



Fixing broken MSP430 Boot loader

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1 Boot Loader

In the process of msp 430 project development the embedded memory can be accessed with the help of boot loader which was also known as Boot strap loader(BSL). It allows the user to communicate with the available memory in prototype or initial phase of product development. The available flash memory or programmable memory (FRAM) and data memory also known as RAM can be modified as required by users. Boot loader actually control the data exchange activities of the MCU hence, avoiding accidental removal or overwriting of BSL commands. In case, you have created a program that accidentally erased or overwritten the boot loader file, following procedure explains how we can fix it.

2 Flashing MSP module with bootloader

If main memory is being erased when flashing MSP module, follow this document to upload it again

2.1 Requirements

- MSP module
- TI Launch Pad
- Female- female wire connector
- Software [FET- Pro 430](#)
- Bootloader file [bootloader v1.0.1.txt](#)

2.2 Steps

2.2.1 Step1

Connect the MSP430 module with the TI launch pad as per following diagram.

MSP430 module	TI launch pad
3V3	3V3
GND	GND
IO	RST
CLK	TEST

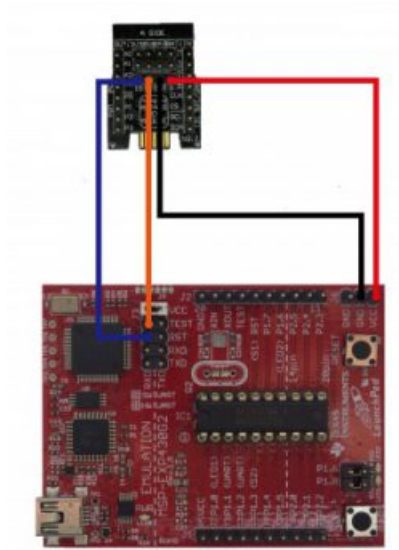


Figure 1: Connection diagram of MSP 430 and TI launch pad

2.2.2 Step 2

Run the FET Pro430 and load the bootlaoder_v_1.0.1.txt file as shown in diagram below. Make sure the bootloader file version is the latest i.e. v_1.0.1.

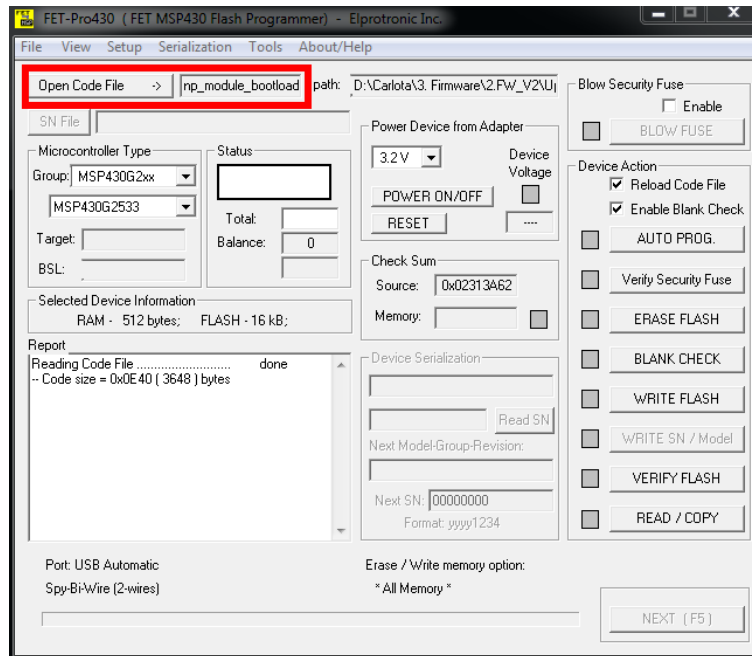


Figure 2: Opening the bootloader file in FET-pro430

2.2.3 Step 3

Go to Setup → Connection/Device Reset and select the following items

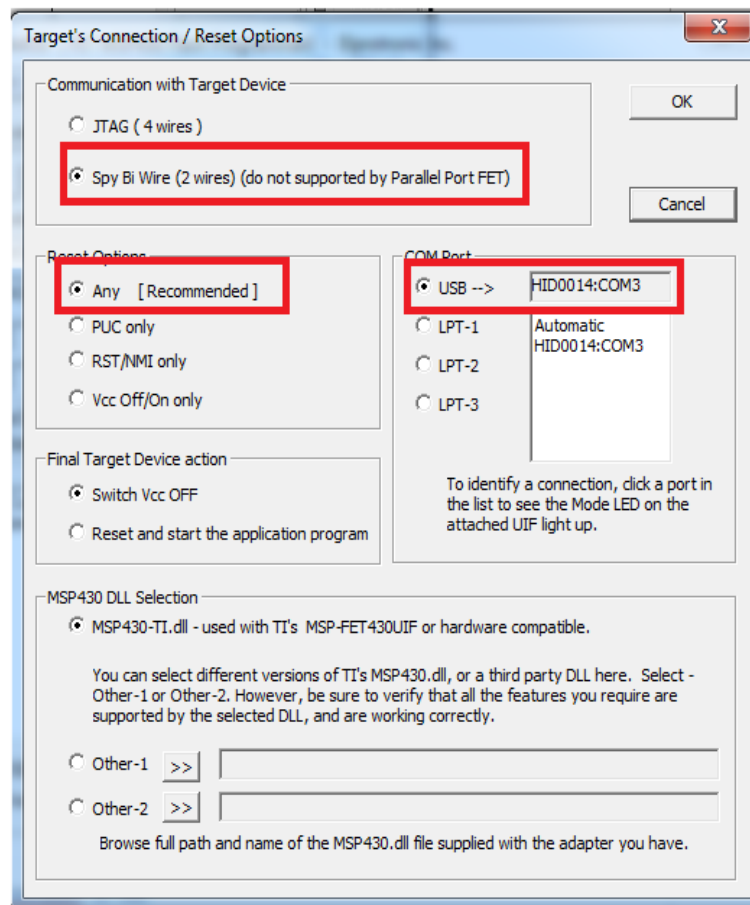


Figure 3: Configuring the target connection options.

2.2.4 Step 4

Go to Setup → Lock/ Unlock Setup and select Yes

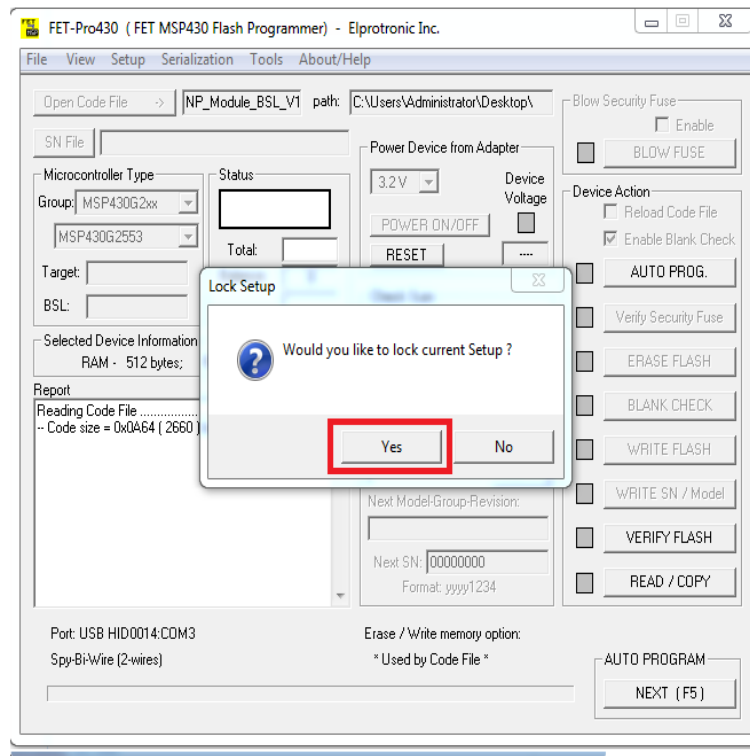


Figure 4: Finalize the Setup using lock/unlock Setup option.

2.2.5 Step 5

Press next to upload the bootloader to the MSP module

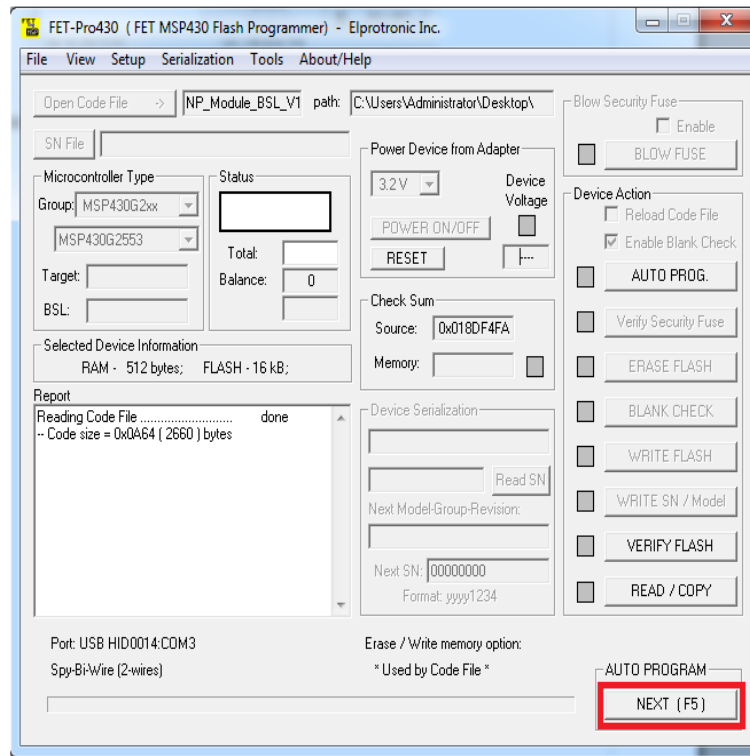


Figure 5: Start uploading the bootloader to the module.

2.2.6 Step 6

Wait until the process is finished and the status has updated to 'Pass'

3 Miscellaneous

During the setup of target connection sometime the FET-pro430 continue to give error like target not found. In such cases try folowing:

- Plug the target usb into another available port.
- Restart FET pro430.