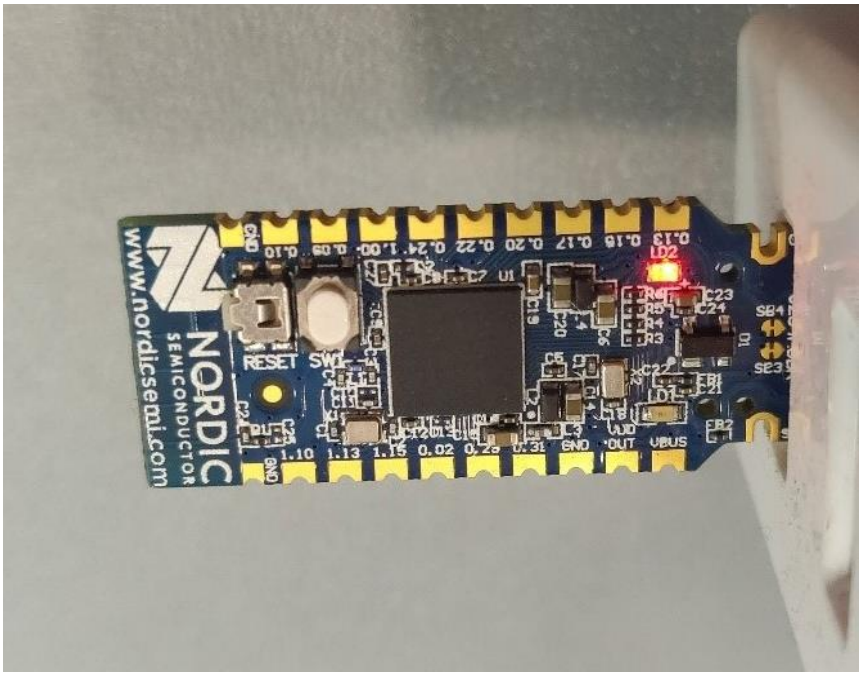
How to Use NRF BLE Dongle with Study Watch

This page lists down the steps to program and use the NRF BLE Dongle with ADI Study Watch on **Windows**.

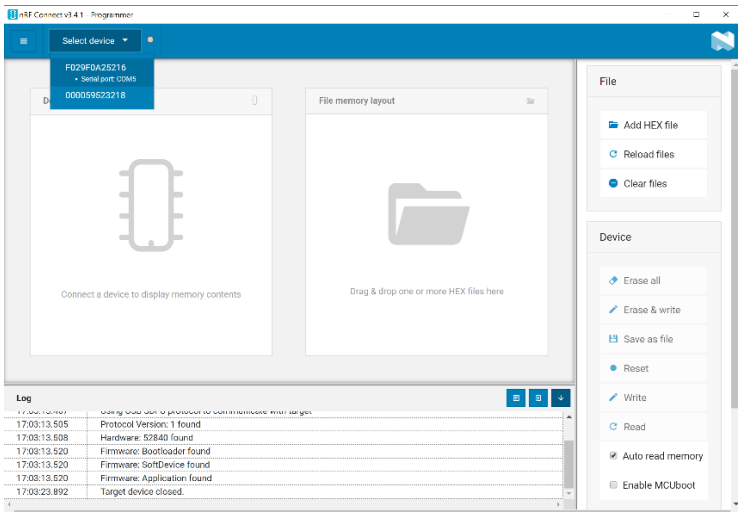
Prepare nRF PCA10059 as the BLE Dongle

1. Download and install nRFConnect Programmer PC tool going through the following link: https://infocenter.nordicsemi.com/index.jsp?topic=%2Fug_nc_programmer%2FUG%2Fcommon%2Fnrf_connect_app_installing.html

2. Press RESET button on the board (can be seen labeled as RESET on the left side of below image) and wait for the RED LED light to glow.

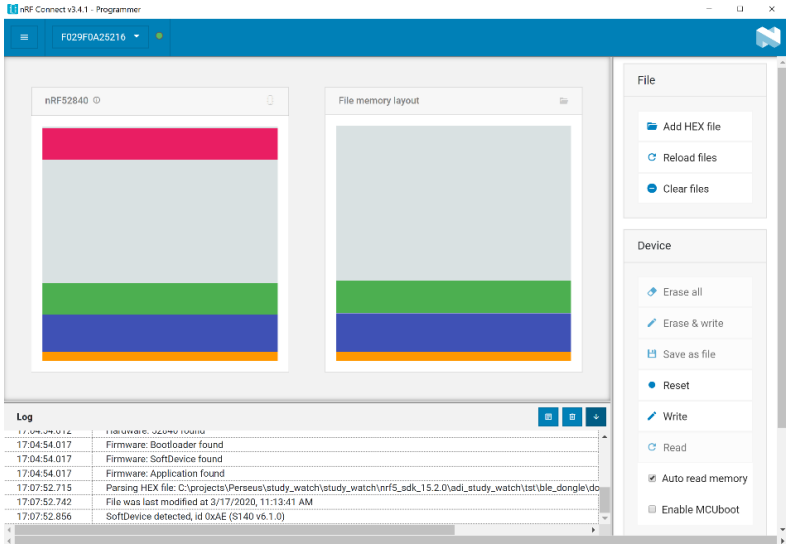


3. From nRF Connect Programmer, go to top left drop down for ‘Select Device’ and select the COM Port getting shown for the board as in Figure below.



4. From right side pane, File -> select Add HEX File and choose the path to the dongle_hex file (*./study-watch-sdk/utils/dongle_hex/ADIBLEDongle_S140.hex)* which is available in study-watch-sdk github repository.

5. After that, from right side pane, select Device -> select Write option.



6. This would program the nRF device as a Dongle with selected hex file. At the end, board would Reset, and Dongle will be ready to use.

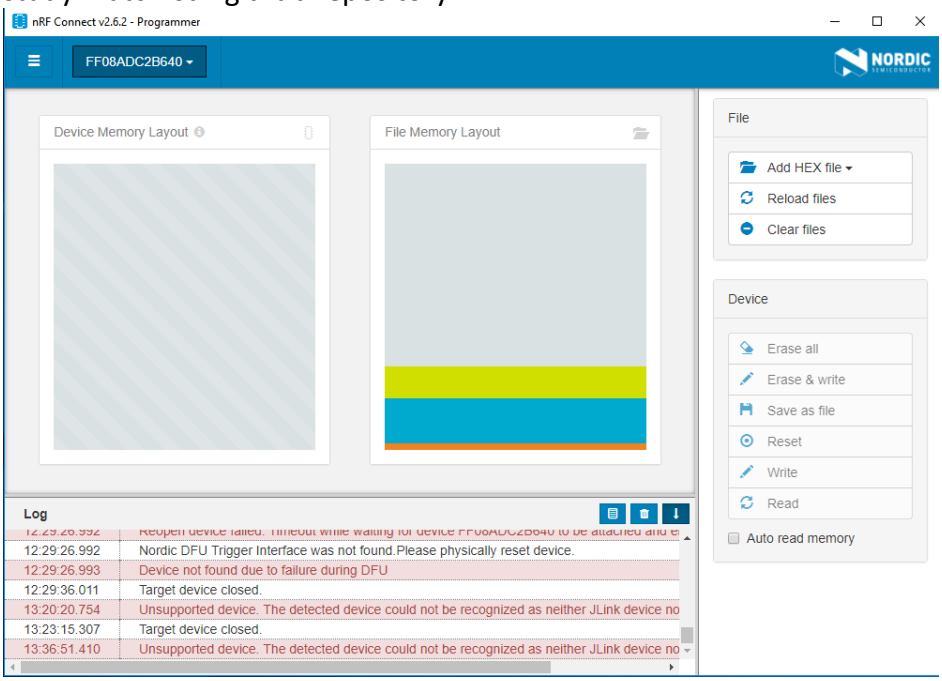
7. Note the COM port number of Dongle. This will be used to start the SDK communication over BLE.

Prepare nRF DK PCA10056 as BLE Dongle (Optional)

This section is only for users with nRF DK board. Kindly skip this section if you already programmed your nRF device.

1. Download and install nRFConnect Programmer PC tool going through the following link: https://infocenter.nordicsemi.com/index.jsp?topic=%2Fug_nc_programmer%2FUG%2Fcommon%2Fnrf_connect_app_installing.html

2. From right side pane, File -> select Add HEX File and choose the path to the dongle_hex file (*./study-watch-sdk/utils/dongle_hex/ADIBLEDongle_S140.hex)* which is available in study-watch-sdk github repository.



3. Connect the nRF DK though USB cable to PC. Note the COM port number of Dongle. This will be used to start the SDK communication over BLE

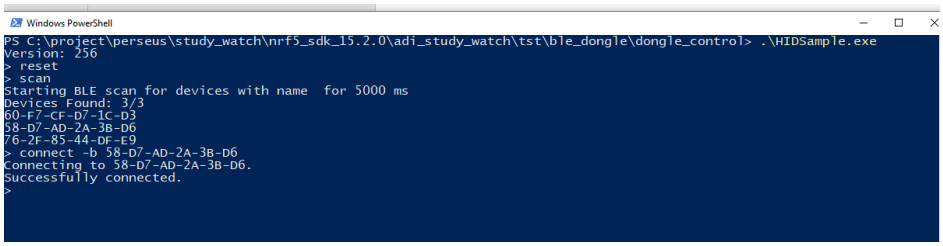
Procedure to use Study Watch SDK over BLE

1. Prepare the study watch

- (Optional) Program the study watch firmware (using Application Wave Tool) and verify from the application (nRF Connect on Android phone) that it gets scanned and listed as “STUDYWATCH_ 58D7AD2A3BD6”

2. Connect the dongle to the target

- Run HIDSample.exe from Command Prompt \ Windows Power Shell.
    - Download the HIDSample.exe from the below github location
    - https://github.com/analogdevicesinc/study-watch-sdk/blob/main/utils/dongle_control/HIDSample.exe
    - Open a Command Prompt or Windows Power Shell and call the HIDSample.exe
- Run the below commands to connect to the watch
    - reset
    - scan
    - connect -b <mac-address>



3. Run SDK example over BLE

- The watch is now connected to the BLE Dongle. You can run the below example script to communicate with the SDK over BLE.
  Getting started — adi_study_watch 4.0.4 documentation (analogdevicesinc.github.io)