

# MC25&M25&M56-R-OpenCPU QFlash User Guide

**GSM/GPRS/GNSS Module Series**

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# About the Document

## History

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|----------|------------|-----------|-------------|
| 1.0      | 2019-08-06 | Edwin WEN | Initial     |

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# 1 Introduction

This document mainly introduces the “QFlash” tool offered by Quectel and how to use it to upgrade OpenCPU firmware.

This document is applicable to the following modules:

- MC25-OpenCPU
- M25-OpenCPU
- M56-R-OpenCPU

## 1.1. OS and Version

The QFlash tool can be run on a PC without installation if the OS is among the ones listed below:

- Windows 7
- Windows 10

Any newer version of the tool will be informed and provided by Quectel in advance.

### NOTES

1. In Windows 10, please start *QFlash.exe* by right-clicking the icon and selecting “Run as administrator”.
2. The paths where the tool and firmware are stored should NOT contain any space, and English characters are preferred.

## 1.2. About QFlash Tool

The QFlash tool developed by Quectel is shown as below (e.g. *QFlash\_V4.12*).

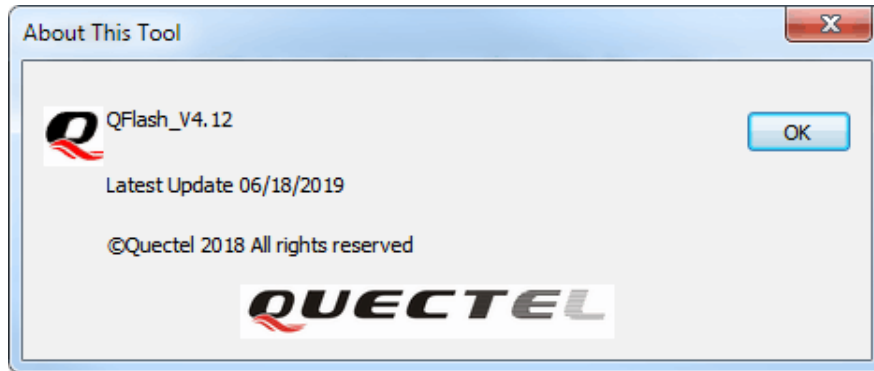


Figure 1: QFlash Tool

## 2 OpenCPU Firmware Upgrade Procedure

This chapter introduces how to upgrade OpenCPU firmware by using the QFlash tool (*QFlash\_V4.12* is taken for example). Generally, the following three steps can be applied:

**Step 1:** Configure the parameters of serial port.

**Step 2:** Load firmware files (core or App firmware).

**Step 3:** Upgrade the firmware (core or App firmware).

The following sections describe the details about how to use the tool to upgrade firmware.

### 2.1. Configure Serial Port

After the QFlash tool is started, the main interface is shown as below.

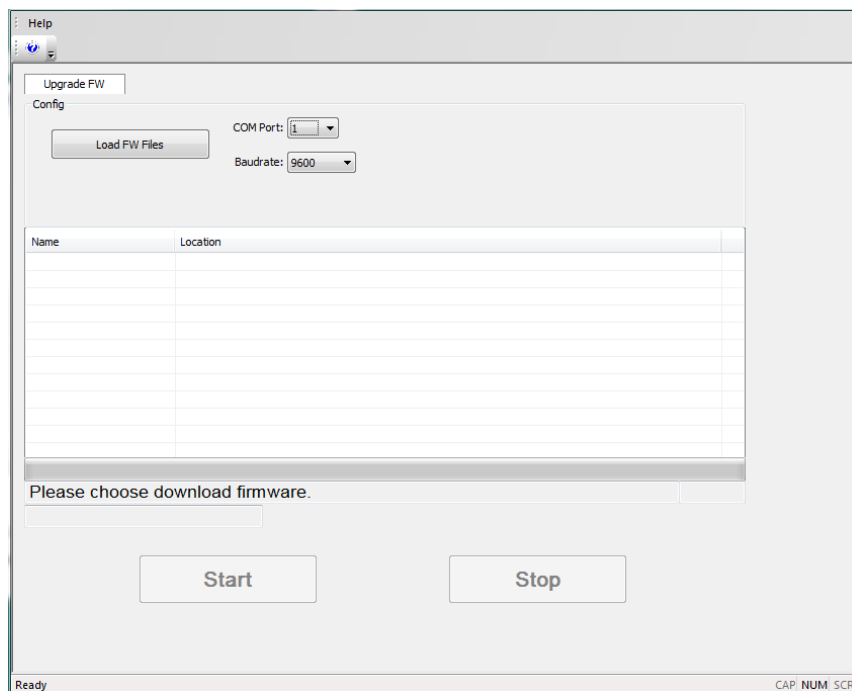
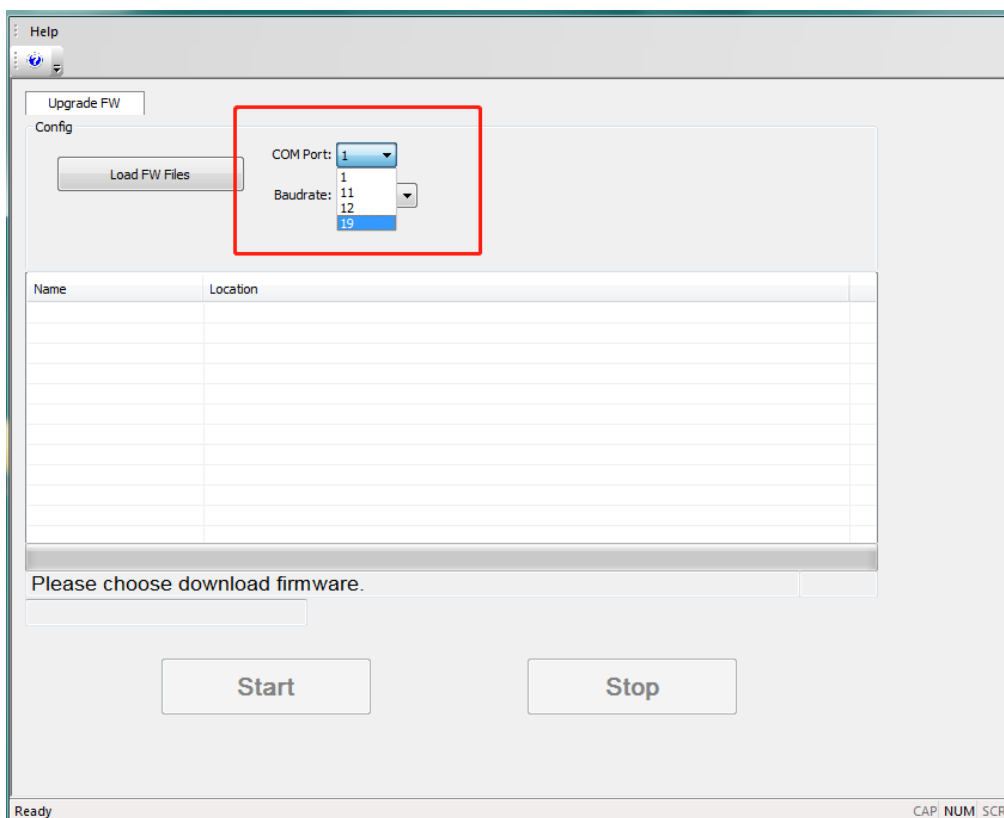


Figure 2: Main Interface of QFlash Tool



### 2.1.1. Set COM Port

Click the “COM Port” dropdown list to select the serial port that corresponds to the debug port of module, through which the firmware will be upgraded.



**Figure 3: Select the Correct Serial Port**

### 2.1.2. Set Baud Rates

Click the “Baudrate” dropdown list and choose an appropriate baud rate.

For MC25&M25&M56-R-OpenCPU, please select “921600”, as shown in the following figure.

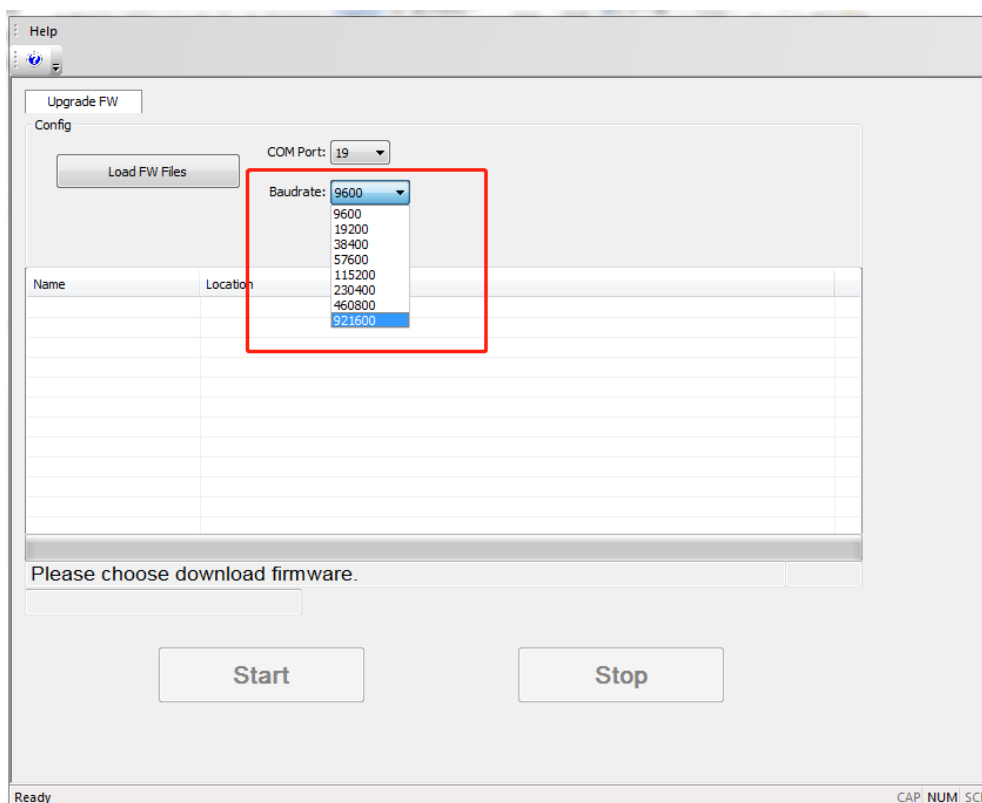


Figure 4: Select the Baud Rate

#### NOTE

Baud rates have many different values. It is the hardware environment that determines whether the specified baud rate is supported or not; If not supported, an error message will be returned.

## 2.2. Load Firmware Files

### 2.2.1. Load App Firmware

Click the button “Load FW Files”, and select the “.lod” file of App firmware which needs to be downloaded to the module.

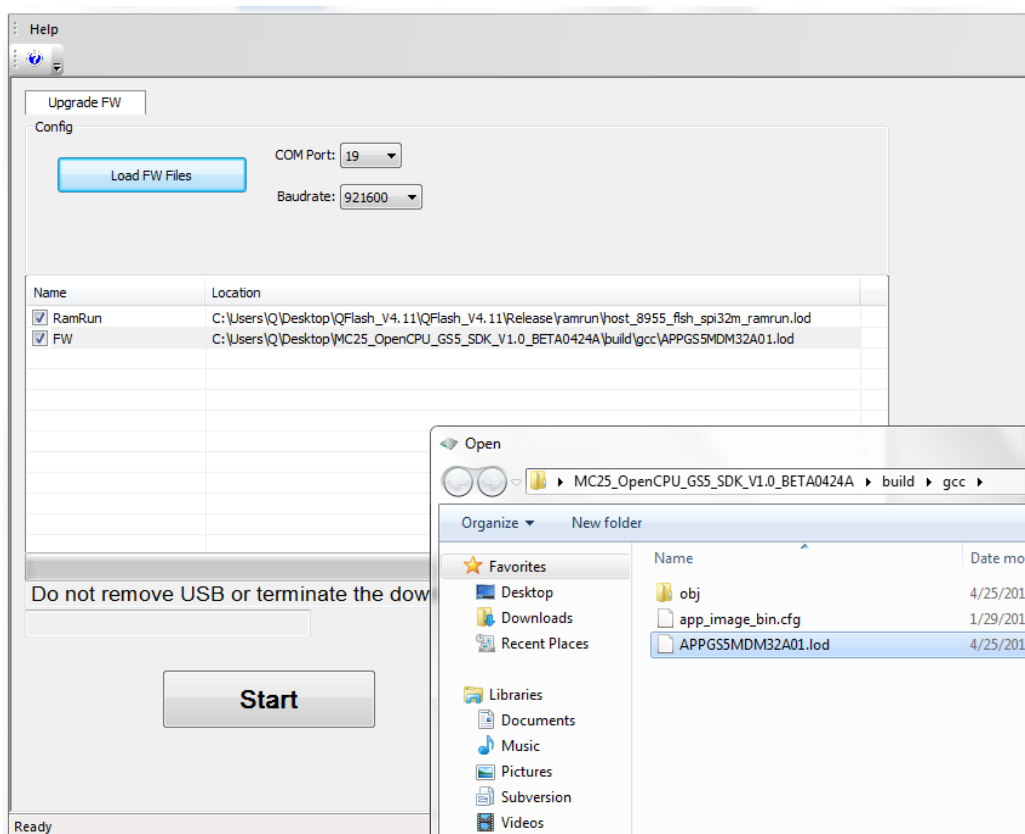


Figure 5: Load App Firmware

### 2.2.2. Load Core Firmware

Click the button “Load FW Files”, and select the “.lod” file in core firmware package (offered by Quectel) which needs to be downloaded to the module.

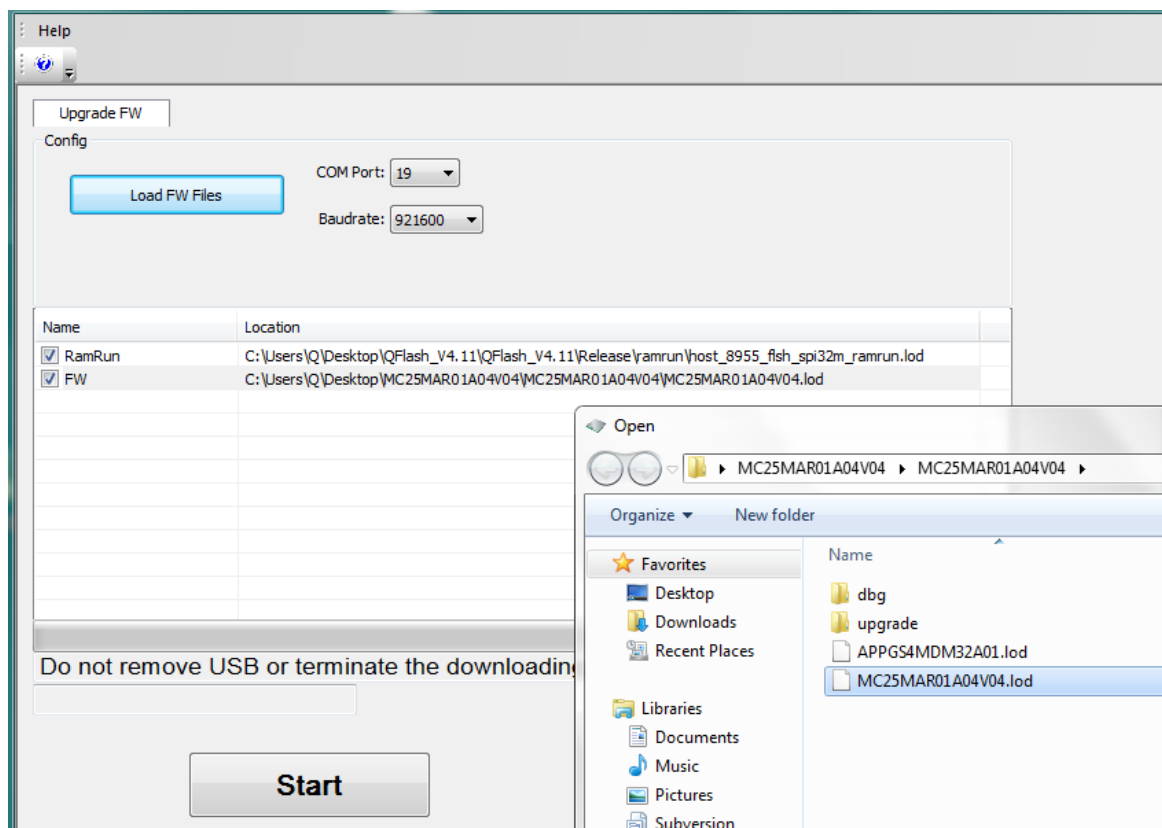


Figure 6: Load Core Firmware

## 2.3. Upgrade Firmware

### 2.3.1. Upgrade App Firmware

**Step 1:** Click the “Start” button to upgrade the App firmware.

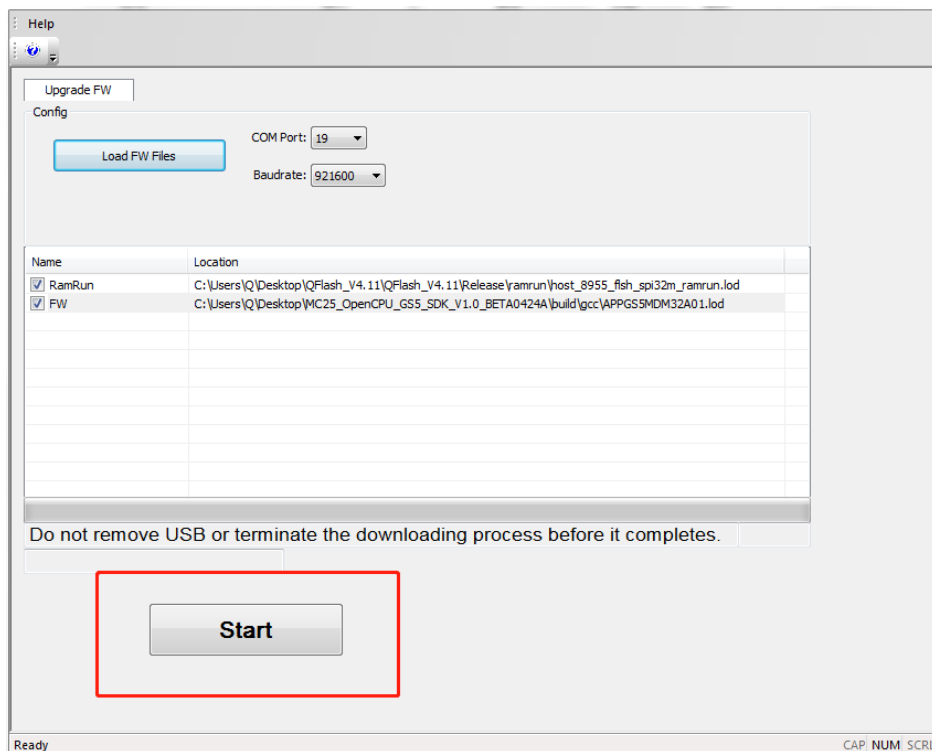


Figure 7: Click the “Start” Button

**Step 2:** Then firmware upgrade will be started.

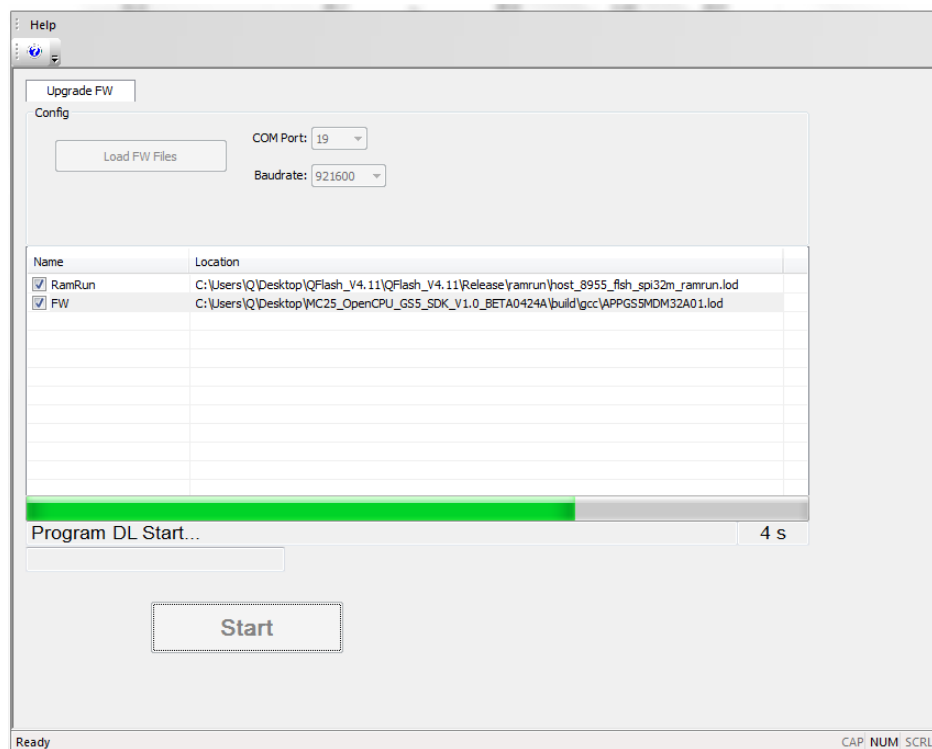


Figure 8: Start to Upgrade App Firmware

**Step 3:** “PASS” will be shown on the interface after the firmware is successfully upgraded, as shown in the following figure. Then it is needed to restart the module manually.

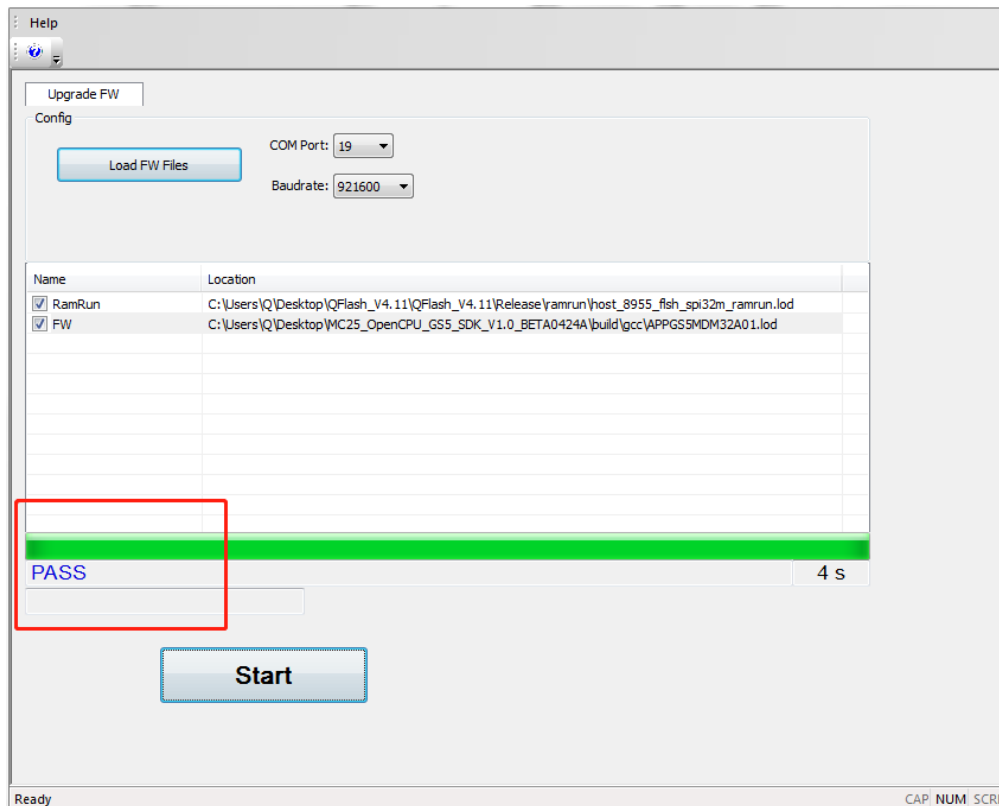


Figure 9: App Firmware is Upgraded Successfully

### 2.3.2. Upgrade Core Firmware

**Step 1:** Click the “Start” button.

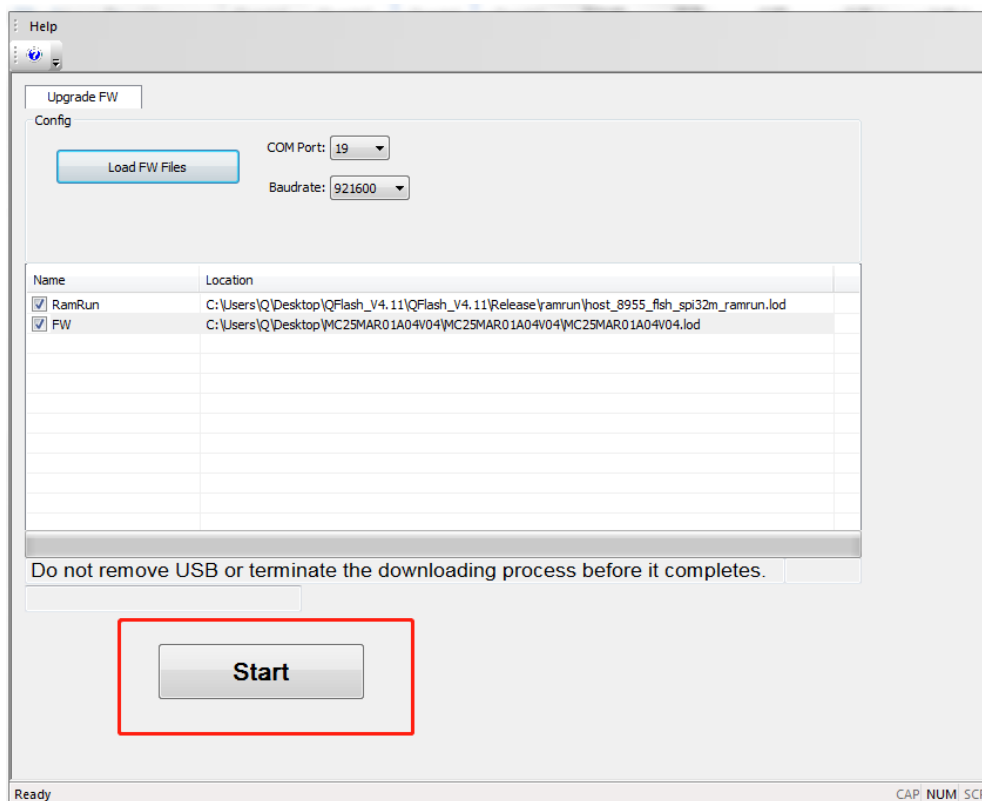
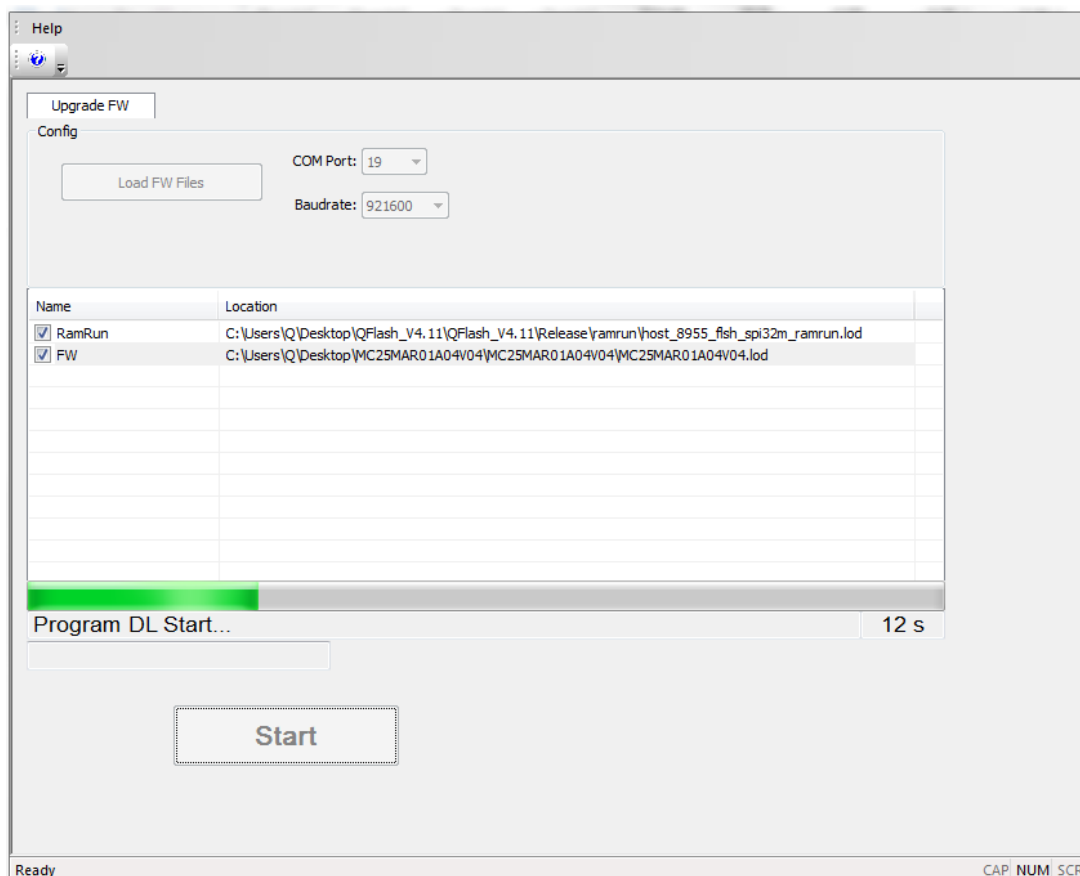


Figure 10: Click the “Start” Button

**Step 2:** Then firmware upgrade will be started.



**Figure 11: Start to Upgrade Core Firmware**

**Step 3:** “PASS” will be shown on the interface after the firmware is successfully upgraded, as shown in the following figure. Then it is needed to restart the module manually.



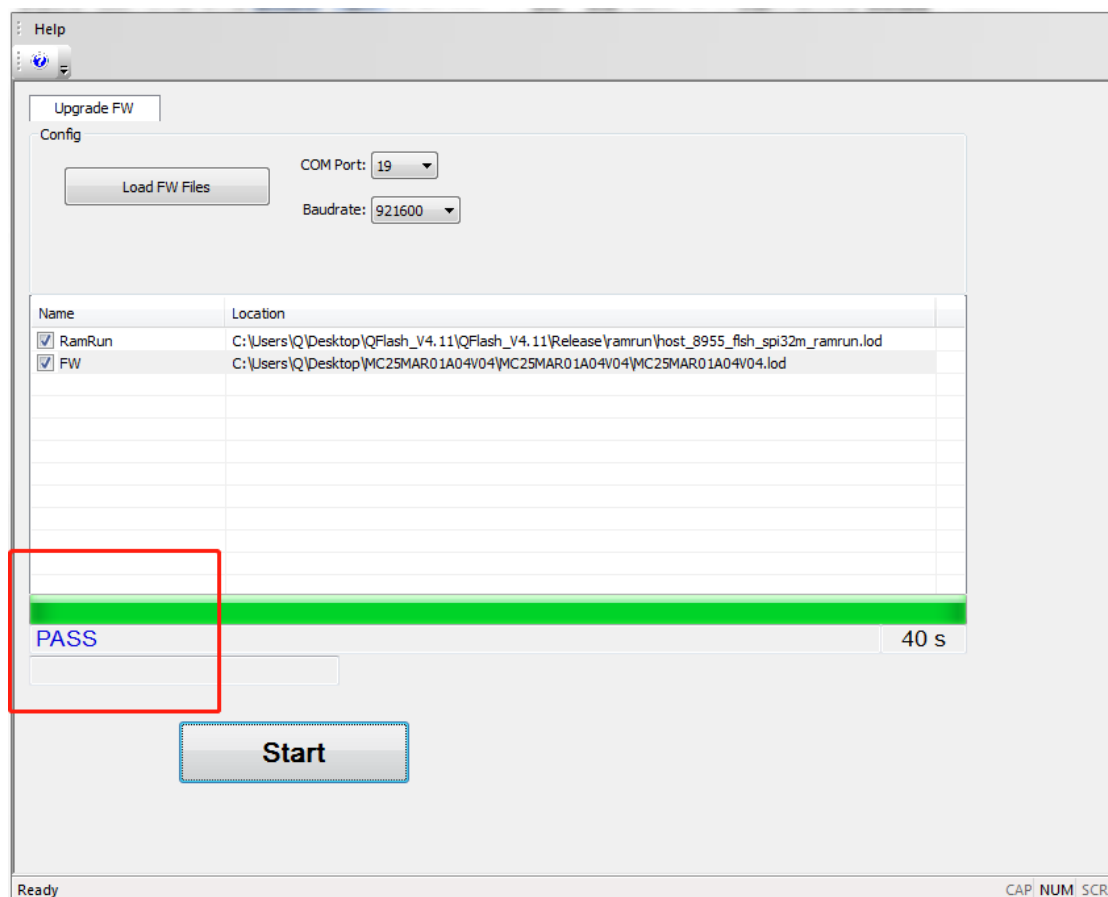
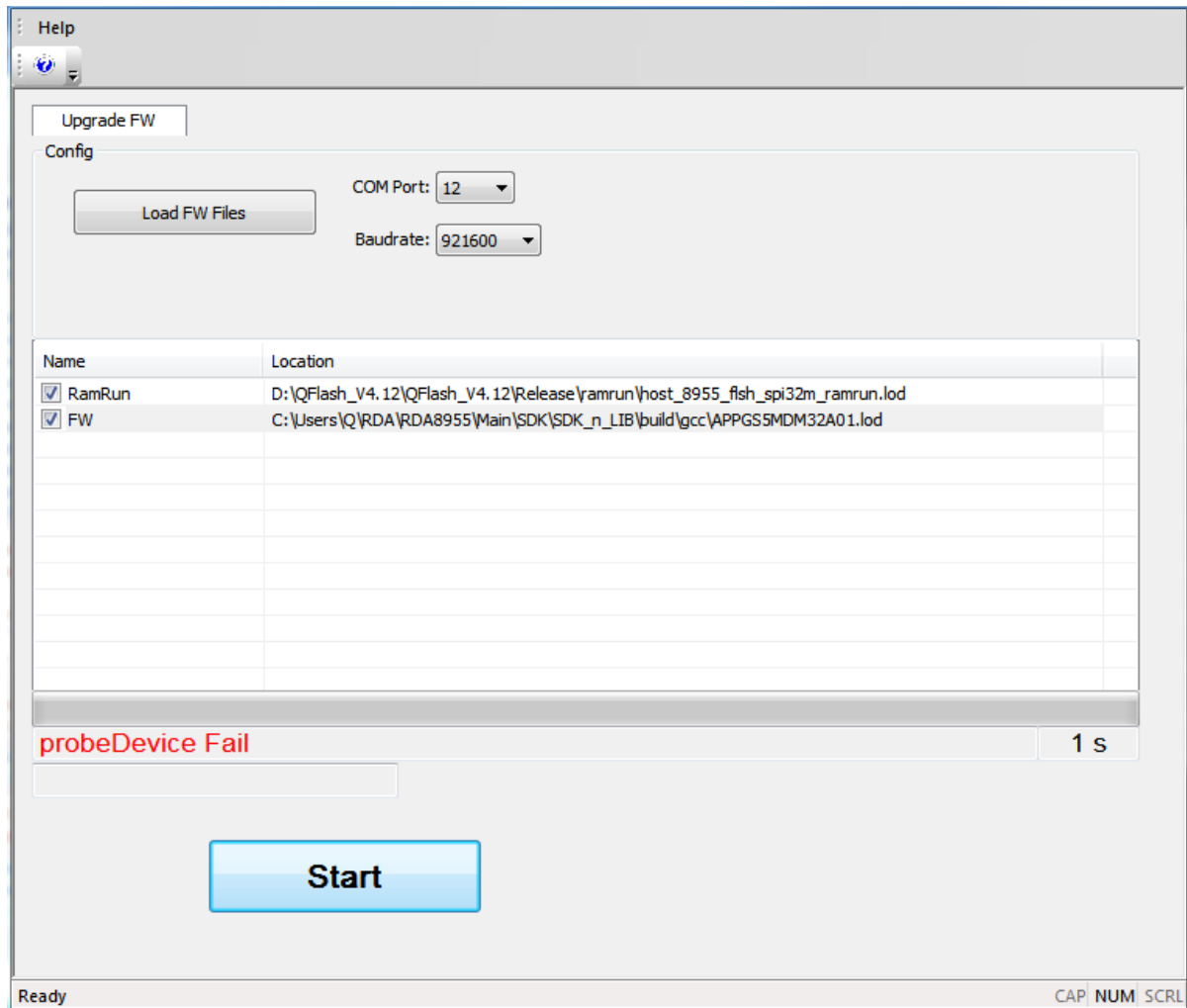


Figure 12: Core Firmware is Upgraded Successfully

## 2.4. Abnormalities

Abnormalities may be caused by incorrect parameter of baud rates, damaged EVB/TE-A or invalid files, etc. The following illustrates some common abnormalities.

### 2.4.1. Select a Wrong Serial Port



### Figure 13: Select a Wrong Serial Port

## 2.4.2. Connected to an Occupied Serial Port

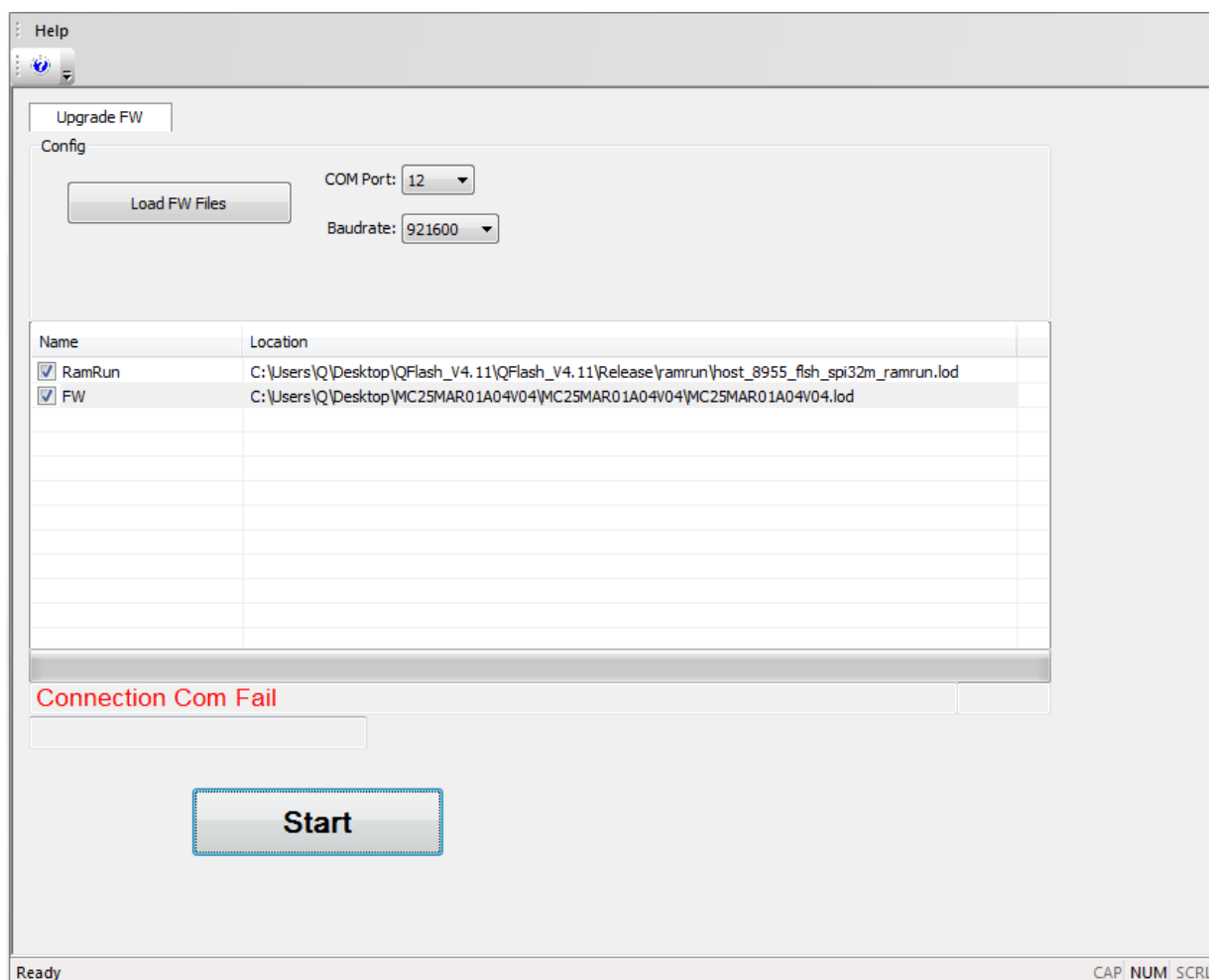
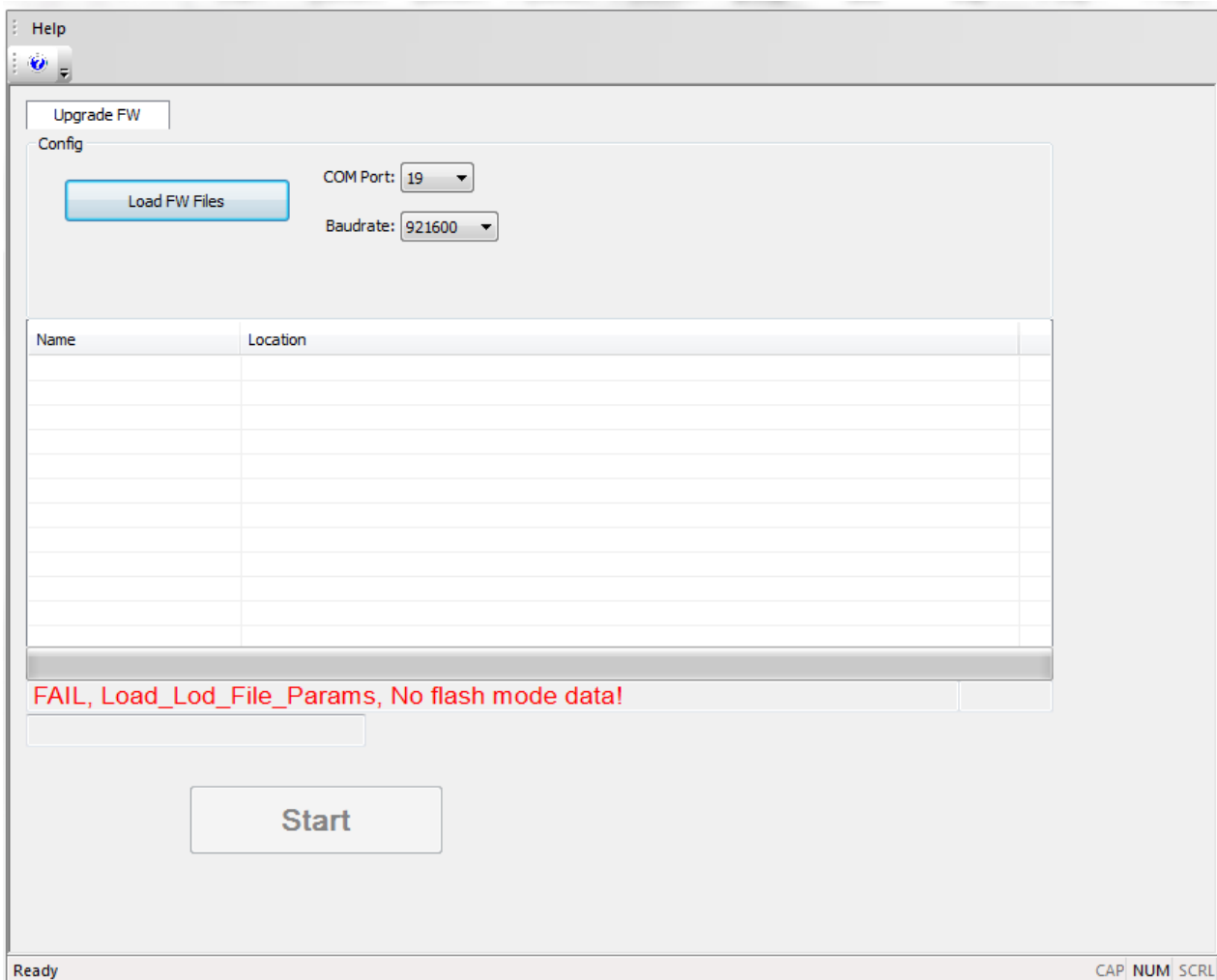


Figure 14: Connected to an Occupied Serial Port

### 2.4.3. Select an Invalid Load File



### Figure 15: Select an Invalid Load File

## 2.4.4. Power Supply is Abnormal

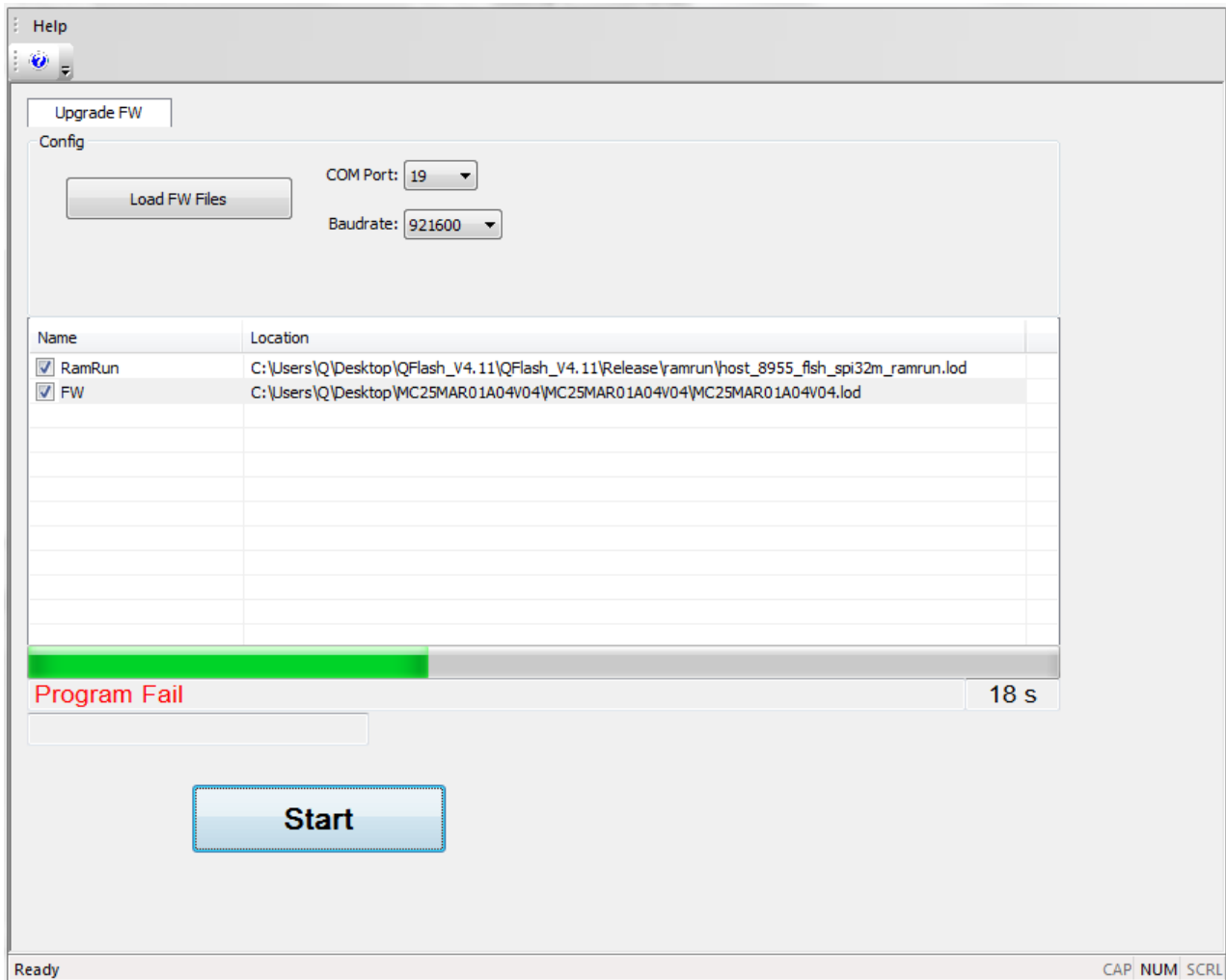


Figure 16: Power Supply is Abnormal

# 3 Appendix A Reference

Table 1: Terms and Abbreviations

| Abbreviation | Description                           |
|--------------|---------------------------------------|
| App          | OpenCPU Application                   |
| Core         | Core System, OpenCPU Operating System |
| OS           | Operating System                      |