Author: Clive Turvey,
Senior Engineer
Janus Remote Communications

Guide for Terminus 2 Device Firmware Update

Overview

The STM32F205 part on the Terminus 2 can be upgraded via the USB port using a Device Firmware Update (DFU) protocol. This is achieved using a DFU tool "DfuSe Demo (v3.0.2)", booting the device into this mode, and upgrading.

Before starting with the hardware you will need to download and install the DfuSe Demo application, this will install the necessary tools and drivers to connect and upgrade your device, and also to create new update binaries for your own software. The use of v3.0.2 is recommended as the later v3.0.3 has observed stability issues with Windows 7 x64, newer versions may address these issues in the future. Be sure to always use the appropriate 32-bit or 64-bit version depending on what you are running.

The Terminus 2 has two ways that it can be put into DFU mode. The first is by utilizing internal jumpers on the T2, and the second is by activating DFU mode from the bootloader itself during runtime.

The unit cannot power from the USB cable, and the main power supply must still be applied.

Method 1:

This method uses the jumper, P9 inside of the case. This is connected to the BOOT0 pin of the processor and runs the built in system loader when power is applied.
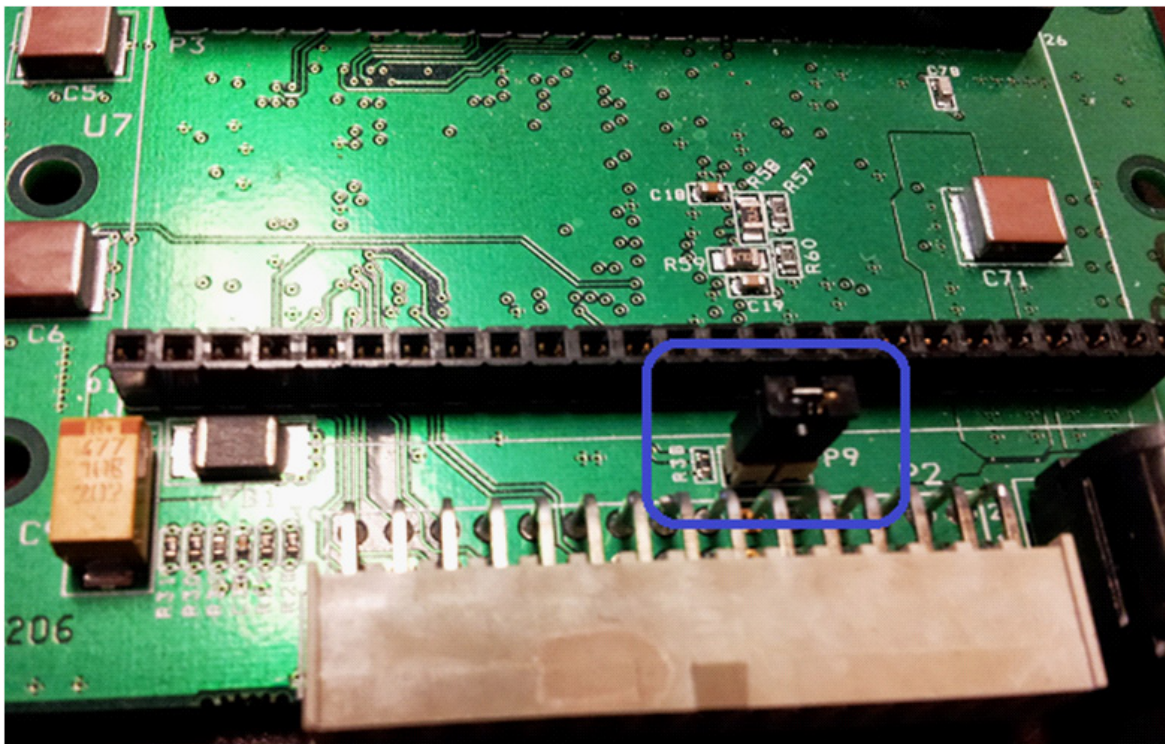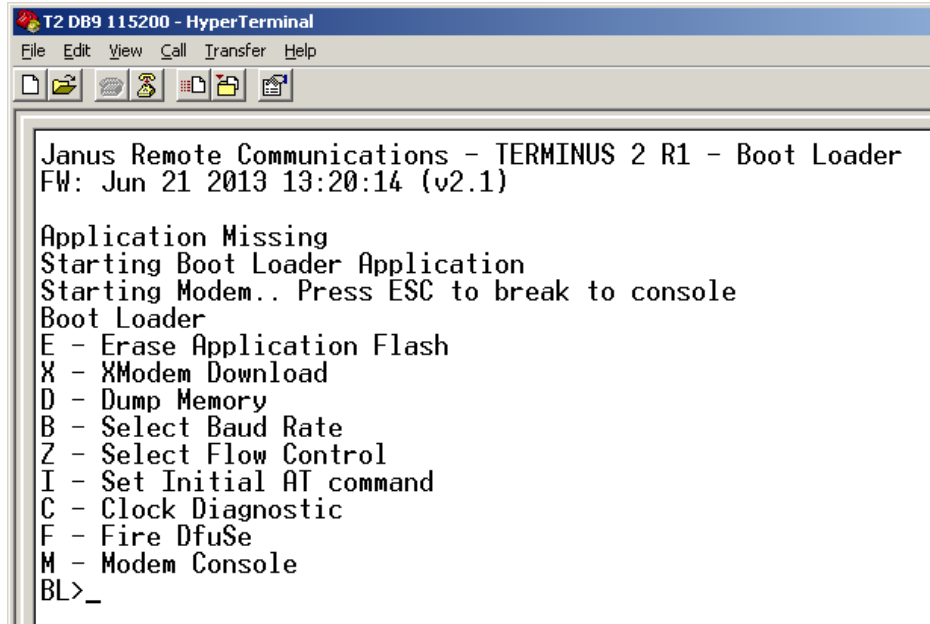
Method 2:

This method uses the production loaded bootloader to enter DFU mode and does not require opening the case up. Simply apply power to the unit and press Escape when prompted to break out into the bootloader menu.
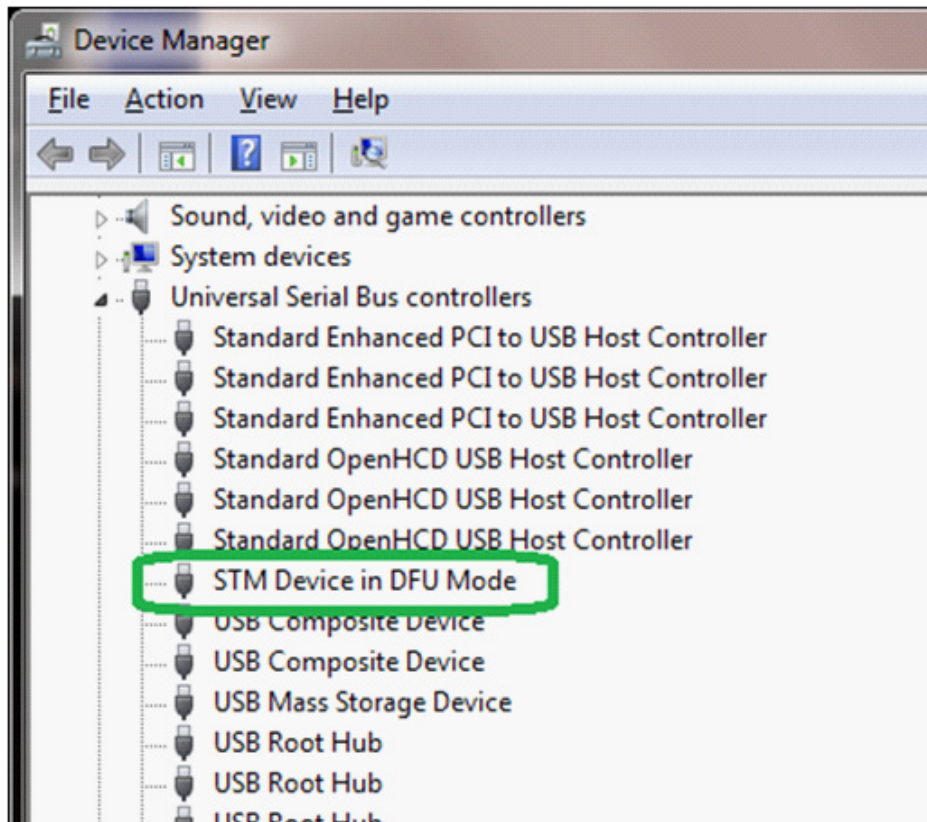
Press 'F' (not case sensitive) to enter DFU mode.

When powered up and connected via USB you will expect to see the device in "Device Manager" as "STM Device in DFU Mode"
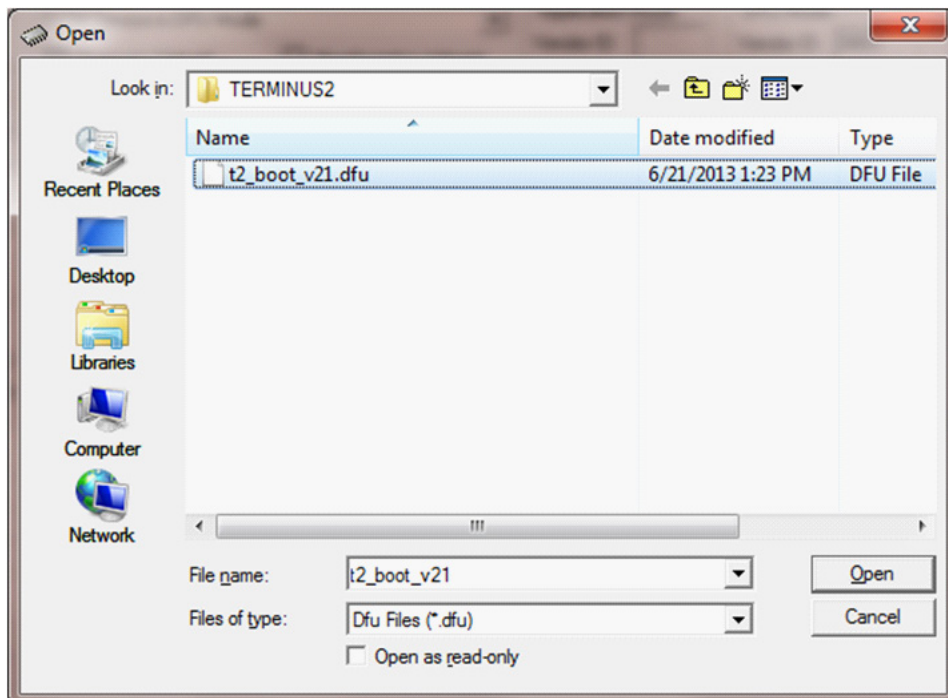
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The update program should be available via Start -> STmicroelectronics -> DfuSe -> DfuSe Demonstration
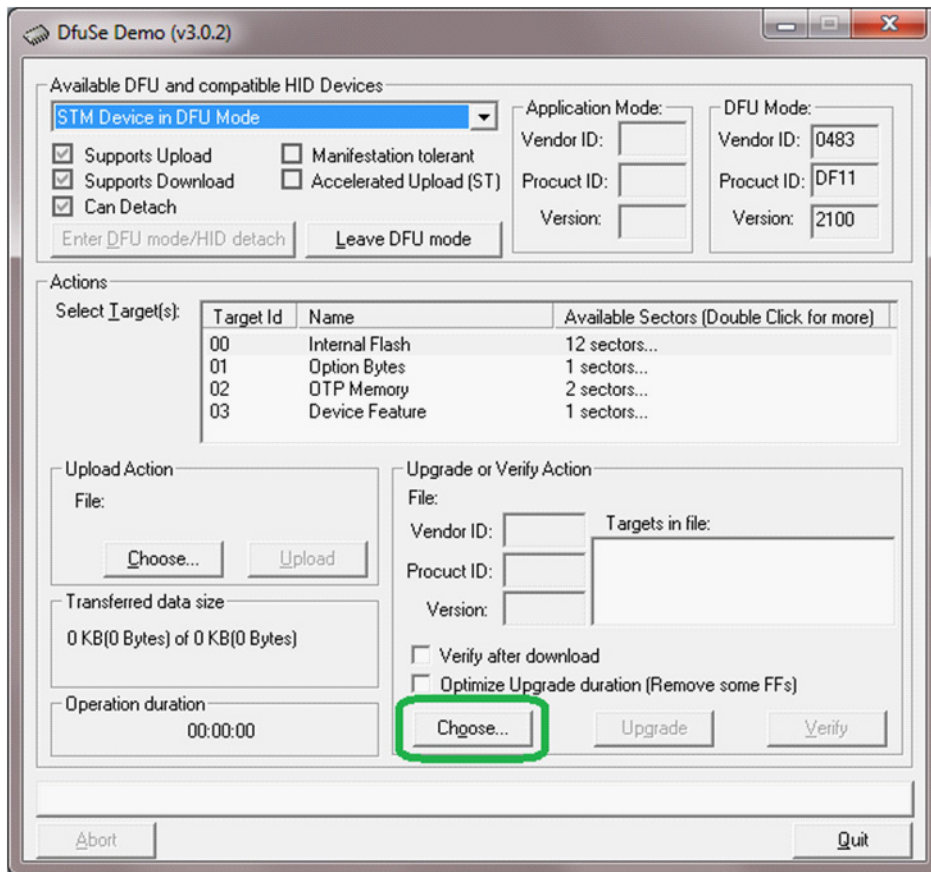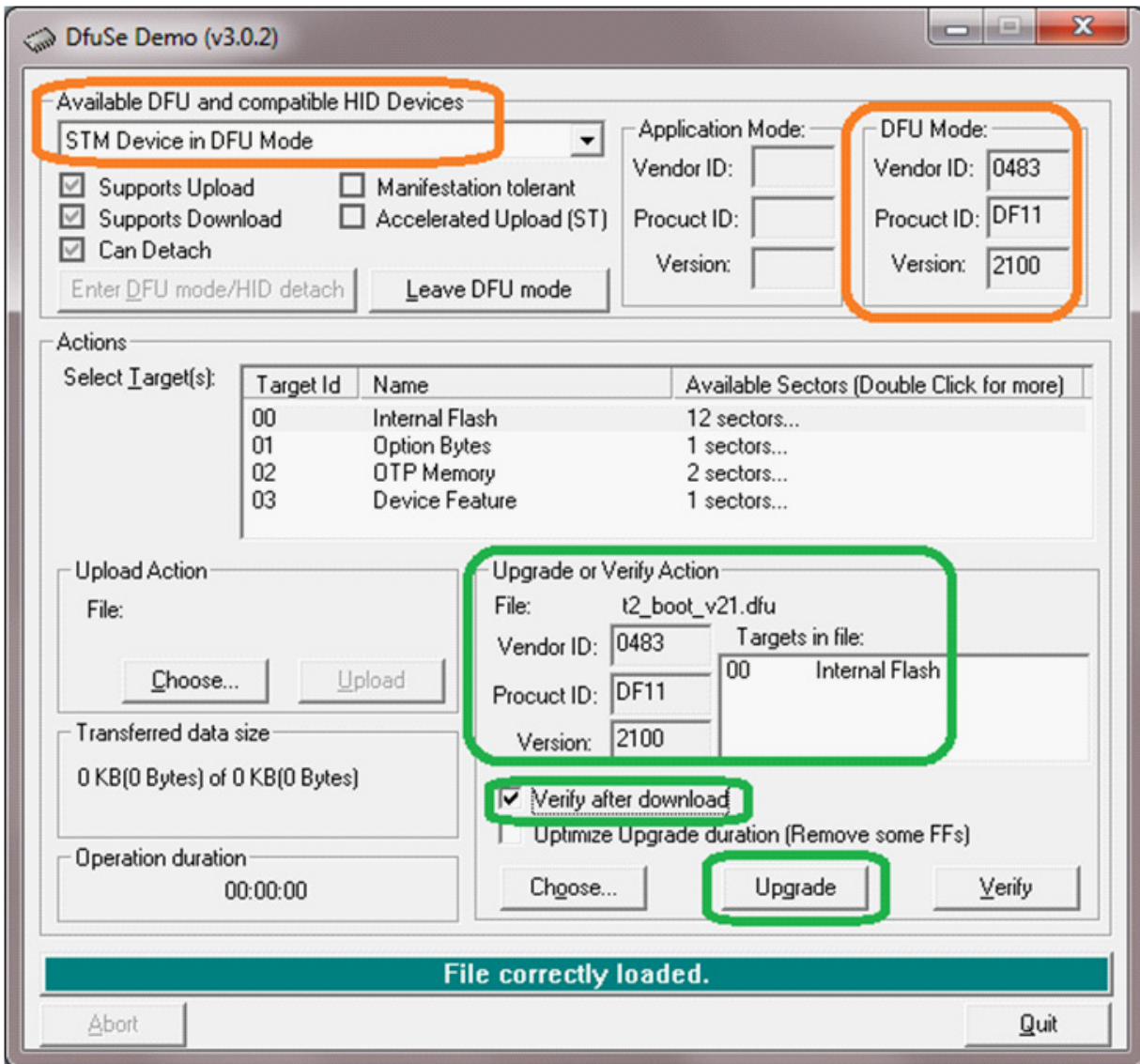

The application should acknowledge the attachment of the device, and you should click Choose to select a firmware upgrade file. The file will normally have a .DFU extension

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Once loaded you should be able to confirm that file and device match

You can select "Verify after download" to confirm the upgrade is correctly applied, and click Upgrade to proceed.

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As the device does not have a unique VID/PID (Vendor/Product ID) it has those of the standard STM32F2 chip, you will be alerted to this.
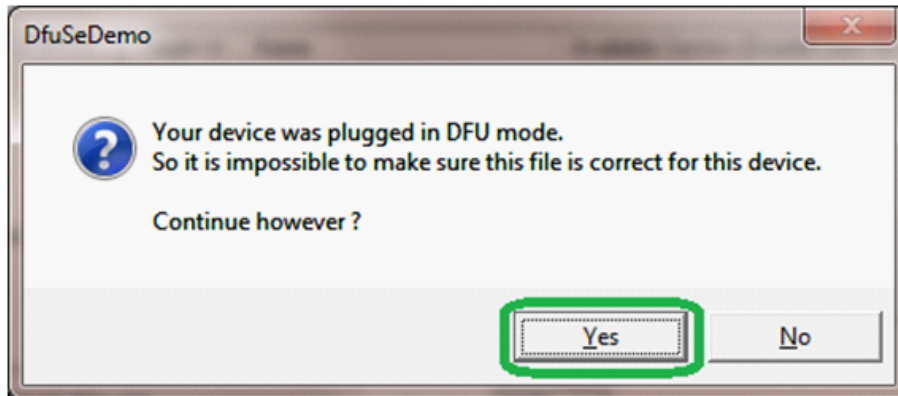
Click Yes to proceed, and it should continue to Erase, Program and then Verify successfully.