

ECED 4402: Time Systems

Tutorial 1: Getting started with the Tiva

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Introduction

There are a few files that need to be downloaded and installed before your laptop can connect to the Tiva Board. This includes an Integrated Development Environment (IDE) and a compiler (in this case included with the IDE), and informative files like the Cortex-M4F datasheet.

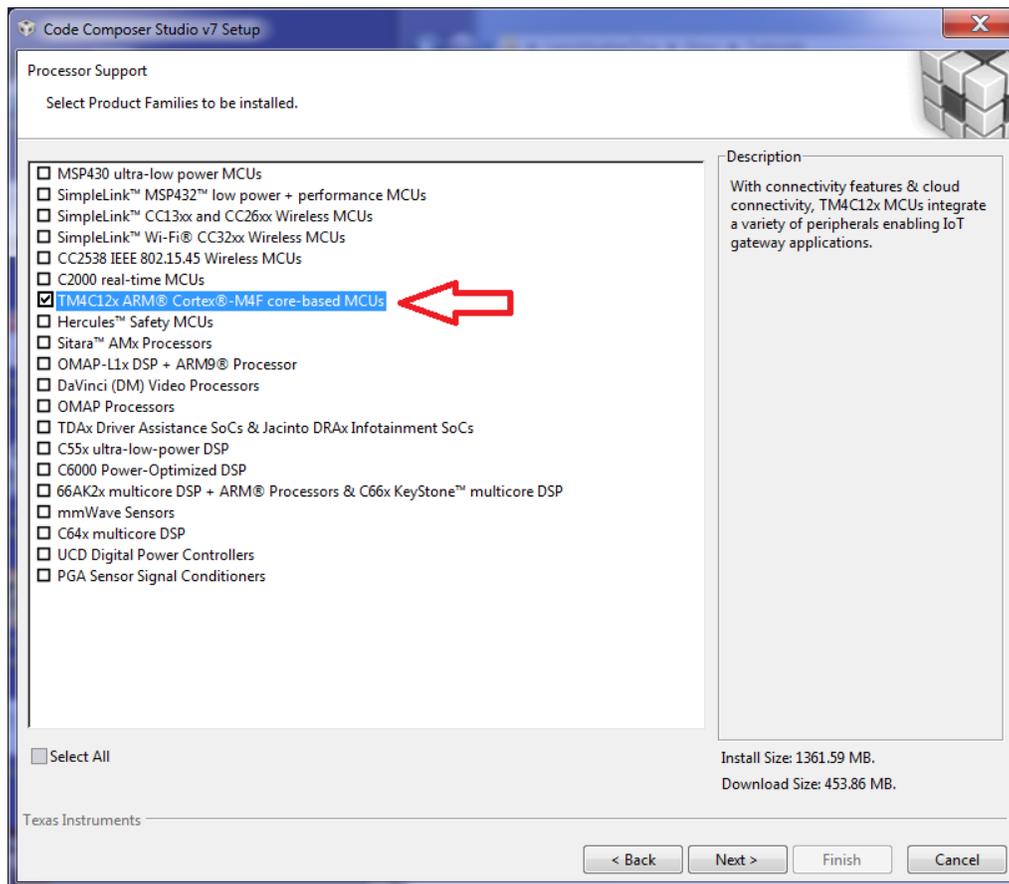
The Tiva IDE - Code Composer Studio (CCS)

The IDE for the Tiva family of microcontrollers is Texas Instruments' Code Composer Studio (CCS). It can be downloaded from:

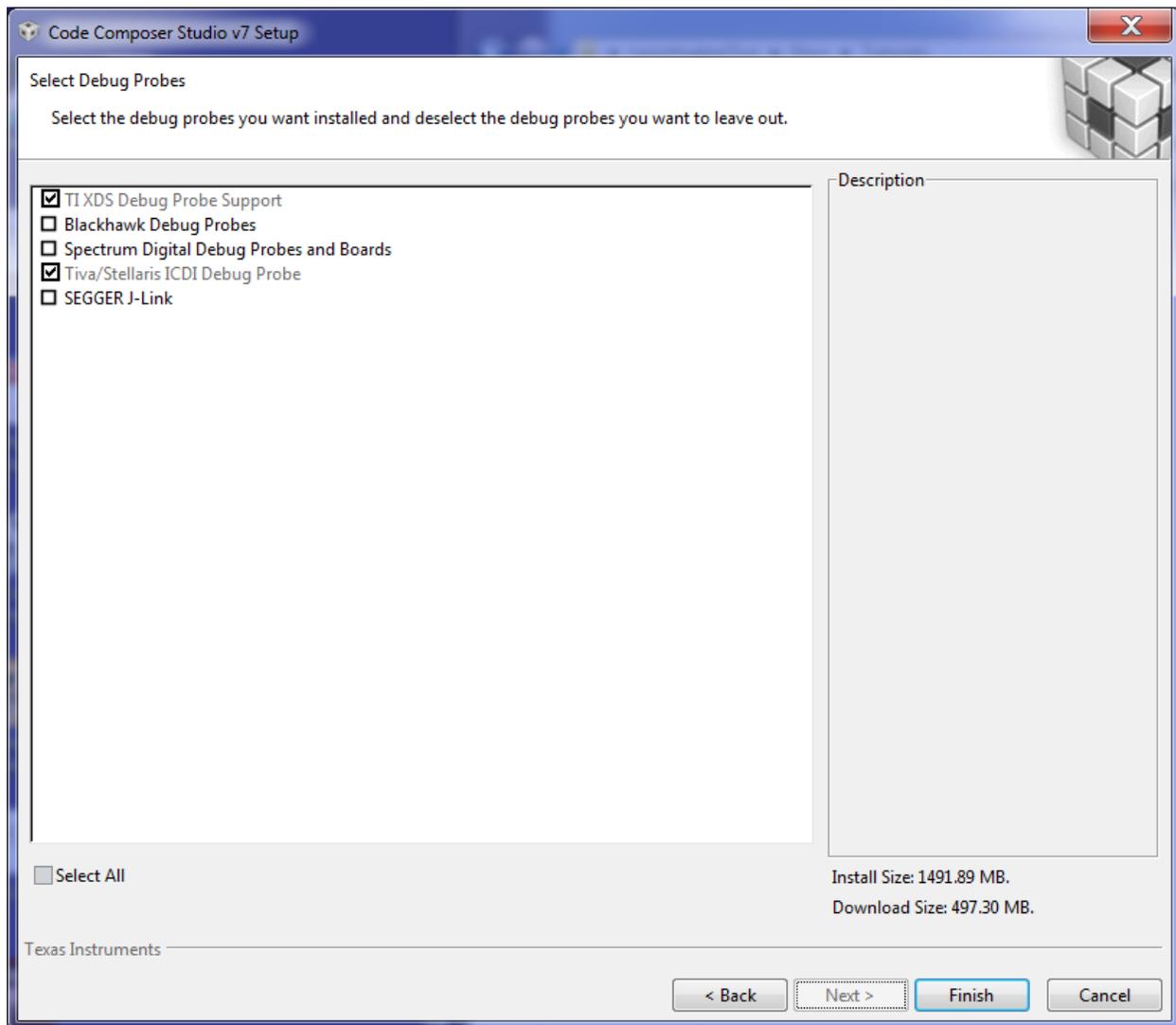
http://processors.wiki.ti.com/index.php/Download_CCS

Version 7 will be used for this course.

The installation of CCS includes selecting the compiler for the Tiva series Cortex-M4F, it can be selected from the *Processor Support* list:

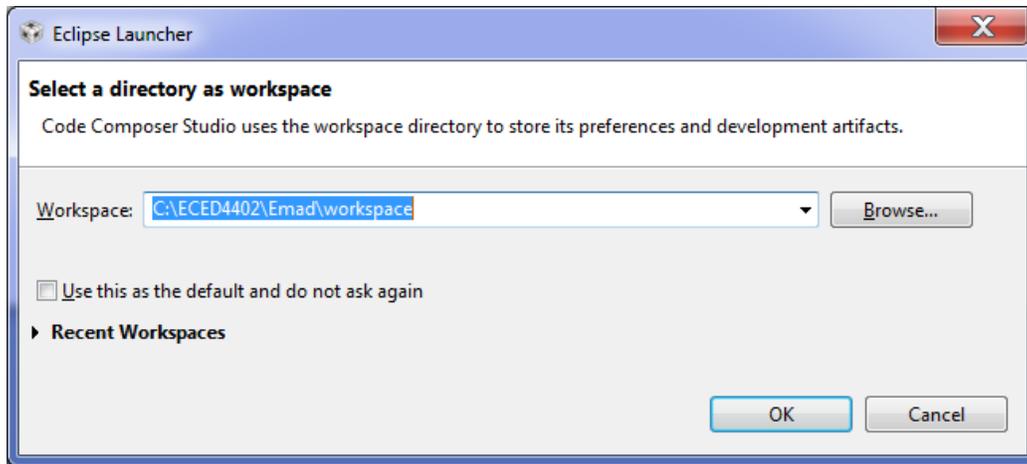


Continue with the installation and make sure that Tiva/Stellaris ICDI Debug probe is selected. This is the main debugger interface for the Tiva family.



Setting up a Project on CCS

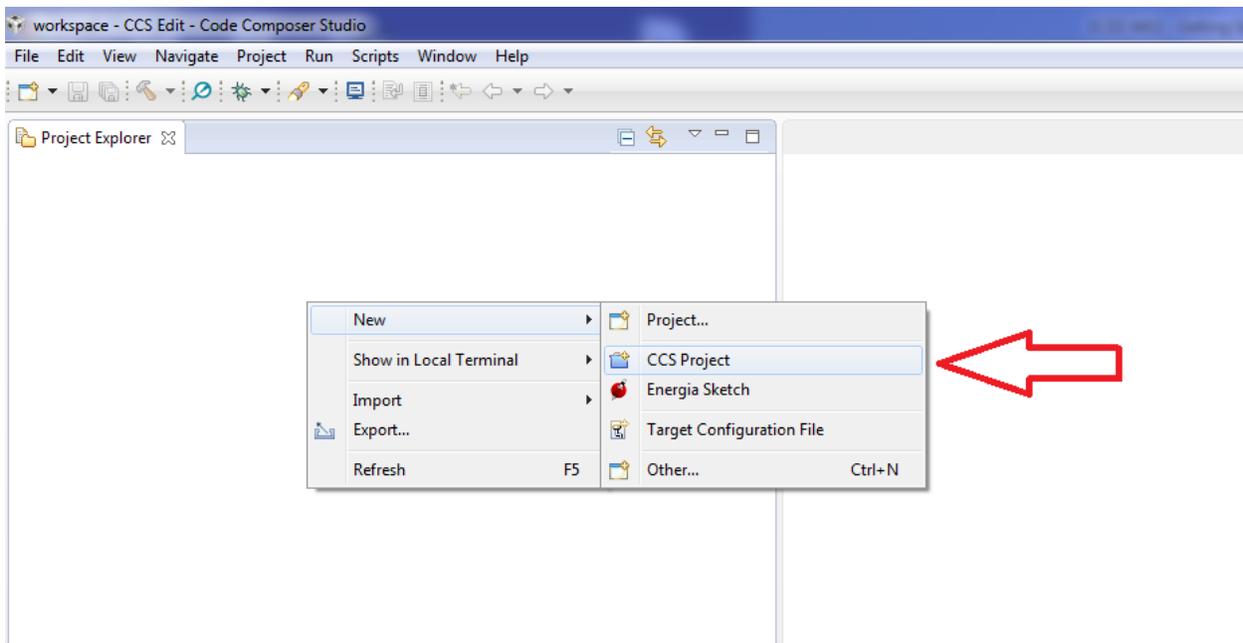
Once the installation is complete for CCS, development can begin. Start by creating a new workspace for your work.



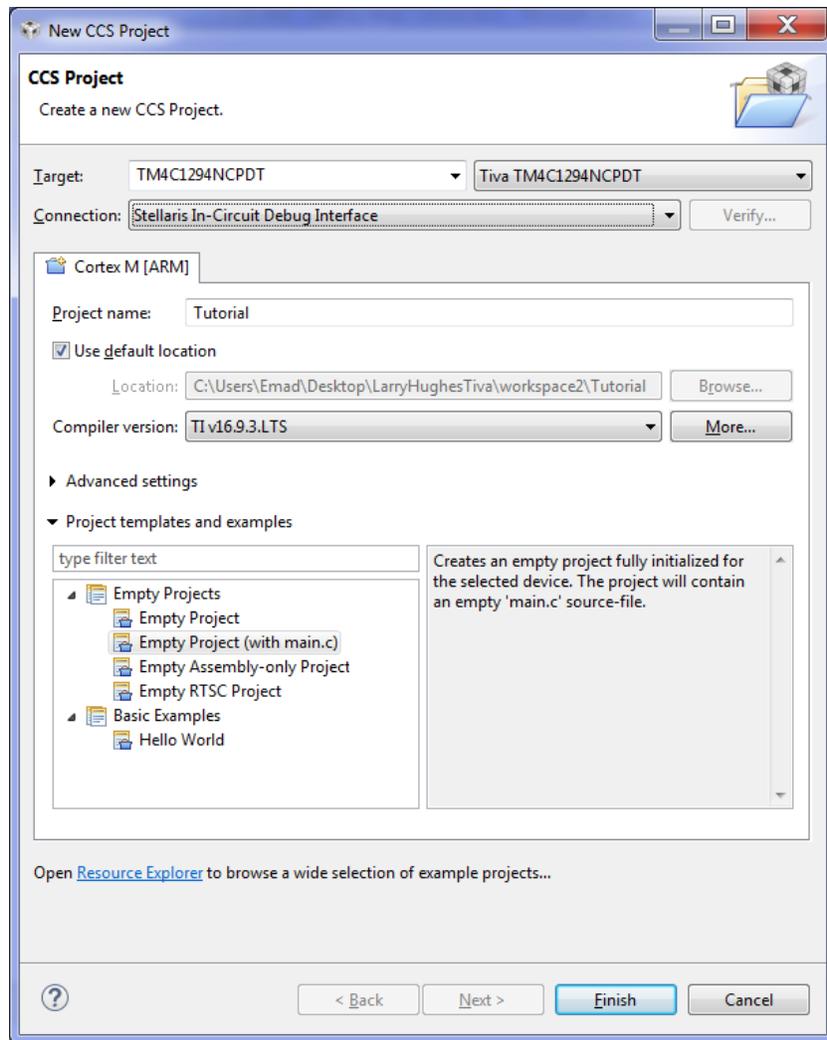
Press OK to open the workspace where projects can be created.

Creating a Project

A project can be created by second-clicking the Project Explorer space as seen below, and going to New and then CCS Project:



Clicking this will bring you to a configuration screen where you must select the processor, the debug connection type, and the project name. The processor is "TM4C1294NCPDT"; you can type this in as the target. The connection is the (Tiva) Stellaris In-Circuit Debug Interface. The project should be given a name (in this example, it is "Tutorial").



Click finish to start the project.

The Tiva datasheet and other important information

The datasheet is a critical source of information while learning about the Cortex-M4F processor. It can be accessed from:

<http://www.ti.com/lit/ds/symlink/tm4c1294ncpdt.pdf>

Other information about the processor and the Tiva board can be found at:

Processor information: <http://www.ti.com/product/TM4C1294NCPDT/description>

Tiva Board information: <http://www.ti.com/tool/ek-tm4c1294xl>