Steps for installing bootloader in SAMD51
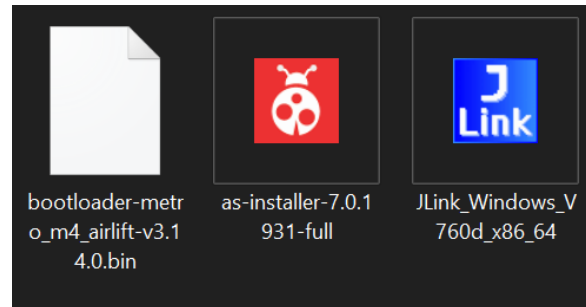

Install all files and programs

1. Download .bin file from https://github.com/adafruit/uf2-samdx1/releases. In this file, I installed on board Metro M4 Airlift.

So, I downloaded this file bootloader-metro_m4_airlift-v3.14.0.bin

2. Download J-link software and documentation pack setup program from https://www.segger.com/downloads/jlink#J-LinkSoftwareAndDocumentationPack

3. Download Atmel Studio 7.0 program from https://softfamous.com/atmel-studio/

Steps for wiring

1. Connect between J-link board and Metro M4 board by using SWD Cable.

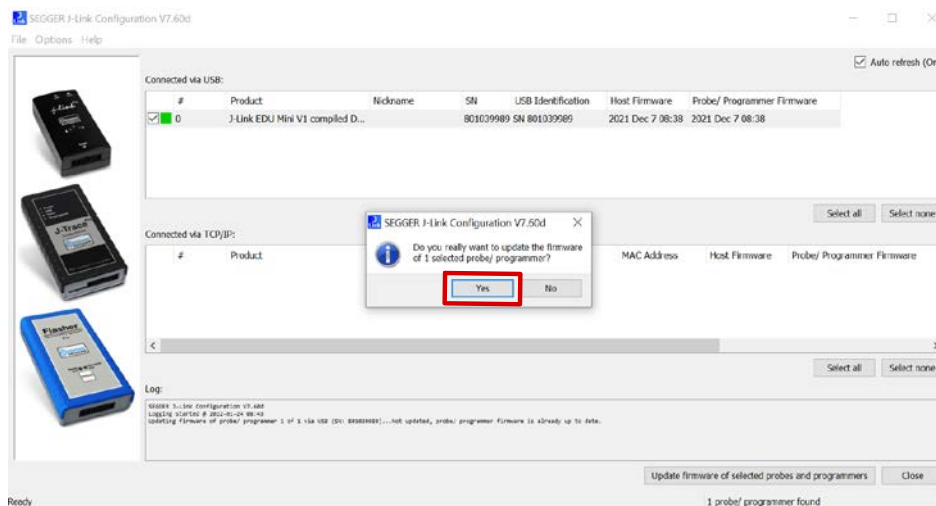2. Connect USB cable from PC to J-Link board and PC to Metro M4.
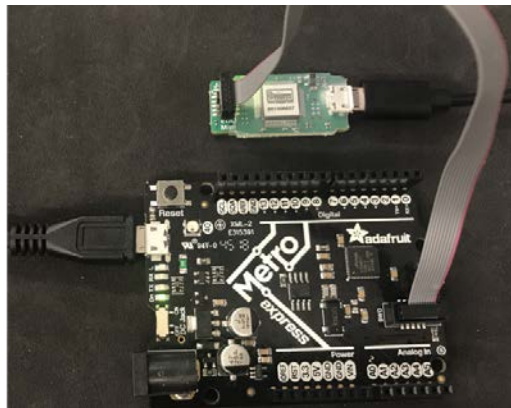
Steps for updating J-Link Firmware in J-Link software and documentation pack setup
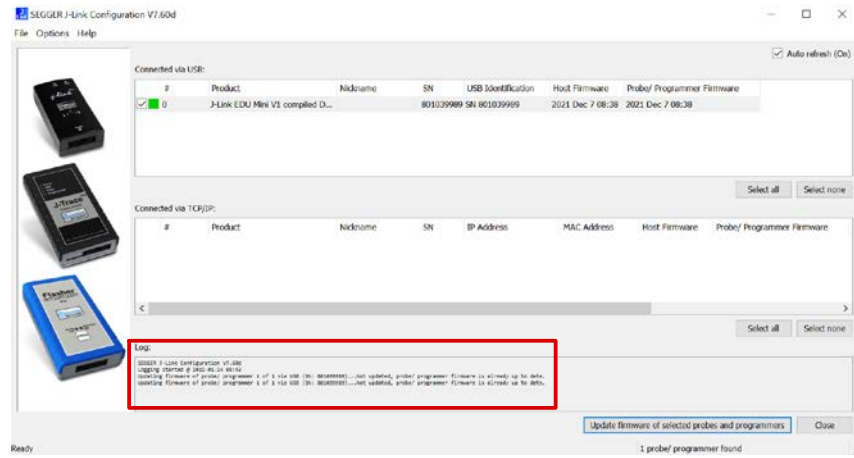
1. Select J-link device by checking mark in the box in front of the desired device. Click Update firmware of selected probes and programmers.
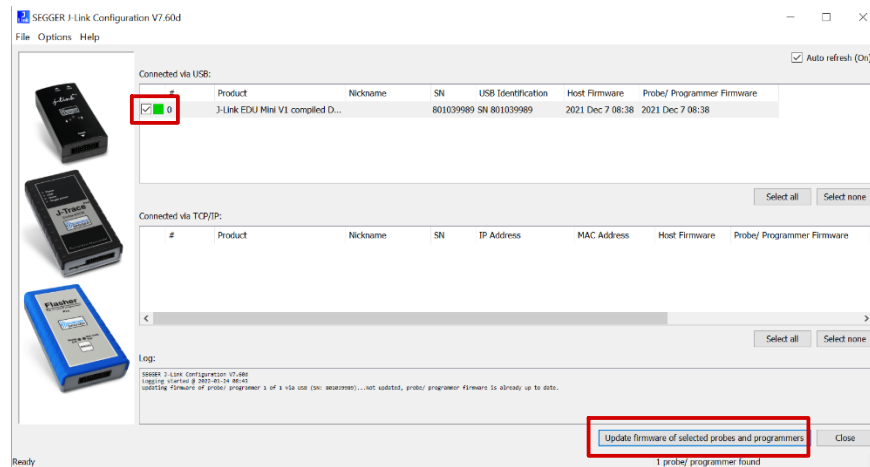
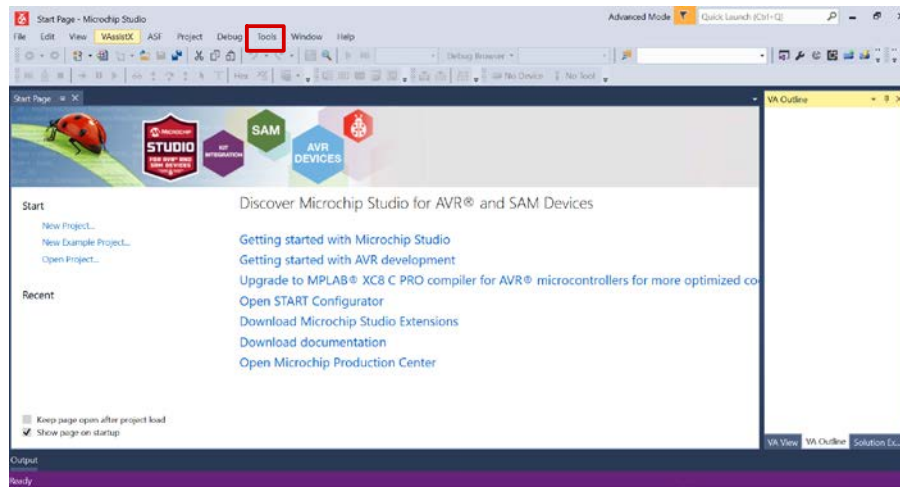2. A pop-up screen will appear, press Yes.

3. At Log box will show the text 'Firmware is already up to date'.

Steps for installing bootloader in Atmel Studio 7.0
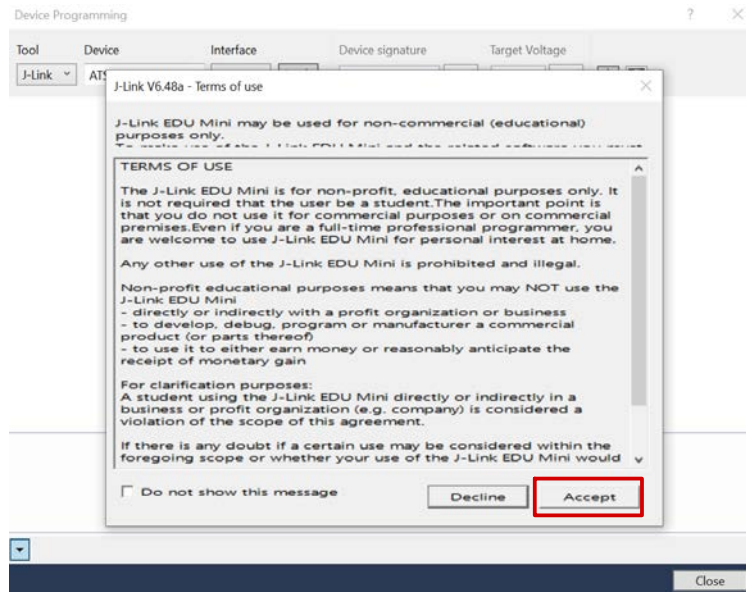
1. Click Tool > Device Programming

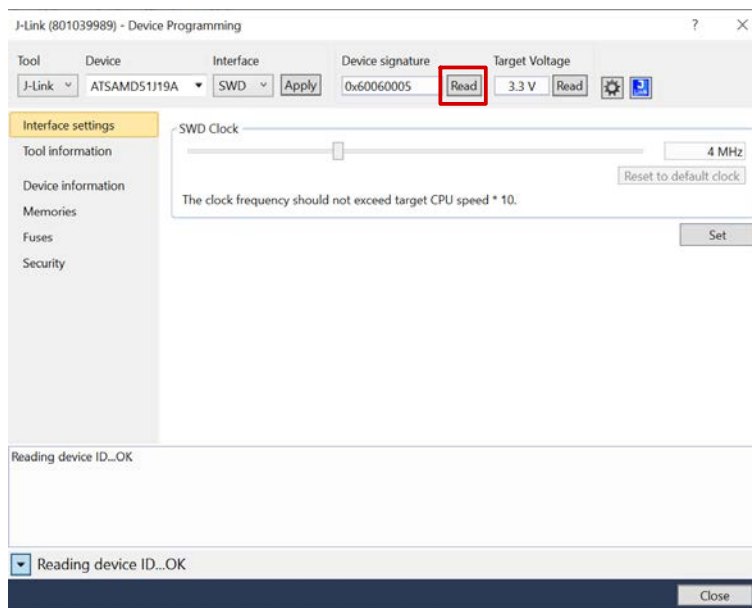2. A pop-up screen will appear, select Tool, Device, and Interface as shown below. Click Apply button.
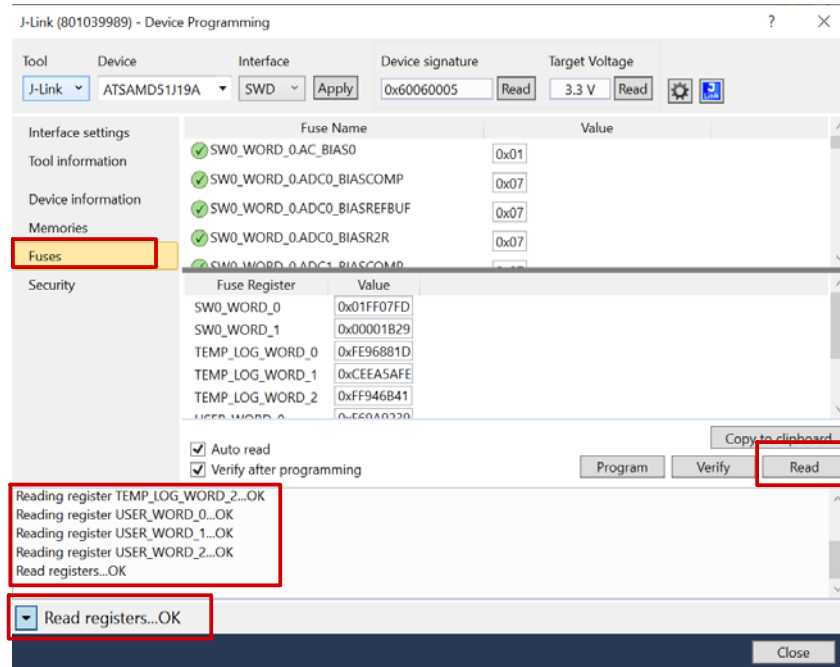
3. A pop-up screen will appear, click accept button.

4. Click Read button, the number will show on Device Signature and Target Voltage.

5. Select Fuses menu from sidebar. Click Read button, the text 'Read registers… OK' will show at the bottom box.

6. Change USER_WORD_0.NVMCTRL_BOOTPROT from 16 kbytes to 0 kbyte. Click Program button, wait for confirmation that the fuses have been set and press the Verify button.
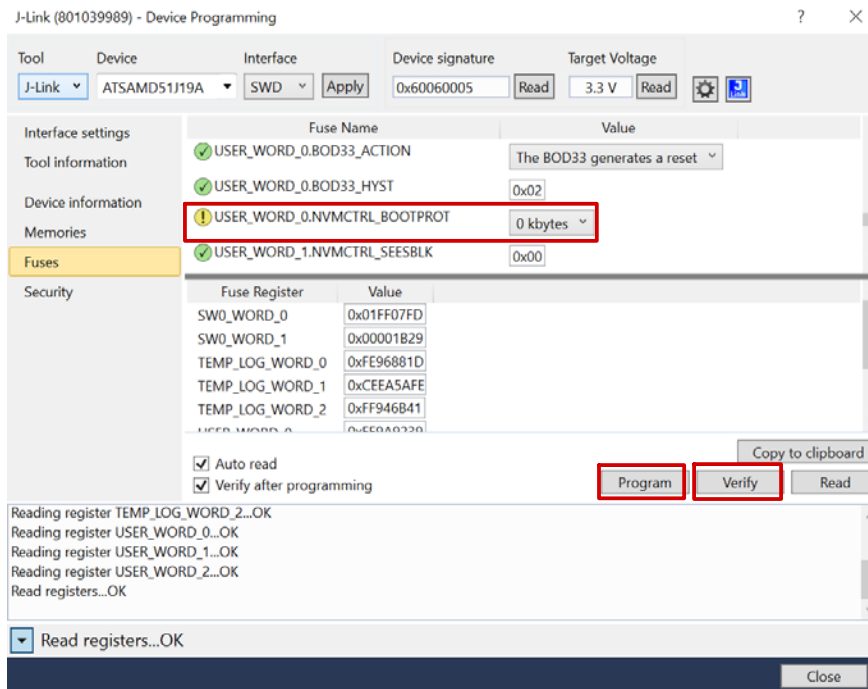
7. Select Memories menu from sidebar. At Flash (512 KB), Choose .bin file that downloaded. Check mark in the box in front of Erase Flash before programming and press Program button.
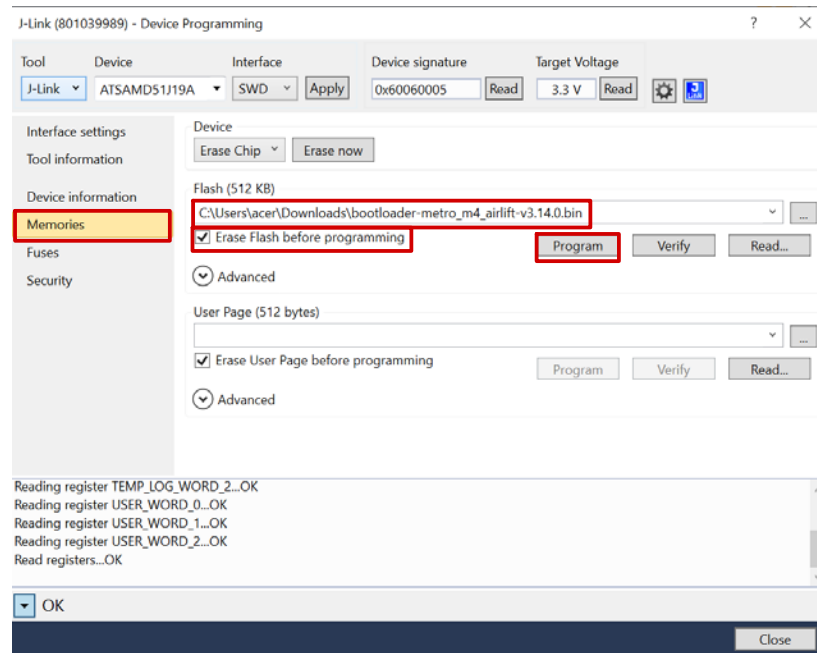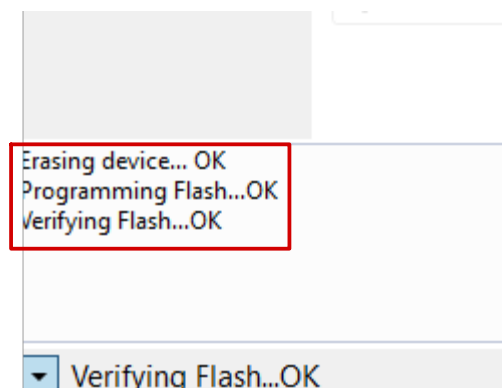

8. After press Program, the text will show as below

Erasing Device… OK

Programming Flash… OK

Verifying Flash… OK

9. Select Fuses menu from sidebar again and change BOOTPROT back to 16 kbytes.