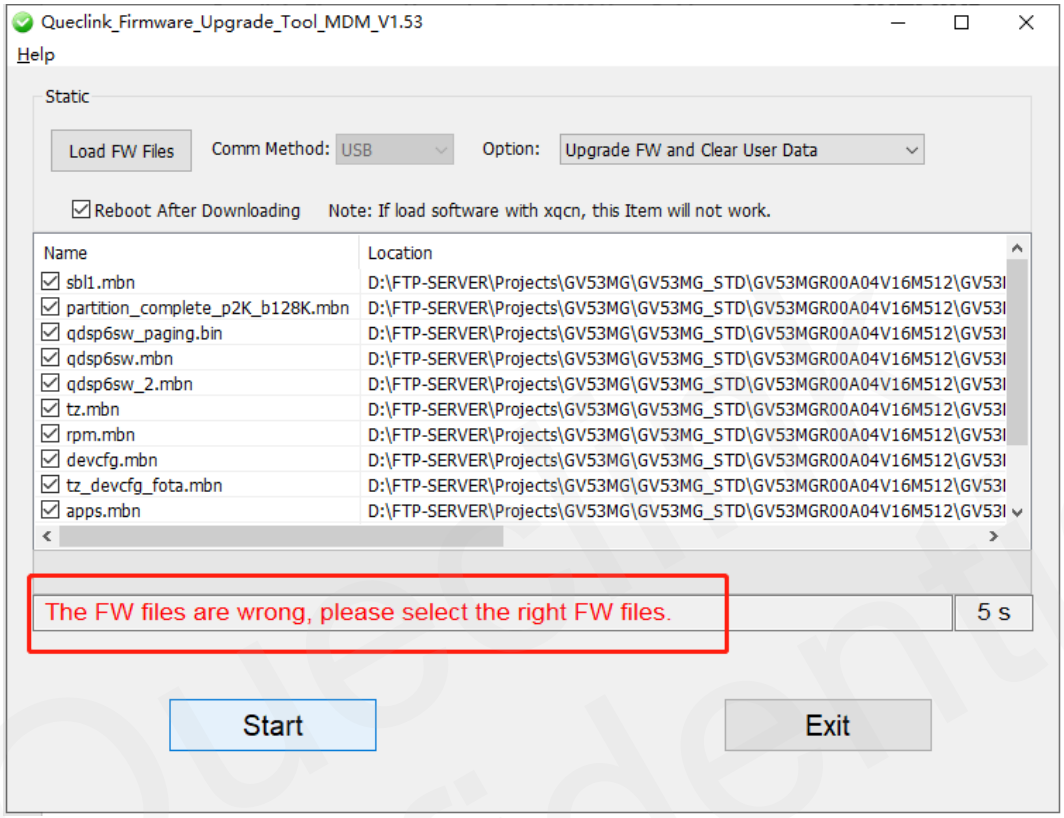
Downloading



Upgrade completed

3. Restriction

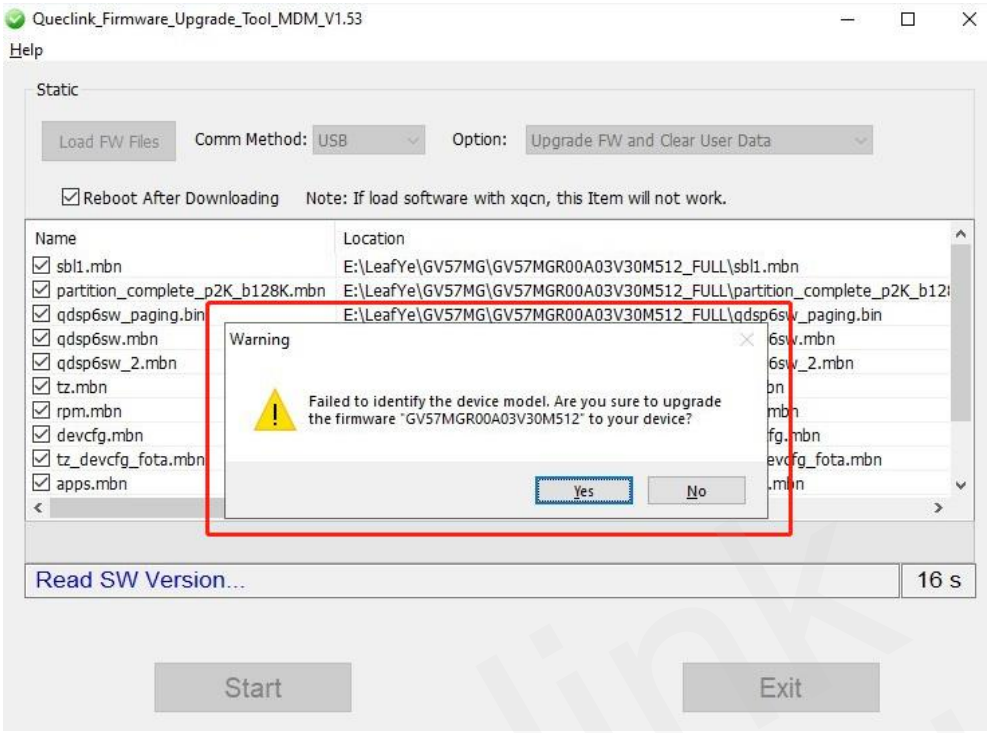
The upgrade tool will check the device information after you click **Start**. The device type should be matched with the firmware version. If the device type and the firmware version don't matched, the upgrade will be stopped.



The device type and the firmware version don't match

If an error occurs during the upgrade process, then you try to upgrade the firmware again and the firmware version can't be read from the device, the upgrade tool will pop up a notification.

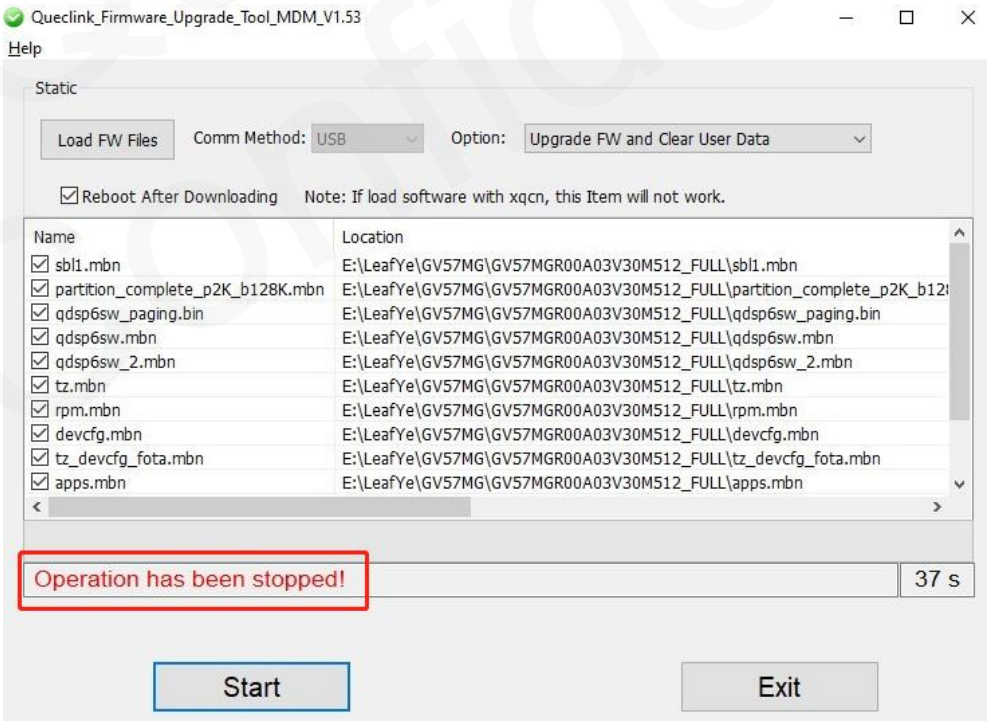
Please double-check the firmware version you loaded, and make sure the firmware version is correct.



Pop-up notification

If you want to stop the firmware upgrade, please click **No** and the firmware upgrade will be canceled.

If you want to continue the firmware upgrade, please click **Yes** and the firmware upgrade will be continued.



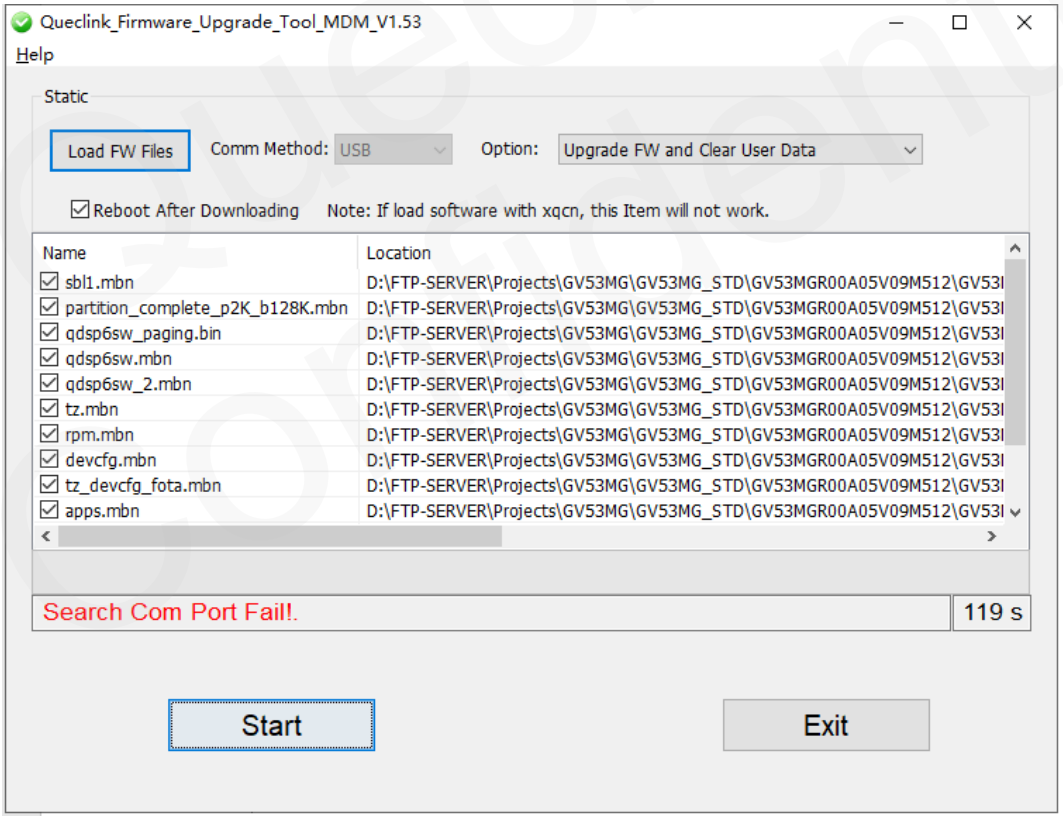
Cancel the firmware upgrade

4. Troubleshooting

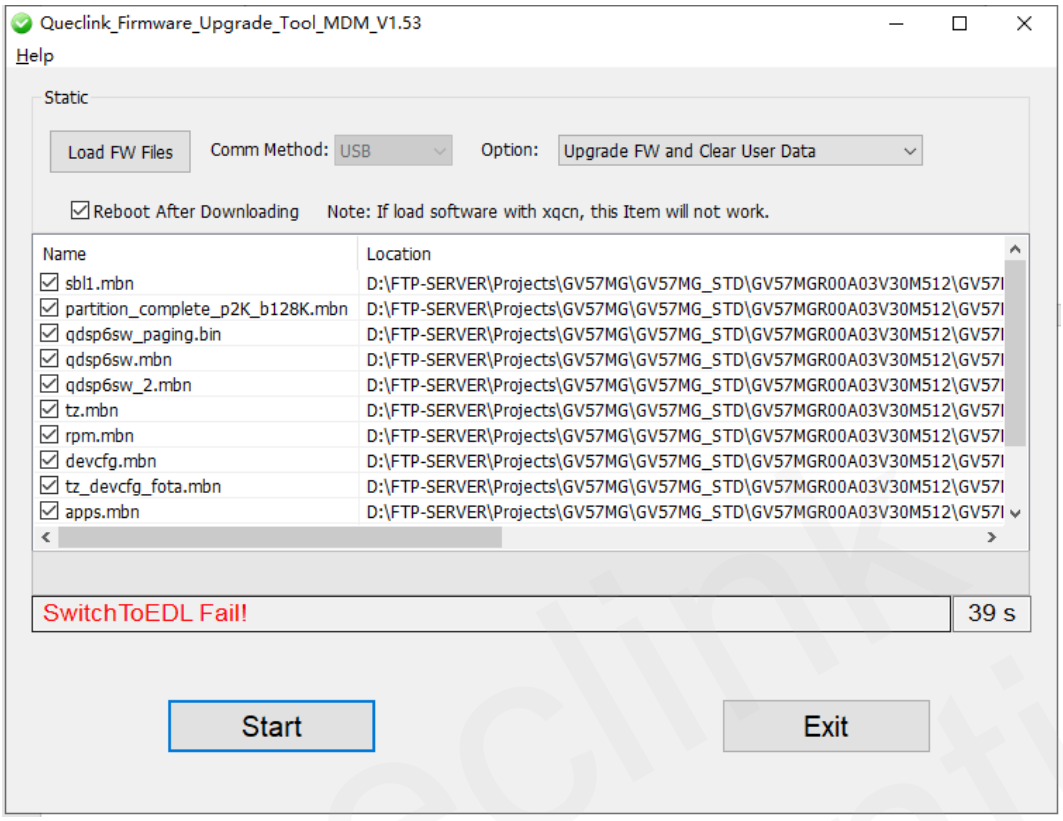
Possible Reason	Solution
The ports do not appear.	Connect the device to the PC, and wait several seconds to confirm that the USB port is generated.
The upgrade cable is broken.	Change another upgrade cable.
The driver installation for the upgrade cable is unsuccessful.	Reboot the PC and try again.
The USB cable or the PC is unstable.	Change another USB cable; if the upgrade of the firmware still fails, restart the PC and try again, or try on another PC.

4.1. Errors

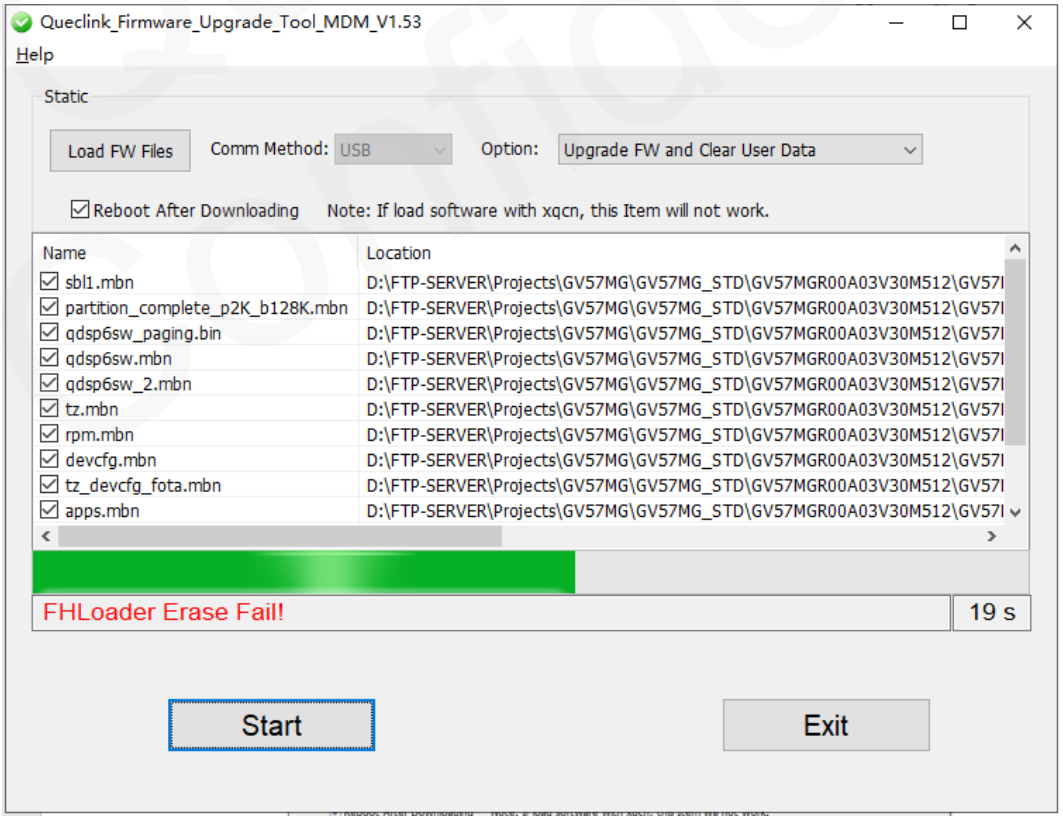
The USB cable is disconnected.

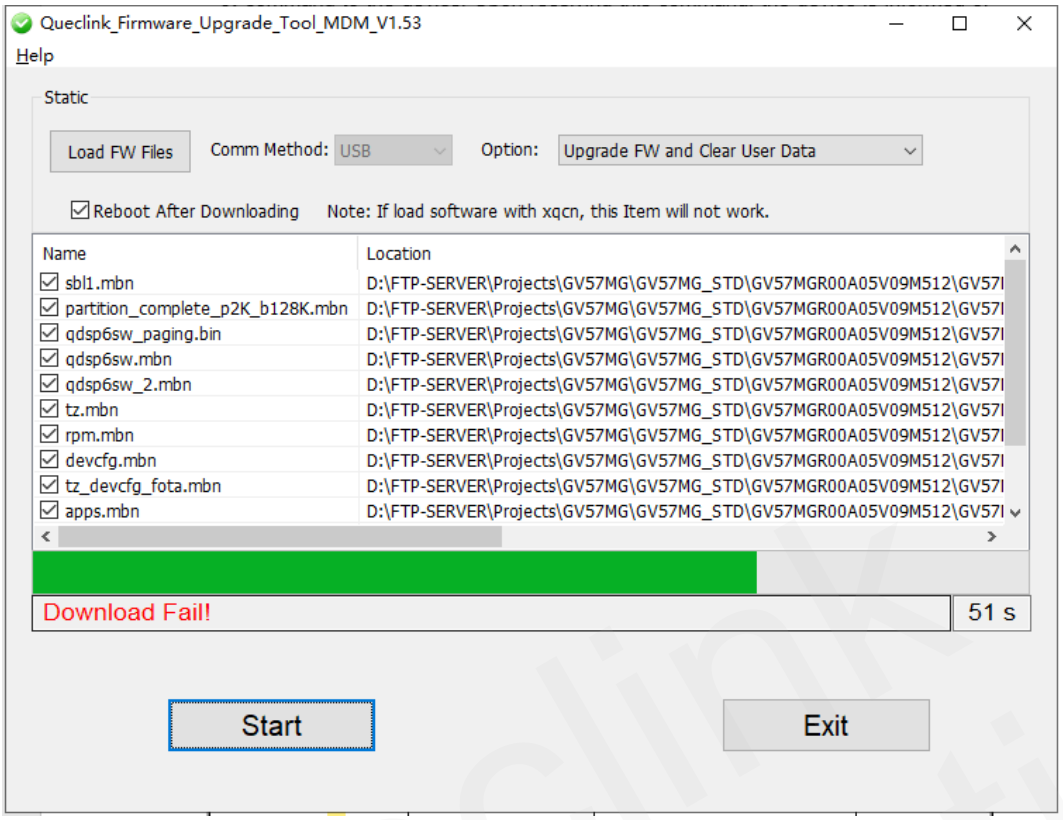


The USB port is not available and may be occupied by other applications.

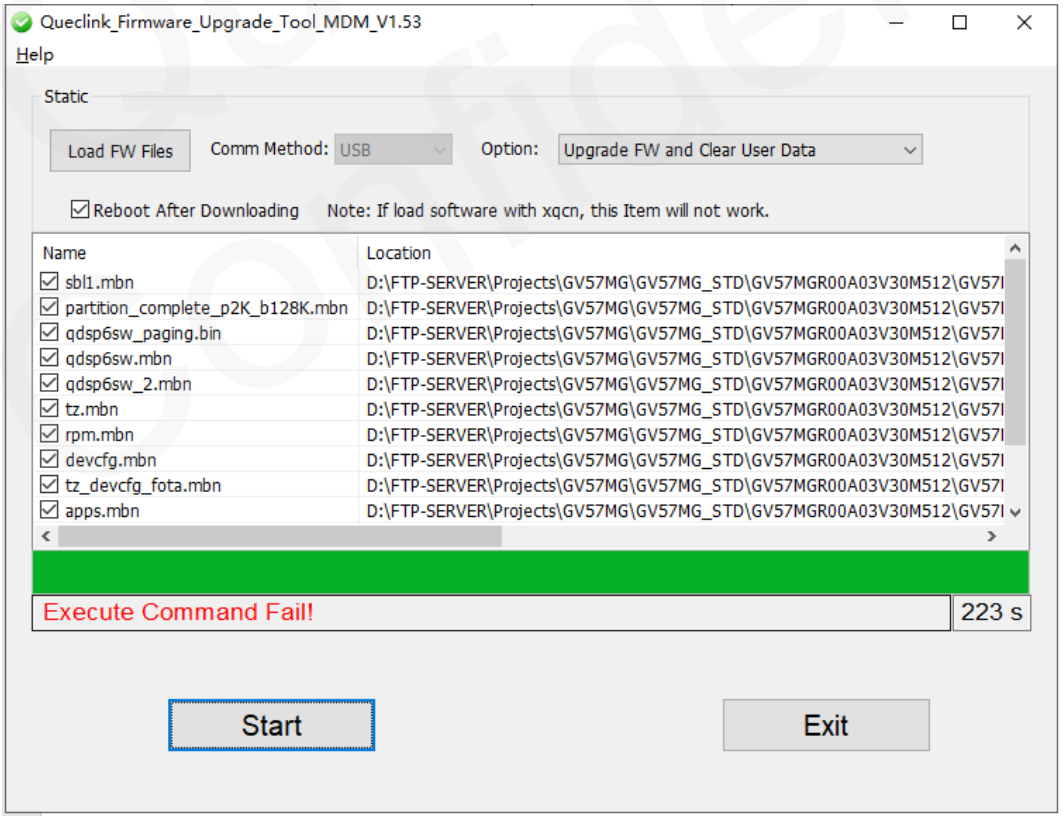


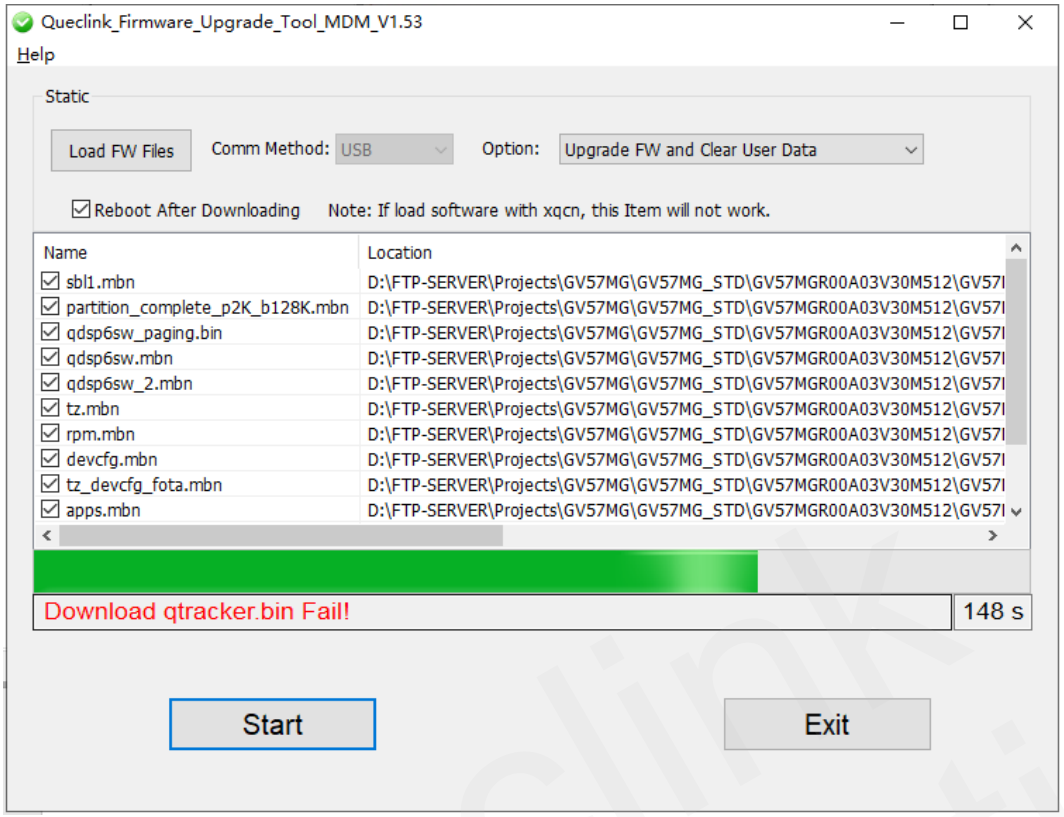
The upgrade fails because the USB cable is disconnected.

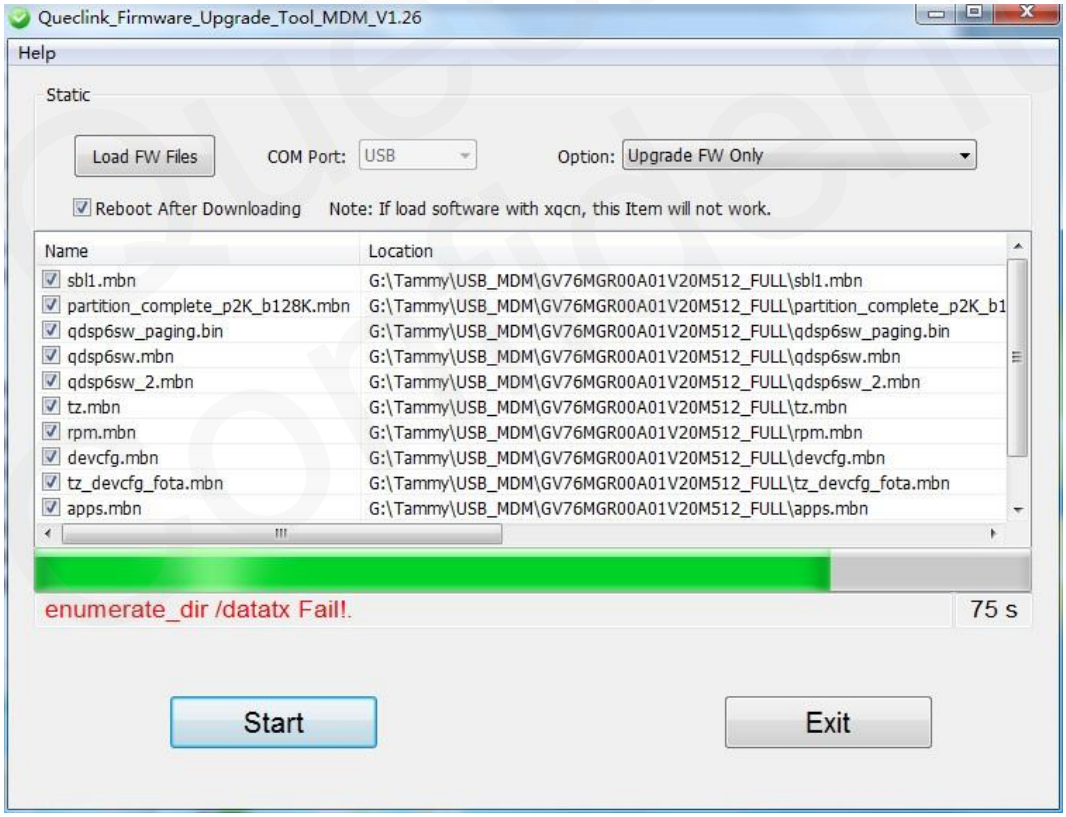




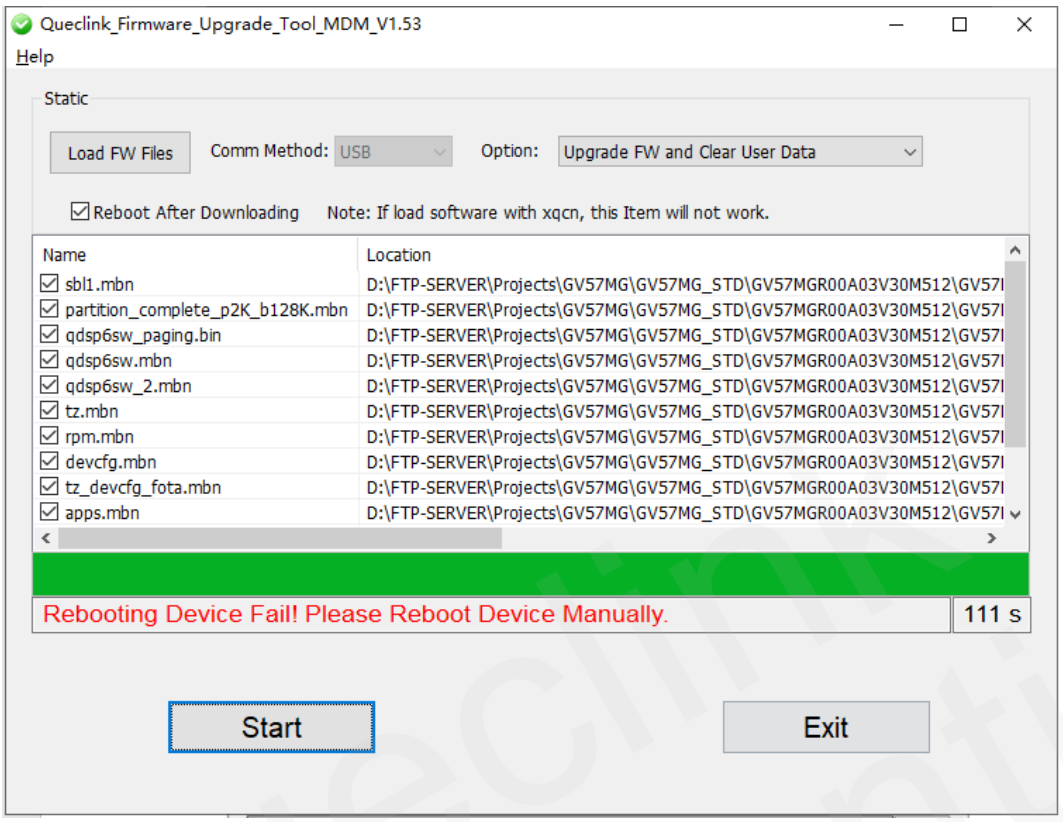
The USB cable or the PC is unstable, please change to another USB cable. If the upgrade of the firmware still fails, restart the PC and try again, or try on another PC.



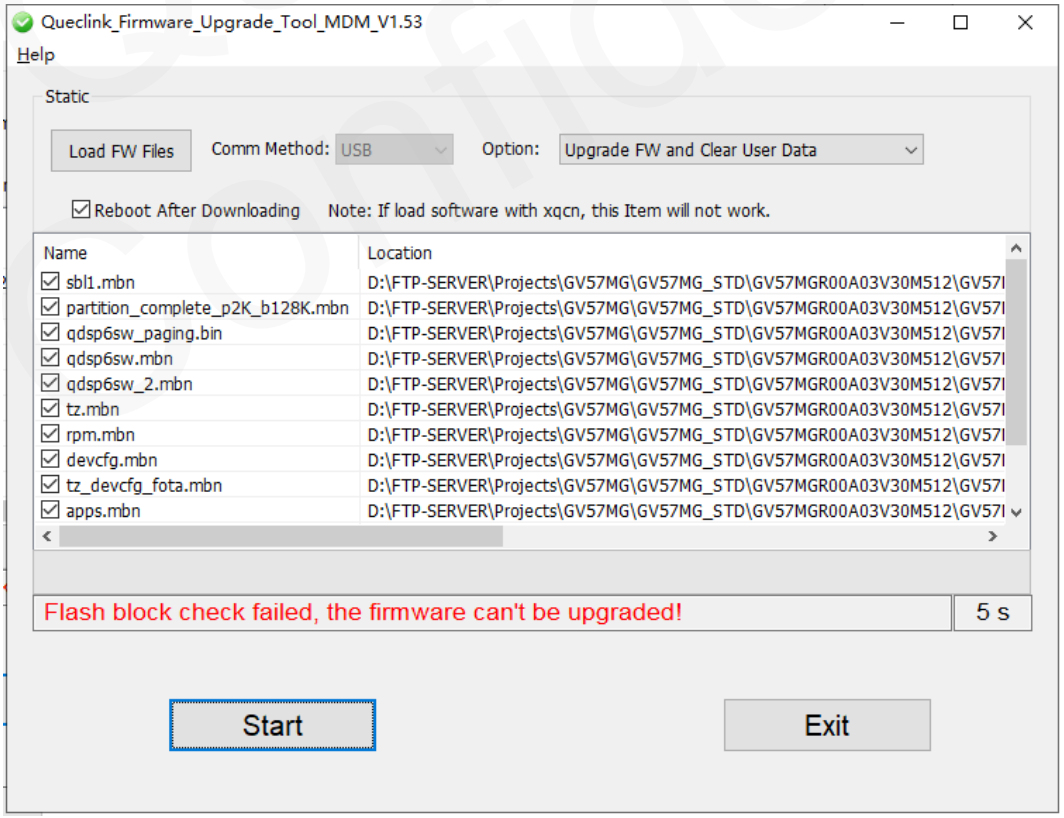

Queclink_Firmware_Upgrade_Tool_MDM_V1.53
Help
Static
Load FW Files
Comm Method: USB
Option: Upgrade FW and Clear User Data
Reboot After Downloading
Note: If load software with xqcn, this Item will not work.
Name
Location
sbl1.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
partition_complete_p2K_b128K.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
qdsp6sw_paging.bin D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
qdsp6sw.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
qdsp6sw_2.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
tz.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
rpm.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
devcfg.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
tz_devcfg_fota.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
apps.mbn D:\FTP-SERVER\Projects\GV57MG\GV57MG_STD\GV57MGR00A03V30M512\GV57I
Download qtracker.bin Fail!
148 s
Start
Exit


Queclink_Firmware_Upgrade_Tool_MDM_V1.26
Help
Static
Load FW Files
COM Port: USB
Option: Upgrade FW Only
Reboot After Downloading
Note: If load software with xqcn, this Item will not work.
Name
Location
sbl1.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\sbl1.mbn
partition_complete_p2K_b128K.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\partition_complete_p2K_b1
qdsp6sw_paging.bin G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\qdsp6sw_paging.bin
qdsp6sw.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\qdsp6sw.mbn
qdsp6sw_2.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\qdsp6sw_2.mbn
tz.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\tz.mbn
rpm.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\rpm.mbn
devcfg.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\devcfg.mbn
tz_devcfg_fota.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\tz_devcfg_fota.mbn
apps.mbn G:\Tammy\USB_MDM\GV76MGR00A01V20M512_FULL\apps.mbn
enumerate_dir /datatx Fail!.
75 s
Start
Exit

The firmware upgrade is successful but the restart of the device fails, you can restart the device manually.



Please contact Queclink FAEs when you encounter the following error.



4.2. Caution

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 disconnect the external power supply, reconnect and 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 disconnect the external power supply, reconnect and try again.
c) If other unexpected errors occur, please disconnect the external power supply, reconnect and try again.

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