UM1083
User manual

How to upgrade the waveforms on STEVAL-IME003V1, STEVAL-IME008V1 and STEVAL-IME009V1 evaluation boards

Introduction

This user manual describes the procedure required to upgrade the waveforms contained in the FLASH memory of the STEVAL-IME003V1, STEVAL-IME008V1 and STEVAL-IME009V1 evaluation boards respectively based on STHV748, STHV749 and STHV800 Ultrasound Pulser ICs. In addition, detailed information on using the DfuSe application to upgrade the waveforms is provided, including screenshots of the GUI.

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1 Getting started

1.1 System requirements

In order to use the DfuSe demonstration, a Windows operating system must be installed on the PC. The version of the Windows OS installed on the user's PC may be determined by right-clicking on the "My Computer" icon in the desktop, then clicking on the "Properties" item in the displayed pop-up menu. The OS type is displayed in the "System properties" dialog box under the "System" label in the "General" tab.

1.2 Downloading and installing the DfuSe program

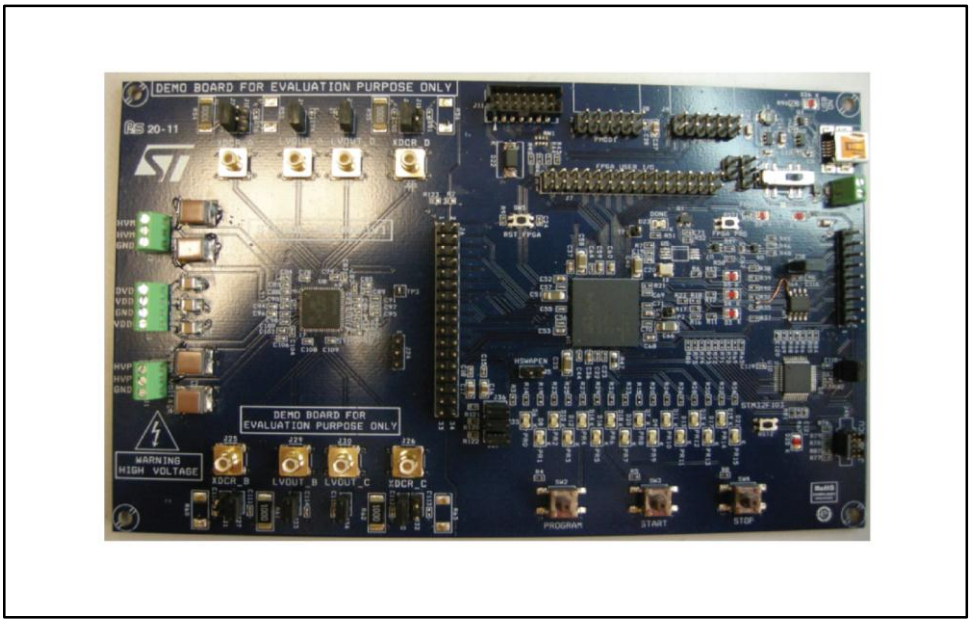
The DfuSe program (STSW-STM32080) can be downloaded from ST's website at: www.st.com.

Please follow the installation instructions contained in UM0412 entitled "Getting started with DfuSe USB device firmware upgrade STMicroelectronics extension". After the installation of the DfuSe, "DFuse Demonstration" appears within the start menu.

1.3 Connecting the evaluation board to the PC

Once the DfuSe program has been downloaded and installed, the user only has to connect the evaluation board through a USB cable (type A to mini B) at CN1, see *Figure 1: "STEVAL-IME003V1 board layout top view"*, as reference it is shown STEVAL-IME003V1 as example. The "Found New Hardware Wizard" will start automatically, please follow the installation instructions contained in UM0412.

Figure 1: STEVAL-IME003V1 board layout top view



Check that SW1 is positioned on the MCU side and the respective LED is turned ON when the USB cable is plugged in.

2 How to use DFU with STEVAL-IME003V1

Please check carefully you are using the right file for the right evaluation board, the DfuSe program doesn't check the compatibility between file and board.

To correctly update the waveforms contained in the SPI FLASH memory:

1. Open "DfuSe Demonstration" from the start menu and the dialog box in *Figure 2: "DfuSe GUI"* will appear. If the board is properly connected, the string "STM Device in DFU Mode" appears in the drop-down list, see box 1.
2. In order to load an upgrade waveform set on a selected evaluation board, select as, select as Target the SPI Flash memory (see box 2 in *Figure 2: "DfuSe GUI"*) and click on the "Choose…" button (box 3) as shown in *Figure 3: "Loading the .dfu file"*.
3. Once the file has been selected, verify that the vendor ID and product ID (see box 4 in *Figure 2: "DfuSe GUI"*) are 0483 and DF11, respectively.
4. Check the "Verify after download" check box, and then press the "Upgrade" button (see box 3). When the new window appears, click "Yes" to continue.
5. Check that the "Verify Successful!" message appears in the dialog box, as in *Figure 4: "Verifying the upgrade"*.
6. It is now possible to disconnect the board from the USB port.

Figure 2: DfuSe GUI

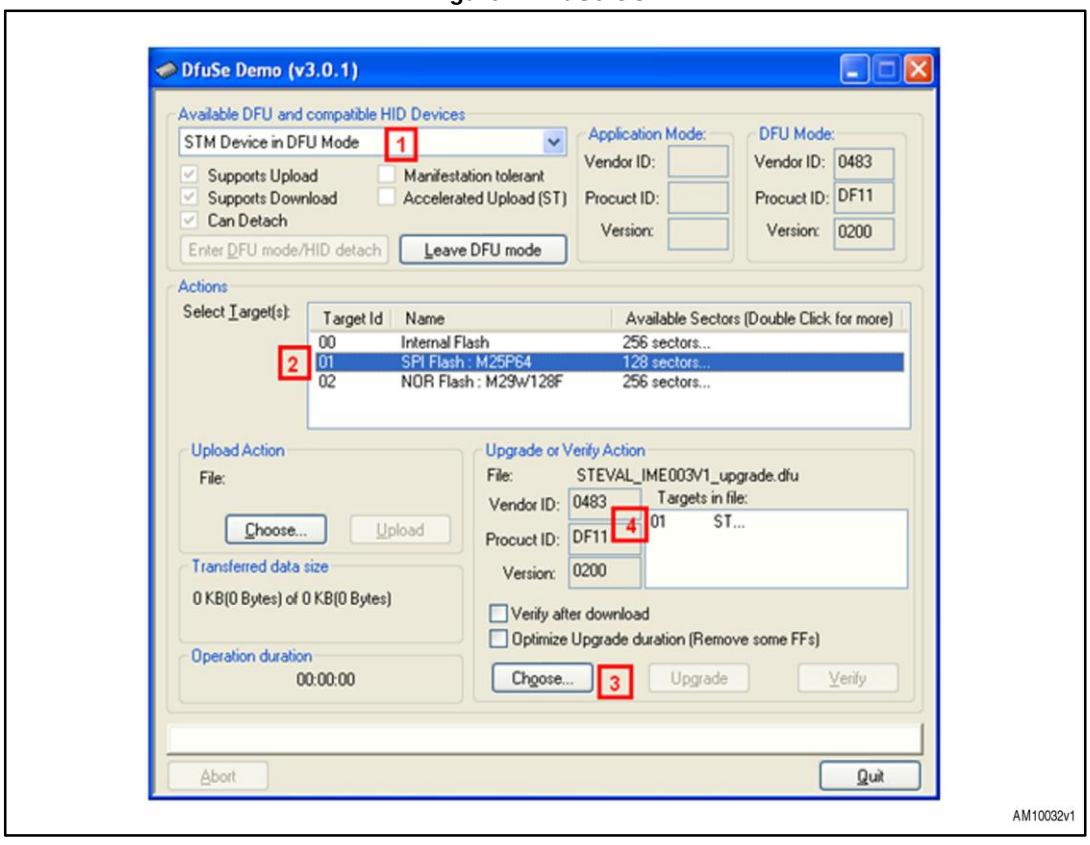


Figure 3: Loading the .dfu file

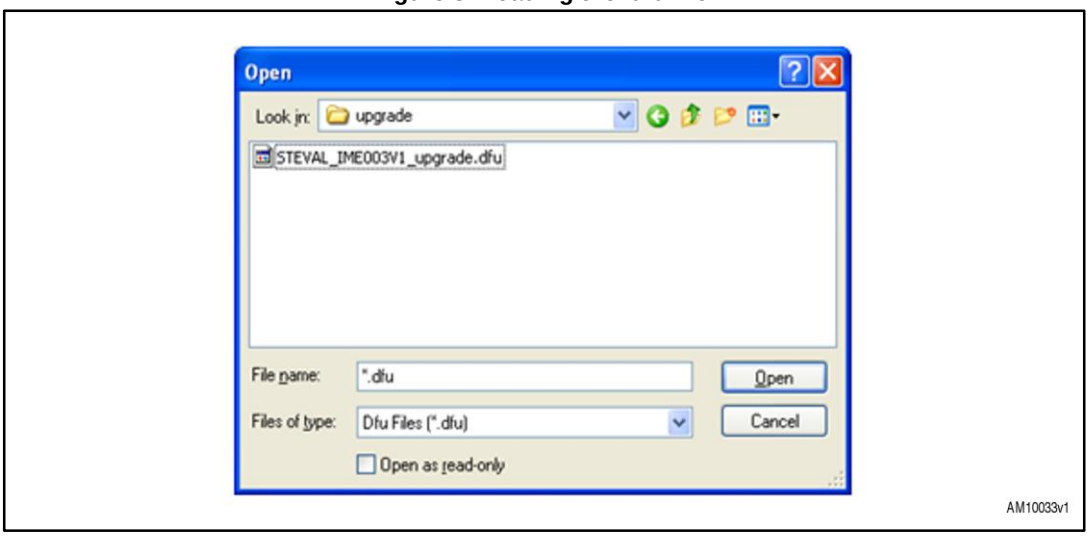
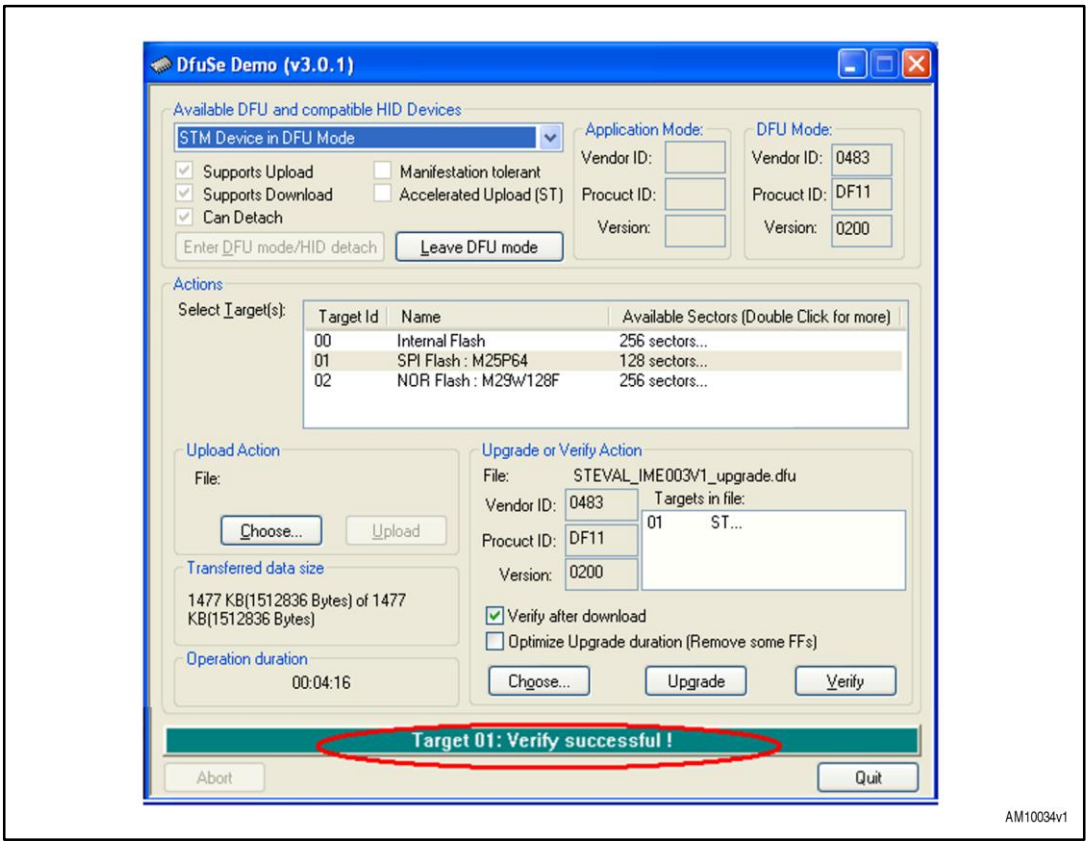


Figure 4: Verifying the upgrade



3 Revision history

Table 1: Document revision history

Date	Revision	Changes
12-Aug-2011	1	Initial release.
09-Sep-2015	2	Updated: - Title on the cover page - Figure 1 STEVAL-IME003V1 board layout top view

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