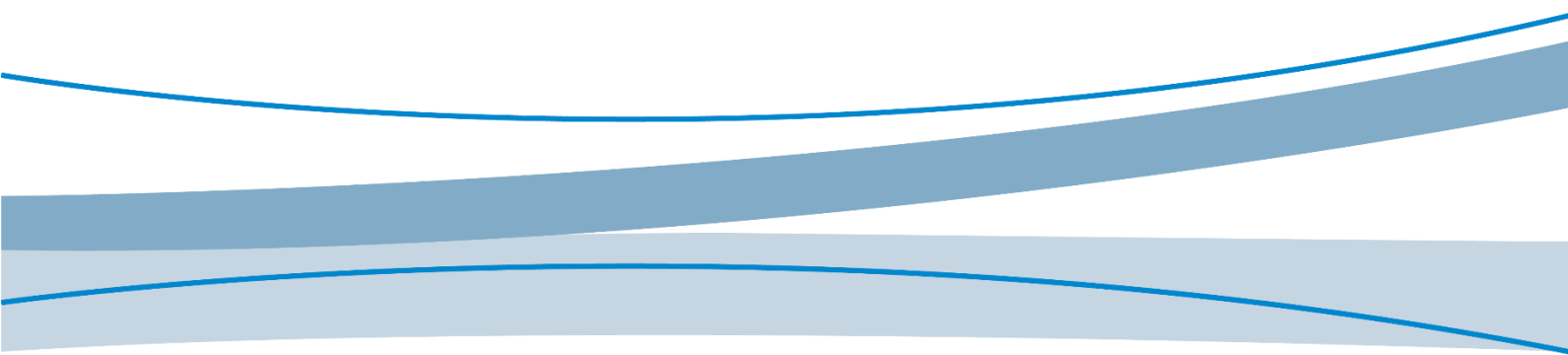




# SDX35 Multi Upgrade Tool

## User Guide

V1.1



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## Safety Instructions

Do not operate wireless communication products in areas where the use of radio is not recommended without proper equipment certification. These areas include environments that may generate radio interference, such as flammable and explosive environments, medical devices, aircraft or any other equipment that may be subject to any form of radio interference.

The driver or operator of any vehicle shall not operate wireless communication products while controlling the vehicle. Doing so will reduce the driver's or operator's control and operation of the vehicle, resulting in safety risks.

Wireless communication devices do not guarantee effective connection under any circumstances, such as when the (U) SIM card is invalid or the device is in arrears. In an emergency, please use the emergency call function when the device is turned on, and ensure that the device is located in an area with sufficient signal strength.

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# Applicable Model

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No.	Applicable Model	Description
1	FG132	Firmware multi upgrade

# Change History

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V1.1 (2024-05-07)	Improve module USB driver installation description.
V1.0 (2023-12-23)	Initial version.

# 1 Overview

## 1.1 Introduction

The Fibocom Multi Upgrade tool is a multi-channel upgrade tool released by Fibocom for module product equipped with Qualcomm SDX35 platform chip, and the tool is integrated firmware package upgrade. The function description is shown in table 1.

Table 1. Function introduction

Function	Description
Firmware upgrade	The firmware package is upgraded in multi-channel. After the upgrade, the calibration parameters, write number information and other parameters are reserved.



1. This tool is only applicable to scenarios which the firmware package software partition table doesn't change before and after the upgrade.
2. The tool path can't contain Chinese, space and special characters.

## 1.2 Environment

### 1.2.1 Hardware Environment

Table 2. Hardware environment

Hardware	Basic Requirement
PC memory	4G and above

Hardware	Basic Requirement
PC hard disk	4G and above free space
PC USB port	Multiple USB ports, USB 3.0 is recommended
Cable	Multiple usb cables, USB 3.0 is recommended
Jigs	Support one to one or one to more
USB hub	Support multiple USB ports, USB 3.0 is recommended, support independent adapter power supply

## 1.2.2 Software environment

Table 3. Software environment

Software	Basic requirements
Operating system	Microsoft Windows 7/10 64bit
USB Driver	Provide by Fibocom FAE officially
Tool	Tool kit



## 1.2.3 Environmental Diagram

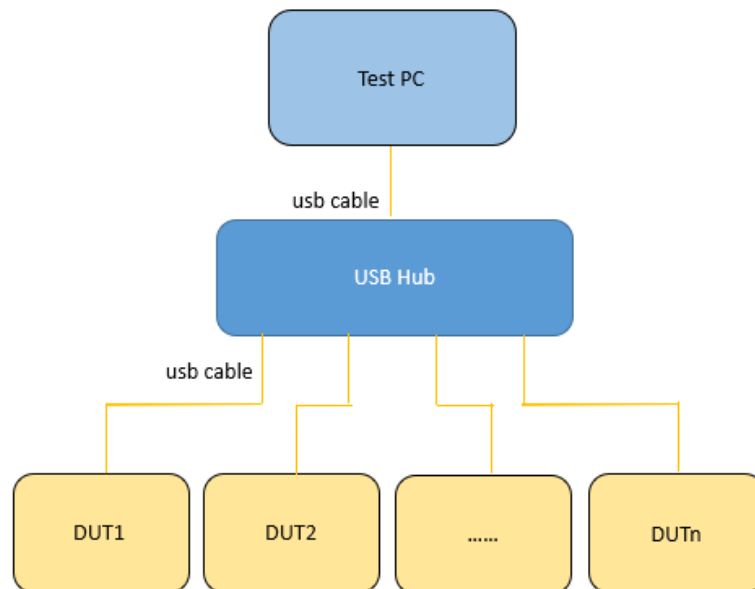


Figure 1. Environmental Diagram

## 1.3 Software Installation

### 1.3.1 USB Driver Installation

Install module USB driver, if the drive is already installed, please ignore this step.

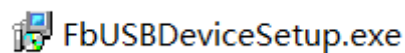


Figure 2. USB Driver

## 2 Tool Operation Instruction

### 2.1 The Description of Main Files

The main files of the tool are described in the following table:

Table 3. Software environment

Type	File Name
Executable file	SDX35_Windows_Multi_Upgrade_Tool_V1.1.0.0.exe
Configuration file	system.ini
Log file	log

### 2.2 Tool Ini File Parameters Configuration

#### 1. Diag port name configuration

- Power on the module before upgrading, and get the part of unique key information contained in the name of Diag port. For example, the name of Diag port contains "Diagnostics".




Figure 3. USB Port of Module

- Fill the value of "Diagnostics" in the following fields of the toolkit "system.ini" file

[Common]

DiagPortName=Diagnostics

## 2.3 Tool Interface Parameters Configuration

1. Click the configuration button  on the main interface to enter the parameter configuration interface.

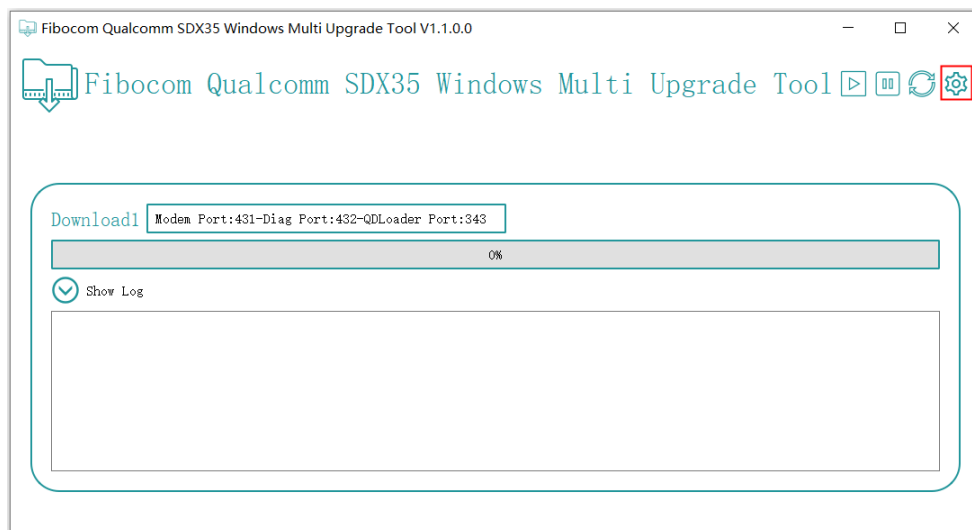


Figure 4. Enter the configuration page

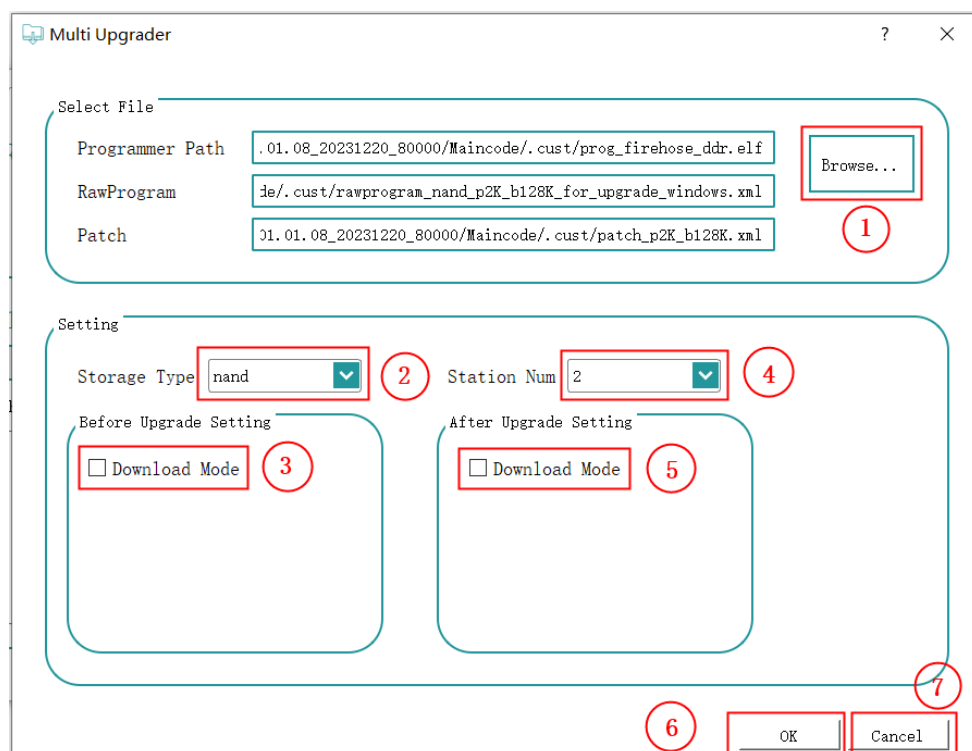


Figure 5. Configure page parameter configuration

Table 3. Software environment

No.	Area Name	Introduction
Area 1	Select package area	Click “Browse...” button to select firmware package.
Area 2	Select flash type area	Select “nand” or “emmc” flash type.
Area 3	Select mode area	Choose whether to upgrade in DL mode before upgrade.
Area 4	Select the number of download threads area	Select the number of threads to download at the same time
Area 5	Select mode area	Choose whether to upgrade in DL mode after upgrade.
Area 6	Save settings area	Save setting.
Area 7	Cancel setting area	Cancel setting area



1. Area 1, when you select software package, please select “Maincode\cust\rawprogram\_nand\_p2K\_b128K\_for\_rework.xml” file.

## 3 Quick Start

### 3.1 Running Tool

The following is an example of upgrading two modules at the same time, the other quantities of upgrades are similar.

#### 3.1.1 Port Matching



When only one channel is selected for upgrade, there is no need to match the ports and the upgrade can be performed directly.

1. Set the number of upgrade modules in the tool configuration interface, then click “OK” button.

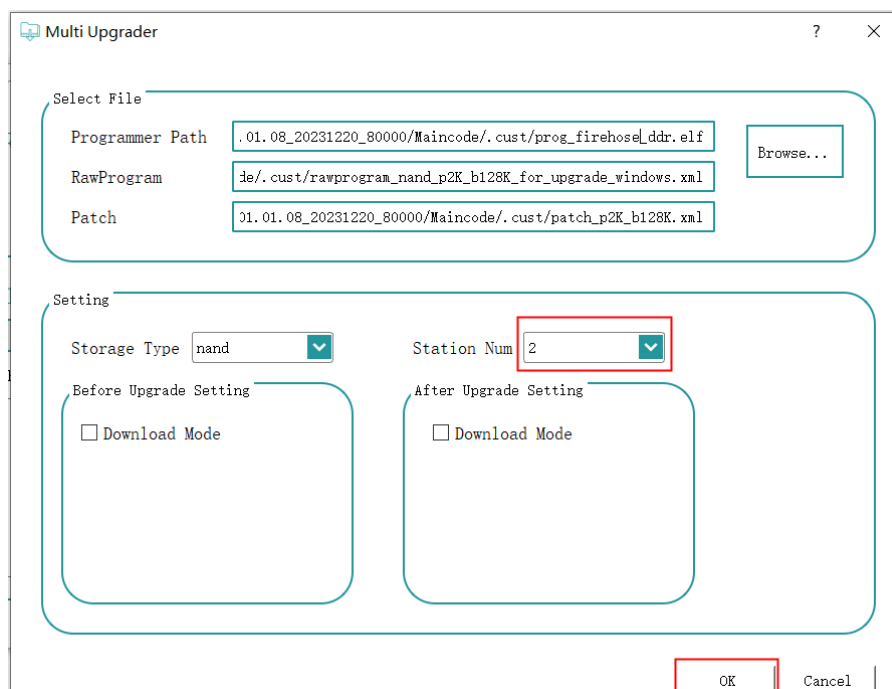


Figure 6. Set the number of upgrade modules

- Click the match port button  on the main interface of the tool.

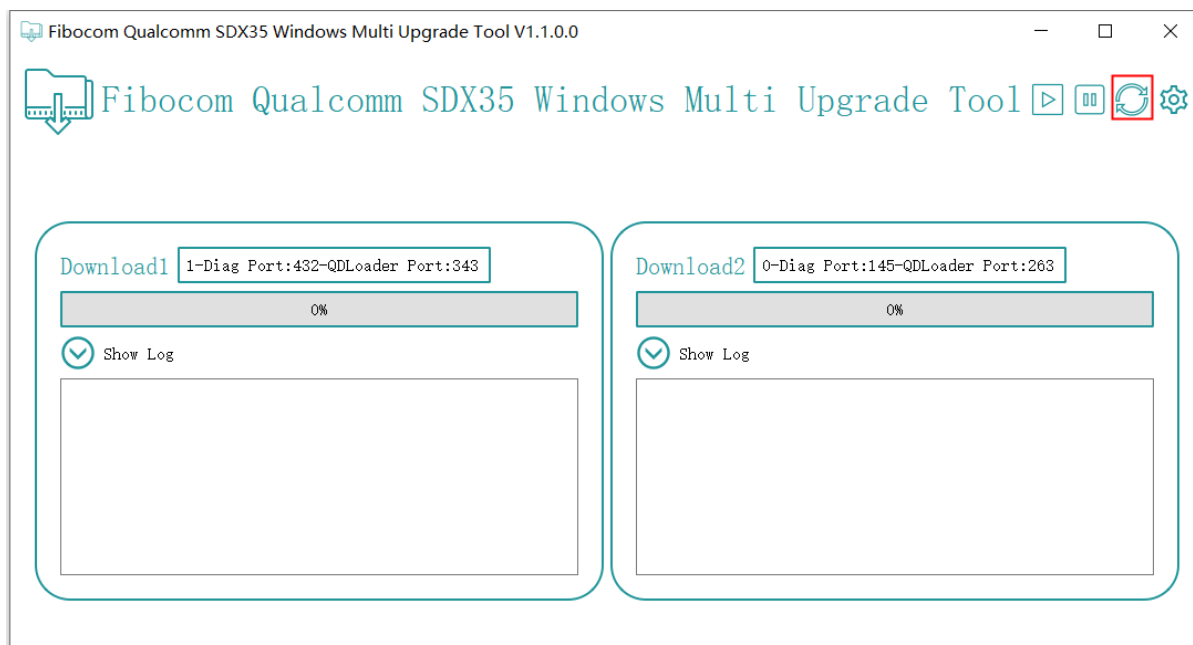


Figure 7. Click button to match port

- Download1, insert module 1 to USB Hub, such as USB Hub Port1.
- When Download1 successfully matched to the port, then prompt to unplug USB cable of module 1 from USB Hub, or power off module 1.

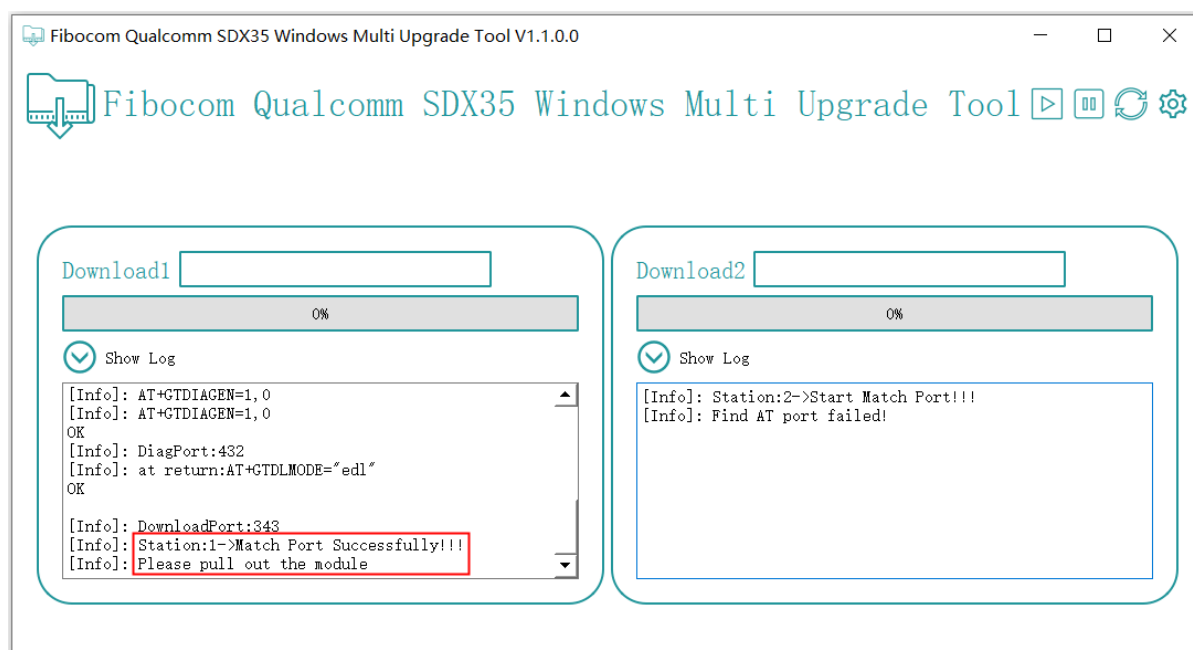


Figure 8. The port of the first module matches successfully

5. Download2, insert module 2 into another port (such as Port2) on the USB Hub, the module 2 will automatically start matching ports. When Download2 successfully matched to the port, then prompt to unplug USB cable of module 2 from USB Hub, or power off module 2.

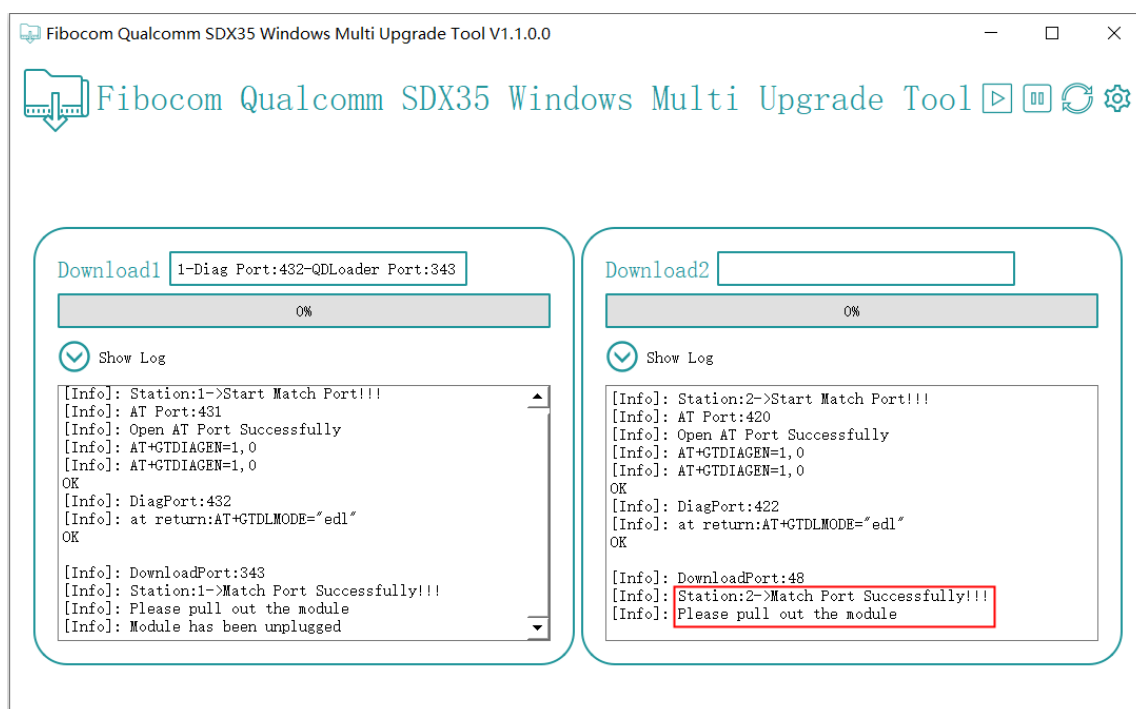


Figure 9. The port of the second module matches successfully

6. When Download1 and Download2 match ports successfully, the matching port process ends. When all matches are successful, port information will appear in each channel.

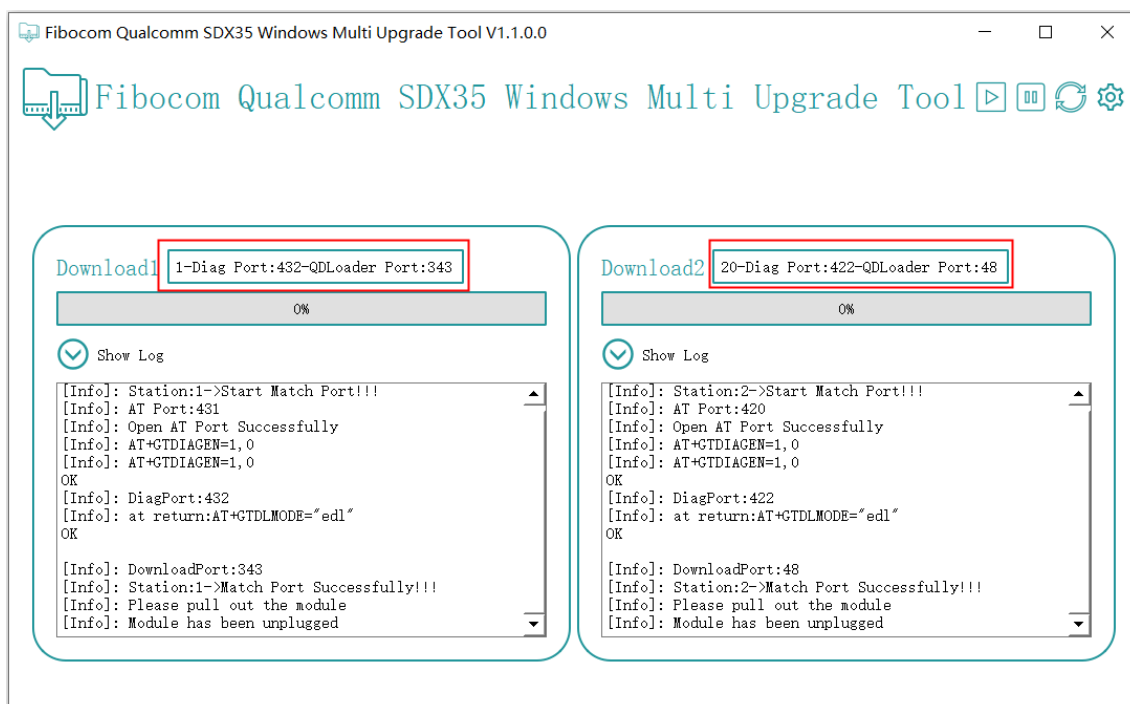


Figure 10. The matching of two module ports ends


Note:

1. When the ports are matched, Download1 and Download2 modules can't be plugged into the USB Hub at the same time.
2. After port matching, tool Download1 and Download2 will form port binding relationship with Port1 and Port2 of USB Hub respectively. The next upgrade can only use USB Hub Port1 and Port2, no other HUB Hub ports, otherwise the upgrade will not be possible.
3. After port matching, if the upgrade environment has not changed (for example, the USB Hub has not been replaced, or other USB ports plugged into the test PC have not been replaced in the USB Hub), it is unnecessary to do port matching again.





### 3.1.2 Multi Upgrade

1. The Download1 and Download2 modules can be powered on at the same time or separately, and click the Start button  to upgrade.

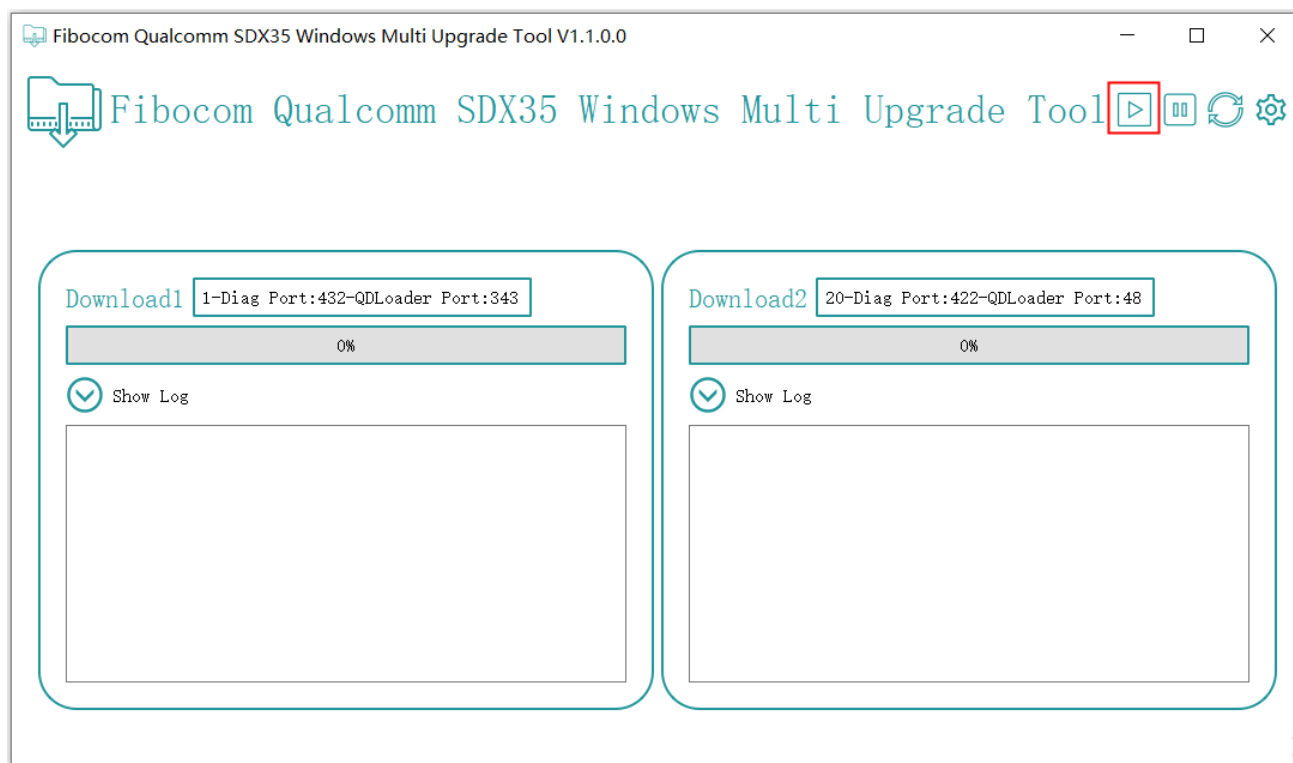


Figure 11. Click the Start button to upgrade

2. After the upgrade is completed, other modules can be replaced to download automatically.

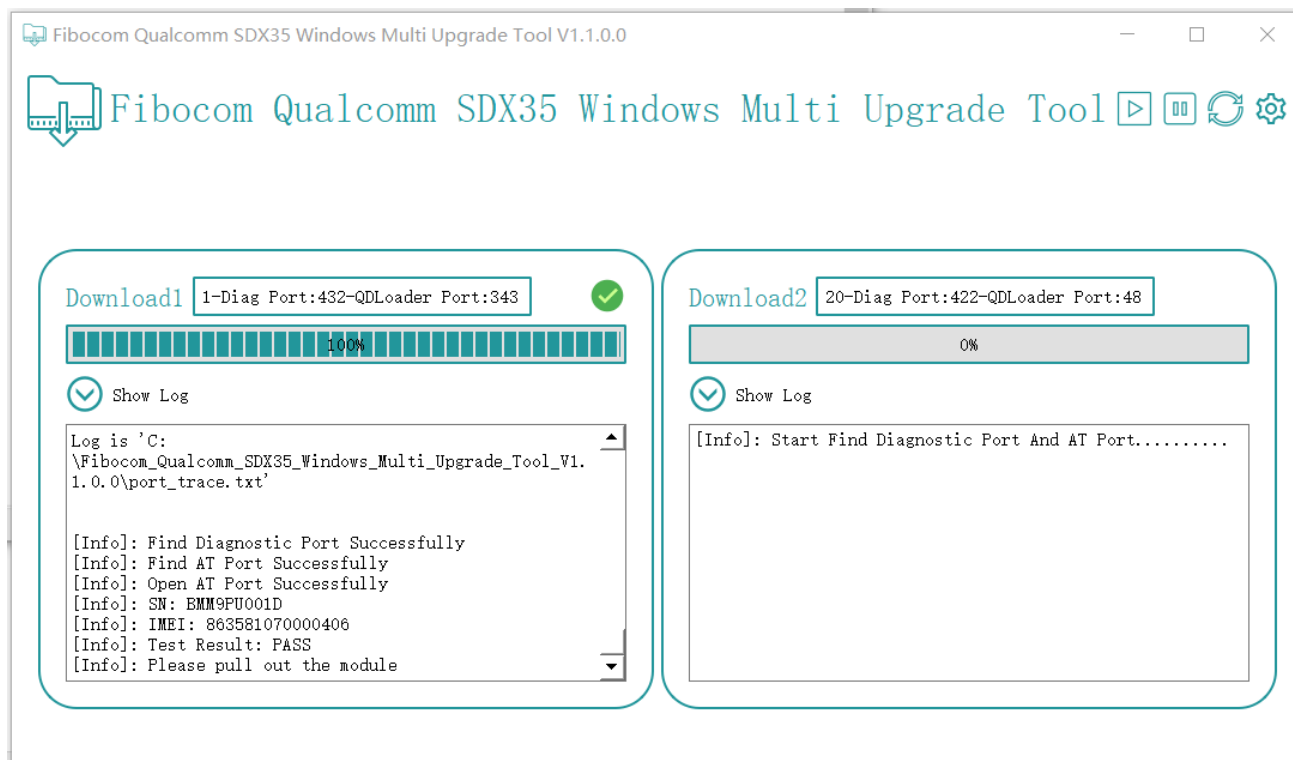


Figure 12. After the upgrade is completed, replace other modules



Note:

1. Don't click the Stop Download button  during the upgrade process.

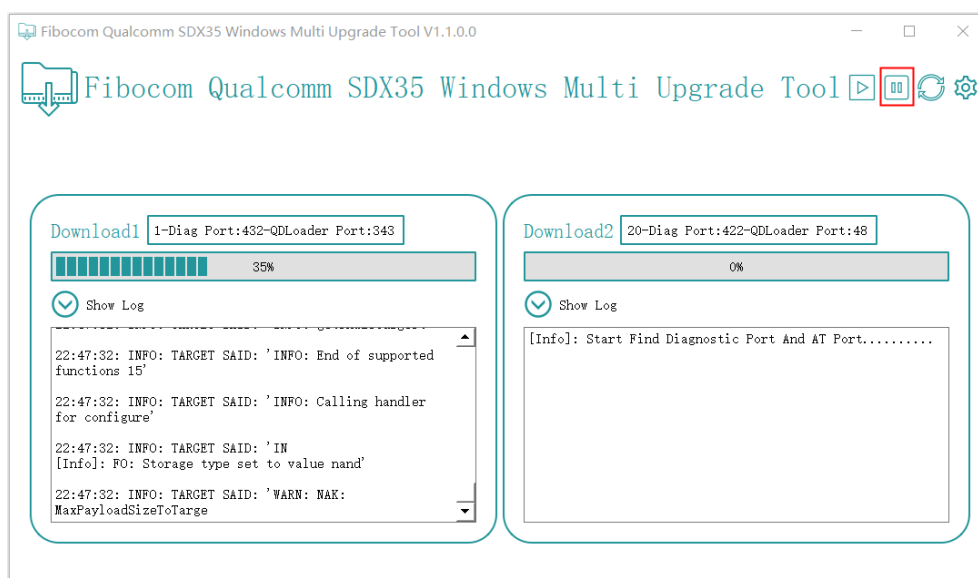


Figure 13. Don't click the Stop Download button during upgrade

## 3.2 Test Log

The test log is automatically generated in the local log file.

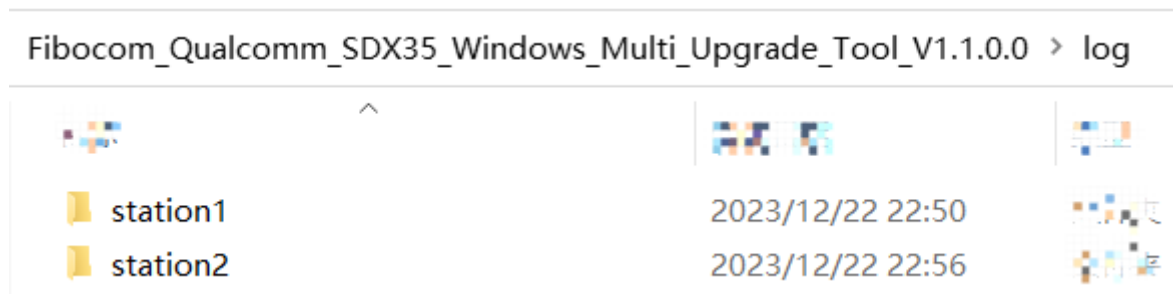


Figure 14. Test log path

## 4 FAQ

### 4.1 Solve The Issue of USB Port Number Change

When different modules are connected to the same USB port on the same test computer, If the test computer has problems with different port numbers of the modules, It can be solved by (double-clicking) executing the IgnoreHWSerNum.reg file, Before double-clicking to execute the IgnoreHWSerNum.reg file, you need to update the VIDPID of the AT port of the module to the IgnoreHWSerNum.reg file, The following procedure is just an example.

1. Select the module AT port in the device manager, right-click to select properties and get the VIDPID, e.g 8087095A.

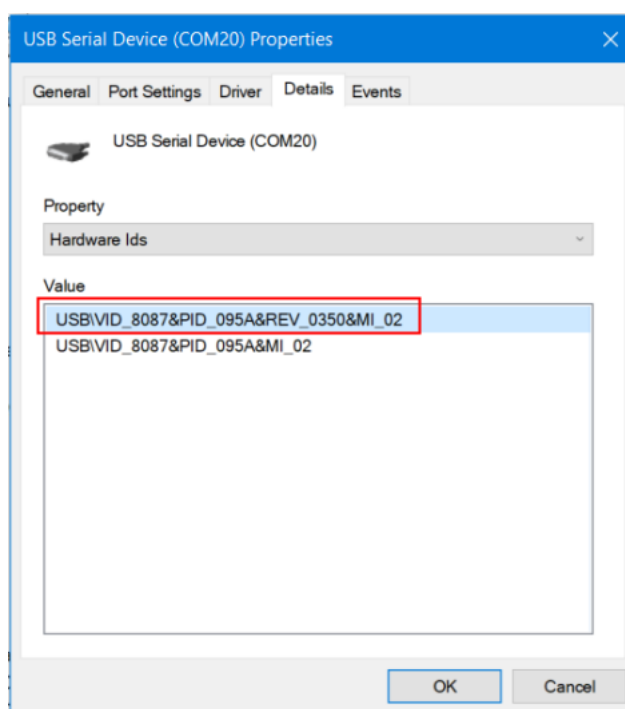


Figure 15. Get module AT port vidpid

2. Add VIDPID (eg 8087095A) information to IgnoreHWSerNum.reg file.

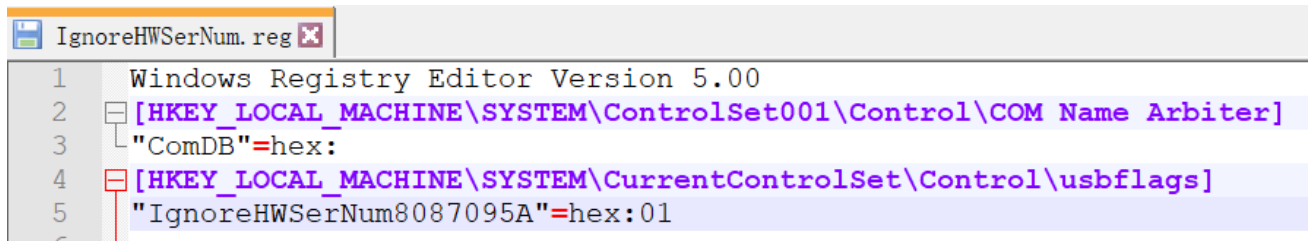


Figure 16. The content of IgnoreHWSerNum.reg file

You can do the creation of the IgnoreHWSerNum.reg file yourself as below content.

Windows Registry Editor Version 5.00

[HKEY\_LOCAL\_MACHINE\SYSTEM\ControlSet001\Control\COM Name Arbiter]

"ComDB"=hex:

[HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\usbflags]

"IgnoreHWSerNum8087095A"=hex:01

3. Double-click to execute the IgnoreHWSerNum.reg file, please note that you need to restart the computer after running the file to take effect.