WES269 Useful Info and Commands

Table of Contents

MAC Addresses

DK/Dongles

DK Board 1 (Darker Blue):

- MAC: F6:C0:07:82:D2:03
- S/N: 1050224740

Dongle 1 MAC: D9:99:5A:1E:F9:2D

Dongle 2 MAC: D2:BE:42:C8:54:40

DK Board 2 (lighter blue):

- MAC:
- Serial Number: 1050274707

Heltek

Heltec 1:

-

Heltec 2:

- 34:CD:B0:3B:E6:C0

Wireshark Search Queries

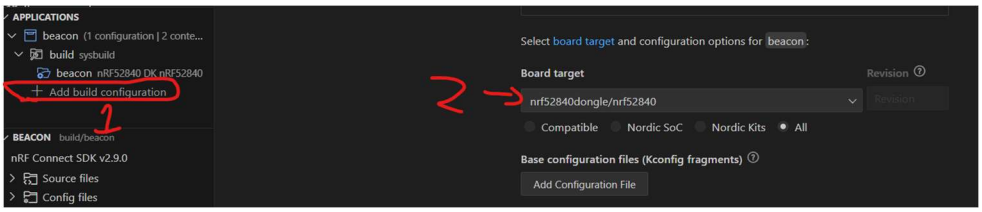
1. btle.advertising_address==MAC
2. btle.scanning_address==MAC || btle.advertising_address==MAC
3.

Board Specifics

Flash Dongles (using nrfutil)

Press button on side, verify it is ready to get flashed (should blink red).

Add build configuration: nrf52840dongle/nrf52840



In terminal, cd to zephyr.hex file. For example:
“C:\ncs\beacon\build_1\beacon\zephyr\zephyr.hex

- Note: most recent build #, not necessarily 1
- May not be “beacon”, will be project name.
    - E.g. C:\ncs\BLE_Advertiser2\ble-week2-starter\ble-peripheral\build\ble-peripheral\zephyr
      C:\ncs\BLE_Advertiser2\ble-week2-starter\ble-peripheral\build_1\ble-peripheral\zephyr

```
PS C:\ncs\beacon> cd C:\ncs\beacon\build_1\beacon\zephyr
PS C:\ncs\beacon\build_1\beacon\zephyr> nrfutil pkg generate --hw-version 52 --sd-req=0x00  --application zephyr.hex --application-version 1 app.zip
```

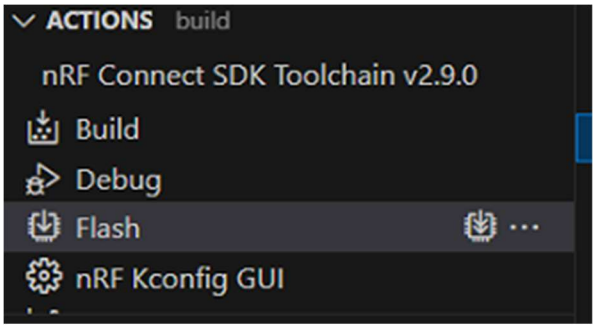
```
PS C:\ncs\beacon\build_1\beacon\zephyr> nrfutil device program --firmware app.zip --traits nordicDfu
```

Run the following 2 lines of code:
nrfutil pkg generate --hw-version 52 --sd-req=0x00 --application zephyr.hex --application-version 1 app.zip
nrfutil device program --firmware app.zip --traits nordicDfu

Once flashed, it should stop flashing red.

Flash DK

Just hit the flash button. You will likely want to see the terminal to see if it flashed properly.



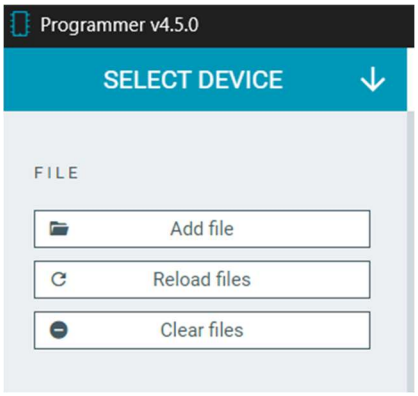
See Output (Serial Output - VCOMM)

To see results of the flash, you need to show serial output. This is shown via: connected devices->1050224740->CVCOMM0->plug (on right)

NRF Connect

Program

This is useful. You can select device to update which you want to flash/reset/etc.



Sniffing

To allow a board to sniff, you should Erase all and/or clear files on the selected/desired board.

1. Download the “nrf_sniffer_for_bluetooth_le_4.1.1” files and extract them.
2. Open NRFConnect -> program.
3. Select device
4. Add file -> “nrf_sniffer_for_bluetooth_le_4.1.1\hex”
    a. Mine is at: C:\Users\chatw\Downloads\nrf_sniffer_for_bluetooth_le_4.1.1\hex
    b. sniffer_nrf52840dk_nrf52840_4.1.1.hex for DK (large) board
    c. sniffer_nrf52840dongle_nrf52840_4.1.1.hex for dongle (small) board
5. Write

“Config not built” bug when Flashing

Try a Pristine build (refresh button here).

Phone App

Heltec ESP Boards

Mac Address

WiFi.macAddress()

Boards

Find which board

ls /dev/tty*

Note: I could not get this to actually work. I just unplug and flash one at a time...

Flash specific board

pio run -t upload --upload-port /dev/ttyUSB0

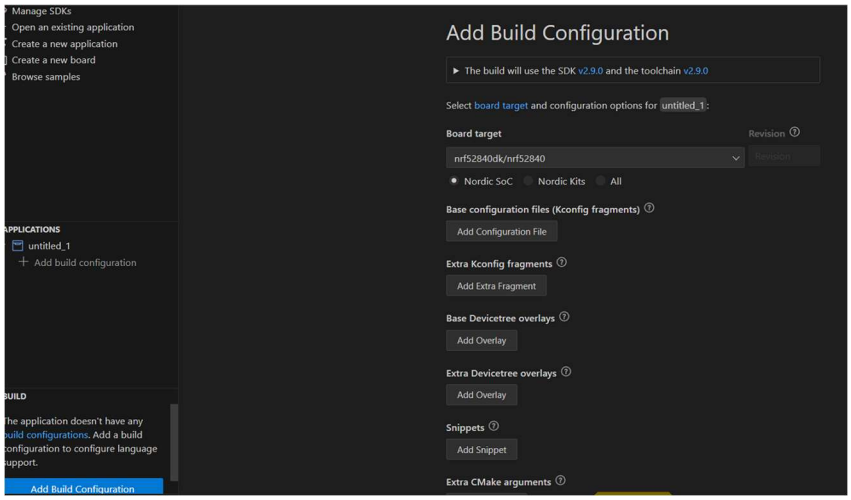
Note: I could not get this to actually work. I just unplug and flash one at a time...

VS Code

Build Configuration

DK: nrf52840dk/nrf52840

Dongle: nrf52840dongle/nrf52840



Bug: Extensions stop showing up in NRF (can't flash, etc)

If NRF stops showing extensions properly, do following:

Extensions -> disable-> restart extension -> enable