How to upgrade the firmware of STEVAL-MKI121V1 using DFU

By Alessandra Di Pietro

Introduction

This user manual describes the procedure required to upgrade the device firmware of the STEVAL-MKI121V1 directly from a PC through the USB port.

1 Overview

The STEVAL-MKI121V1 has the DFU (device firmware upgrade) mode capability, allowing reprogramming an application through the USB without the use of additional hw tools.

The firmware of STEVAL-MKI121V1 can be upgraded using dedicated GUI such us:

* iNEMO Suite
* DfuSe Demonstration

iNemo Suite and DfuSe Demonstration are available on ST web (http://www.st.com).

1.1 Device Firmware Upgrade using iNemo suite

The iNEMO Suite is the GUI (graphical user interface) of the STEVAL-MKI121V1. It has also the DFU capability, allowing user to download and replace the firmware of INEMO-M1 directly from a PC through the USB port. To do this it is necessary enter DFU mode.

1.1.1 How to enter DFU mode

Enter DFU mode can be done either through hardware or software.

- Hardware: unplug the USB cable, press the SW2 button and, keeping the button pressed, connect the USB cable to the PC.
- Software: connect the USB cable, open the iNEMO Suite application, select the right COM port and press the Connect button.
  Then go to tools -> communication -> firmware upgrade… (see *Figure 1*). Click "Yes" (see *Figure 2*).

In both case, if the blue LED start to blink the device is in DFU mode.
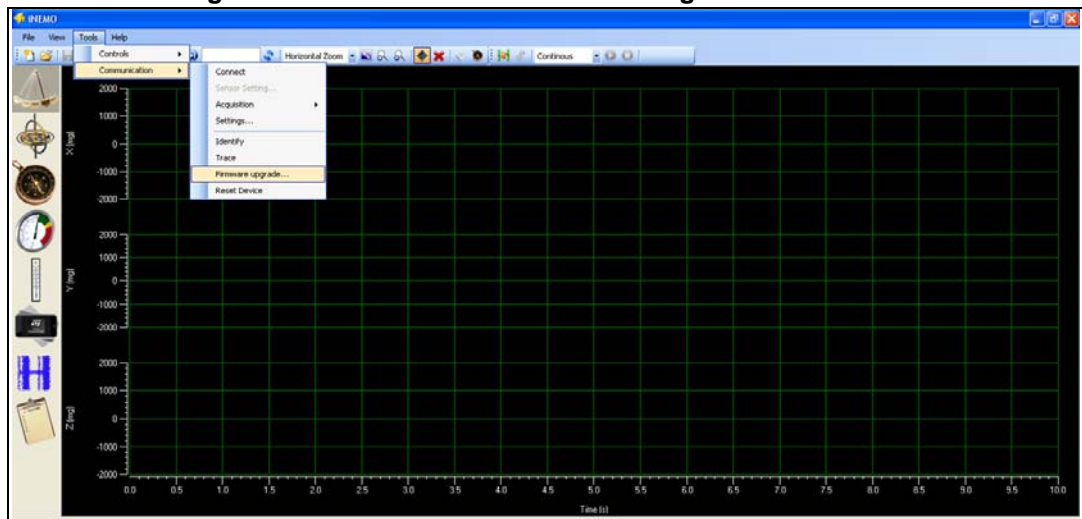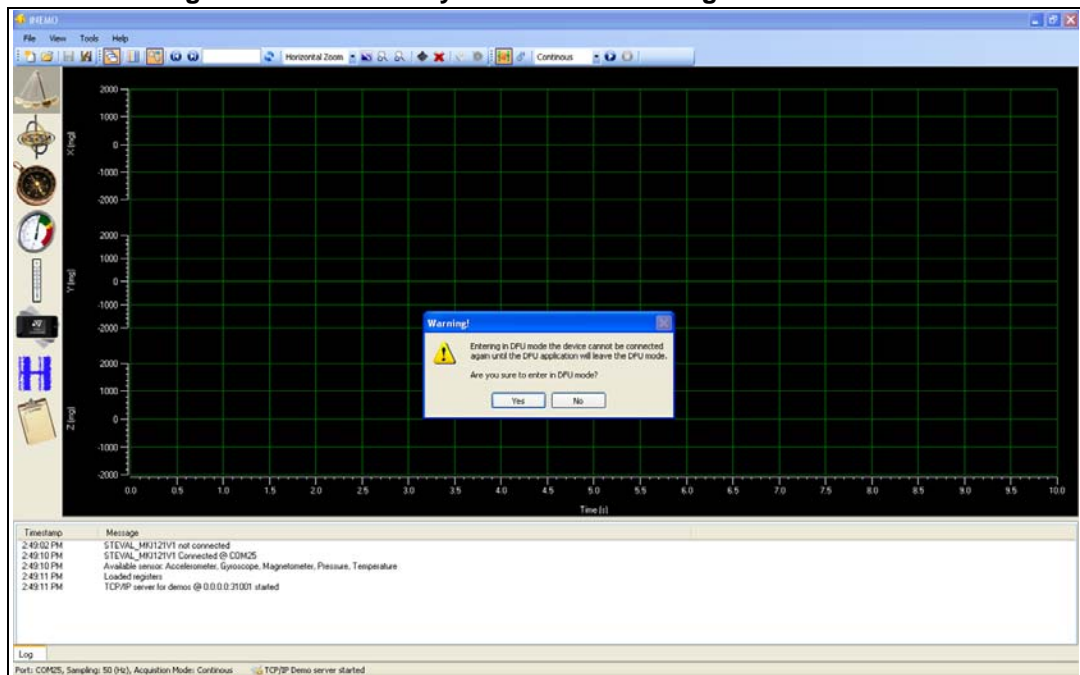
Figure 1. How to enter DFU mode through the iNEMO GUI

Figure 2. Confirm entry in DFU mode through the iNEMO GUI

1.1.2 How to upgrade firmware

Once the DFU mode is entered to upgrade the firmware follow the below steps:

1. Open iNEMO suite GUI
2. Select firmware upgrade from tools-> communication->firmware upgrade… (*Figure 1*)
3. Click yes if device is already in DFU mode otherwise click no (*Figure 3*) and enter DFU mode (*Section 1.1.1*)
4. Browse the file in .hex format (*Figure 4*)
5. Click on upload
6. Check firmware upgrade message and if it is completed successfully click ok
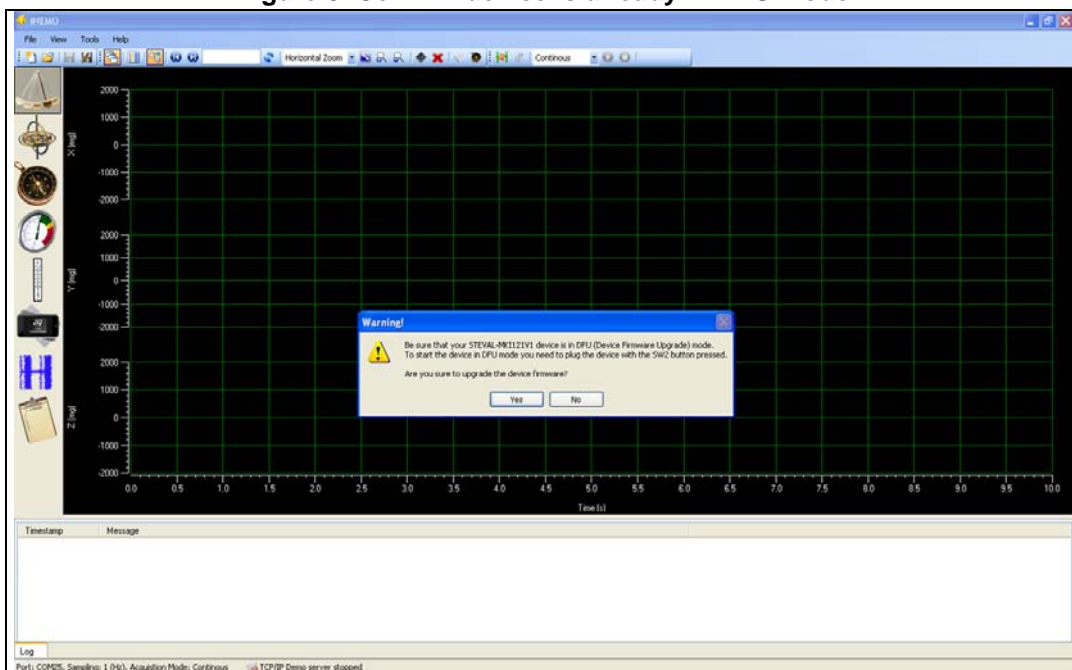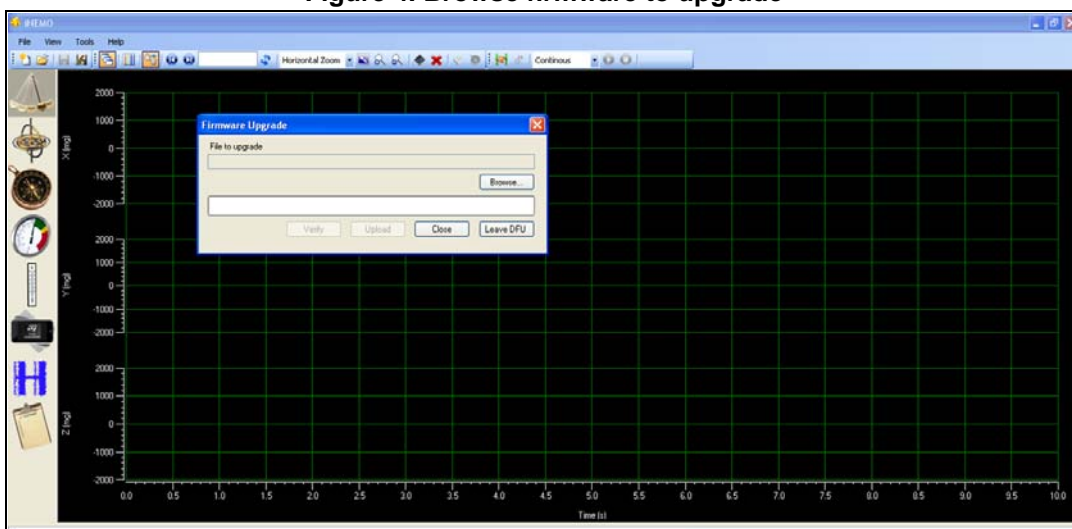
Figure 3. Confirm device is already in DFU mode

Figure 4. Browse firmware to upgrade

1.2 Device firmware upgrade using the DfuSe demonstrator

The STEVAL-MKI121V1 can be upgrade using also the DfuSe Demonstration software. In this case the device enters in DFU mode via hardware as described in *Section 1.1*. To install the DfuSe software, launch the "DfuSe_Demo_V3.0_Setup.exe", available on ST web site, and follow the instructions on the screen. To launch the software, select "Start > STMicroelectronics > DfuSe > DfuSe Demonstration".

For more details regarding DfuSe device firmware upgrade see the related user manual located under "Start > STMicroelectronics > DfuSe > Docs > DfuSe Getting Started".

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
29-May-2013	1	Initial release.

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