Introduction

STSW-STUSB001 is a software package containing a Graphical User Interface (GUI) used to ease STUSB ICs device customization, evaluation and debug.

In order to run the GUI on a laptop, an STM32 Nucleo board must be programmed to act as a USB to I²C bridge between the laptop and the STUSB evaluation boards.

The document details the full installation process, from GUI software package download to NUCLEO board configuration, including error messages.
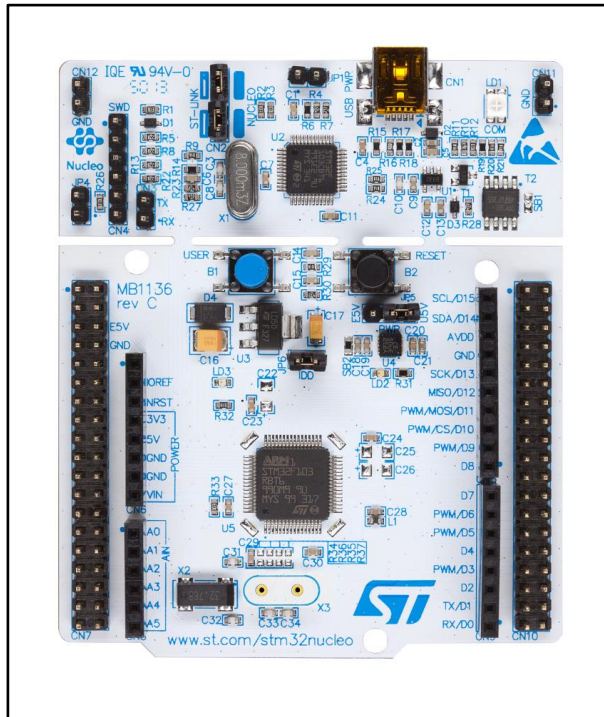
1 System configuration

1.1 Hardware setup

Follow the procedure below to set up your hardware.

1. Connect the NUCLEO-F072RB to your computer via mini-B USB cable
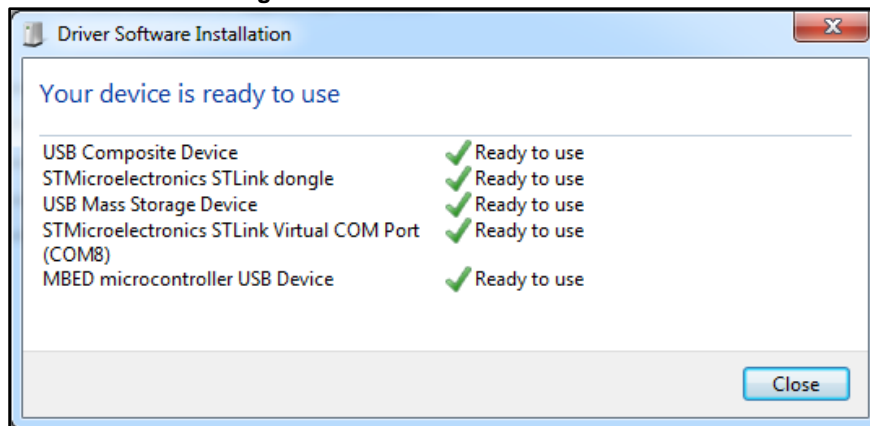
Figure 1: NUCLEO-F072RB development board

You can also use the NUCLEO-L476RG development board

2. Check the device drivers are installed successfully
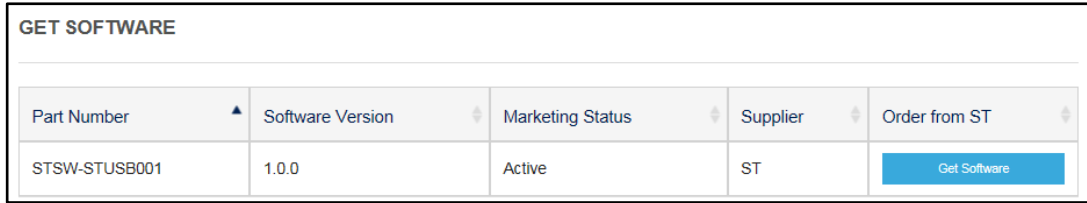
Figure 2: Driver software installation

3. Download the STSW-STUSB001 GUI from homepage by searching **STSW-STUSB001** or from the following location:
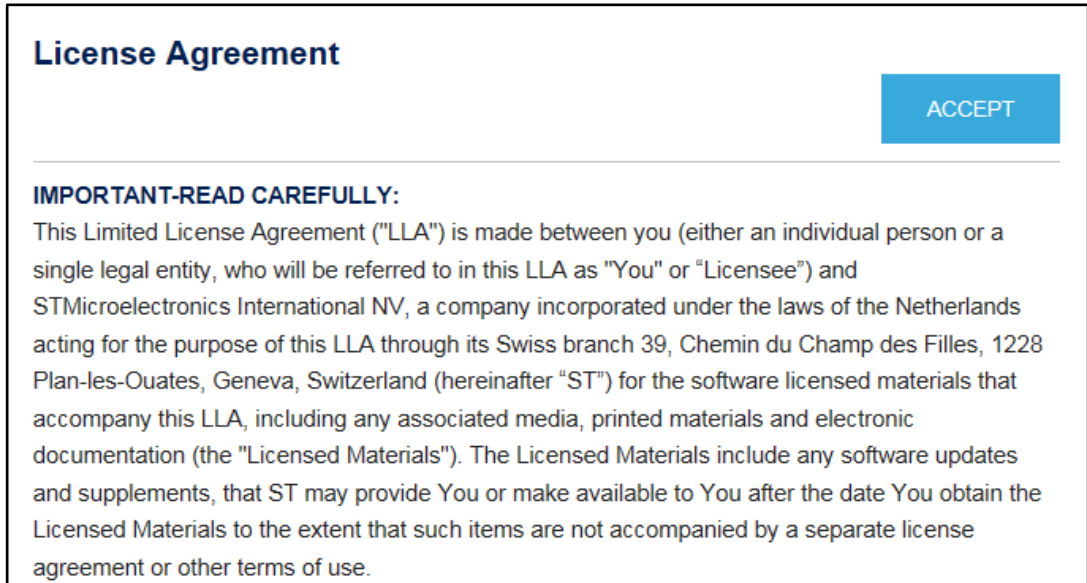
Figure 3: STSW-STUSB001 search path

4. Click the Get Software button at the bottom of the page
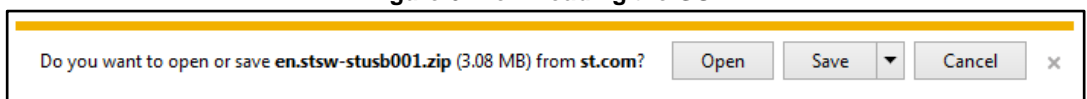
Figure 4: STSW-STUSB001 Get Software button

5. Accept the license agreement to begin downloading

Figure 5: STSW-STUSB001 License Agreement

6. Save the file **en.stsw-stusb001.zip** on your computer

Figure 6: Downloading the GUI

7. Unzip the contents to a clean folder

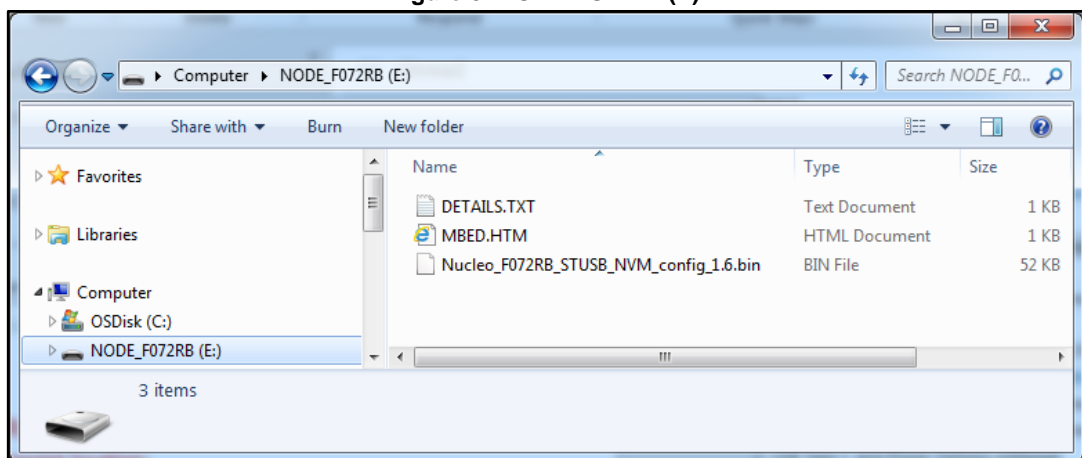**Figure 7: STSW-STUSB001 GUI package files**

Name	Size
GUI_STUSB_Utility_3.01.exe	476 672
mfc110u.dll	4 456 520
msvcp110.dll	535 008
msvcr110.dll	875 472
Nucleo_F072RB_STUSB_NVM_config_1.6.bin	52 319
uipinterface.dll	218 624

8. Drag and drop NUCLEO_F072RB_STUSB_NVM_config_1.6.bin to the STM32 Nucleo drive on your computer.

This drive is created automatically when you connect the board to your computer.
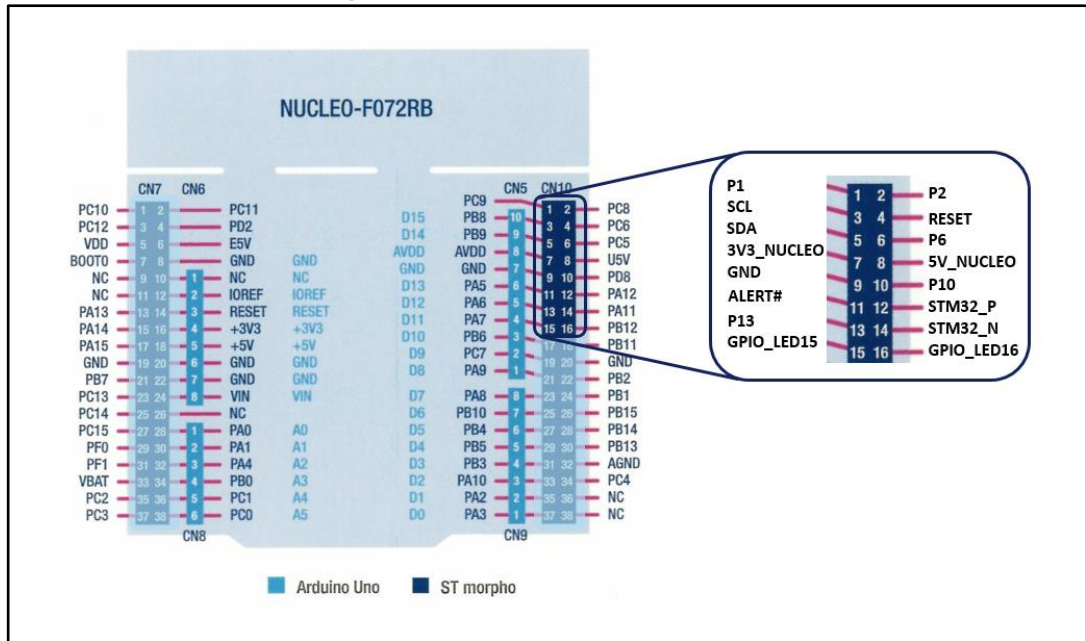
Figure 8: NODE FO72RB(E)

9. Press the black RESET button on the NUCLEO-F072RB.

The board is now configured to act as a USB to I²C bridge between the GUI and STUSB products.

10. Disconnect the mini-B USB cable connecting the NUCLEO-F072RB and your computer.

11. Plug your STUSB evaluation board onto the NUCLEO-F072RB development board as shown below
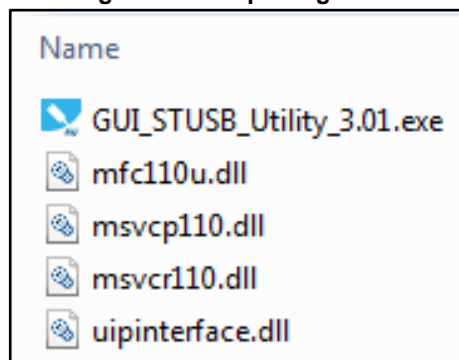
Figure 9: NUCLEO-F072RB connectors

1.2 GUI setup

1. Extract the en.stsw-stusb001.zip package files to the folder on your PC (as described in the previous chapter).

The .dll files and the .exe file must be in the same directory

Figure 10: GUI package files

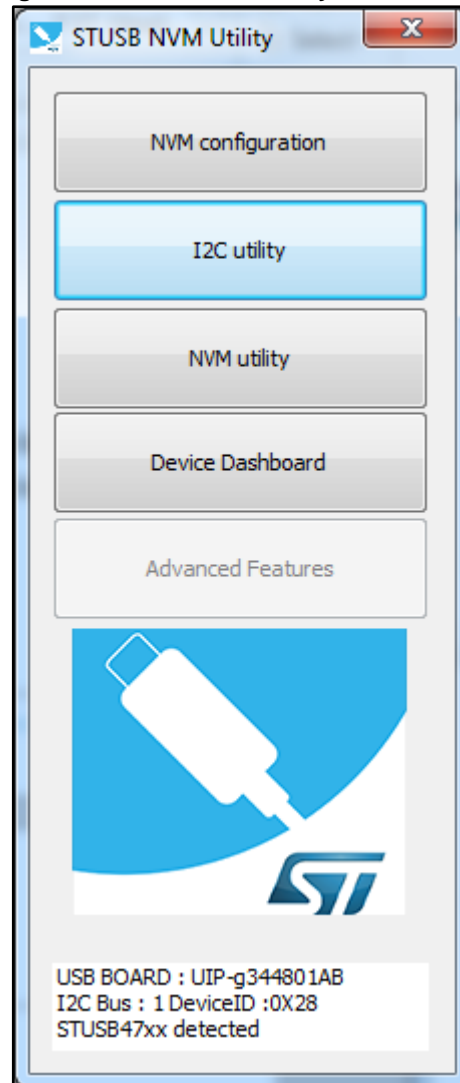**2. Connect** your computer to the STUSB evaluation board with the micro-B USB cable (see *Figure 9: "NUCLEO-F072RB connectors"*).

No connection between the NUCLEO-F072RB and the computer is required.

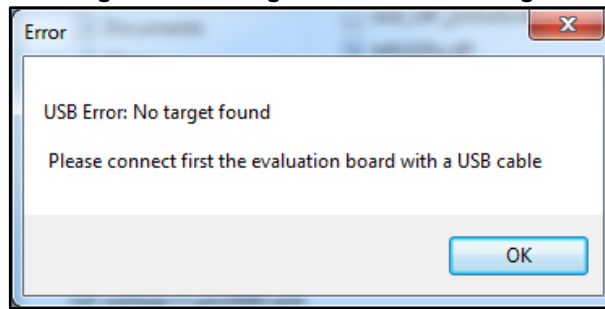**3. Run** the .exe file to open the start window of the GUI.

Figure 11: STUSB NVM Utility start window

The GUI is now ready to use.

1.3 Troubleshooting

Figure 12: No target found error message

Refer to the following scenarios if the GUI fails to connect with the STUSB evaluation board.

- **CASE 1**: the LEDs on the NUCLEO-F072RB board and STUSB board are blinking.
  - Check the USB cable connection on the STD-A port (on computer) and on micro-B port (on STUSB board).
- **CASE 2**: the LEDs on the NUCLEO-F072RB are blinking, but not on the STUSB board.
  - The Software has not been installed properly on the NUCLEO-FO72RB. Repeat the hardware configuration process (*Section 1.1: "Hardware setup"*).
- **CASE 3**: no LEDs are blinking on either board.
  - Check the connection between the NUCLEO-F072RB and the STUSB evaluation board (see *Figure 9: "NUCLEO-F072RB connectors"*).

2 Compatible STUSB evaluation boards

Table 1: Compatible DUT boards

ST part number	Description
STEVAL-CCC001	STUSB1600 evaluation board
P-NUCLEO-USB002	STUSB1602 + STM32 dual port evaluation board
STEVAL-ISC003V1	STUSB4710 evaluation board

3 Revision history

Table 2: Document revision history

Date	Version	Changes
28-Jul-2017	1	Initial release.

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