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

GSM/GPRS/GNSS Module Series

Rev. MC25&M25&M56-R-OpenCPU_QFlash_User_Guide_V1.0

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About the Document

History

Revision	Date	Author	Description
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*).

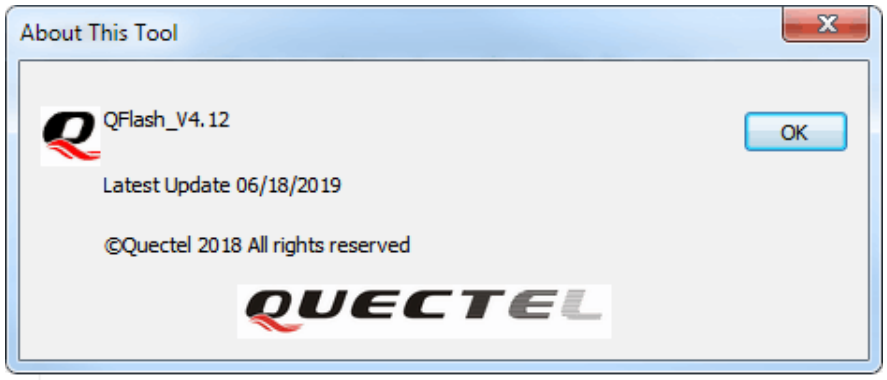

Figure 1: QFlash Tool

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.

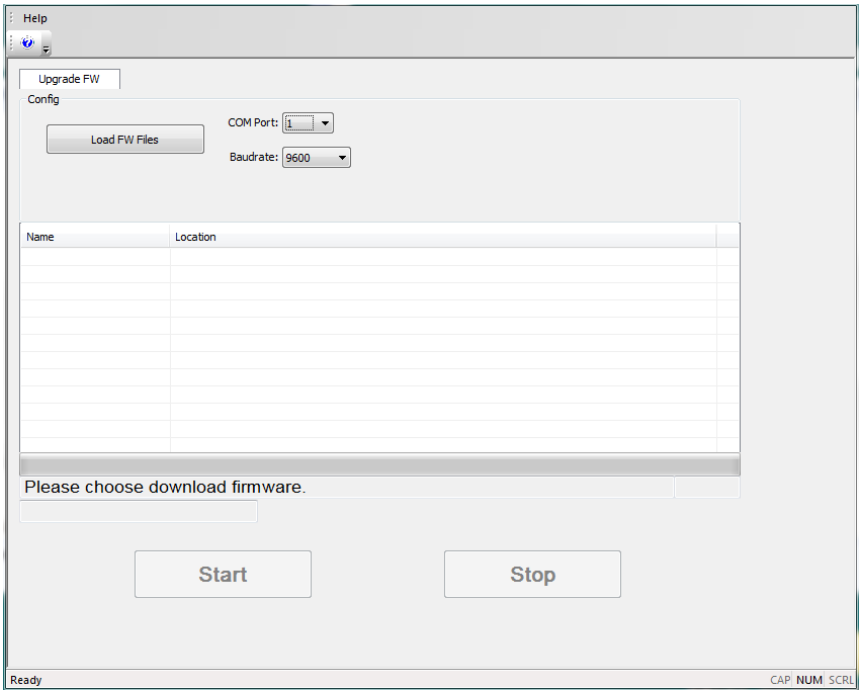

Figure 2: Main Interface of QFlash Tool

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.

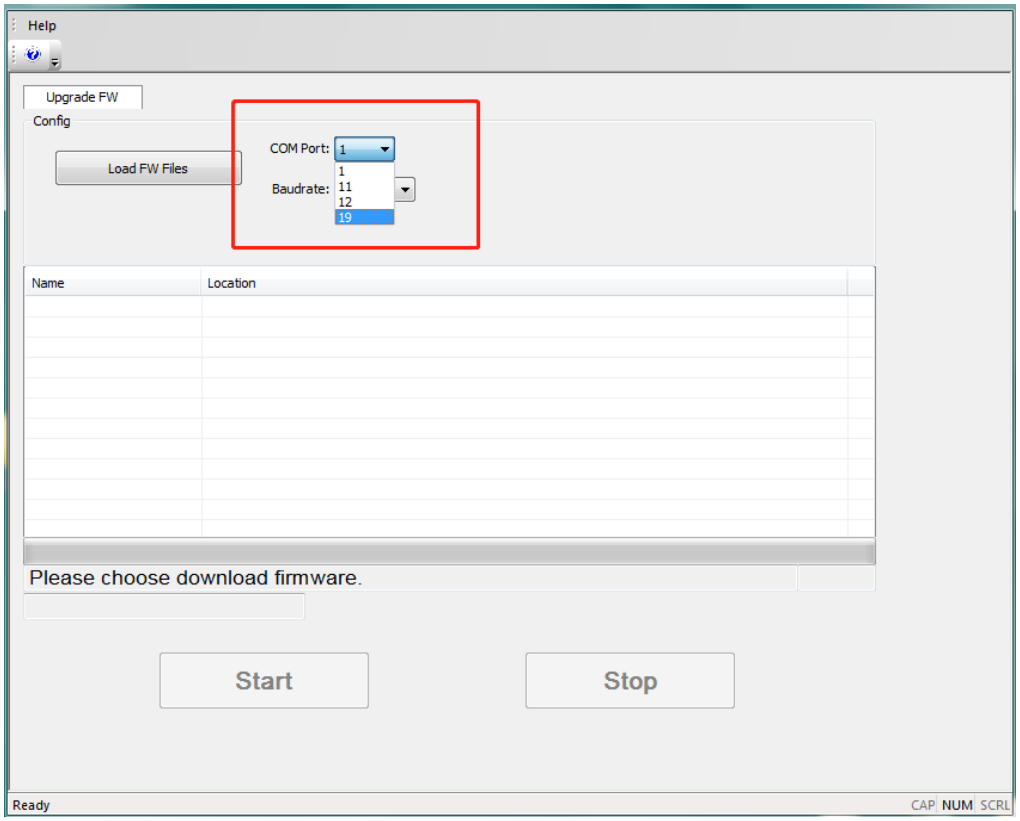

Figure 3: Select the Correct Serial Port

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.

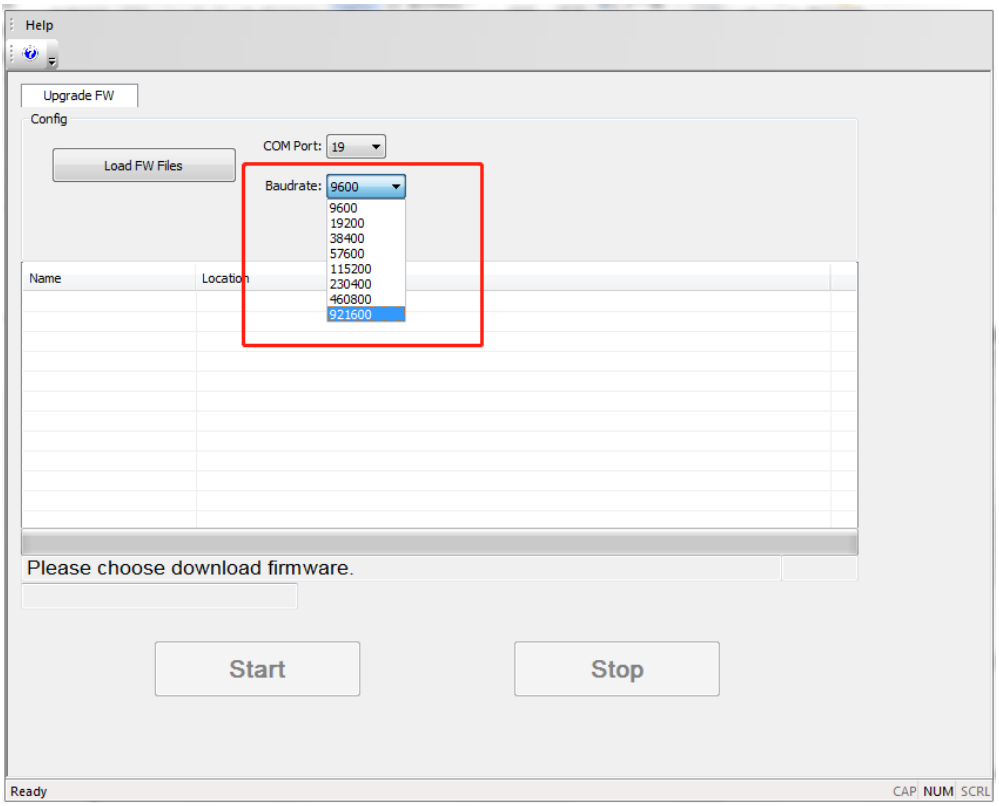

Figure 4: Select the Baud Rate

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.

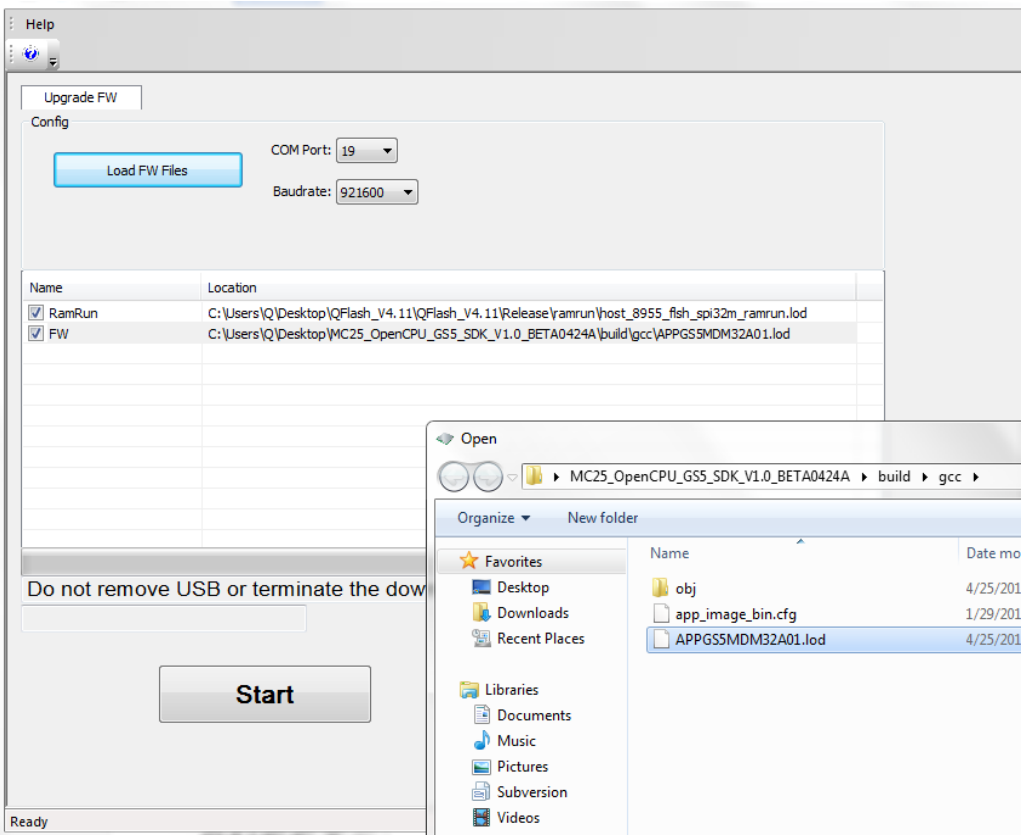

Figure 5: Load App Firmware

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.

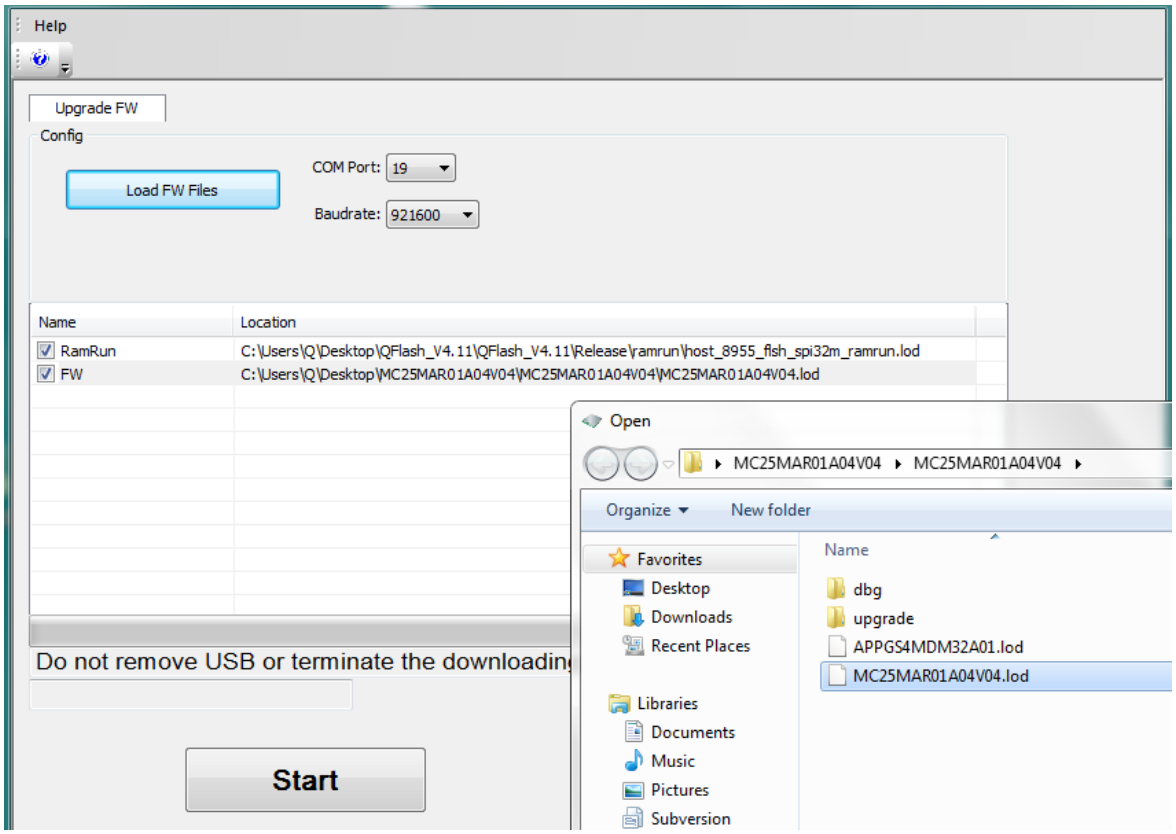

Figure 6: Load Core Firmware

2.3. Upgrade Firmware

2.3.1. Upgrade App Firmware

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

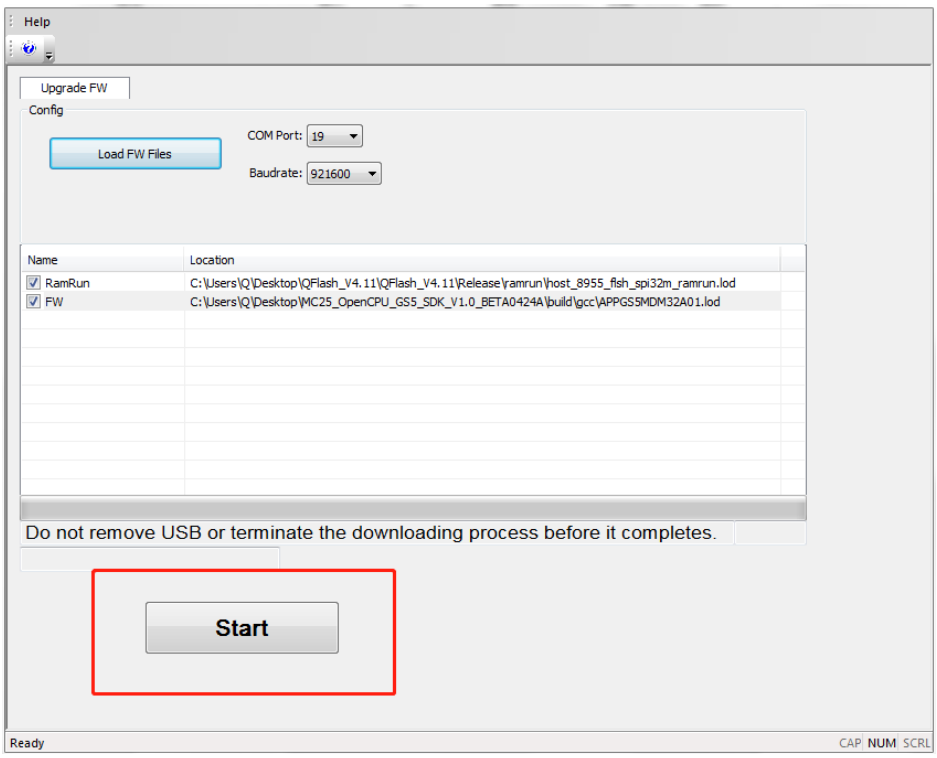

Figure 7: Click the "Start" Button

Step 2: Then firmware upgrade will be started.

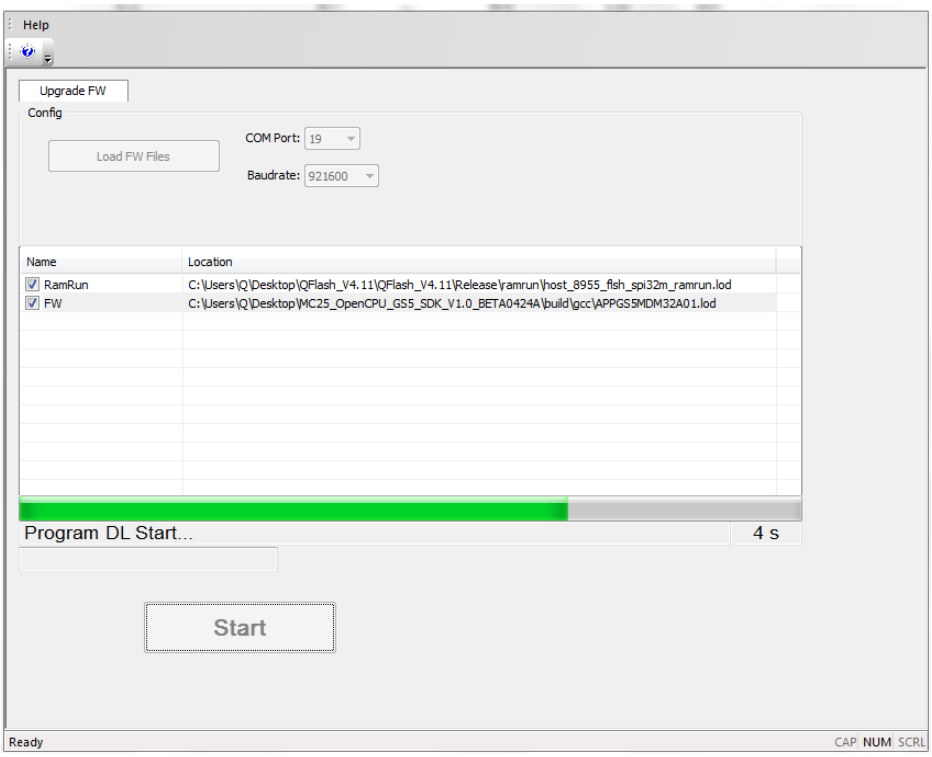

Figure 8: Start to Upgrade App Firmware

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.

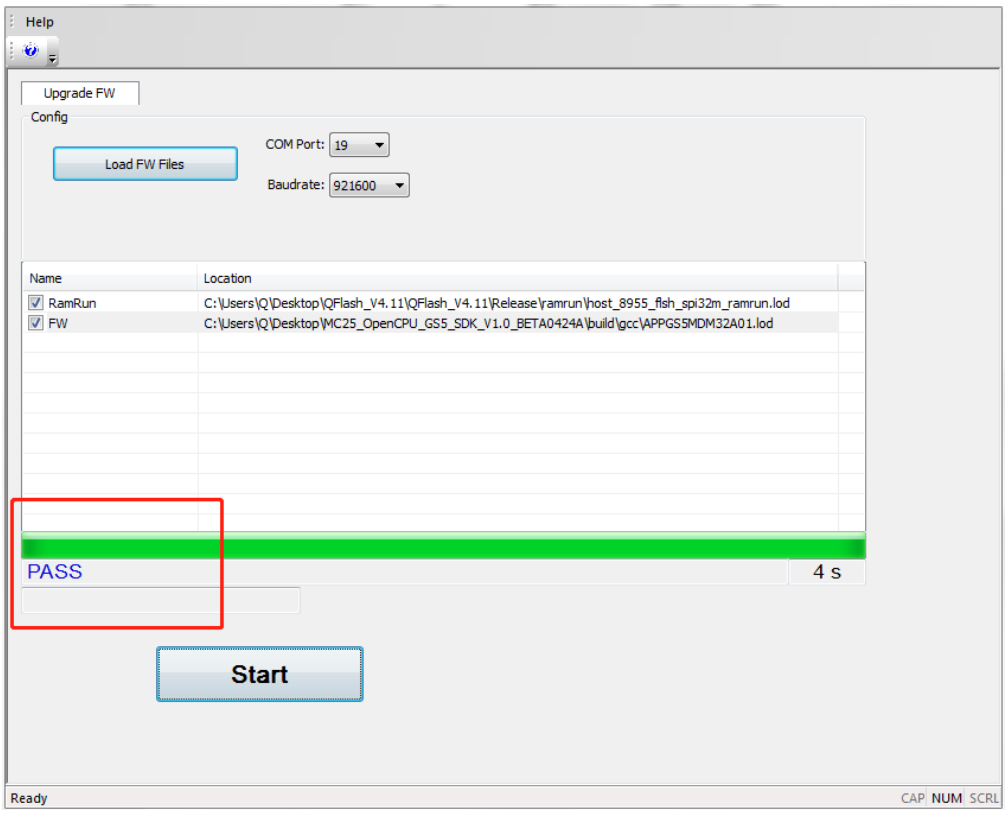

Figure 9: App Firmware is Upgraded Successfully

2.3.2. Upgrade Core Firmware

Step 1: Click the "Start" button.

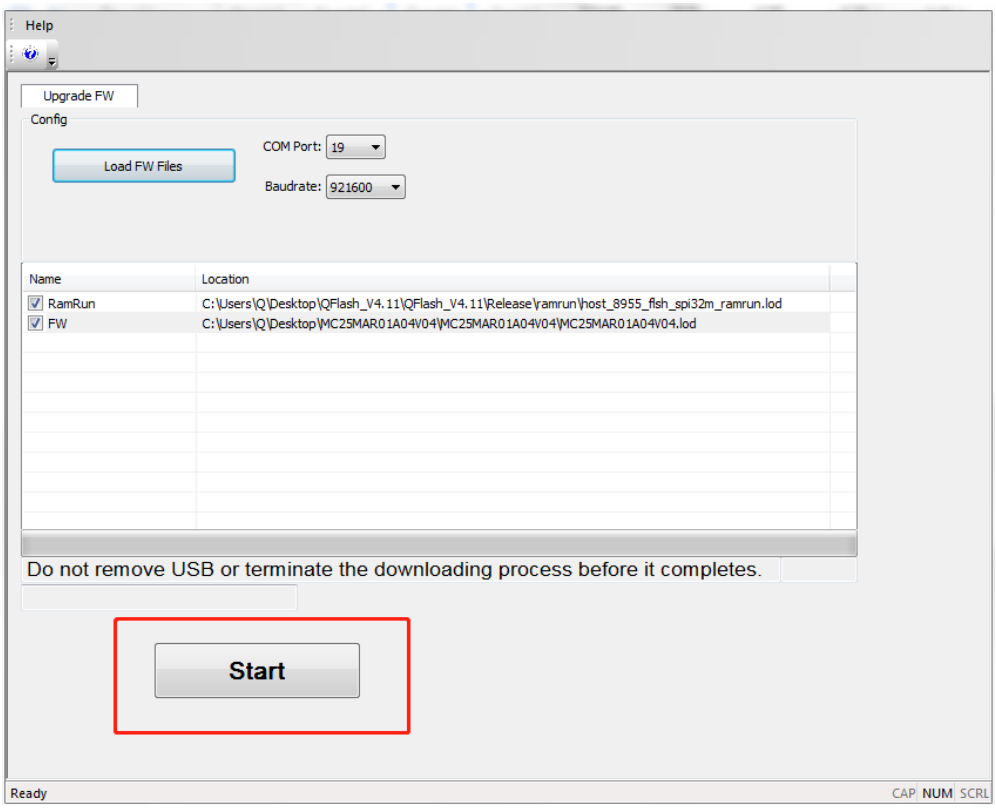

Figure 10: Click the "Start" Button

Step 2: Then firmware upgrade will be started.

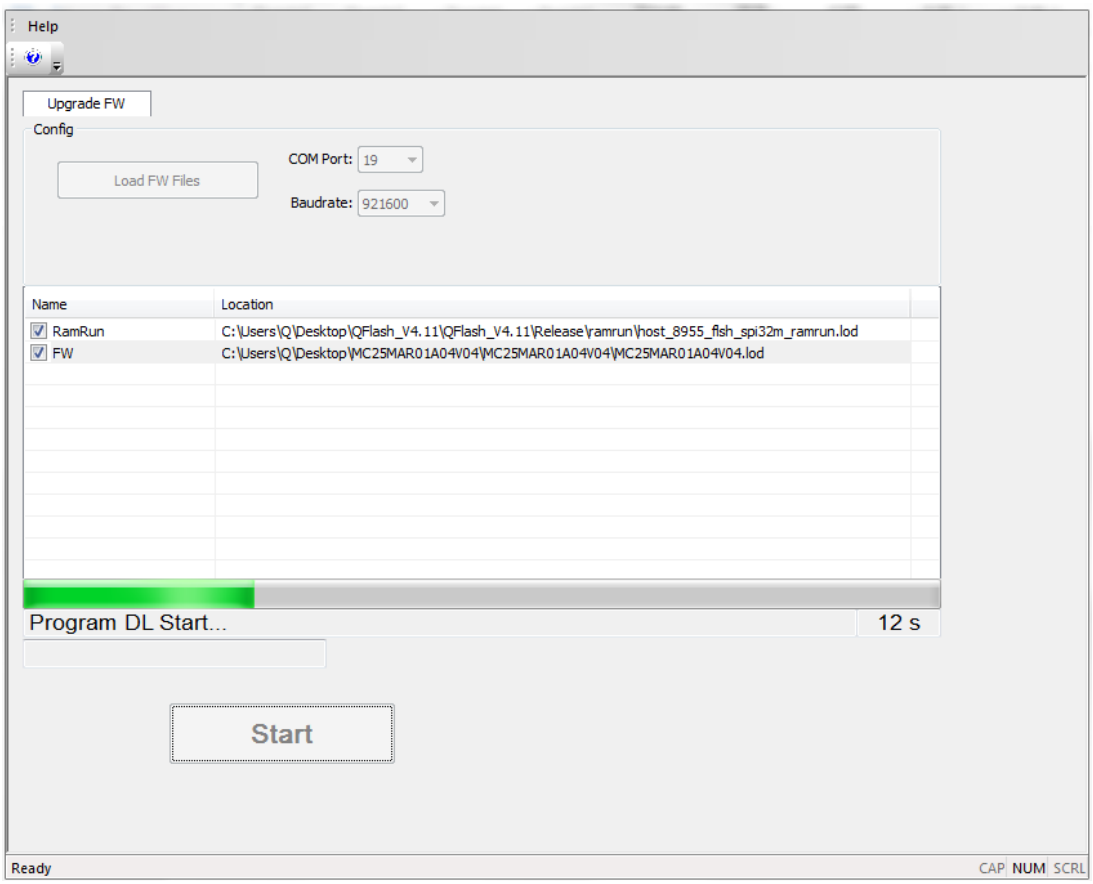

Figure 11: Start to Upgrade Core Firmware

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.

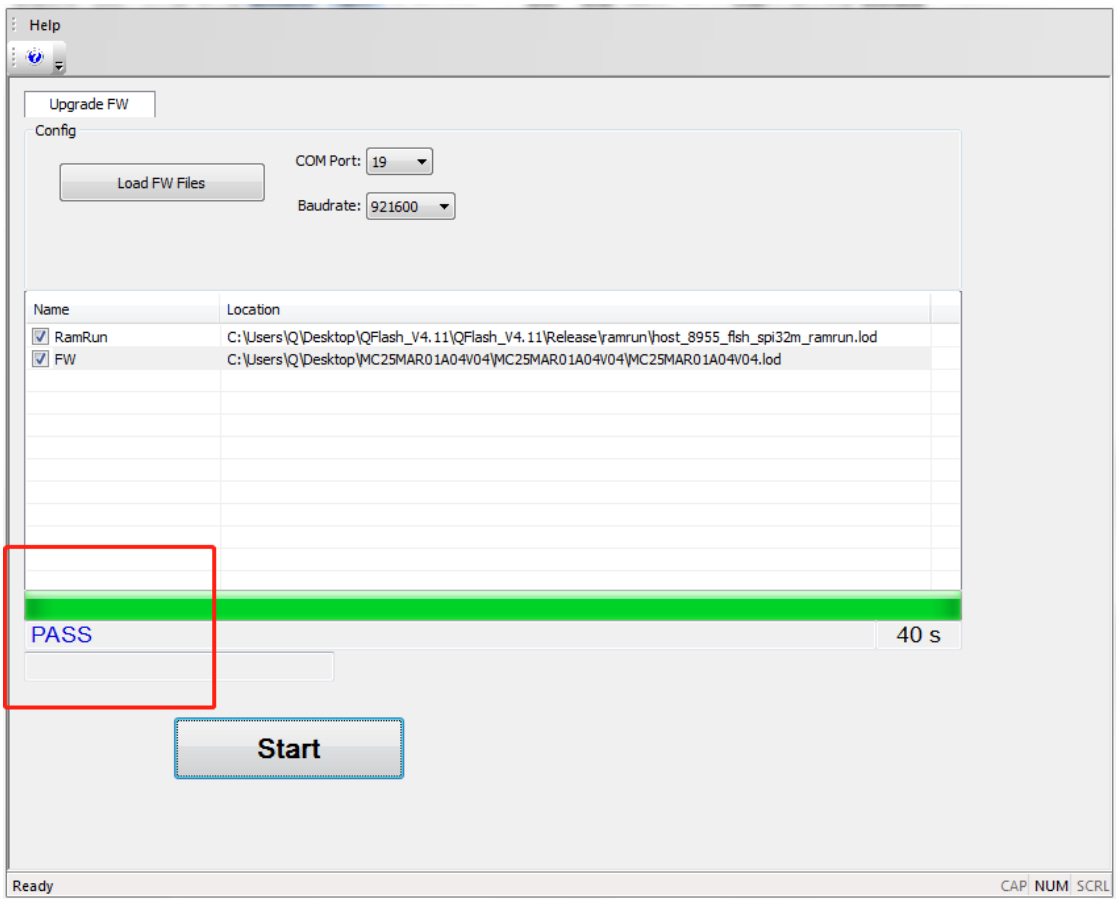

Figure 12: Core Firmware is Upgraded Successfully

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

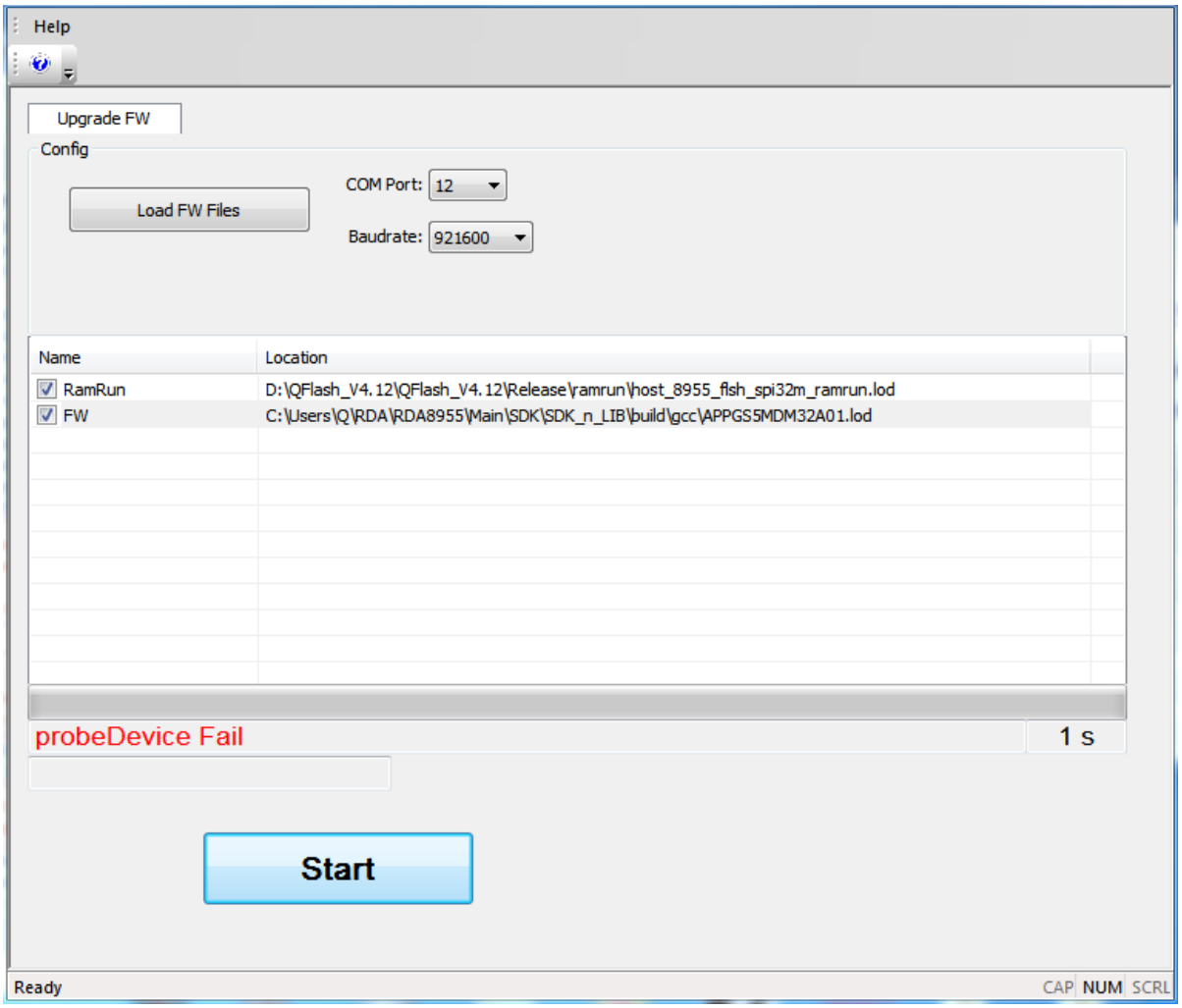

Figure 13: Select a Wrong Serial Port

2.4.2. Connected to an Occupied Serial Port

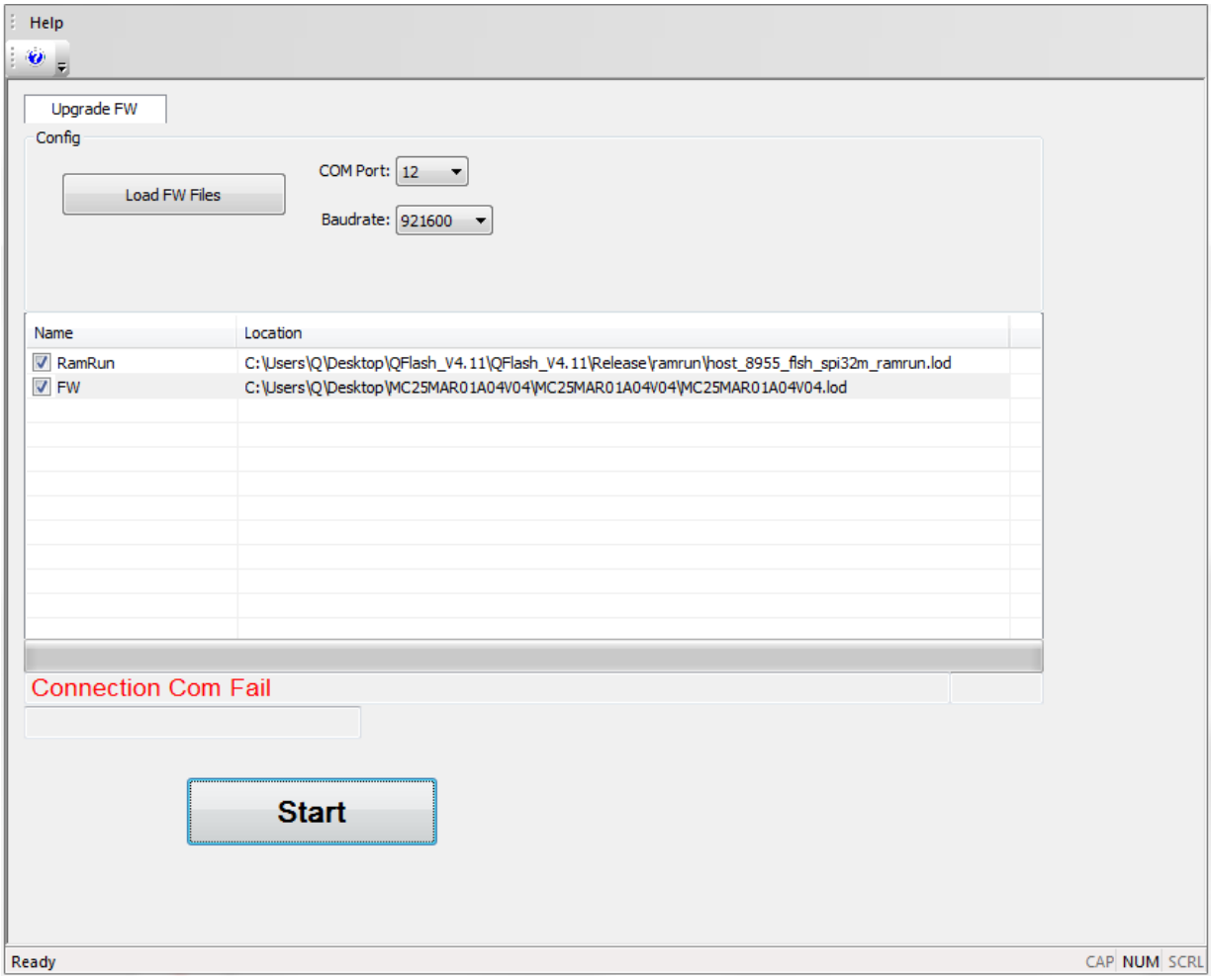

Figure 14: Connected to an Occupied Serial Port

2.4.3. Select an Invalid Load File

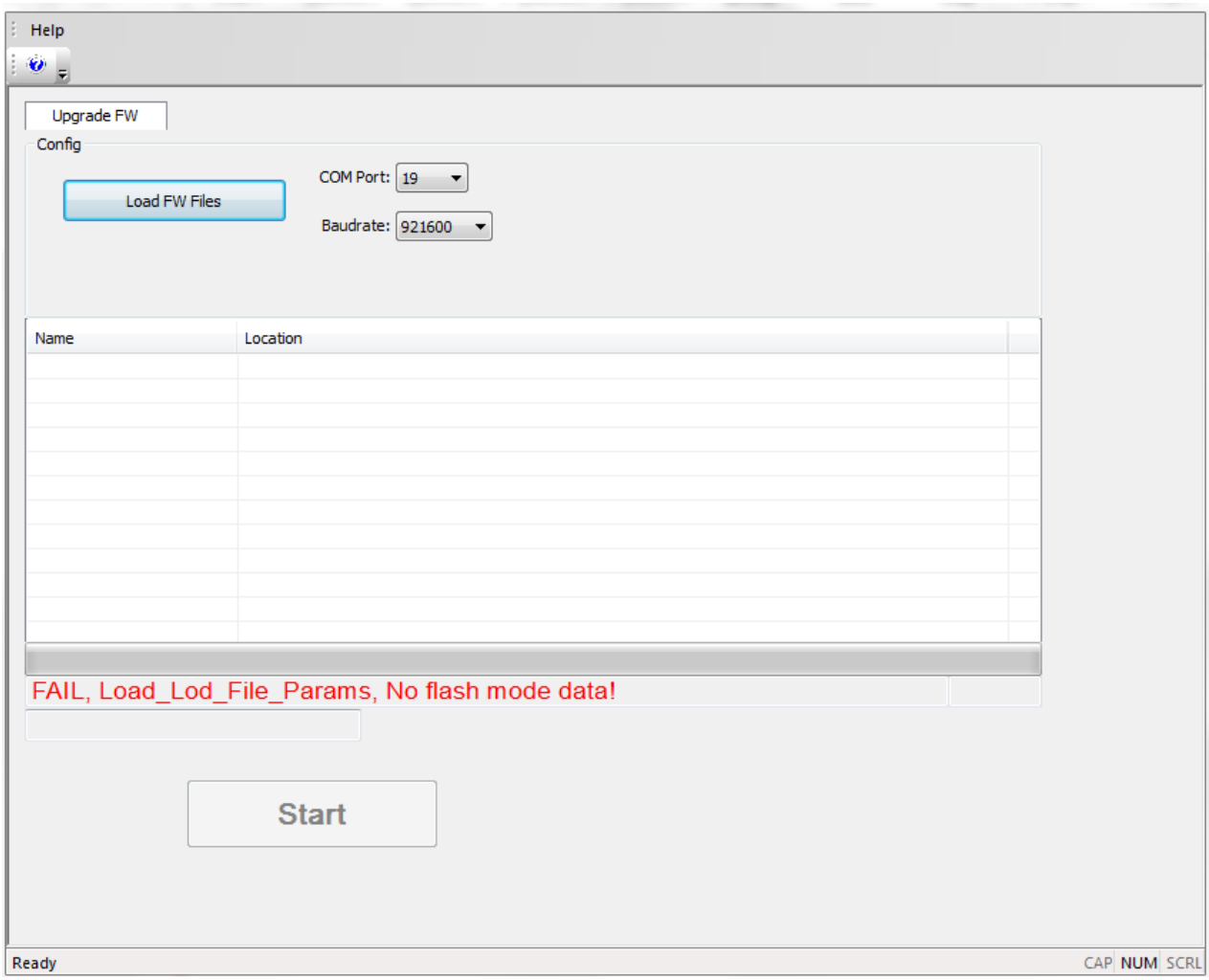

Figure 15: Select an Invalid Load File

2.4.4. Power Supply is Abnormal

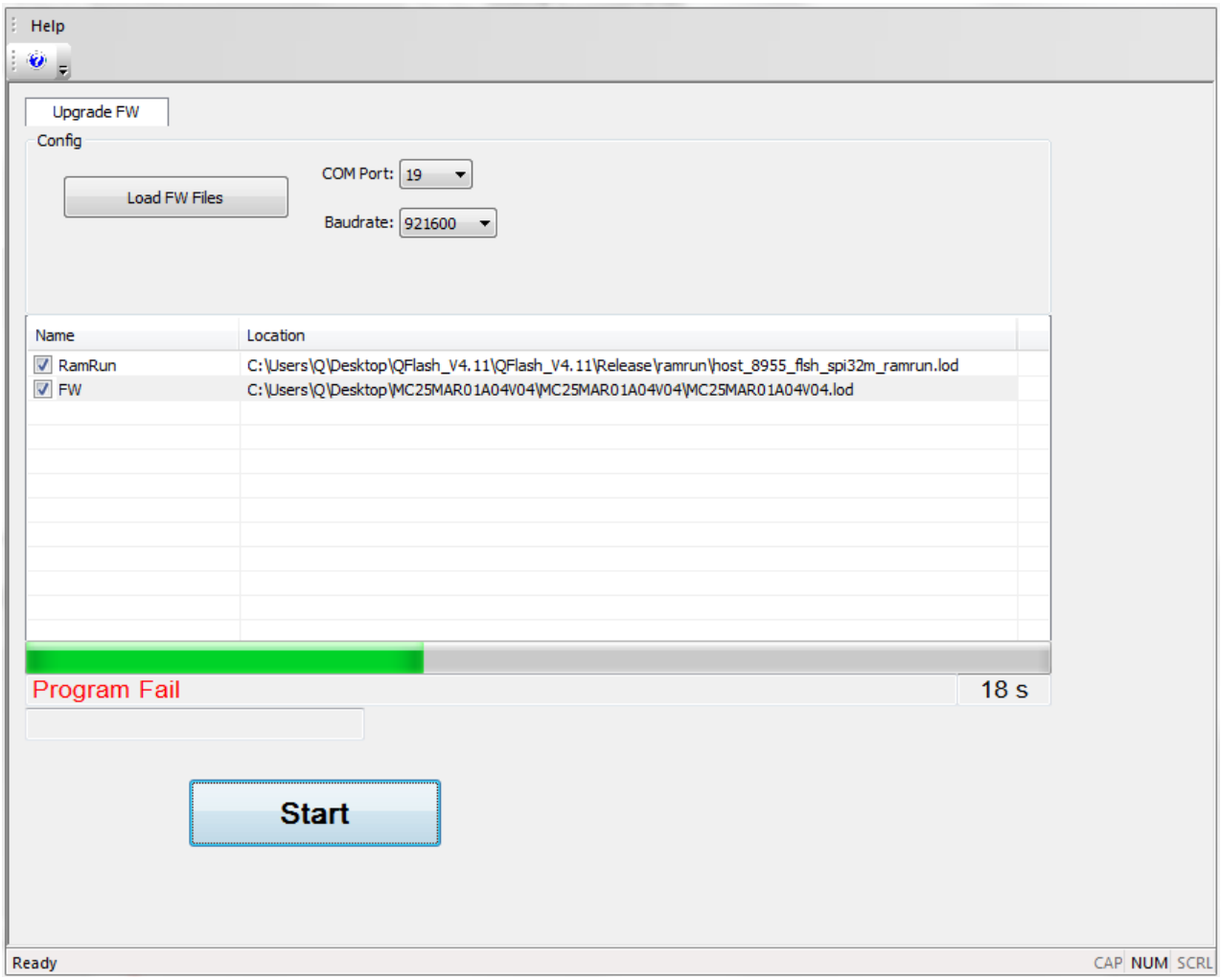

Figure 16: Power Supply is Abnormal

3 Appendix A Reference

Table 1: Terms and Abbreviations

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