

How to use the X-CUBE-MEMS2 software package and X-NUCLEO-IKS01A1 + NUCLEO-F401RE

NOTE: this explanation is for Windows 7 (64bit – Pro.) and KEIL v.5.13.0 the full version (this because the FW is around 80K)

- [How to install the SW \(X-CUBE-MEMS2\) for using the X-NUCLEO-IKS01A1 and NUCLEO-F401RE](#)
- [Sensor Fusion GUI](#)
- [Directory where is installed the SW](#)
- [Copy the directory of the original installation in another directory](#)
- [Use the SW](#)

The explanations, **How to install the SW (X-CUBE-MEMS2) for using the X-NUCLEO-IKS01A1 and NUCLEO-F401RE** are [here](#)

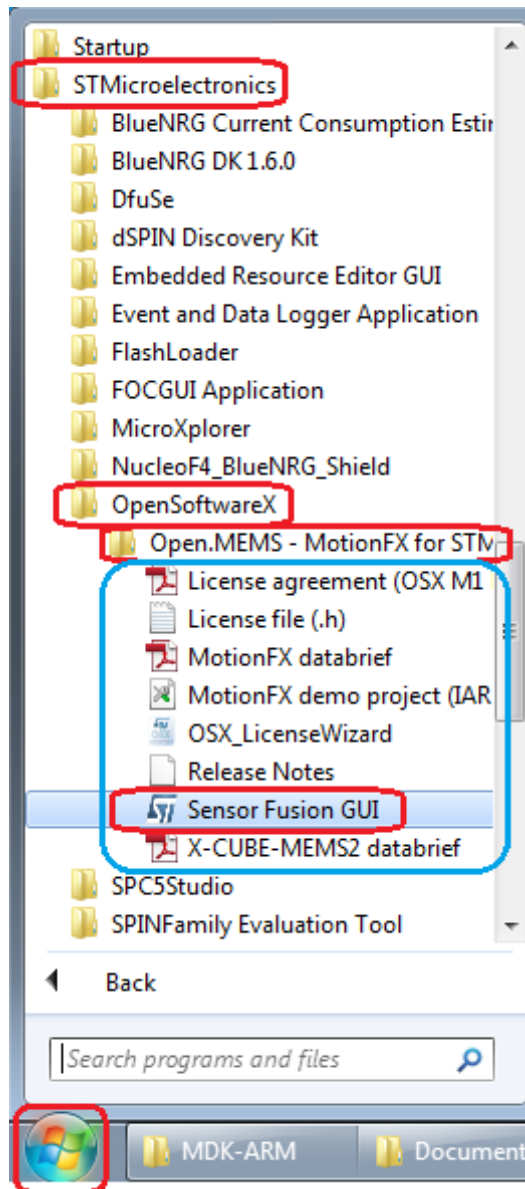
Sensor Fusion GUI

On the PC if you select:

START → ALL PROGRAMS → STMicroelectronics → OpenSoftwareX →

Open.MEMS–MotionFX for STM32

you must see something like the BLUE box below



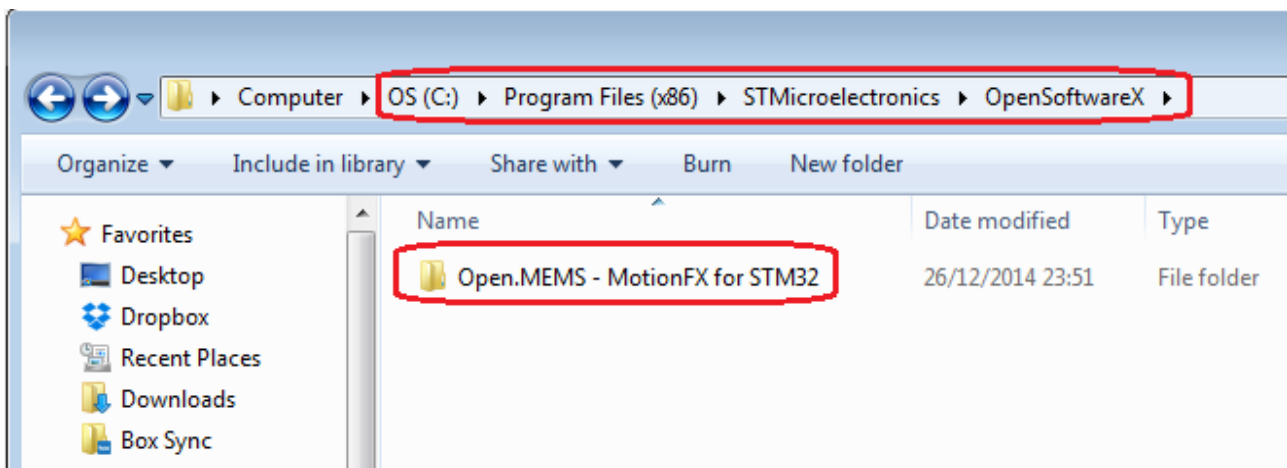
Directory where is installed the SW

On your **PC** in the **directory**:

C:\Program Files (x86)\STMicroelectronics\OpenSoftwareX

You must have the subdirectory:

Open.MEMS - MotionFX for STM32



Please copy the directory: Open.MEMS - MotionFX for STM32
(that is in: **C:\Program Files (x86)\STMicroelectronics\OpenSoftwareX**)

in an other directory because in the next step, we will use the STM32 SW examples that are present in the Open.MEMS - MotionFX for STM32.

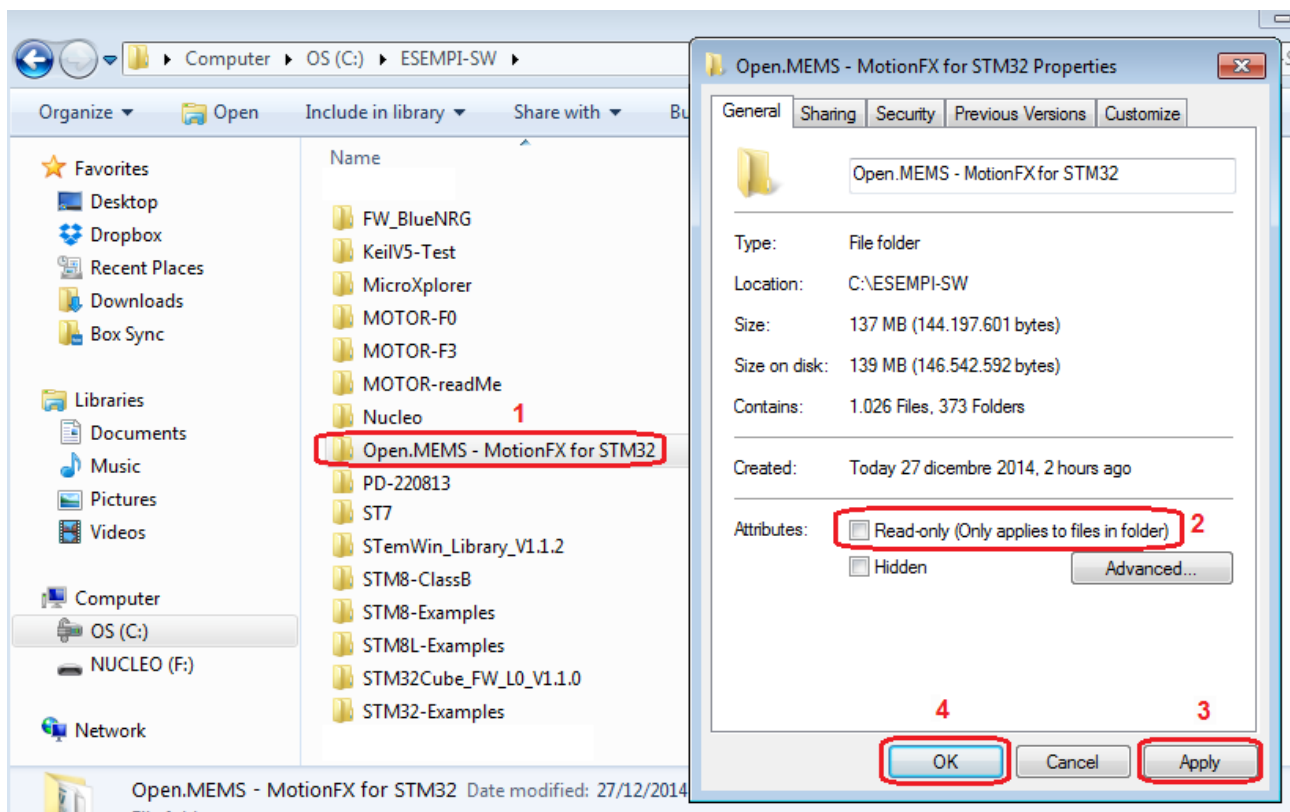
In this way we preserve the original installation of the X-CUBE-MEMS2.

ATTENTION: at the end of the copy is necessary remove the attribute: **Read only....** if it is present, below there is the right configuration.

NOTE:

I copied the: **Open.MEMS - MotionFX for STM32**

in: **C:\ESEMPI-SW\Open.MEMS - MotionFX for STM32**



Use the SW


In our case we use the NUCLEO-F401RE and the X-NUCLEO-IKS01A1.

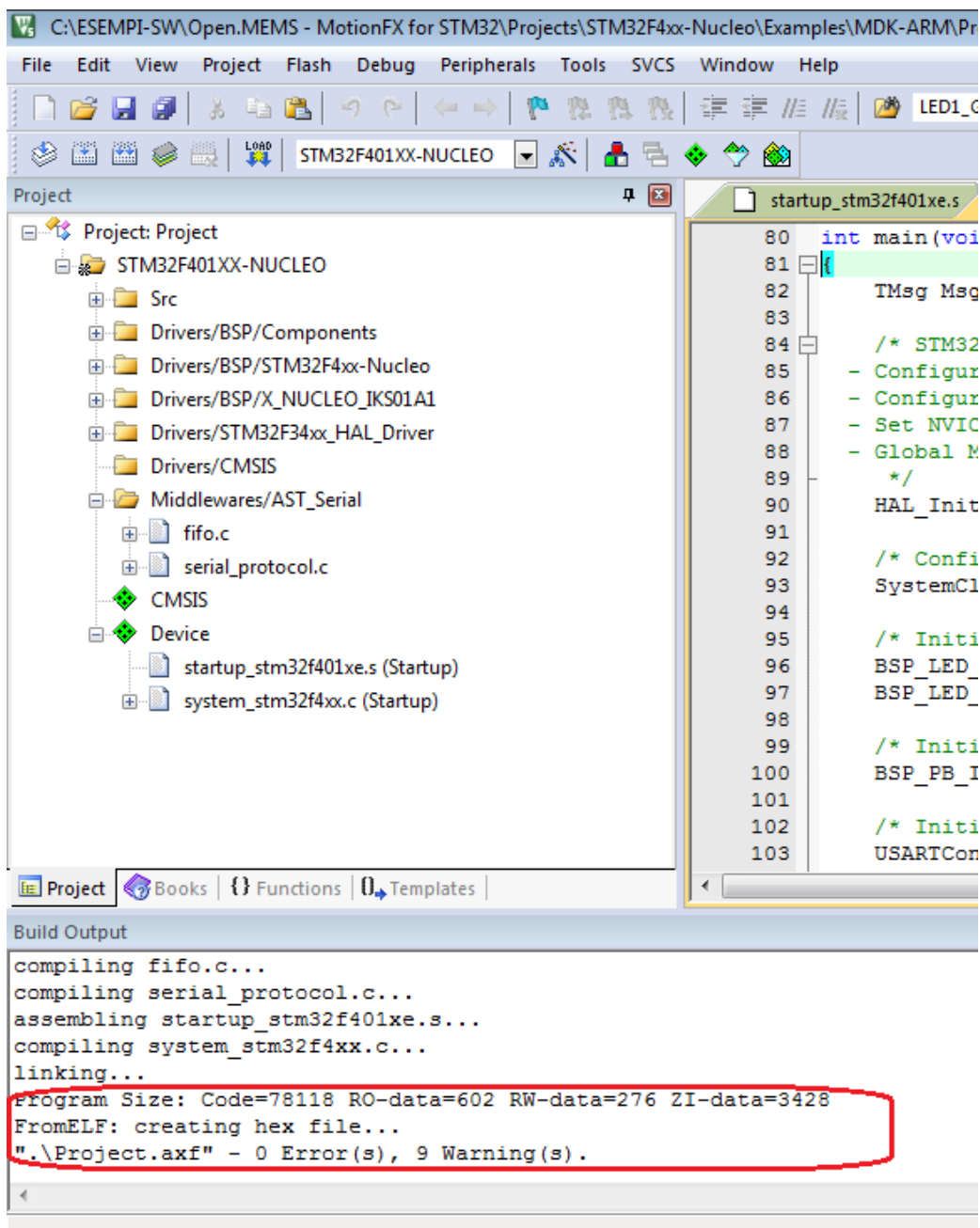
For this reason go in the directory:

C:\ESEMPI-SW\Open.MEMS - MotionFX for STM32\Projects\STM32F4xx-Nucleo\Examples\MDK-ARM

and double click on the:

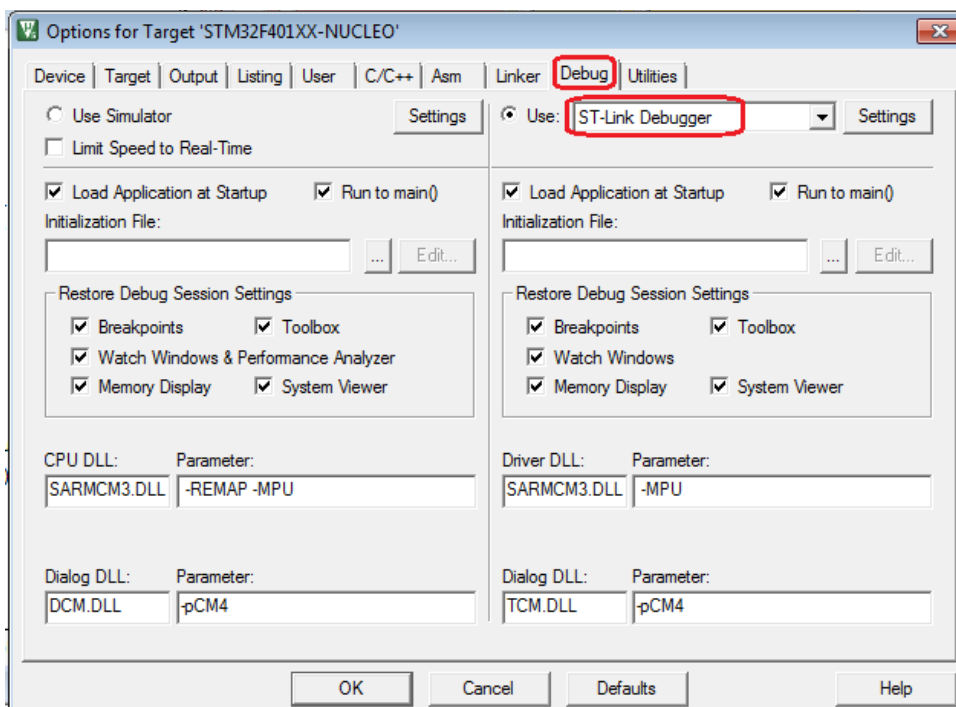
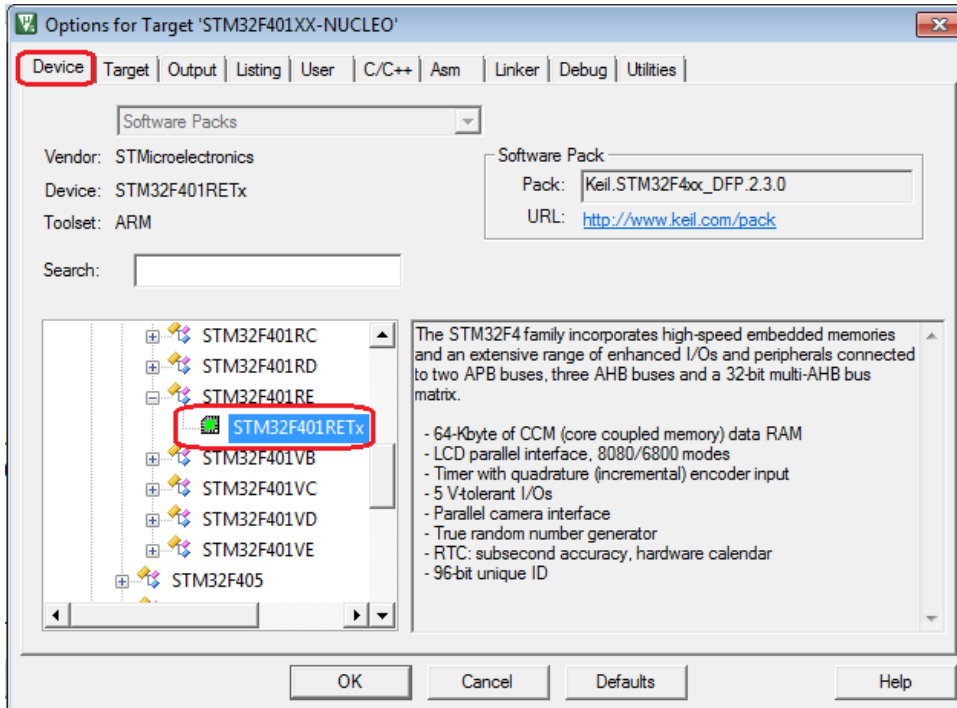
Project.uvprojx

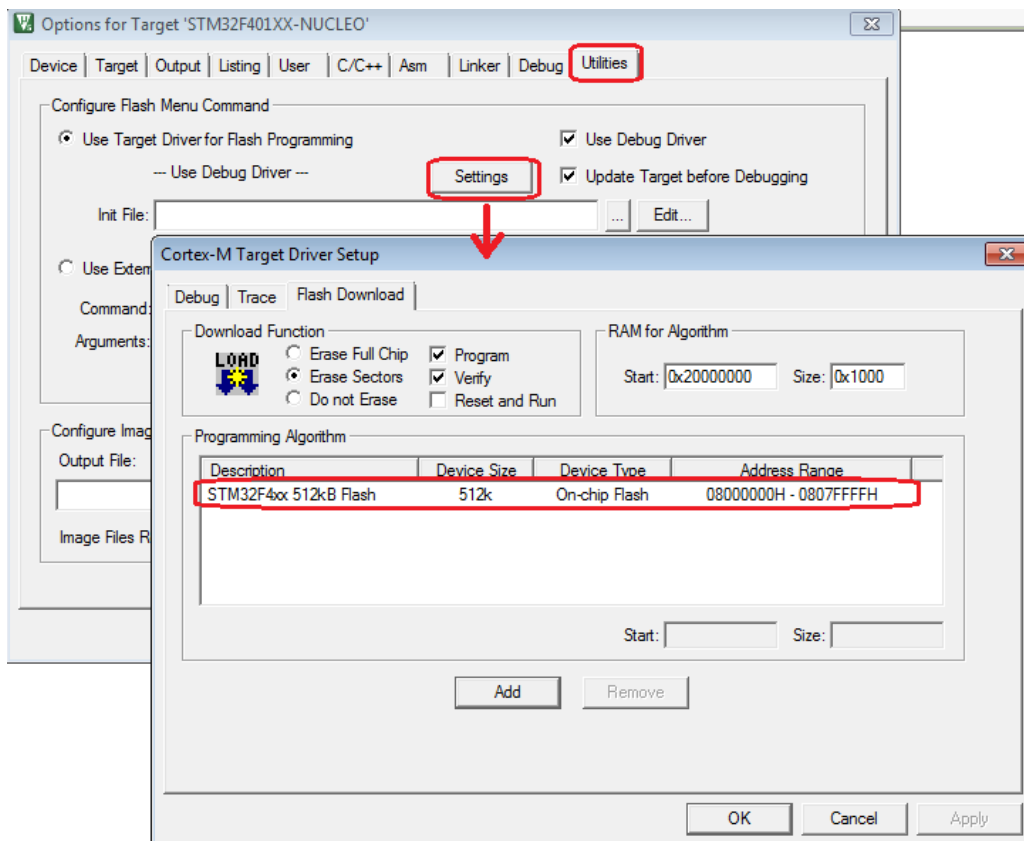
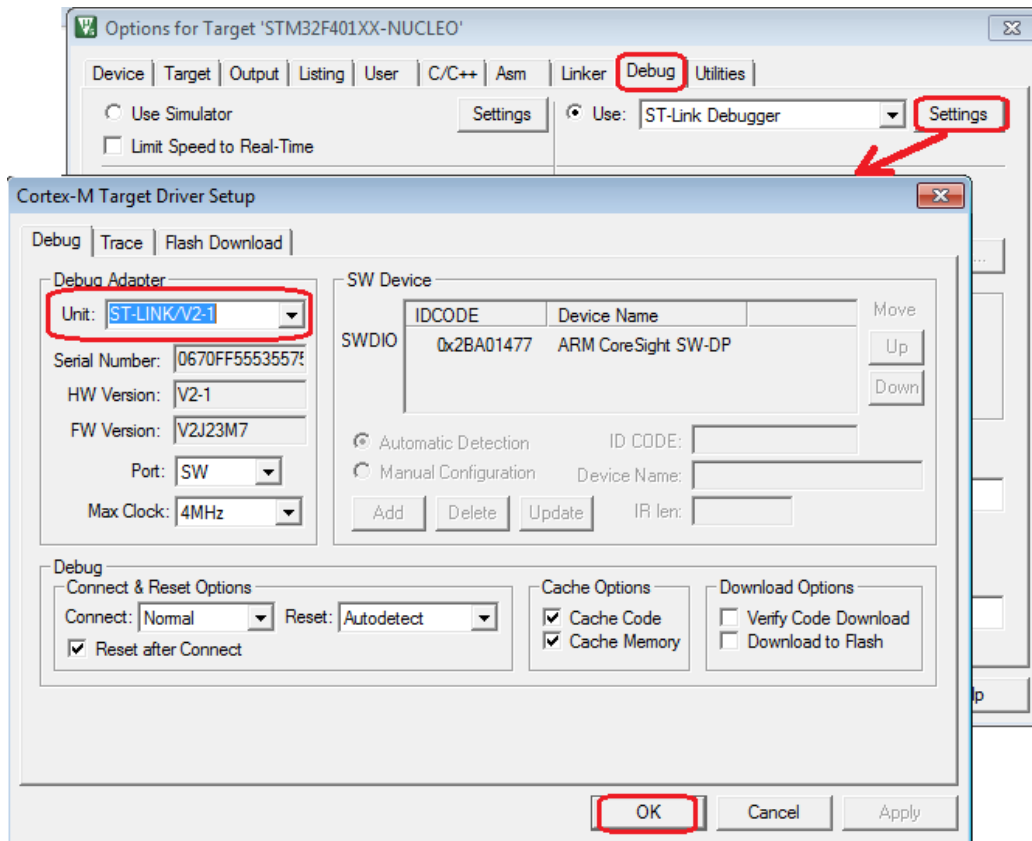
Now build all  and you must see something like below.




ATTENTION: the compilation exceeded the 32K of exe for this reason is necessary a full version of KEIL.

Now verify the configurations  shown below.

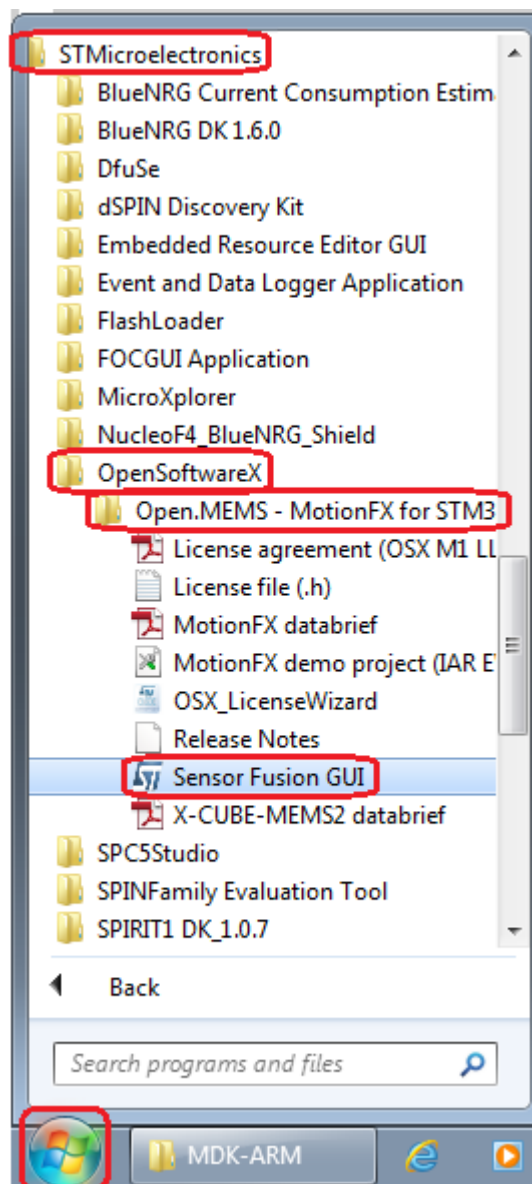




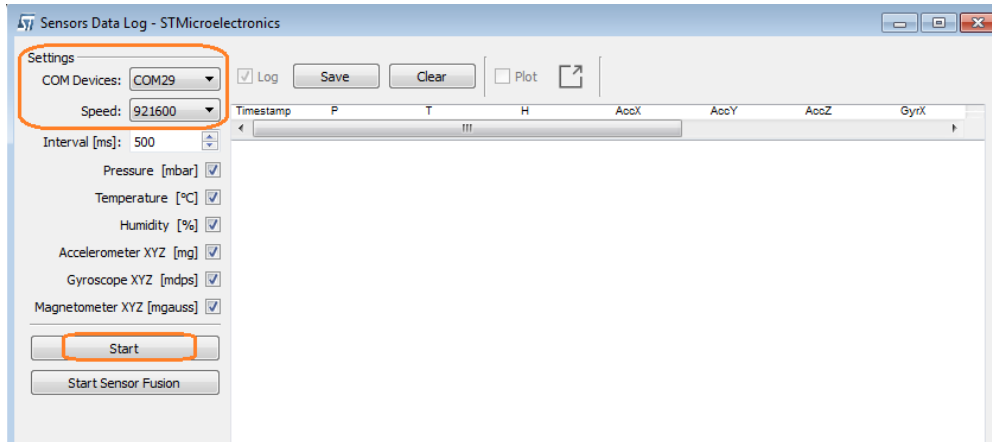
Now download  the FW in your NUCLEO-F401RE.

At this point you must run the: **Sensor Fusion GUI**
that is here:

START → All Programs → STMicroelectronics → OpenSoftwareX → Open.MEMS - MotionFX for STM32 → Sensor Fusion GUI
(see below)



From the first page that appears press START.



Now the acquisition is running, see below.

