How to Flash Two or More Binary Files Using MCUXpresso IDE

This document introduce how to flash two or more binary files using MCUXpresso IDE.

Also can find some debug configuration methods in it.

I use FRDM-K64 board , it is the same way with other boards. Also there is no difference between flashing two files and more than two files, so here only introduce how to flash two binary files.

The DOC mainly includes two parts:

When using P&E Micro probe, how to flash two binary files.

When using LinkServer(CMSIS-DAP) probe, how to flash two binary files.

Software: MCUXpresso IDE v10.0.2_411

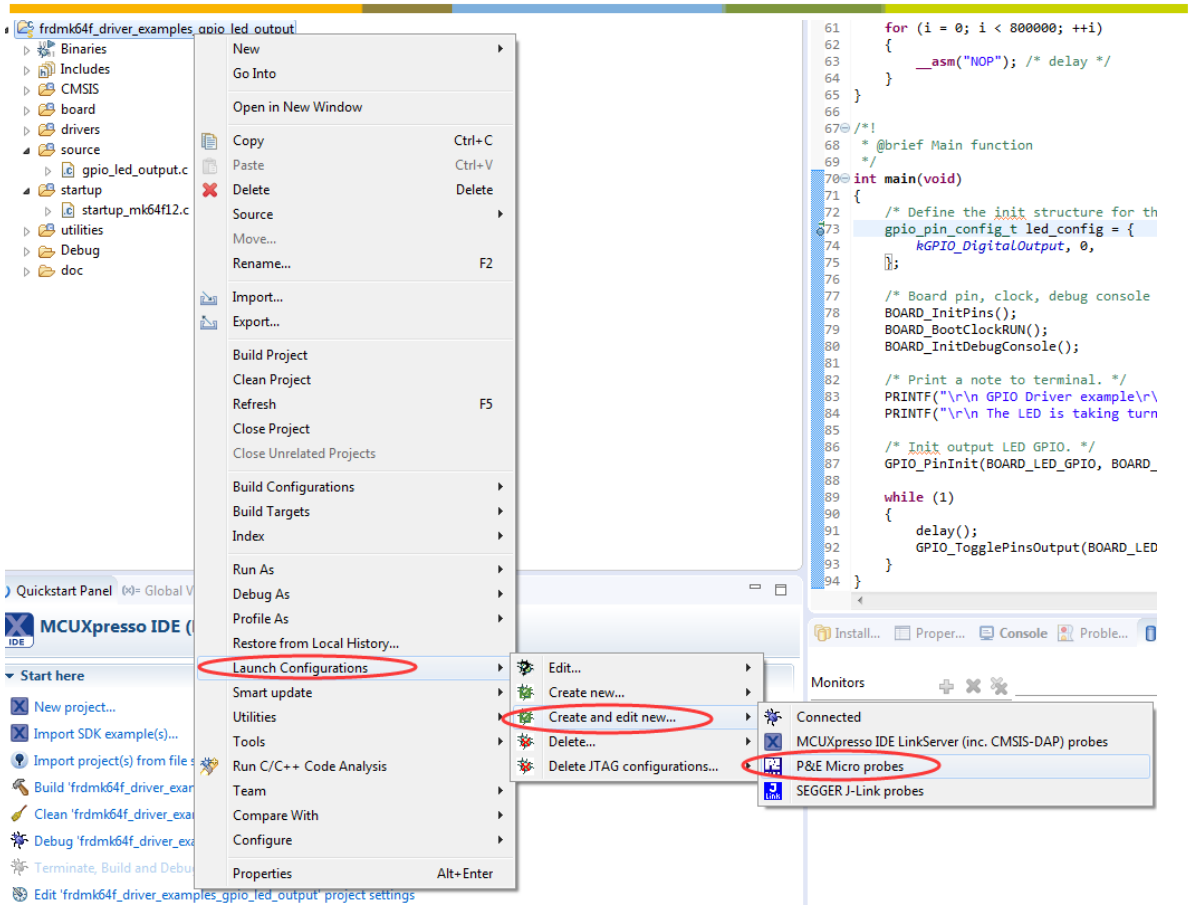
Hardware: FRDM-K64

Suppose that, first binary file is in the current project "frdmk64f _driver_examples_gpio_led_output", the second one is "user_app_red_blink.srec/.bin"

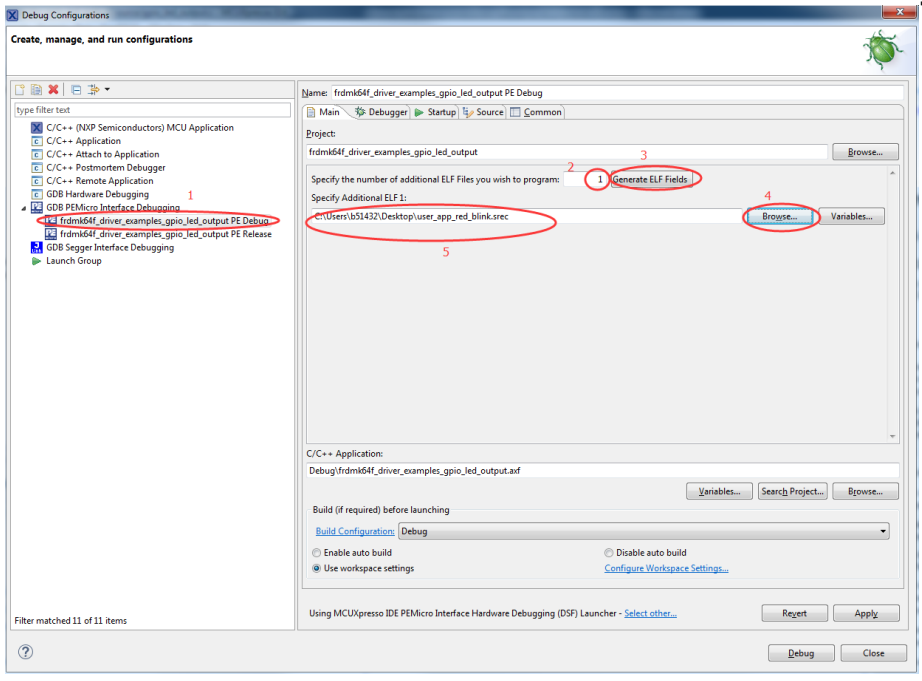
- **When using P&E probe, how to flash two binary files?**

1. Change the firmware of FRDM-k64 board to P&E (You can refer to "Quick Start Guide for the Freescale Freedom Development Platform FRDM-K64F").

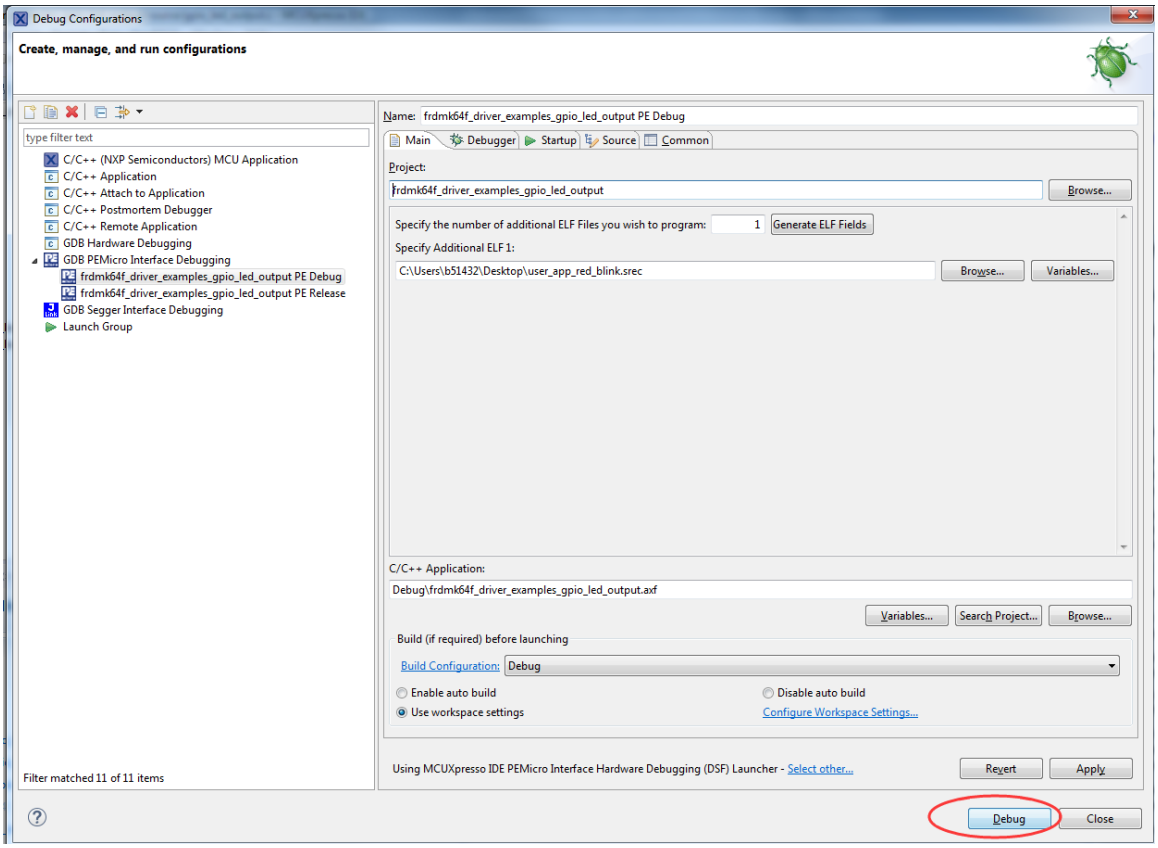
2. Create and edit new P&E Micro probe: **Right click project->Launch Configurations-> Create and edit new…-> P&E Micro probes**



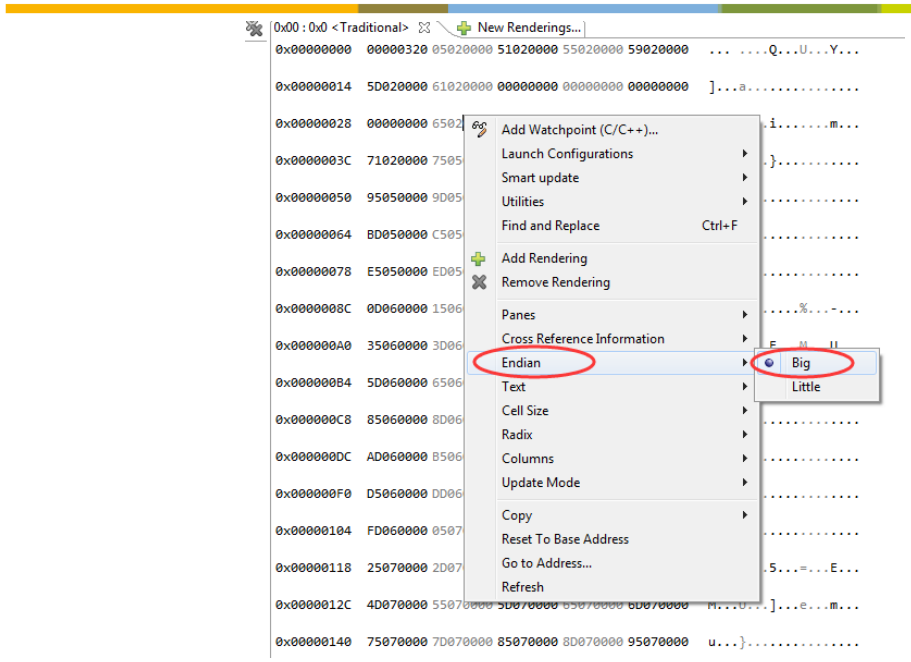
3. Add the second file: **Click the project under PEMicro Interface->Specify the number of additional ELF Files you wish to program to "1"-> Click "Generate ELF Fields"-> Click "Browse" button to choose the second binary file:**

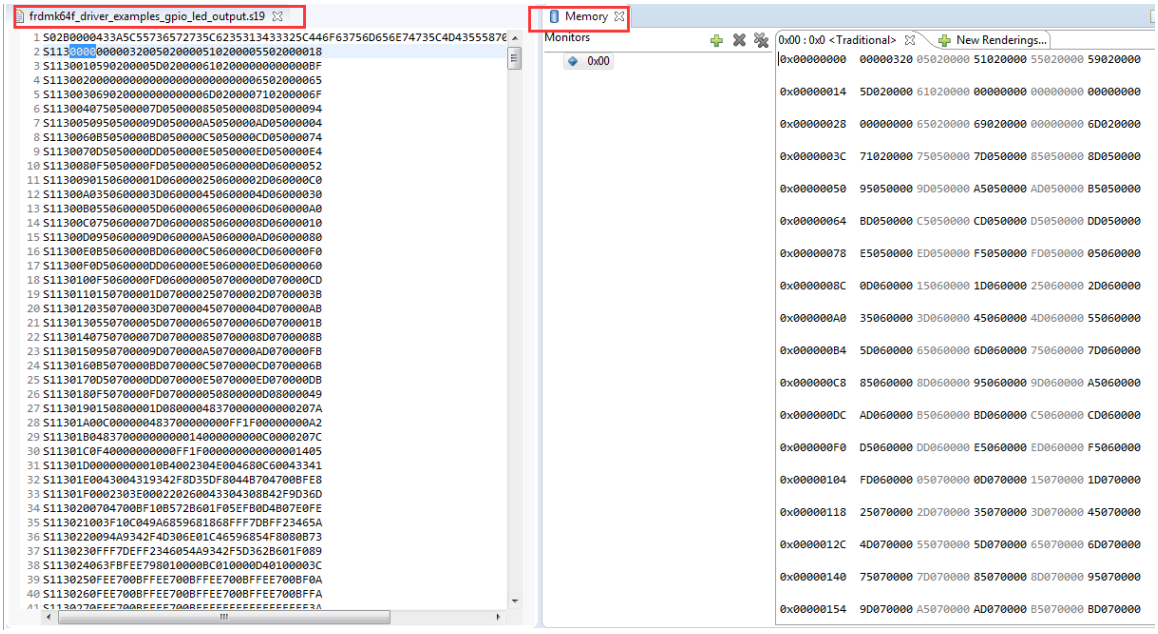


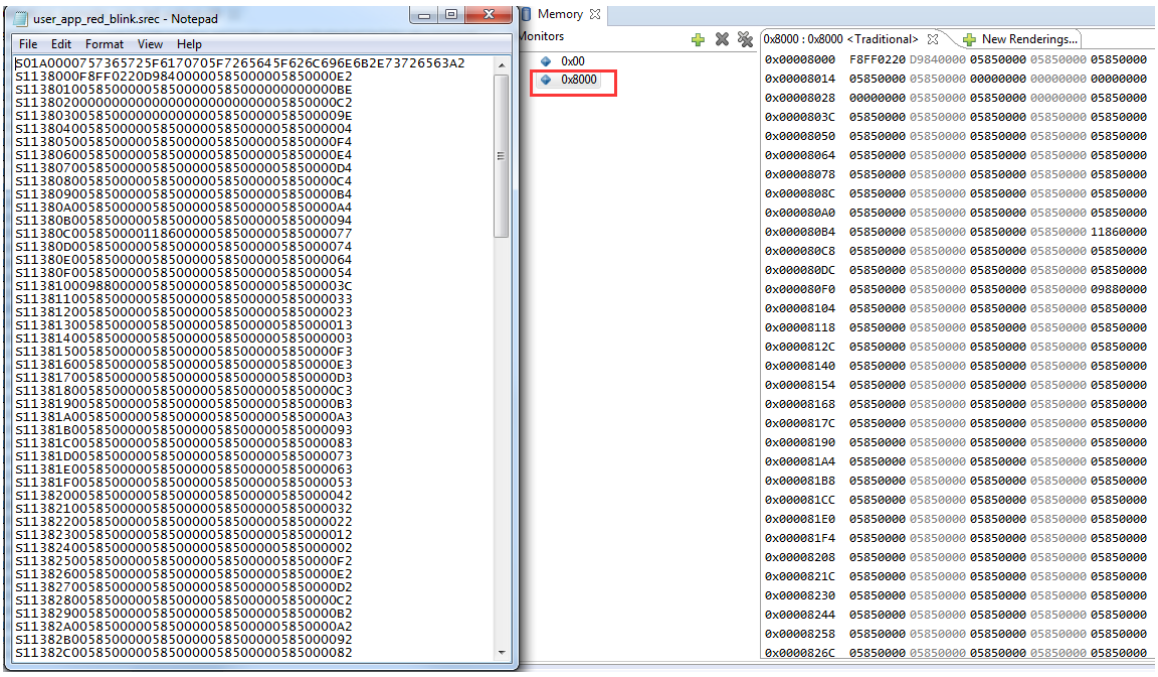
4. Click “Debug” button to debug:



5. Now the two binary files are all flashed into chip, we can use “Memory” view to compare the date with binary file. (I configure the Memory view to Big Endian, please see the below picture. And about how to generate S-Record, Inter Hex and Binary files, please have a look at https://mcuoneclipse.com/2017/03/29/mcuxpresso-ide-s-record-intel-hex-and-binary-files/).


0x00 : 0x0 <Traditional>
New Renderings...
Add Watchpoint (C/C++)...
Launch Configurations
Smart update
Utilities
Find and Replace Ctrl+F
Add Rendering
Remove Rendering
Panes
Cross Reference Information
Endian
Text
Cell Size
Radix
Columns
Update Mode
Copy
Reset To Base Address
Go to Address...
Refresh
Big
Little


frdmk64f_driver_examples_gpio_led_output.s19
Memory
Monitors
0x00
0x00 : 0x0 <Traditional>
New Renderings...

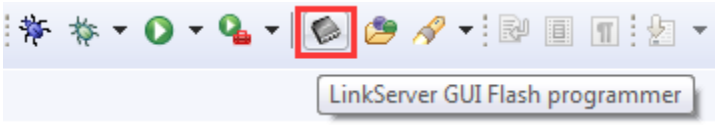


- **When using LinkServer(CMSIS-DAP) probe, how to flash two binary files?**

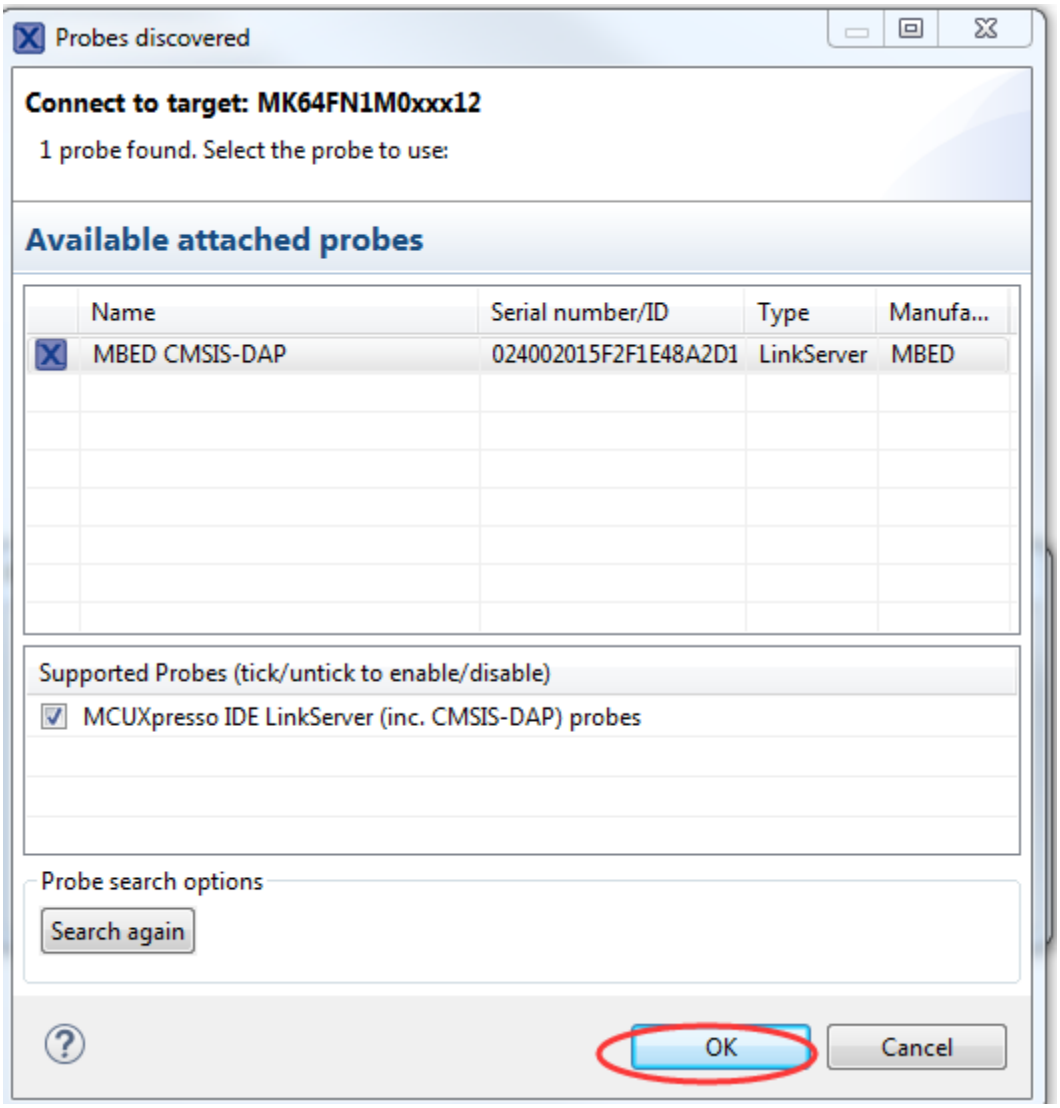
In this way, Flash one file first, then flash the second one.

1. Change the firmware of FRDM-k64 board to LinkServer.

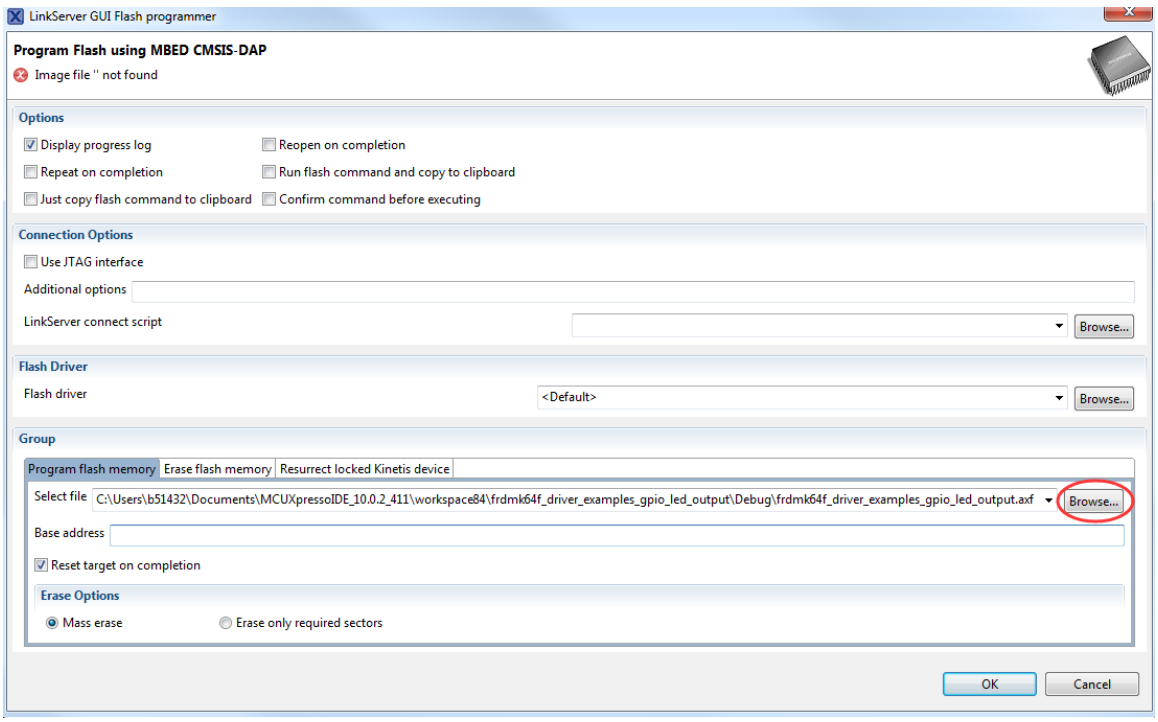
2. Click “LinkServer GUI Flash programmer” button:



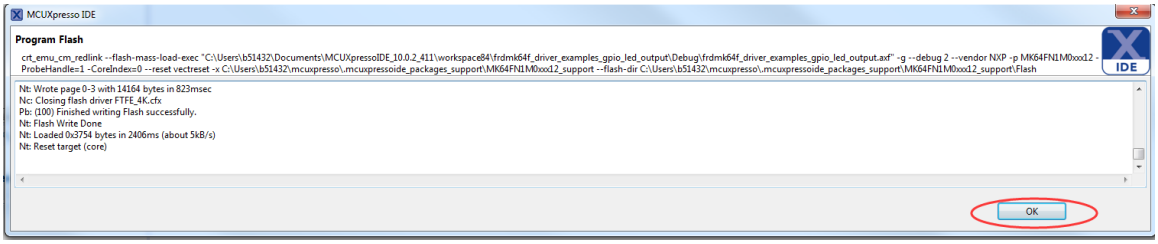
3. Click “OK”:



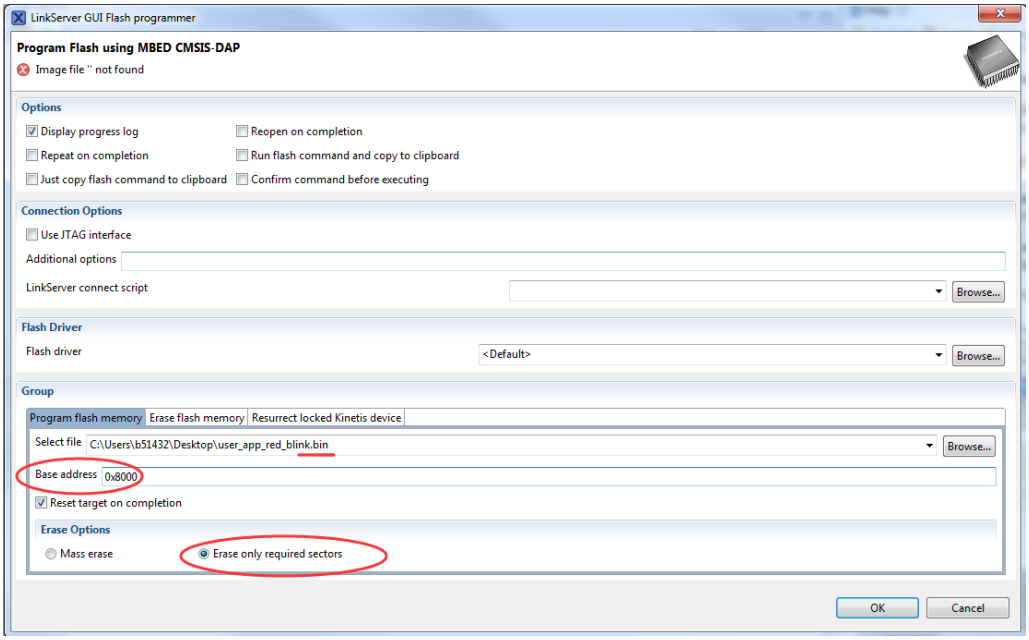
3. Click “Browse” button to choose the first file to be flash, then click “OK”. Note: here only support .elf .axf and .bin file, and for a bin file you must also provide an appropriate base address.



4. When it shows the below window, click “OK”:

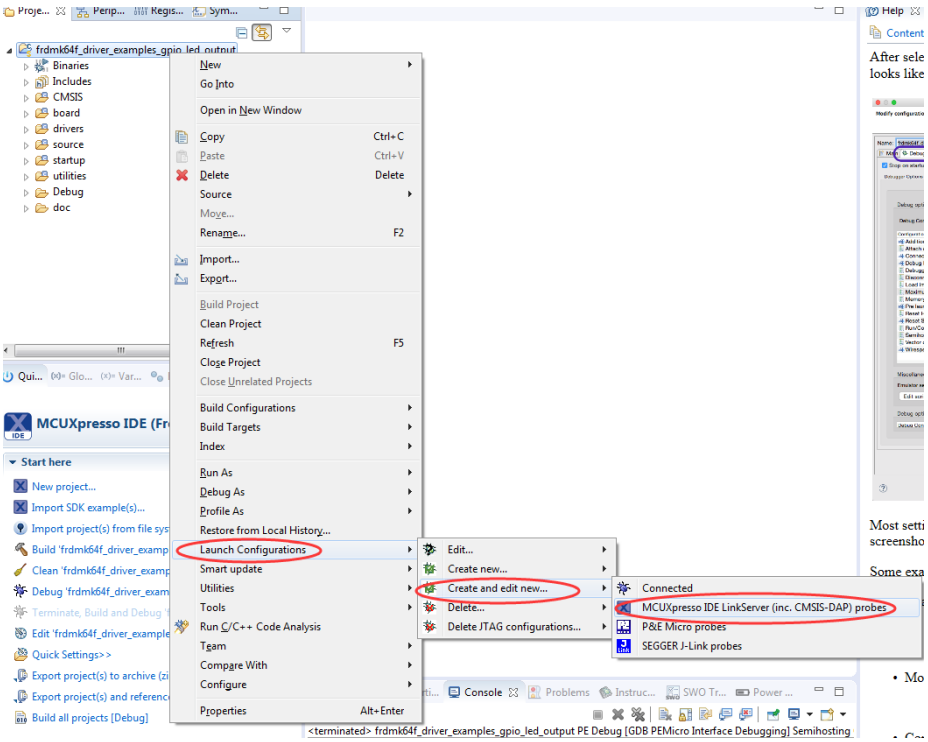


5. Repeat steps 2-4 flash the second file, please pay attention, in step 3, choose “Erase only required sectors”, not “Mass erase”:

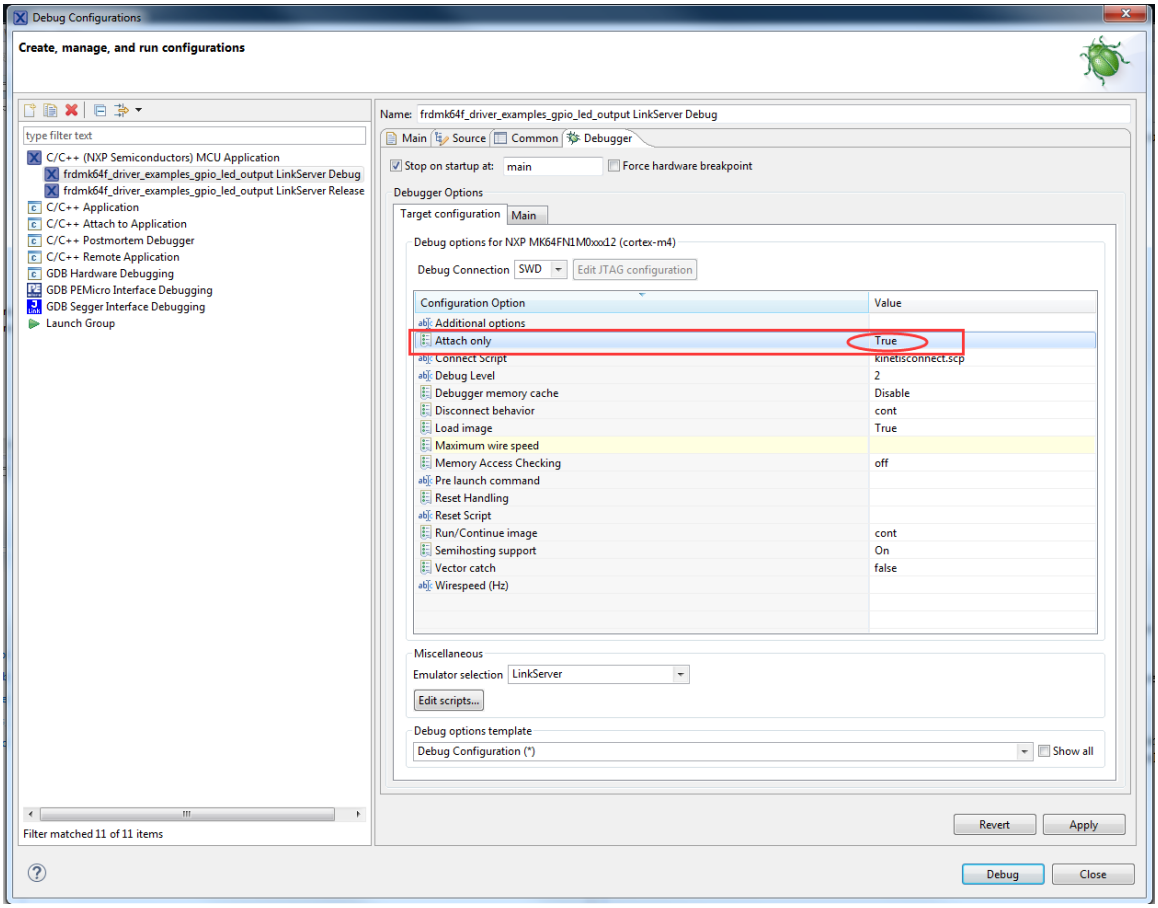


6. Now, the two files flashed into chip, if you want to check on the memory data, you can use method of “Attach to running target”:

- Create and edit new LinkServer probe: **Right lick project->Launch Configurations-> Create and edit new…-> MCUXpresso IDE LinkServer (inc. CMSIS-DAP) probes**



- Choose “True” in “Attach only”-> Debug:



Now you can use the same method to compare file data and memory data as above.