

How to write firmware (Windows GUI)

Download [STSW-STM32080 from the ST site](https://www.st.com/en/development-tools/stsw-stm32080.html) .

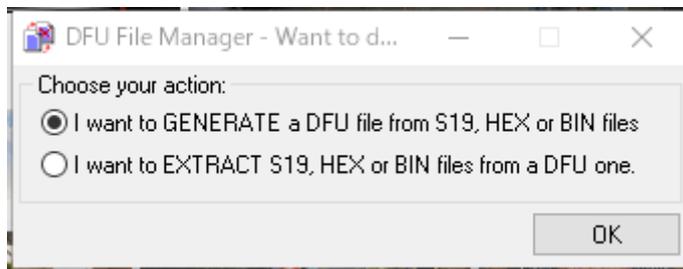
<https://www.st.com/en/development-tools/stsw-stm32080.html>

- DFU File Manager: a tool to create .dfu files from .bin or .hex
- DfuSe Demo: A tool for writing .dfu files to devices

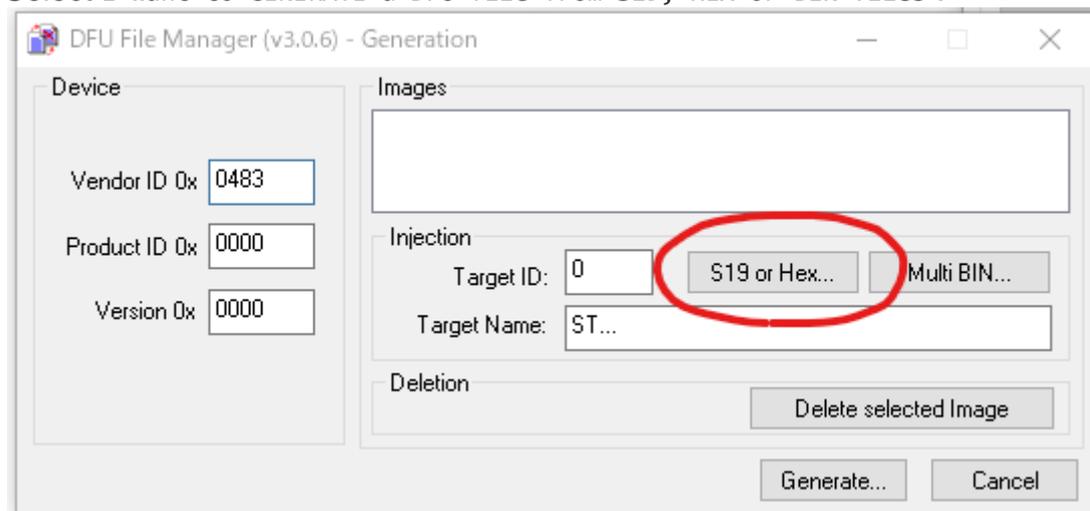
is included.

Convert file format with DFU File Manager (not needed if you have a DFU file)

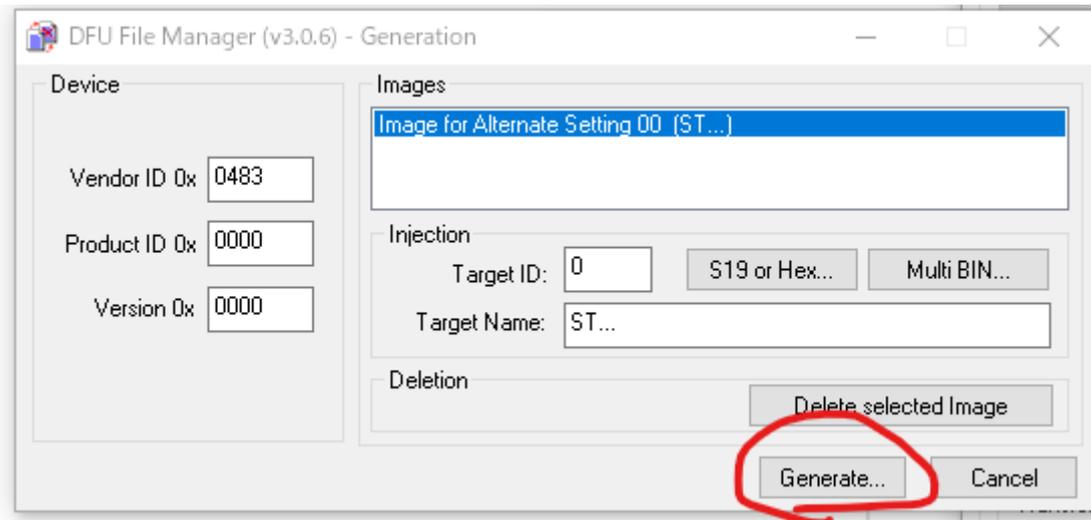
First, start DFU File Manager.



Select I want to GENERATE a DFU file from S19, HEX or BIN files .



Click the S19 or Hex... button. ch.hex firmware ch.hex file such as ch.hex .



Click the Generate... button to create a .dfu file with an appropriate name.
Close the file manager using CANCEL

Write firmware with DfuSe Demo

First start the device in DFU mode. Use one of the following methods to enter DFU mode.

Option 1:

Jumper the BOOT0 pin on the PCB as is shown in below picture



Connect the two rightmost holes, NOT any holes to the left, with a standard Dupont cable or any cable that has small pins that will fit into the holes in the board. Do NOT use force. You may have to bend the pins a little to be able to insert them

Switch on the device. The screen may turn white.

Remove the jumper connection once the device is on.

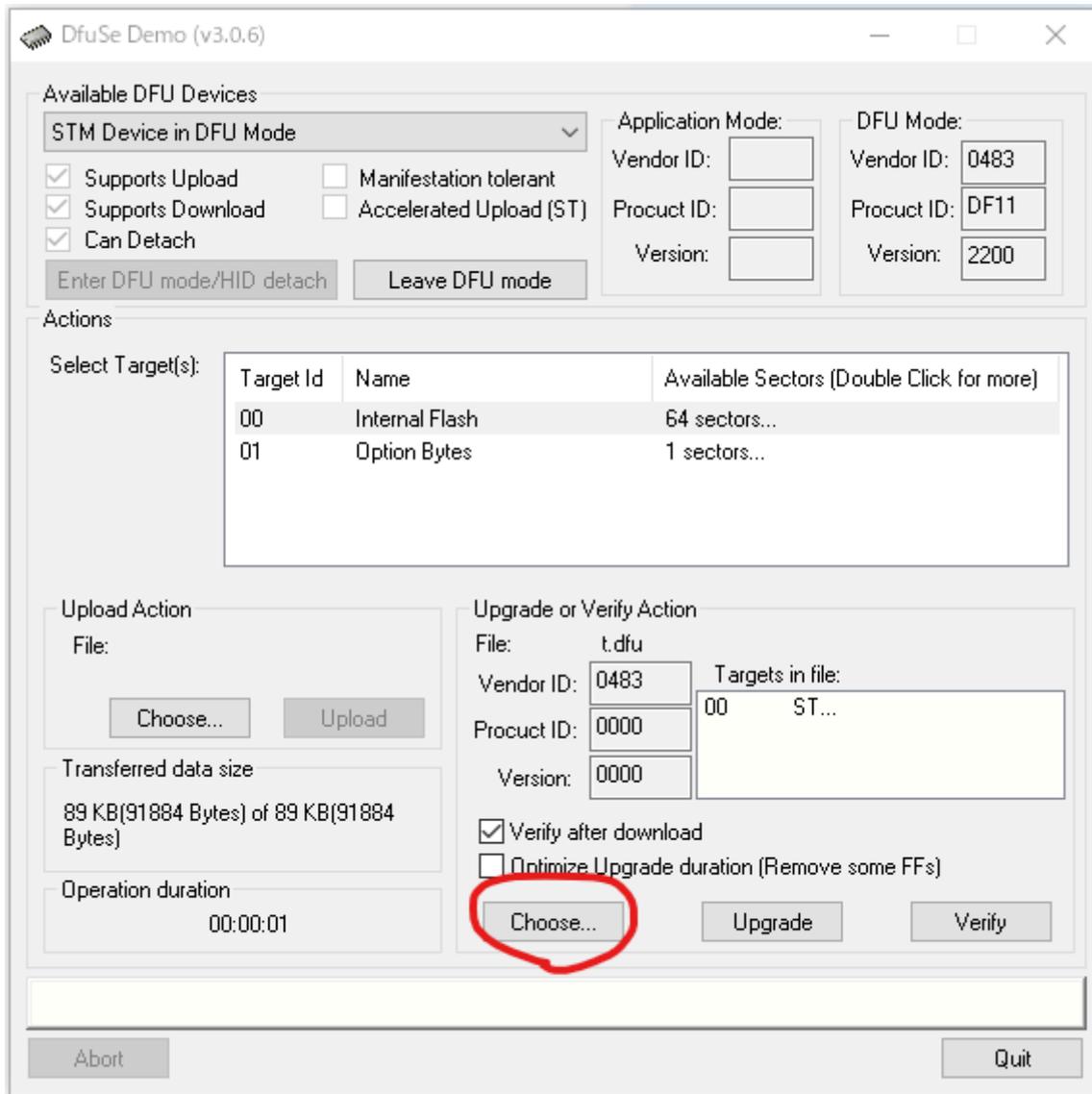
Options 2:

If you have a firmware that has the DFU command buildin:

- CONFIG →DFU RESET AND ENTER DFU Select RESET AND ENTER DFU

Start DfuSe Demo. Make sure that Available DFU Devices has STM Device in DFU Mode .

This automatically appears if the right driver is there for the STM firmware update protocol.



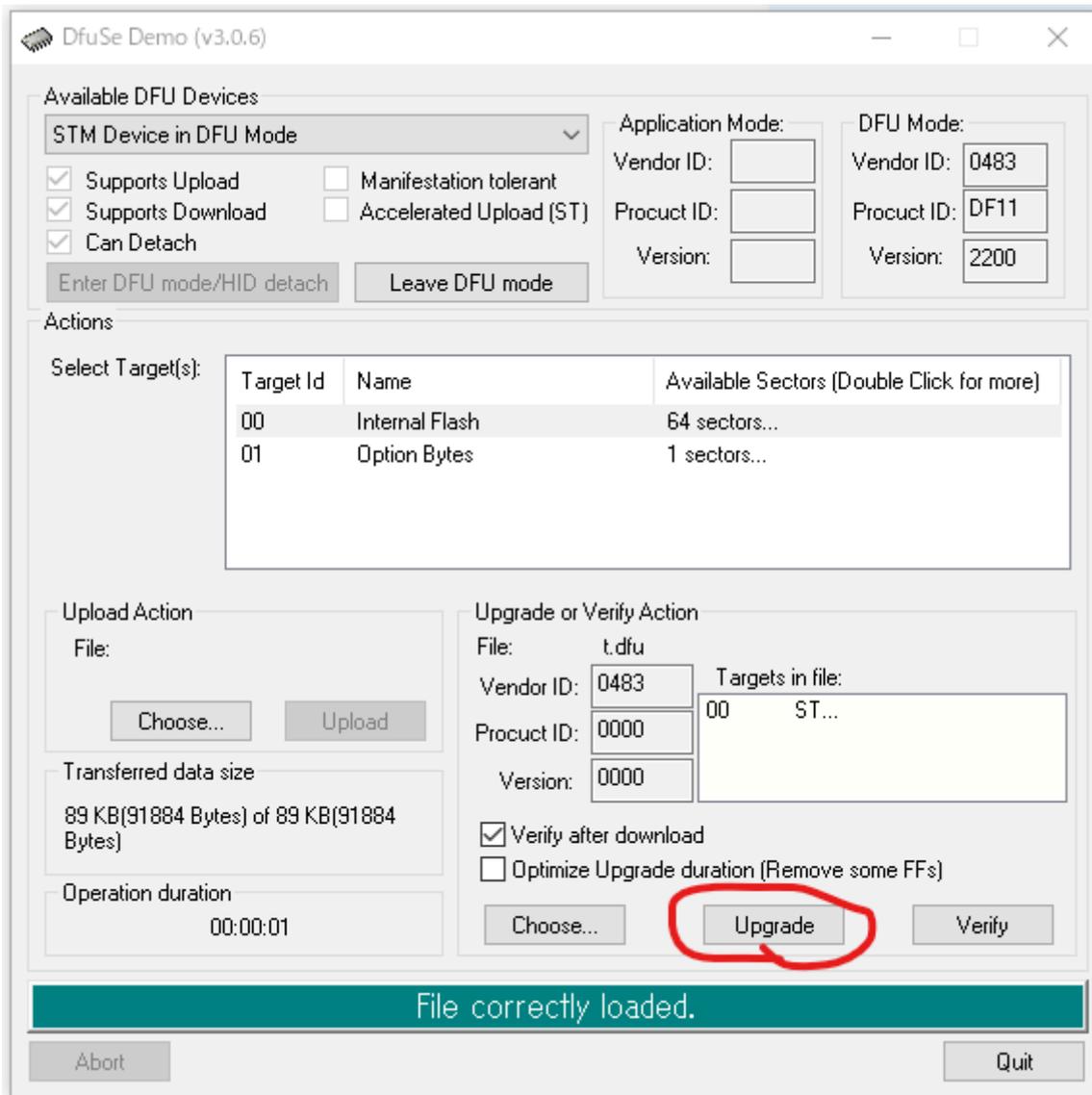
First ignore the red circle and click under "upload action" on the "Choose..." and the "Load" button to make a backup of the current firmware in the nanoVNA. You can always restore this saved firmware if the upgrade did not perform as expected!!!!!!!

Now for the real update look at the red circle and

click Choose...

Select the .dfu file you want to use in your nanoVNA.

If all goes well the bottom bar will turn green and say "File loaded correctly"

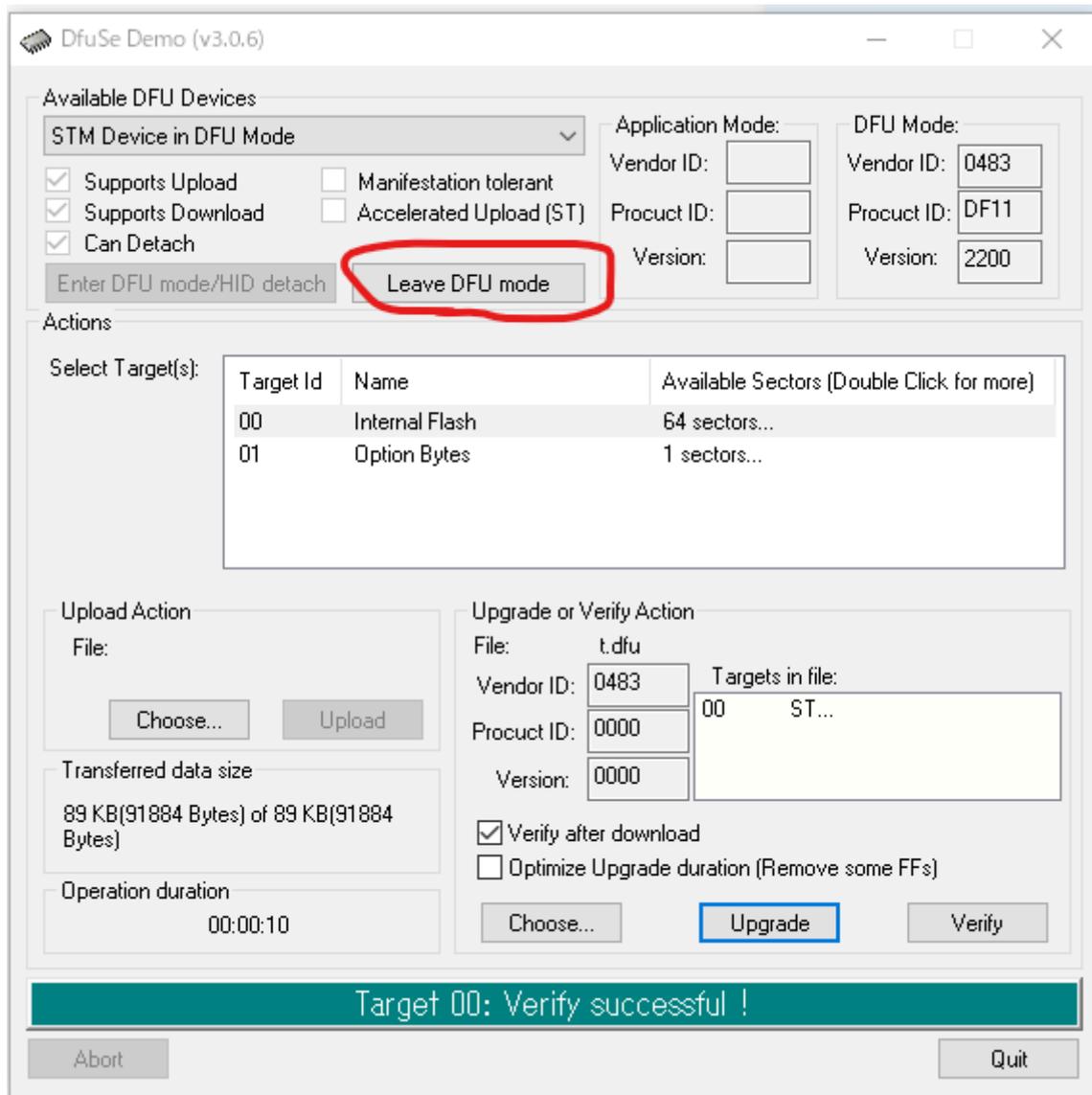


Now the actual programming.

Click the Upgrade button.

YOU may get a warning message about not being able to check if this is the correct firmware but this message can be ignored!

The green bar should now state "verify successfull"



This screen will be displayed when writing is complete. Click the Leave DFU mode button to exit DFU mode. The device will reset and boot with the new firmware. If this does not happen switch the nanoVNA off and on.