

Sens'it

Re-Flash Procedure

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1. Introduction

This document provides the procedure to re-flash a Sens'it on Windows, Ubuntu and MacOS.

You need a Sens'it firmware file with the extension **.dfu** for Windows and with the extension **.bin** for Ubuntu or MacOS.

For convenience, these files will be named **sensit.bin** or **sensit.dfu** in this document.

2. Windows

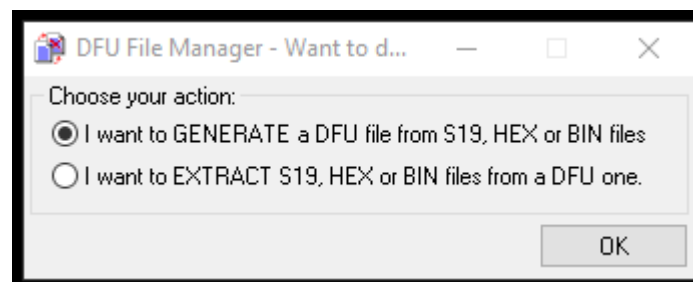
2.1. Install DfuSe

To flash a Sens'it you need to install the software **DfuSe**. You can get it here: <https://www.st.com/en/development-tools/stsw-stm32080.html>.

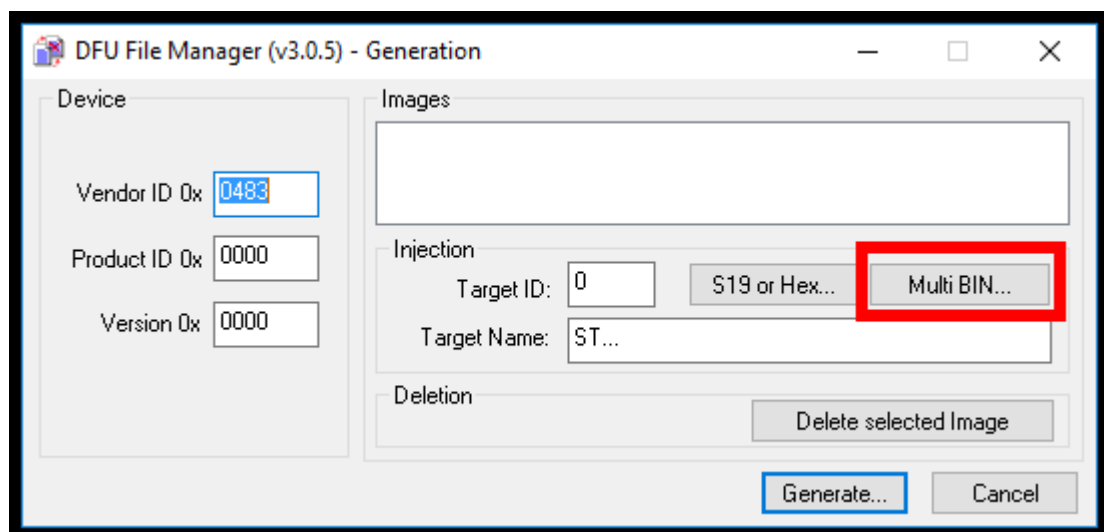
2.2. Convert a bin file into a dfu file

If you already have a Sens'it firmware in the .dfu format you do not need to perform this step.

- Launch **DFU File Manager**.
- Select the option "**I want to GENERATE a DFU file...**" and click on **OK**.

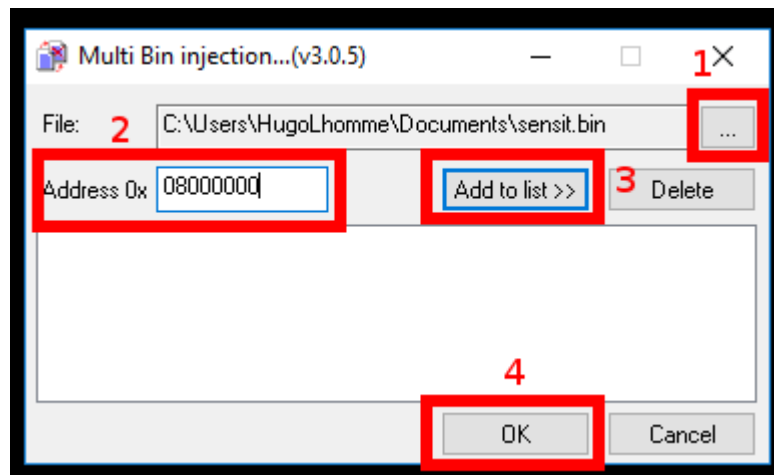


- Click on **Multi BIN**.

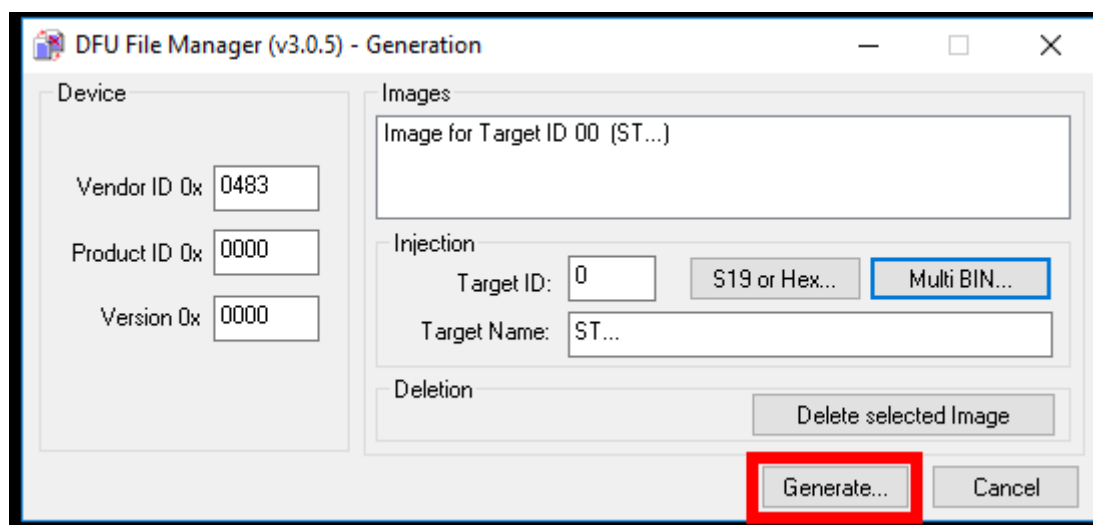


- Multi Bin injection:

1. Select the **sensit.bin** file,
2. In the Address box type **08000000**,
3. Click on **Add to list**,
4. Click on **OK**.



- Click on **Generate** and save your **sensit.dfu** file.



2.3. Put your Sens'it in bootloader

Step 1: Connect your Sens'it to your computer with a USB cable.

Step 2: Do 4 short presses on the button to reset the Sens'it.
Note that for a Sens'it Discovery you need to be in Standby mode to do this.

Step 3: When the led next to the USB connector starts to flash, do a long press on the button.

Step 4: The 2 leds must slowly light up in white. Your Sens'it is now in bootloader.

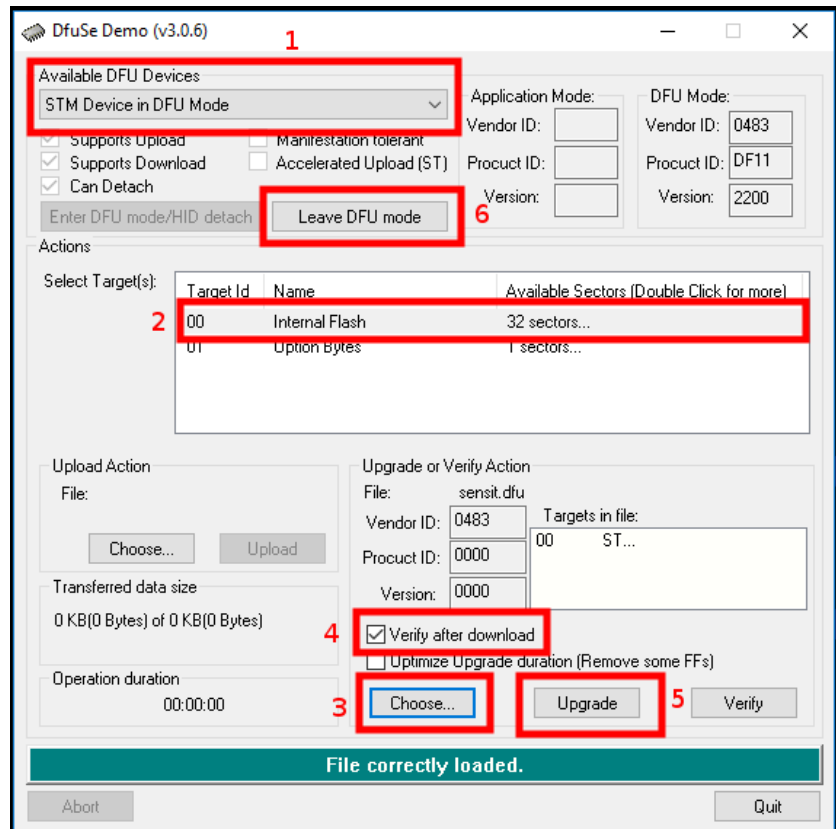


2.4. Flash your Sens'it

Launch **DfuSe Demo**.

1. Check that a device is detected.*
2. Select the target **Internal Flash**.
3. Choose you **sensit.dfu** file.
4. Tick the box **Verify after download**.
5. Click on **Upgrade**.
6. Click on **Leave DFU mode** to restart your Sens'it in normal mode.

* If no device is detected, please install drivers provided by STMicroelectronics.



3. Ubuntu or MacOS

3.1. Install dfu-util

To flash a Sens'it you need to install the software **dfu-util**. You can install it with the following commands:

- On Ubuntu:

```
sudo apt-get install dfu-util
```

- On MacOS:

```
/usr/bin/ruby -e "$(curl -fsSL  
https://raw.githubusercontent.com/Homebrew/install/master/install)  
"
```

```
brew install dfu-util
```

3.2. Put your Sens'it in bootloader

Step 1: Connect your Sens'it to your computer with a USB cable.

Step 2: Do 4 short presses on the button to reset the Sens'it.
Note that for a Sens'it Discovery you need to be in Standby mode to do this.

Step 3: When the led next to the USB connector starts to flash, do a long press on the button.

Step 4: The 2 leds must slowly light up in white.
Your Sens'it is now in bootloader.



3.3. Flash your Sens'it

You need to go to the directory where you have saved the file sensit.bin with the command **cd**.

For example if the file is in your Downloads folder type the command:

```
cd Downloads/
```

Now, type the following command to flash your Sens'it with the firmware sensit.bin:

```
dfu-util -d 0483:df11 -a 0 -s 0x08000000:leave -D sensit.bin
```

```
lhomme@SGX-CMP-515: ~/Downloads
lhomme@SGX-CMP-515:~$ cd Downloads/
lhomme@SGX-CMP-515:~/Downloads$ dfu-util -d 0483:df11 -a 0 -s 0x08000000:leave -D sensit.bin
dfu-util 0.9

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Please report bugs to http://sourceforge.net/p/dfu-util/tickets/

dfu-util: Invalid DFU suffix signature
dfu-util: A valid DFU suffix will be required in a future dfu-util release!!!
Opening DFU capable USB device...
ID 0483:df11
Run-time device DFU version 011a
Claiming USB DFU Interface...
Setting Alternate Setting #0 ...
Determining device status: state = dfuERROR, status = 10
dfuERROR, clearing status
Determining device status: state = dfuIDLE, status = 0
dfuIDLE, continuing
DFU mode device DFU version 011a
Device returned transfer size 2048
DfuSe interface name: "Internal Flash "
Downloading to address = 0x08000000, size = 25200
Download [=====] 100% 25200 bytes
Download done.
File downloaded successfully
Transitioning to dfuMANIFEST state
lhomme@SGX-CMP-515:~/Downloads$
```

When the download of the firmware in the device ends, your Sens'it must exit the bootloader automatically (LEDs switch OFF). If not you need to unplug the battery to force the device to restart.