

Board identification

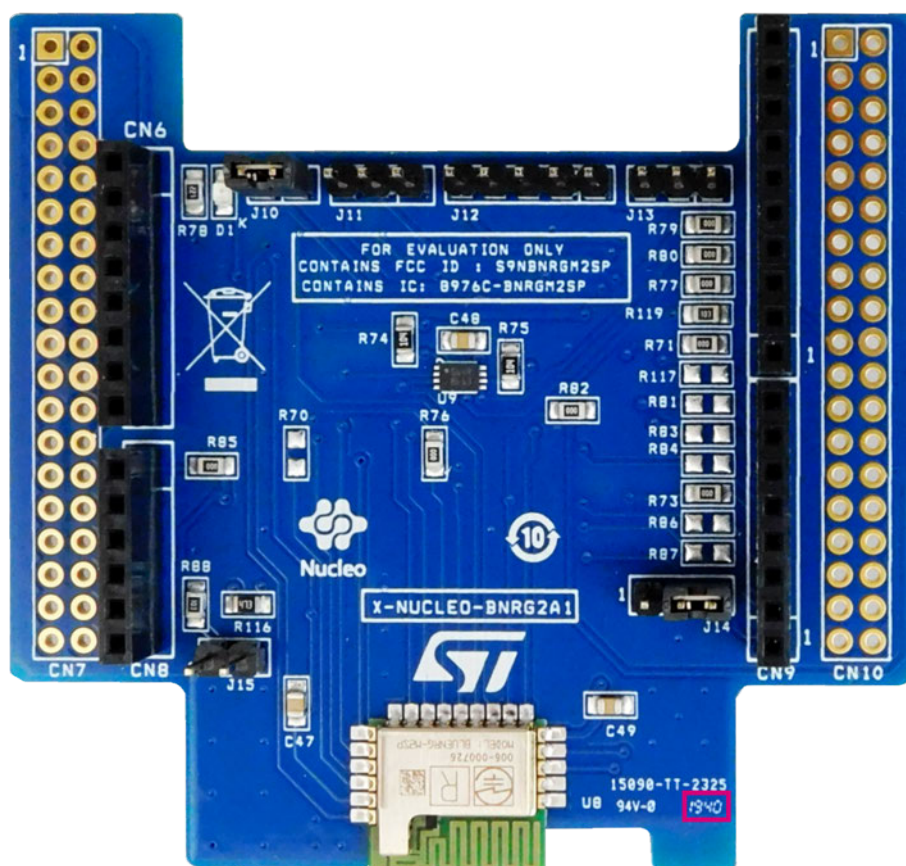
This errata sheet applies to the X-NUCLEO-BNRG2A1 expansion board lot 1940 when connected to the X-NUCLEO-IKS01A3 or X-NUCLEO-IKS02A1 expansion boards.

See the information below for details.

Table 1. Board summary

Order code	Device info
X-NUCLEO-BNRG2A1	1940 (on the X-NUCLEO-BNRG2A1 bottom right corner)

Figure 1. Board identification (lot 1940)



1 Limitation

1.1 Description

On the X-NUCLEO-BNRG2A1 lot 1940, standard sample applications included in the expansion software package (X-CUBE-BLE2) do not work properly when the X-NUCLEO-BNRG2A1 expansion board is connected to the X-NUCLEO-IKS01A3 or X-NUCLEO-IKS02A1 expansion boards.

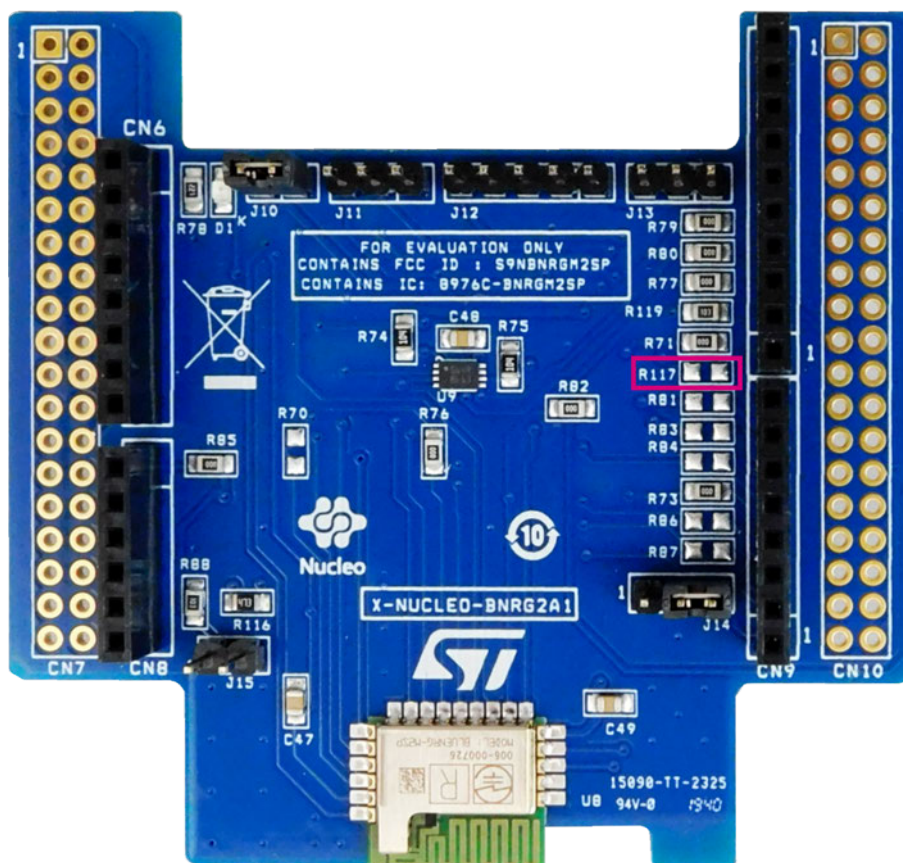
1.2 Workaround

To fix the problem, hardware and firmware updates are necessary.

1.2.1 Hardware update

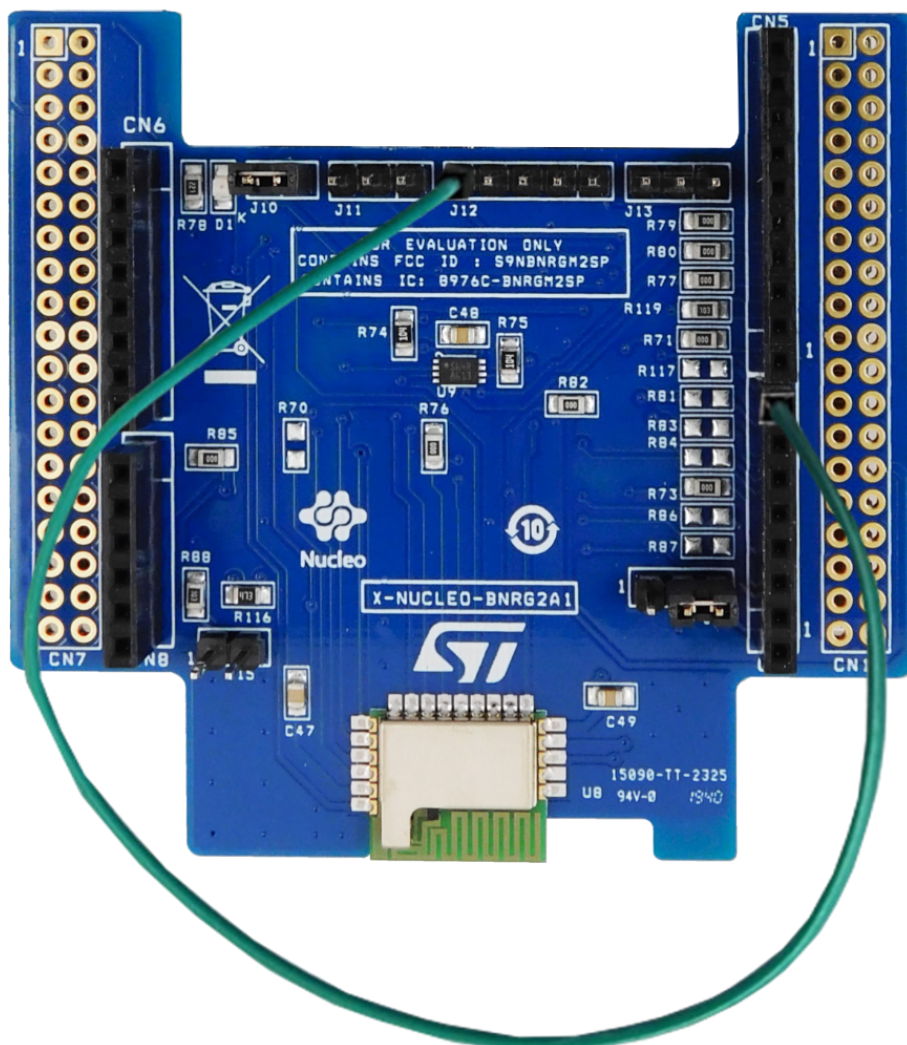
To correctly set the RESET on pin D7, resistor R117 (0 Ohm) must be soldered.

Figure 2. X-NUCLEO-BNRG2A1 - R117 soldered



Alternatively, create a bridge between the Arduino connector pin D7 and J12 pin 5.

Figure 3. X-NUCLEO-BNRG2A1 - D7 and J12 bridge



1.2.2

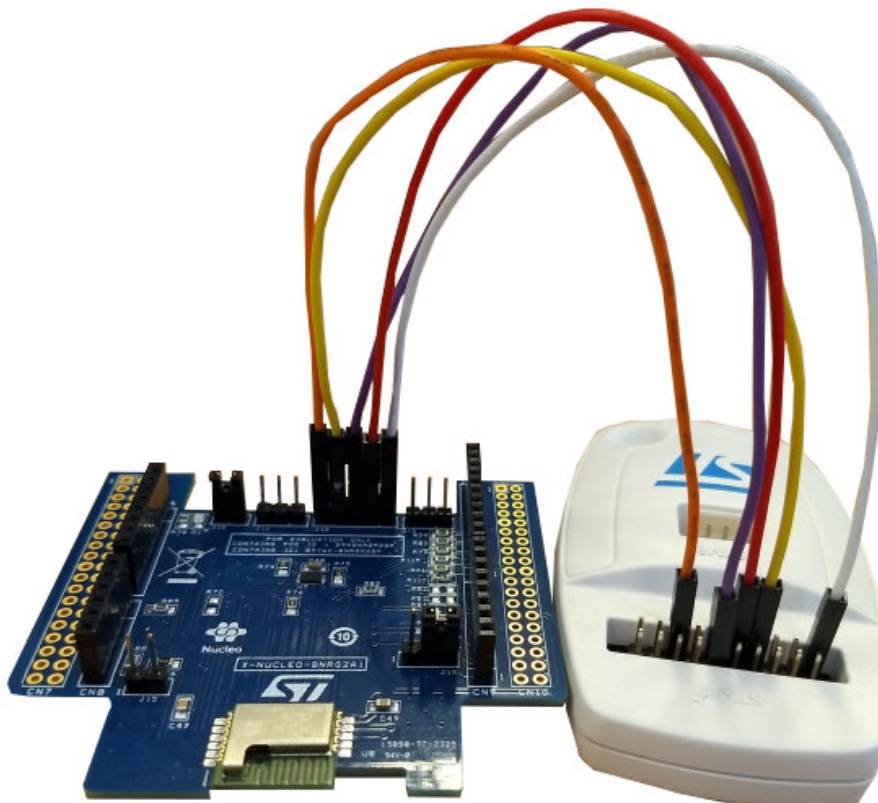
Firmware update

Firmware can be updated by following one of the procedures described below.

1.2.2.1 Mode 1

To update the firmware on the X-NUCLEO-BNRG2A1 BLE module, you need a standard [ST-LINK/V2](#) debugger with 5 jumper wires (female-female) and [STSW-BNRGFLASHER](#) (available only for Windows).

Figure 4. X-NUCLEO-BNRG2A1 connected to ST-LINK/V2



Connect pins as shown in the table below.

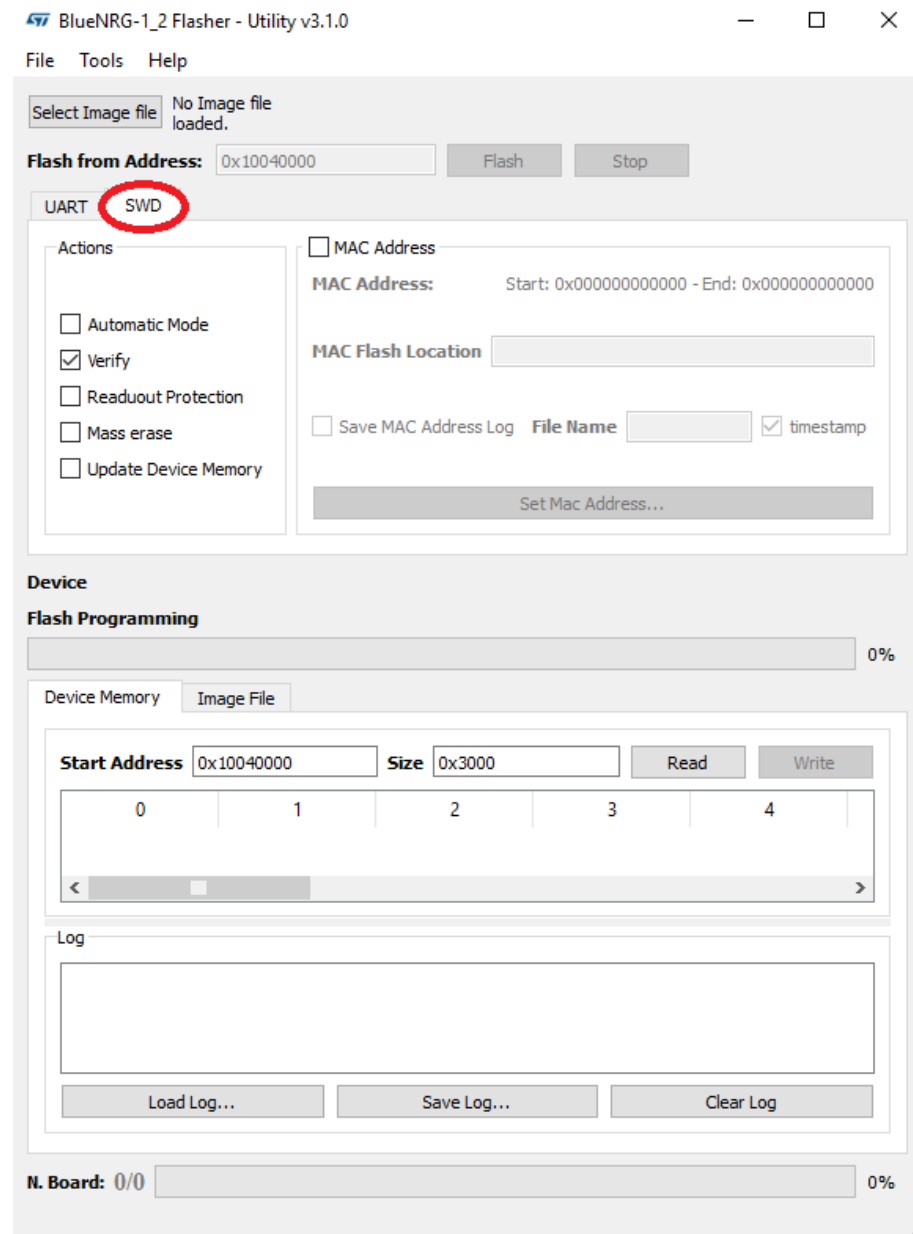
Table 2. Jumper connection between X-NUCLEO-BNRG2A1 and ST-LINK/V2

J12 pin no.	ST-LINK/V2 pin no.
1	1
2	9
3	12
4	7
5	15

Step 1. Download and install the [STSW-BNRGUI](#) latest version (v3.1.0 or above).

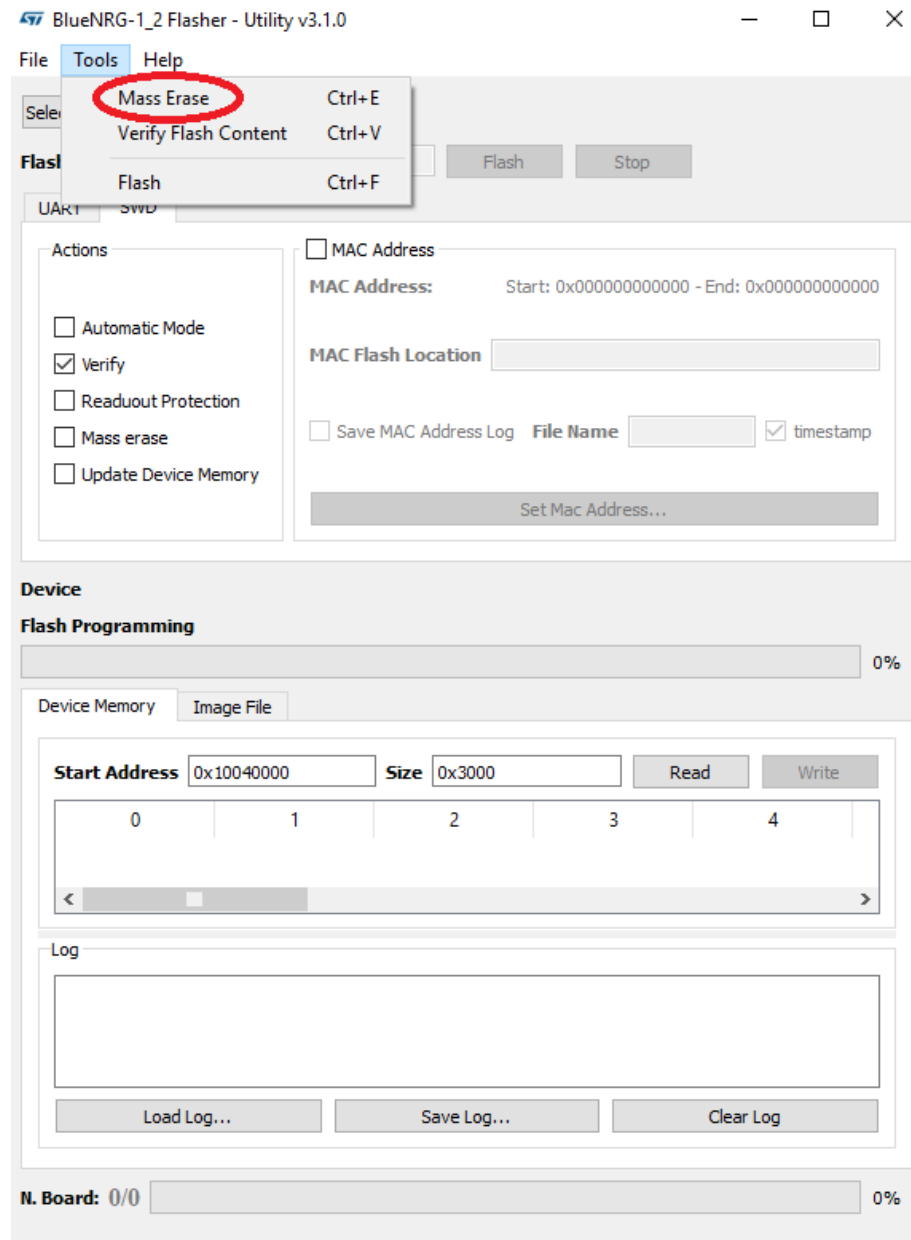
Step 2. Install BlueNRG-1_2 Flasher Utility (STSW-BNRGFLASHER), open it and select the SWD tab.

Figure 5. STSW-BNRGFLASHER interface - SWD tab



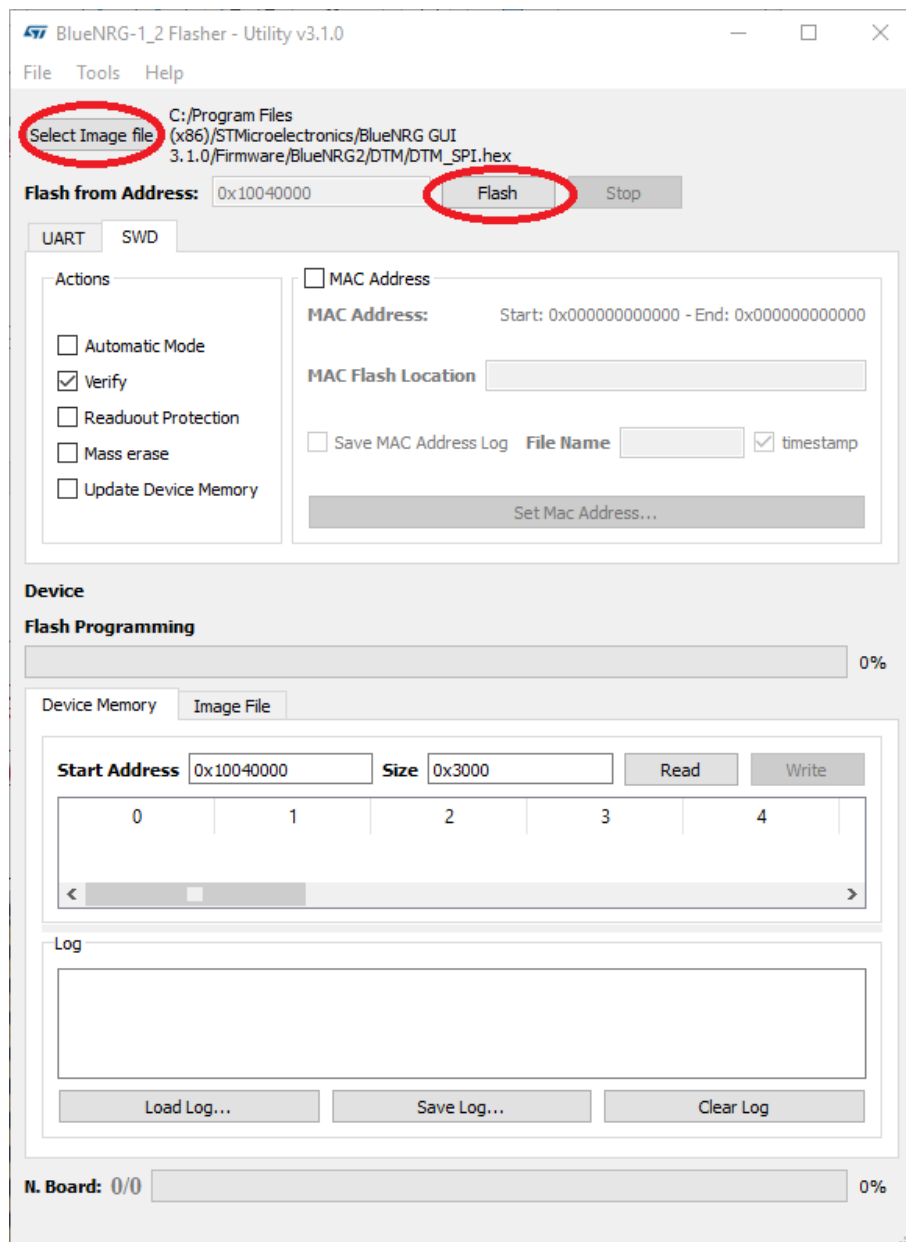
Step 3. Erase the X-NUCLEO-BNRG2A1 Flash memory.

Figure 6. STSW-BNRGFLASHER interface - Flash memory erase



- Step 4.** Load the DTM_SPI.hex firmware contained in the STSW-BNRGUI installation folder (usually *C:\Program Files (x86)\STMicroelectronics\BlueNRG GUI 3.1.0\Firmware\BlueNRG2\DTM\DTM_SPI.hex* for version 3.1.0) and press the Flash button.

Figure 7. STSW-BNRGFLASHER interface - loading the DTM_SPI.hex firmware



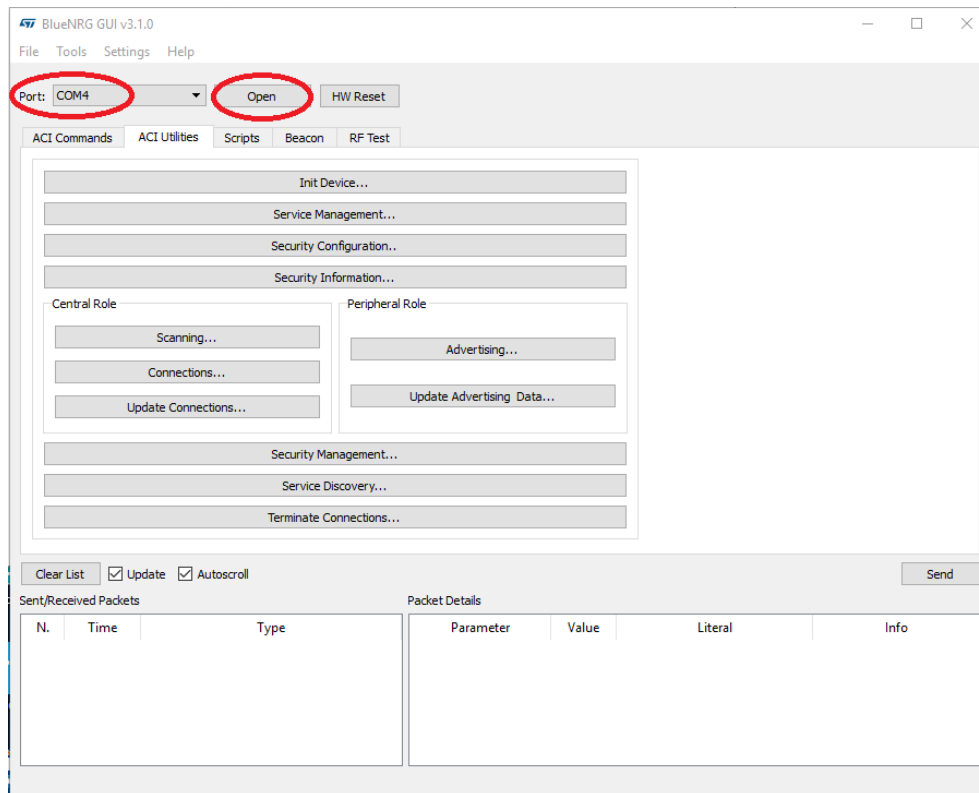
1.2.2.2 Mode 2

After having updated the hardware as detailed in [Section 1.2.1 Hardware update](#), follow the procedure below.

- Step 1.** Download and install the STSW-BNRGUI latest version (v3.1.0 or above).
- Step 2.** Plug the X-NUCLEO-BNRG2A1 expansion board on top of a NUCLEO-L476RG development board and connect the stack to the PC.
- Step 3.** Download the X-CUBE-BLE2 software package, open the archive and flash the *Virtual_COM_Port* binary file (in *Projects\STM32L476RG-Nucleo\Applications\Virtual_COM_Port\Binary*) on the NUCLEO-L476RG.

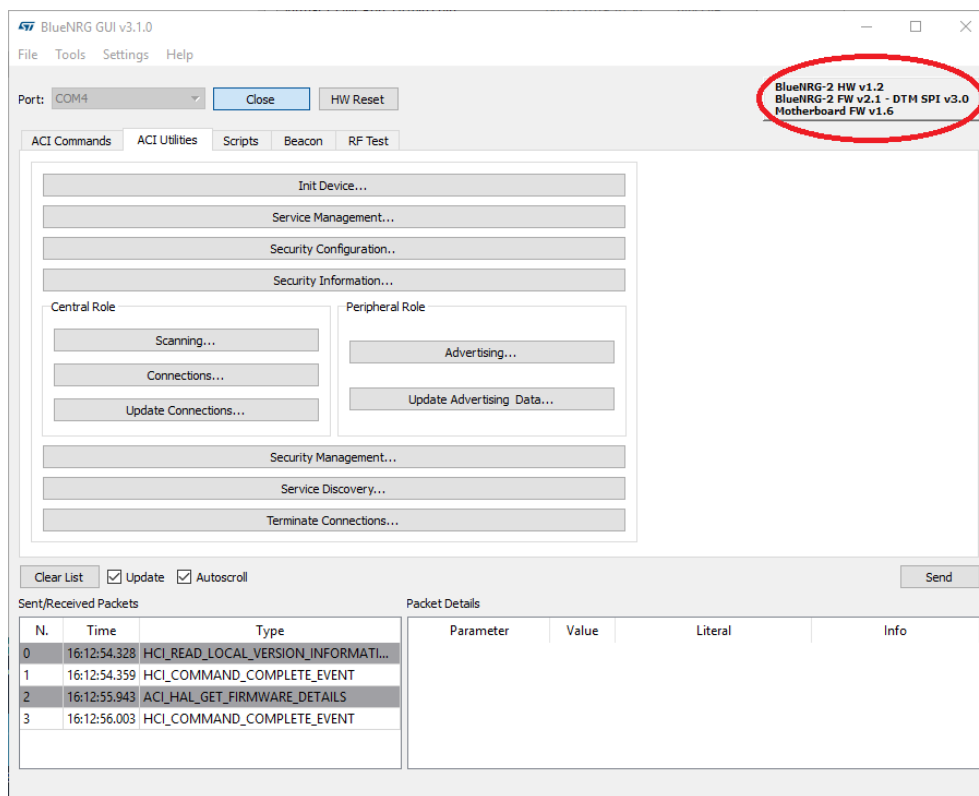
Step 4. Launch the STSW-BNRGUI, select the COM port and click [Open].

Figure 8. STSW-BNRGUI - flashing the Virtual_COM_Port binary file



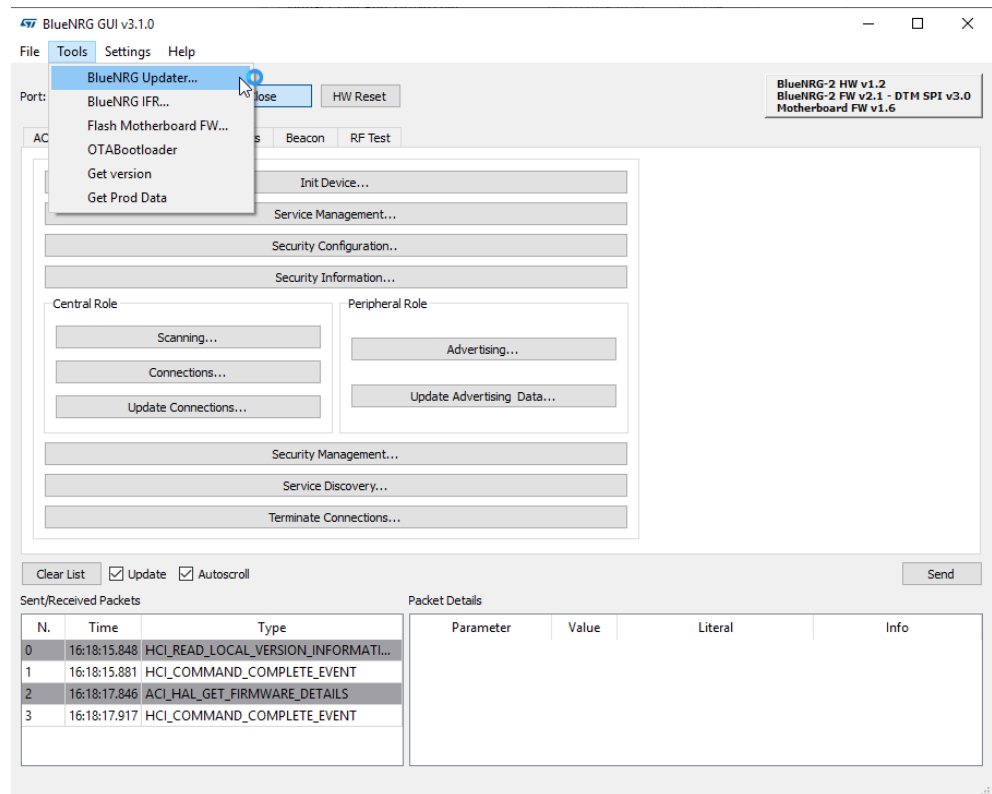
- Step 5.** Check the DTM SPI version.
If it is previous to v3.1.0, the [BlueNRG-2](#) firmware must be updated.

Figure 9. STSW-BNRGUI - flashing the Virtual_COM_Port binary file



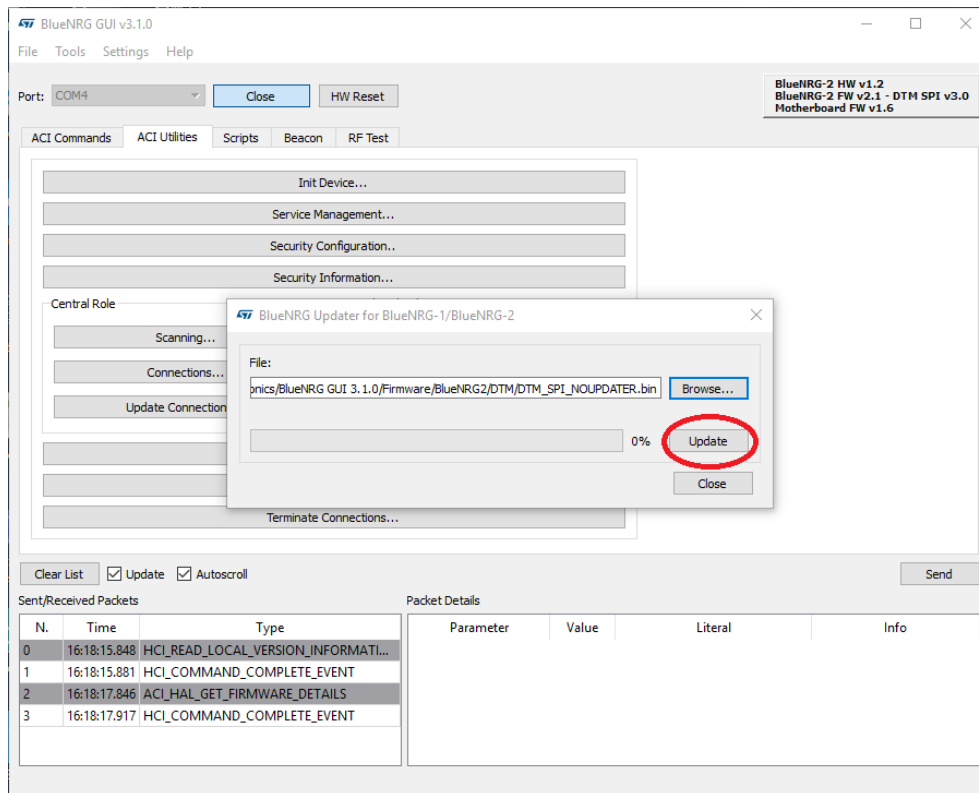
- Step 6.** Click [Tools]>[BlueNRG Updater] and select the *DTM_SPI_NOUPDATER.bin* firmware in the *STSW-BNRGUI v3.1.0* installation folder (usually *C:\Program Files (x86)\STMicroelectronics\BlueNRG GUI 3.1.0\Firmware\BlueNRG2\DTM* for version 3.1.0).

Figure 10. STSW-BNRGUI - selecting DTM SPI updater



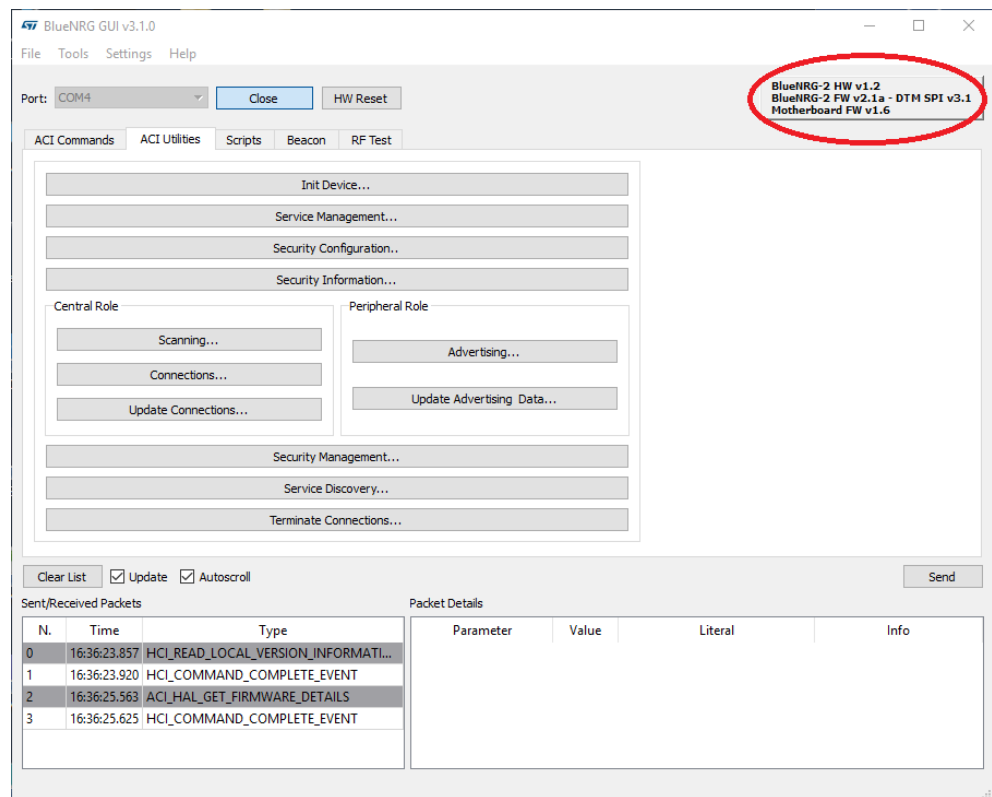
Step 7. Click **[Update]** to start updating.

Figure 11. STSW-BNRGUI - starting DTM SPI process update



At the end of the flashing process, the **BlueNRG-2** firmware is updated to the latest version.

Figure 12. STSW-BNRGUI - DTM SPI successful update



Revision history

Table 3. Document revision history

Date	Revision	Changes
04-Mar-2020	1	Initial release.

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