Pico EVM MSP430 Flash Quick Guide v1.0

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Note: The information in this document is not a substitute for the specifications listed in the corresponding device datasheets. In the event of a discrepancy, the datasheet supersedes this document.

Introduction

This document details how to reprogram the MSP-430 that is on any DLPC347X DLP Pico Light Controller system.

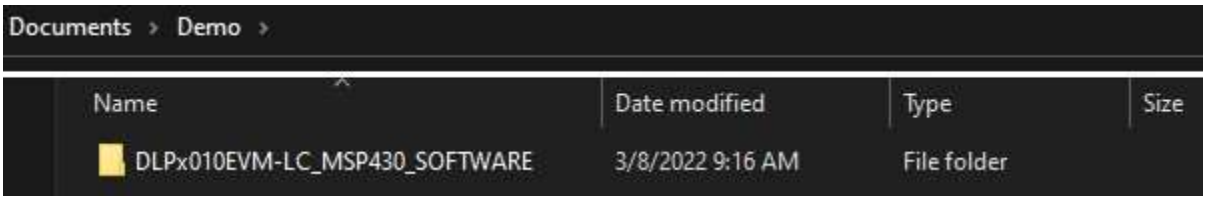
This will require access to some materials that are listed below:

- A PC with Windows 10. Linux and MacOS can be used but will not be covered.
- TI's Code Composer Studio. There are instructions for Linux and MacOS as well.
- An EVM with an appropriate power supply and the EVM product page. Ex: DLP30101EVM-LC
- An MSP-FET or MSP-FET 430UIF with appropriate peripherals. Please look here for details.

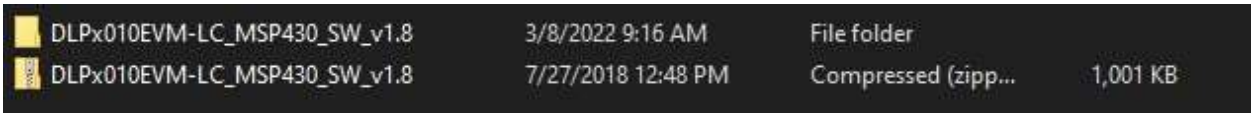
Software Installation

1. Go to TI.com and download the MSP430 code for the respective EVM that will be used. Be sure to follow the instructions given and save the file to an easily accessible place on your PC.

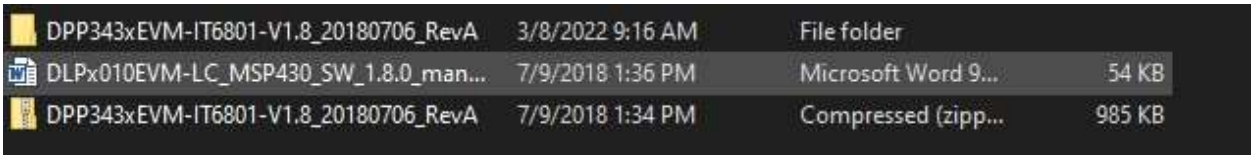
2. There should be a folder that looks like the image below. Open that that folder.



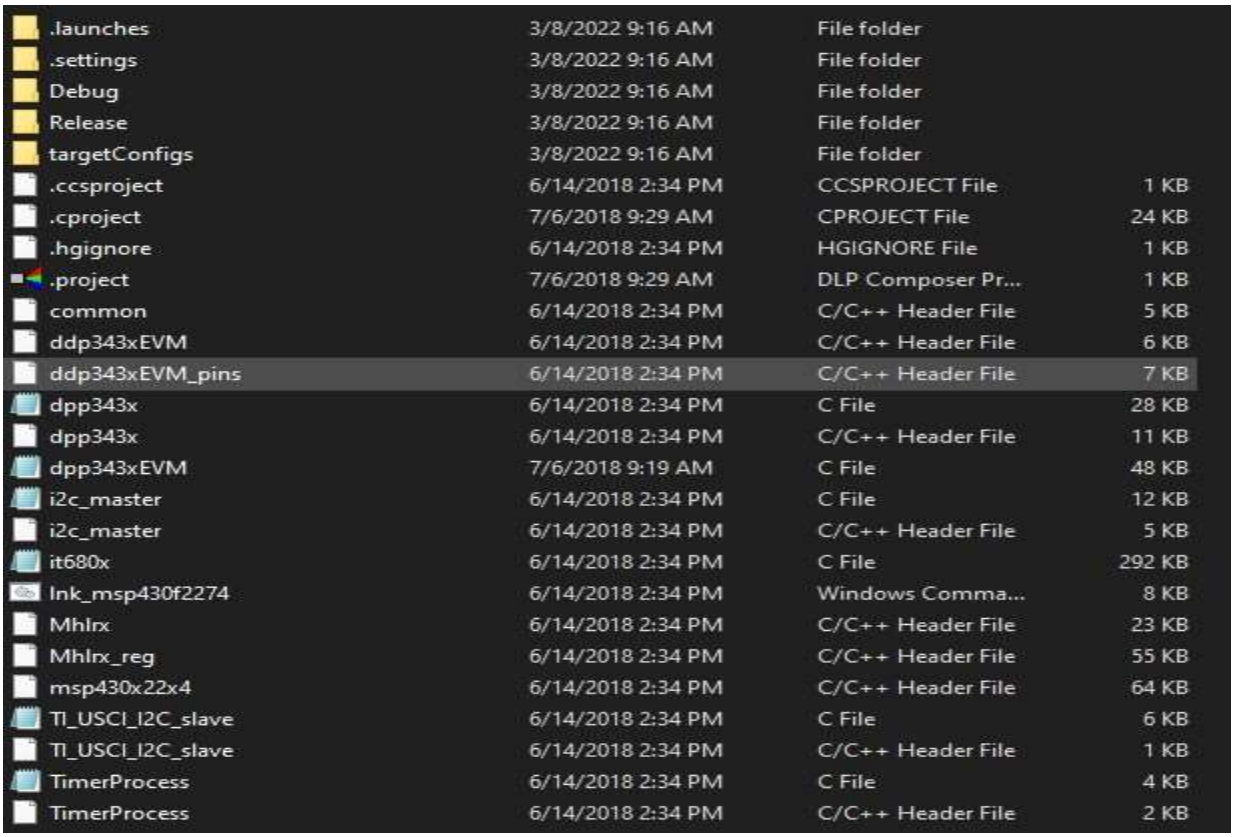
3. There should be a compressed folder. Extract it and open the extracted folder.



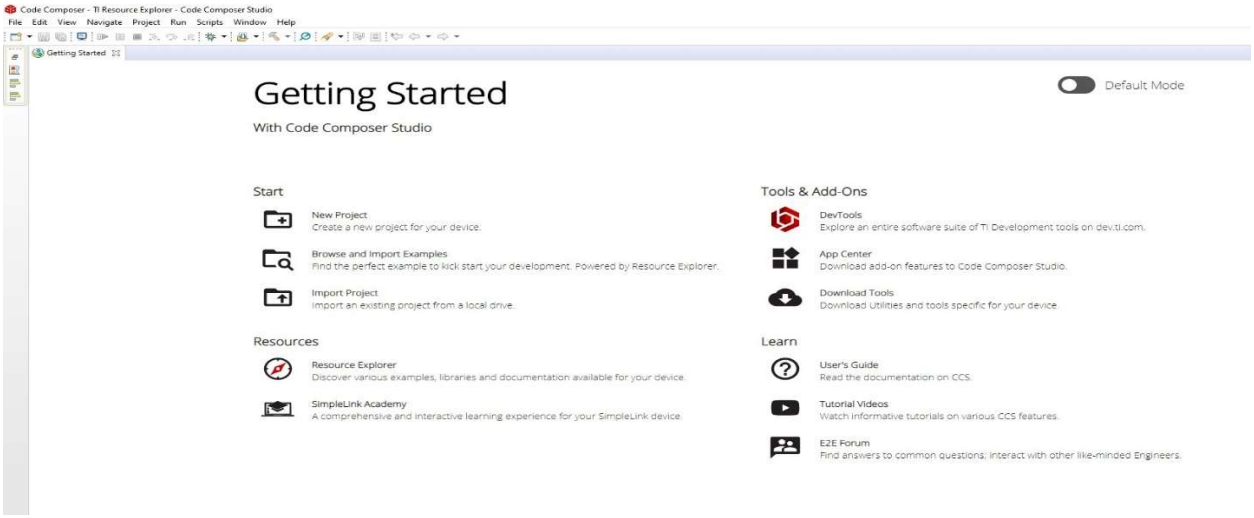
4. There should be a work document and another compressed folder. Do NOT touch the Word document. Extract the compressed folder and open the extracted folder afterwards.



5. The contents of the folder should look like the image below. Note this directory as this folder is important to flashing the MSP-430.

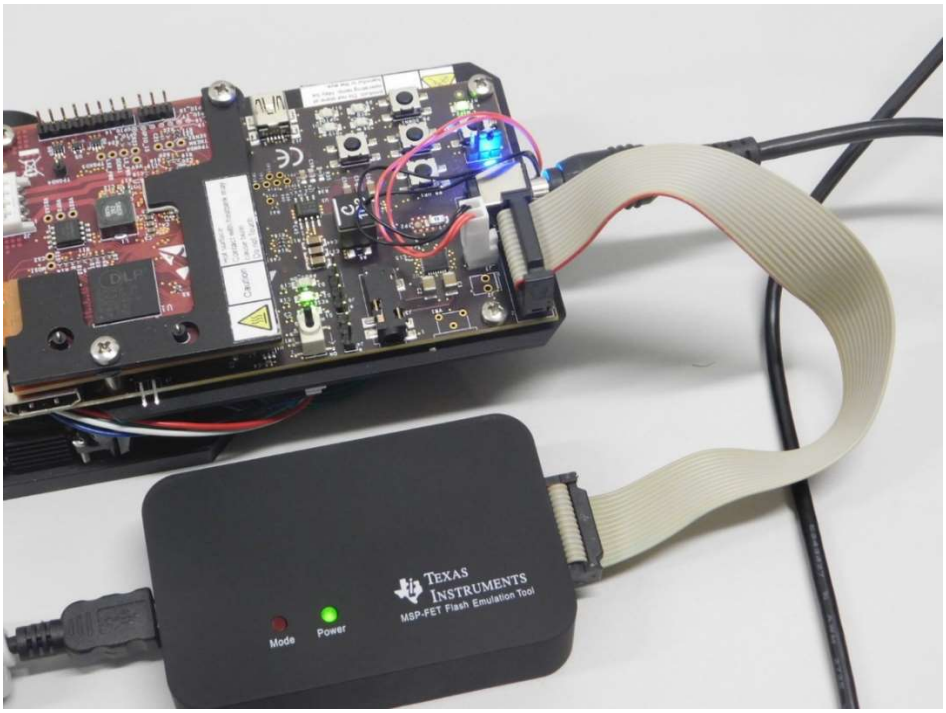


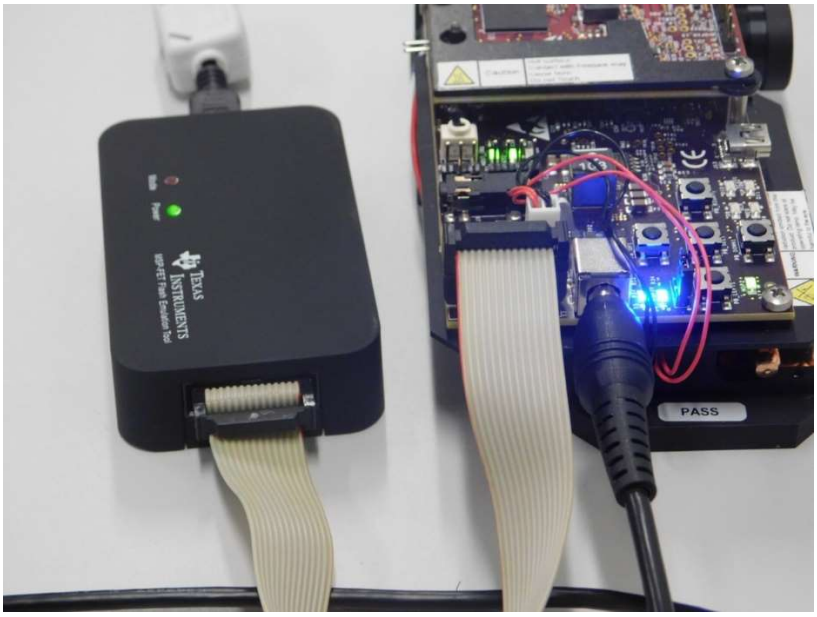
6. Go https://www.ti.com/tool/download/CCSTUDIO to get Code Composer Studio. The preferred version of CCS can be selected from this page. Please follow the instructions given by the prompts to setup properly.
7. Open Code Composer Studio. If you have not used Code Composer Studio your screen should look like the image below. If you have used it in the past then this menu may vary.


Code Composer - TI Resource Explorer - Code Composer Studio
File Edit View Navigate Project Run Scripts Window Help
Getting Started
Getting Started
With Code Composer Studio
Default Mode
Start
New Project
Create a new project for your device.
Browse and Import Examples
Find the perfect example to kick start your development. Powered by Resource Explorer.
Import Project
Import an existing project from a local drive.
Resources
Resource Explorer
Discover various examples, libraries and documentation available for your device.
SimpleLink Academy
A comprehensive and interactive learning experience for your SimpleLink device.
Tools & Add-Ons
DevTools
Explore an entire software suite of TI Development tools on dev.ti.com.
App Center
Download add-on features to Code Composer Studio.
Download Tools
Download Utilities and tools specific for your device.
Learn
User's Guide
Read the documentation on CCS.
Tutorial Videos
Watch informative tutorials on various CCS features.
E2E Forum
Find answers to common questions; interact with other like-minded Engineers.

Hardware Setup

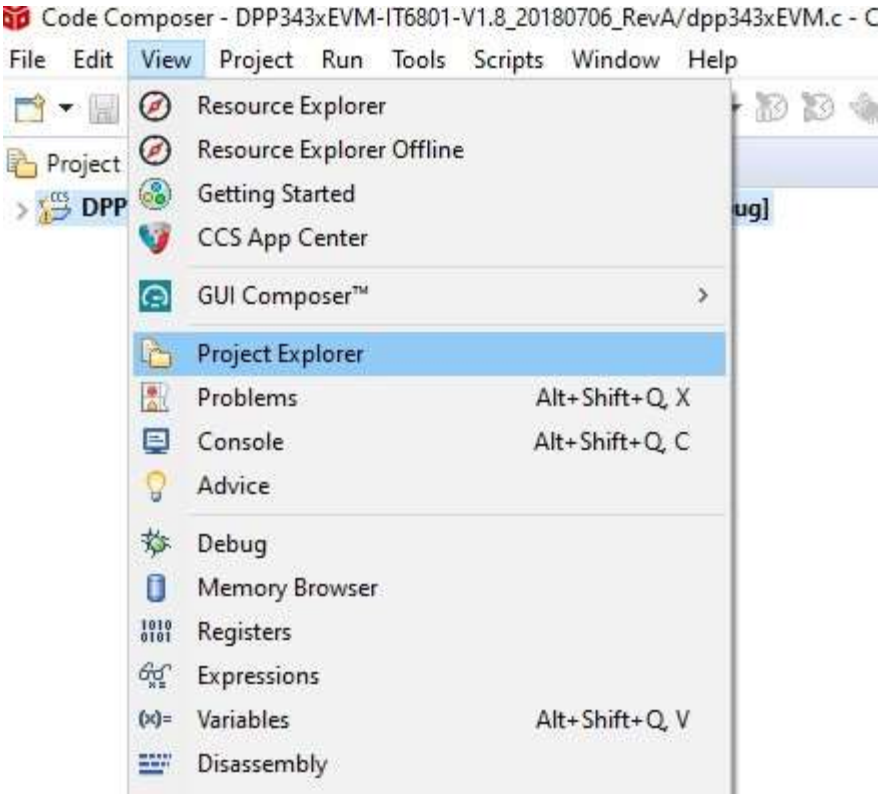
8. Connect the MSP-FET to your PC and to the EVM. Please make sure that the EVM is connected to power but PROJ_ON is not high. It should look something like the image below. Please notice the orientation of the red stripe and the debugger cable.



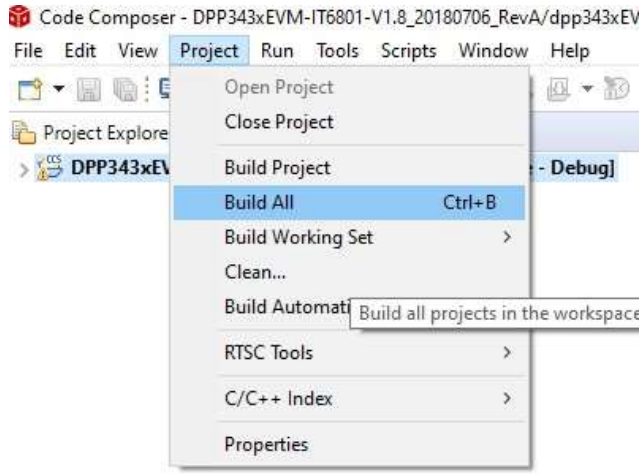


Flash Execution

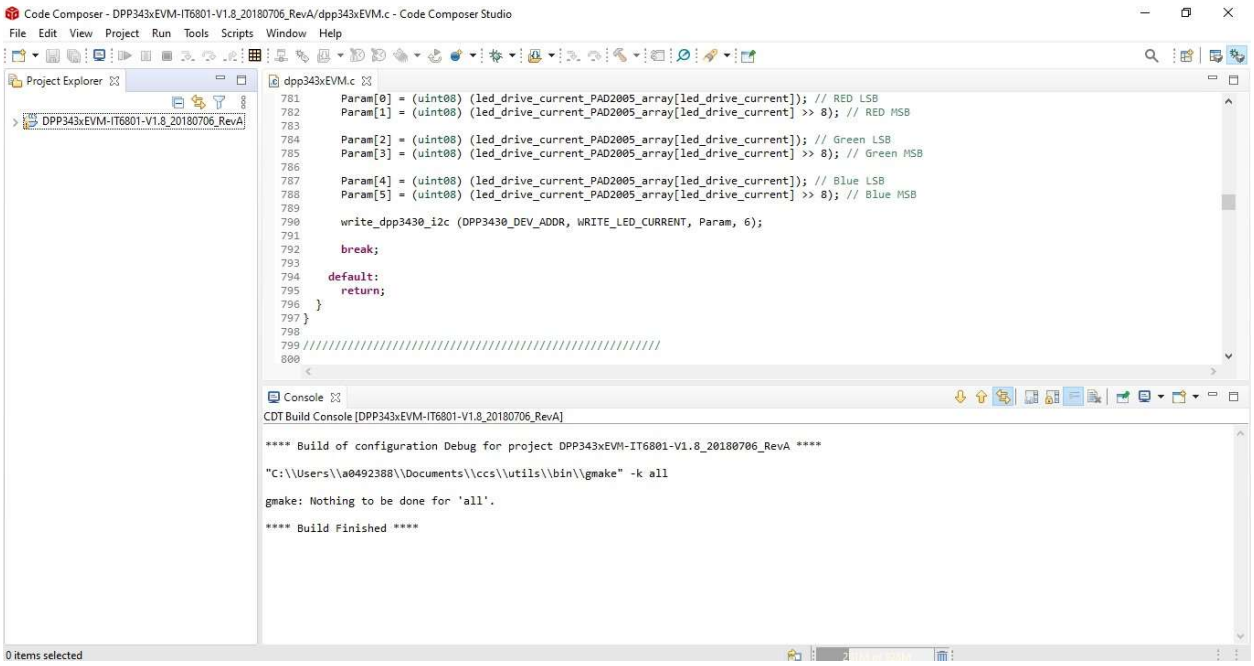
9. Within Code Composer Studio navigate to the tool bar select *view* → *project explorer* and follow the directory path to folder DPP343xEVM-IT6801-V1.8_20180706_RevA. Select this folder.



10. In the toolbar select *project* → *Build All*.

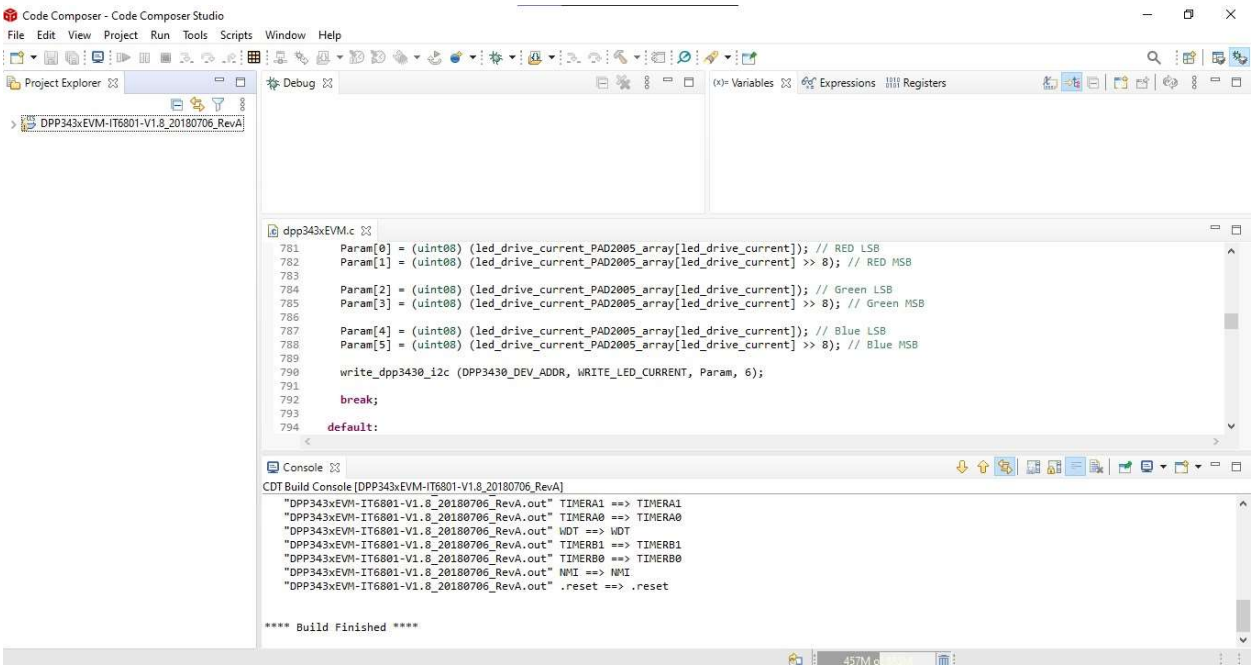


11. The resulting screen should appear as the following. CCS may open up other workspaces windows during this process.



12. Locate the debug icon and select it with the mouse.

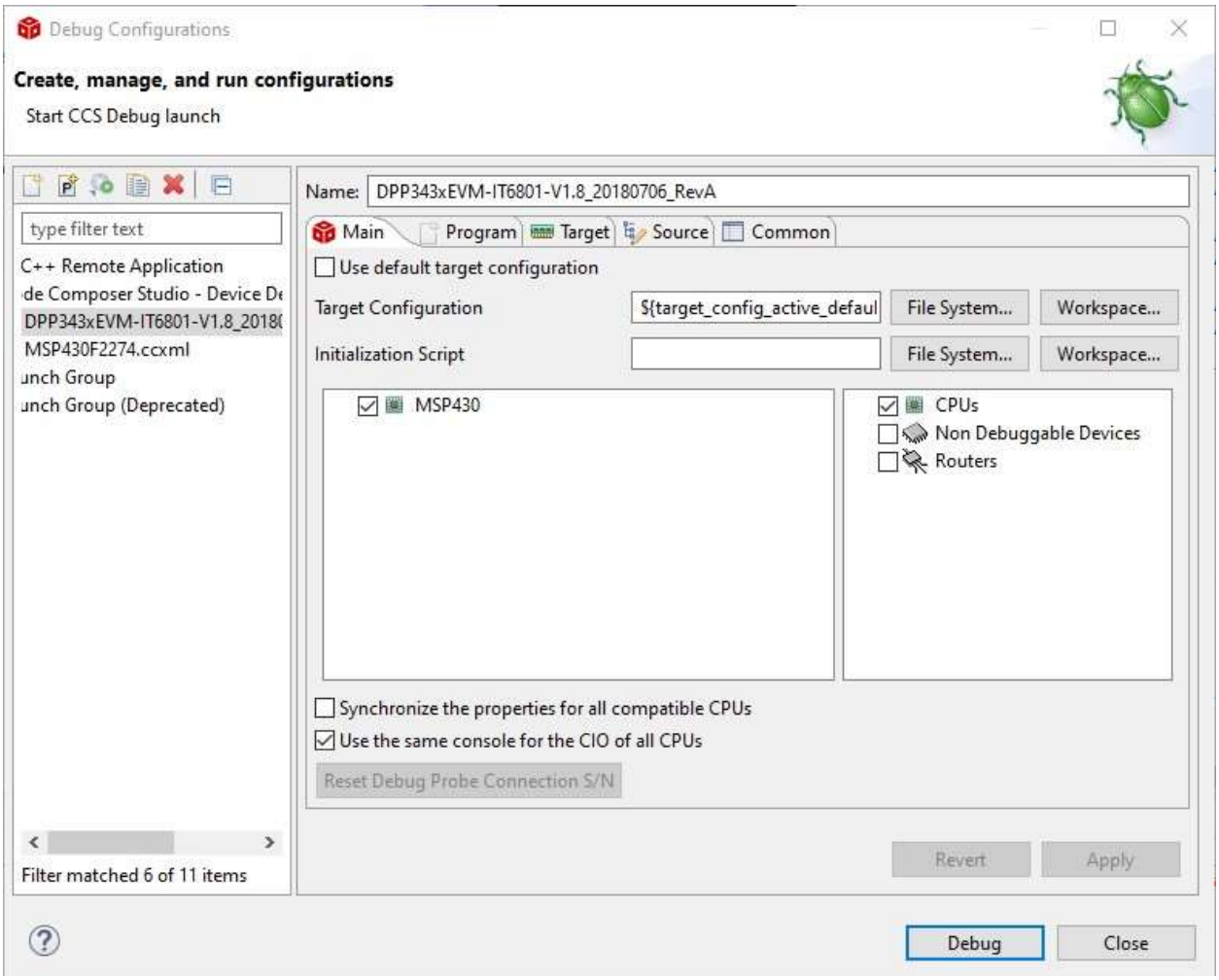
13. CCS should now appear as the image below. This will proceed to download the program to your EVM.



14. Unplug the EVM from power and disconnect the MSP-FET from the EVM.
15. The system should now have been correctly updated.

Troubleshooting

If your debugger is having issue with connecting to the MSP-430 please go to *Debug* → *Debug Configurations* and check that the screen looks something like the image below.



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