N58

Firmware Upgrade Guide (Windows)

Issue 1.0 Date 2019-12-20

Notice

This document provides a guide for users to use N58 modules.

This document is intended for system engineers (SEs), development engineers, and test engineers.

THIS GUIDE PROVIDES INSTRUCTIONS FOR CUSTOMERS TO DESIGN THEIR APPLICATIONS. PLEASE FOLLOW THE RULES AND PARAMETERS IN THIS GUIDE TO DESIGN AND COMMISSION. NEOWAY WILL NOT TAKE ANY RESPONSIBILITY OF BODILY HURT OR ASSET LOSS CAUSED BY IMPROPER OPERATIONS.

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Contents

About This Document

Scope

This document is applicable to Neoway N58 modules.

Audience

This document is intended for system engineers (SEs), development engineers, and test engineers.

Change History

Issue	Date	Change	Changed By
1.0	2019-11	Initial draft	Wu Guoqing

Conventions

Symbol	Indication
(!)	This warning symbol means danger. You are in a situation that could cause fatal device damage or even bodily damage.
(!)	This means the reader be careful. In this situation, you might perform an action that could result in module or product damages.
(i)	Means note or tips for readers to use the module

1 Overview

N58 is an industrial LTC Cat1 module that is developed on Spectrum chipset. During the development, you can upgrade its firmware through the USB port.

This document describes how to upgrade the firmware of N58 on Windows OS.

Before the upgrade process, you need the following materials and tools:

- N58 module or N58 EVB

- UpgradeDownload

- USB cable

- Computer running Windows 7/8/10

- USB drivers

- Firmware package

⚠️ There might be different versions of firmware for N58. Before upgrading your module, please contact Neoway FAE to obtain the correct one.

If an incorrect version of firmware is flashed, the upgrade might fail or the module might be damaged.
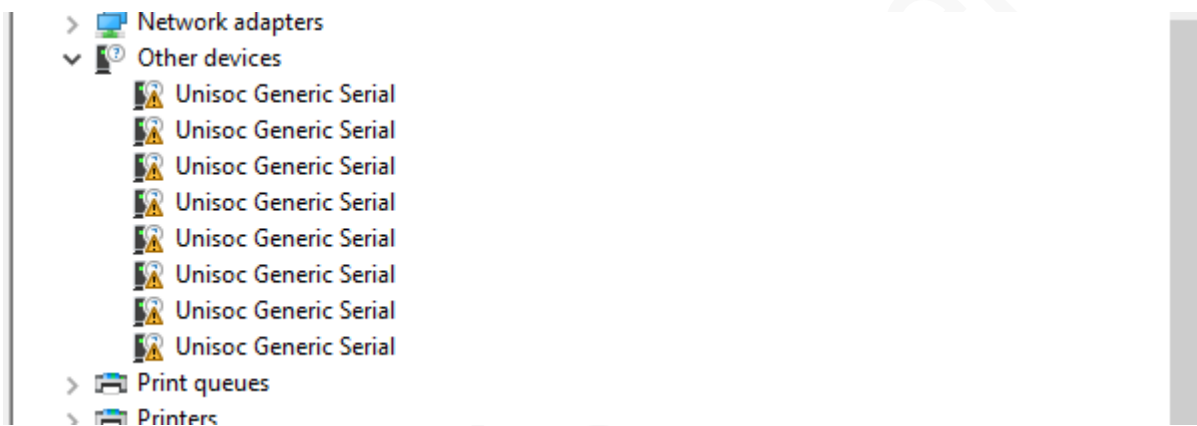
2 Upgrading Firmware

This chapter describes how to install the USB drivers and download the firmware.

2.1 Installing USB Drivers

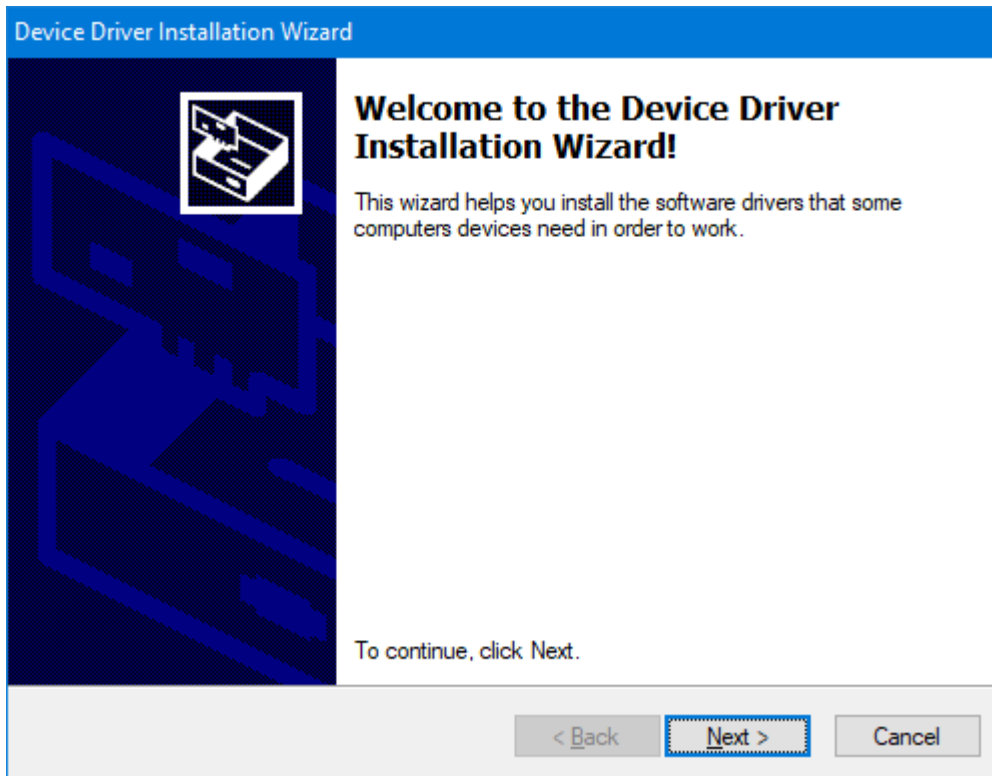Follow the steps below to install the USB drivers of N58.

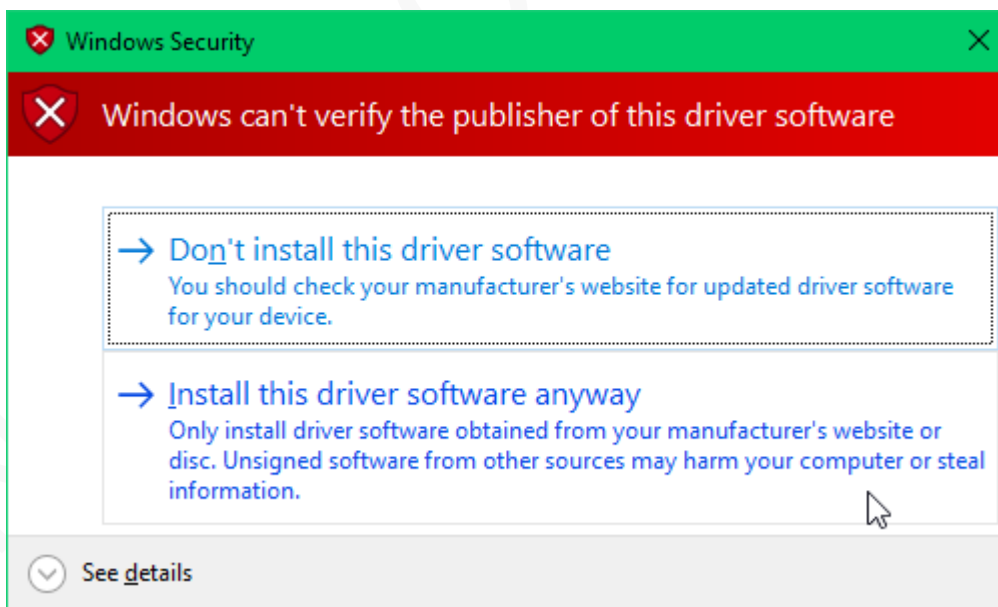**Step 1:** Connect the module to your computer through a USB cable and start the module.

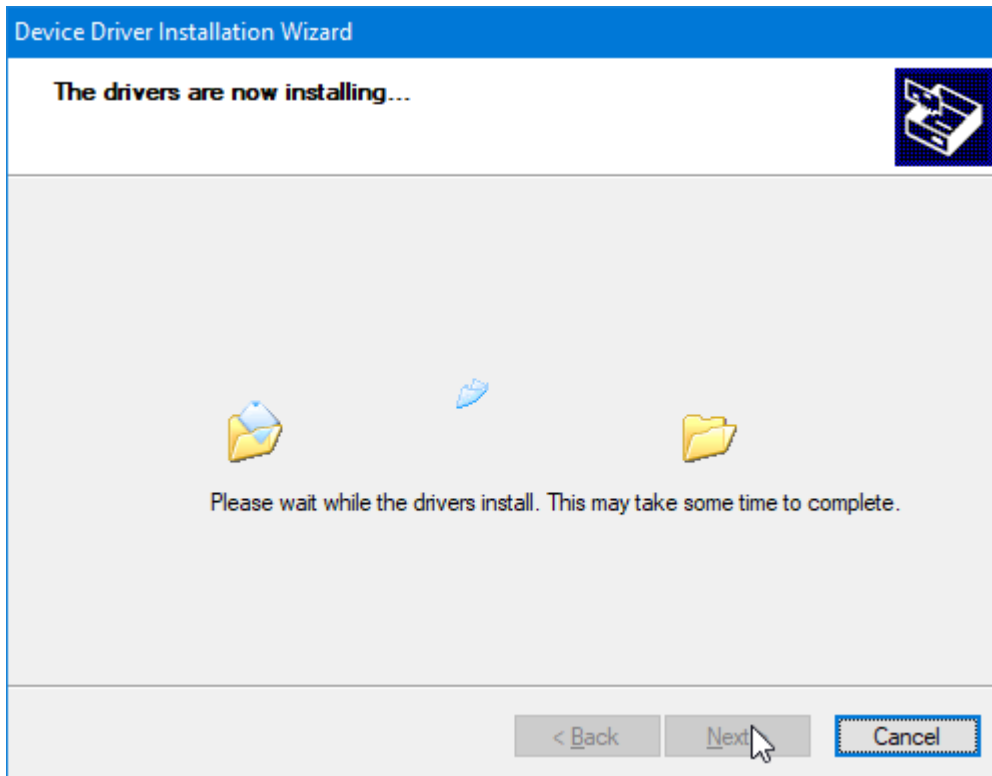**Step 2:** Decompress the N58 tool package and double-click the dpinst execution file.

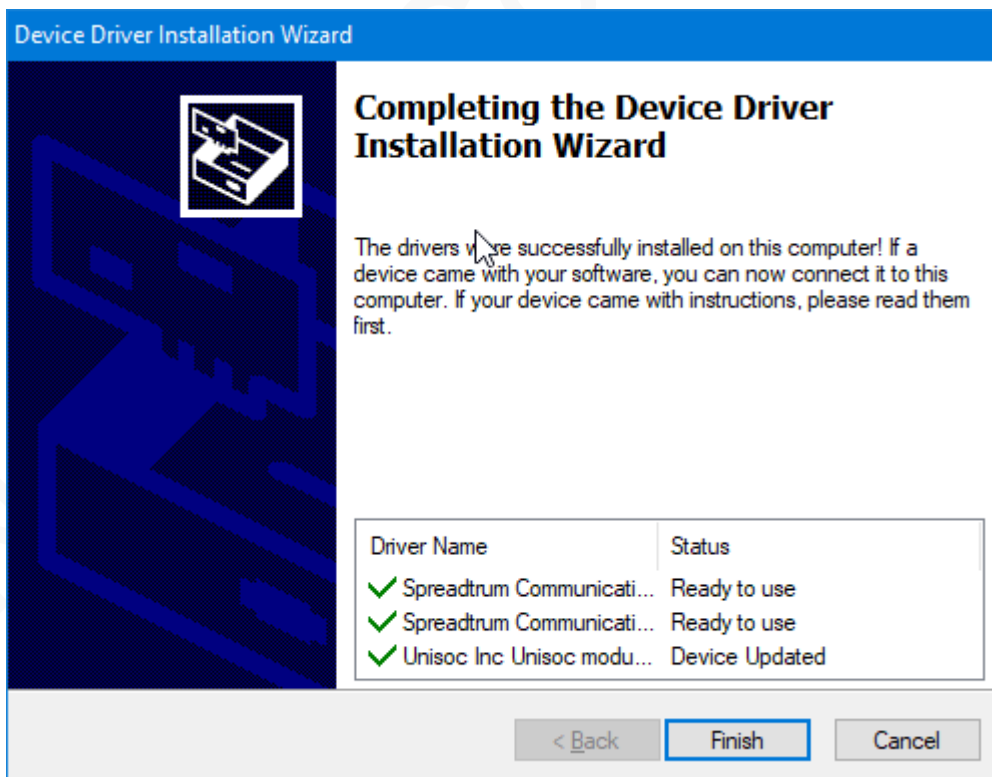**Step 3:** In the installation wizard, click **Next**.

Step 4: (Optional) If the computer displays the following **Windows Security**, click **Install this driver software anyway**.

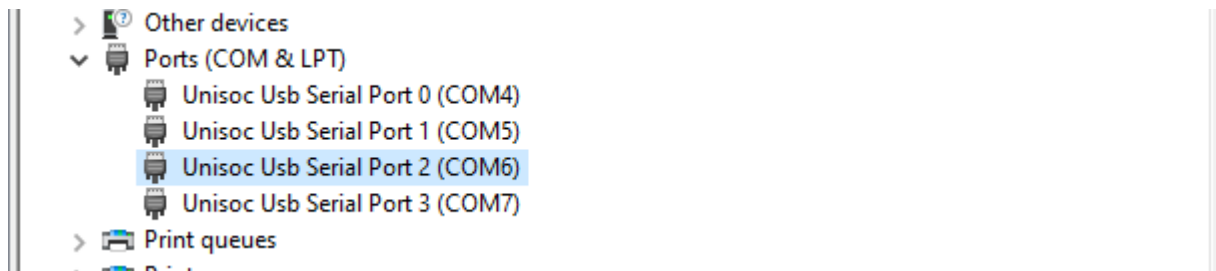Wait several minutes, and the USB drivers will be installed automatically.

The installation is completed.

Step 5: Right-click **This PC** and choose **Properties** from the shortcut menu. Then click Device Manager.

The module is displayed as shown in the following figure before the drivers are installed.

2.2 Downloading Firmware

This section describes the download process of N58 firmware.

Step 1: Connect the module to the computer via USB and set the module to download mode through the following methods.
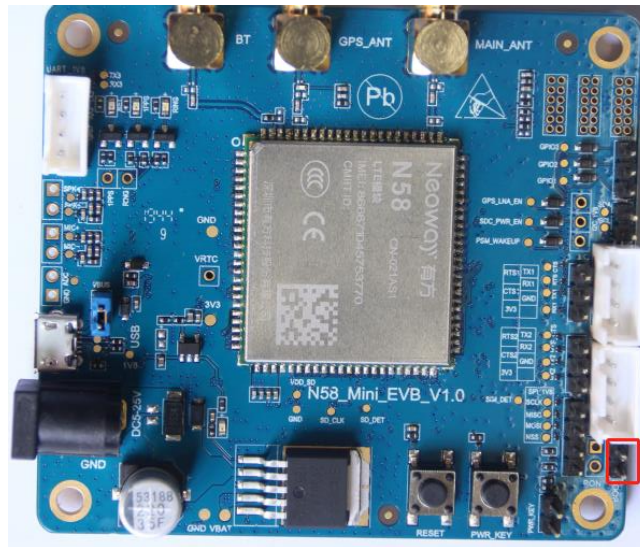
● Hardware

– Module

Short connect the USB_BOOT pin to the VDDIO_1P8 pin and pull the PWRKEY pin down to enter the download mode. Disconnect the USB_BOOT from VDDIO_1P8 after the download port is displayed.

Model	FORCE_USB_BOOT (USB_BOOT)	VDDIO_1P8 (VDD_1P8)
N58	PIN_48	PIN_45

– EVB

Model	Method to Enable Download Mode of EVB
N58_Mini_EVB_V1.0	Short connect the USB_BOOT pin to the 1.8V pin and restart the EVB.
N720-DEMO-V2.0	If the EVB is started already, hold on the USB_BOOT button and press the RESET button. If the EVB is shut down, hold on the USB_BOOT button and press the POWER button.

- AT Command

    If the module is started and identified by the computer, send **AT^FORCEDNLD** to it through the serial port tool.

    ```
    [17:11:38.656]发→◇AT^FORCEDNLD
    □
    [17:11:38.669]收←◆AT^FORCEDNLD
    OK
    ```
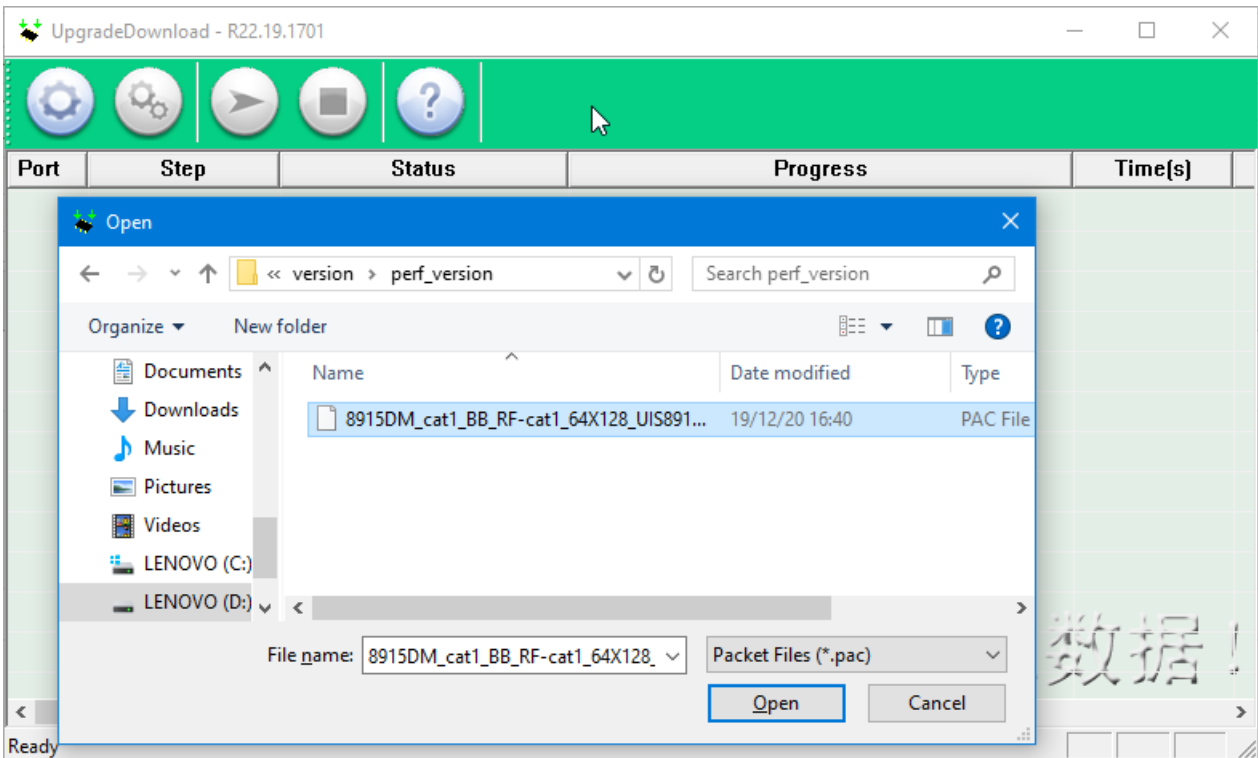
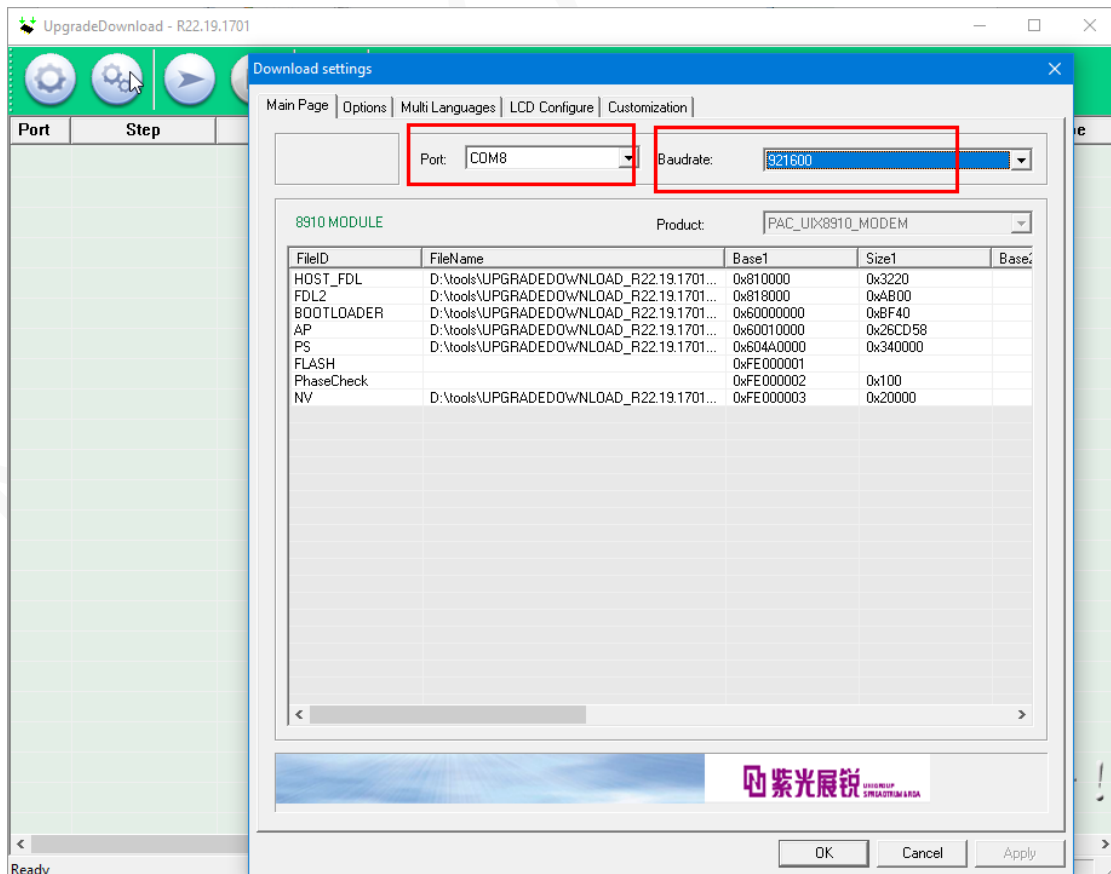**Step 2:** In Device Manager, check if SPRD U2S Diag is displayed.

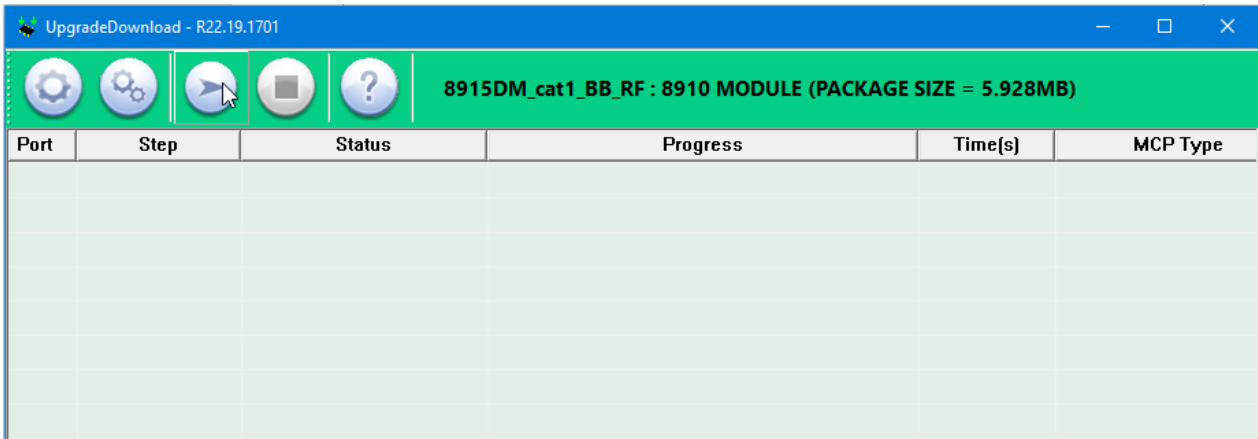**Step 3:** Decompress the UpgradeDownload package and start the UpgradeDownload tool.

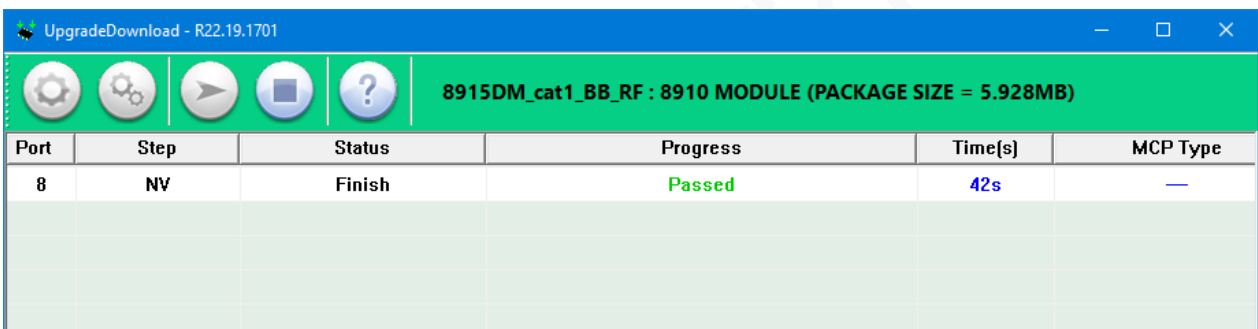**Step 4:** Click the **Load packet** button and select the firmware file.

Step 5: Click the **Setting** button and set the COM port and baudrate in the **Download settings** dialog box.

Step 6: Click the **Start Loading** button.

The firmware is downloaded.

Step 7: Restart the module to exit from the download mode.

Step 8: On the serial port tool, send **AT+CGMR** to query the firmware version.