TI Software Installation Lab 1
How to Install Initial Software

Acknowledgements

Lab Summary

This is a lab for downloading and installing the software that will be used to perform the work associated with TI ARM based processors utilizing the Tiva evaluation kit with the optional Digilent daughter board (Orbit).   There are two ways to install the software. The first is to download all the individual components: Code Composer, Tivaware, etc., and install them all manually.   This used to be a portion of this tutorial but became a nightmare to maintain as the commercial download links changed often.   The second (and preferred) option is to download the installer from our website. This installer bundles all the individual packages together and also sets the paths to point at the tutorial files (which it also installs).
Although the hardware is not required to install software, this lab is written to prepare to use the hardware (lab 2).

Lab Goal

The goal of this lab is provide sufficient instruction and guidance so that individuals will be able to install the software and prepare for lab 2 where the hardware will be plugged in and a simple project will be accomplished.

Time Required

2-3 hours with a high speed Internet connection

Lab Preparation

N/A

Equipment and Materials

Access to Tiva TM4C123GH6PM Launch Pad software via the Internet.

Software needed	Quantity
All software is bundled into one large zip file on the COSMIAC site.	1

Additional References

This page is the website to be able to download the COSMIAC installer: http://cosmiac.org/thrust-areas/academic-programs-and-design-services/education-and-workforce-development/community-portal/

Lab Procedure 1: Download and Install Software and Drivers for LaunchPad

The way to install the software and to automatically set up directory structures and paths for the laboratory material is to go to this website: http://cosmiac.org/thrust-areas/academic-programs-and-design-services/education-and-workforce-development/community-portal/
On this site, look for a large zip file called Tiva Development Workshop.   This is an approximately 1G zip file. Download and unzip this file onto your DESKTOP.   The rest of the installations assume you are online as they reach back to allow you to install other options in case you desire.

Figure 1. unzipped TivaWorkshop

The unzipped file shown in figure 1 is really nothing more than a combination of all the individual files you would have downloaded separately.   The file folders are numbered in the sequence in which they should be installed.   First is the CCS or Code Composer software. Second is the Tivaware software from Texas Instruments (TI).   Next is the LM Flash Programmer which is the driver between the computer and the TI board. Fourth is the Workshop file which will put all the project files on the computer and do path assignments to point CCS to where it should look.   Course docs is where the powerpoint and tutorials for the workshop are located.   Other programs includes Putty, Realterm and Notepad plus plus.

Lab Procedure: Installing workshop Lab materials

The first program to install is Code Composer Studio. Double click on the CCS6.0….. folder. Eventually, if you troll down a little, you will see the ccs_setup file.
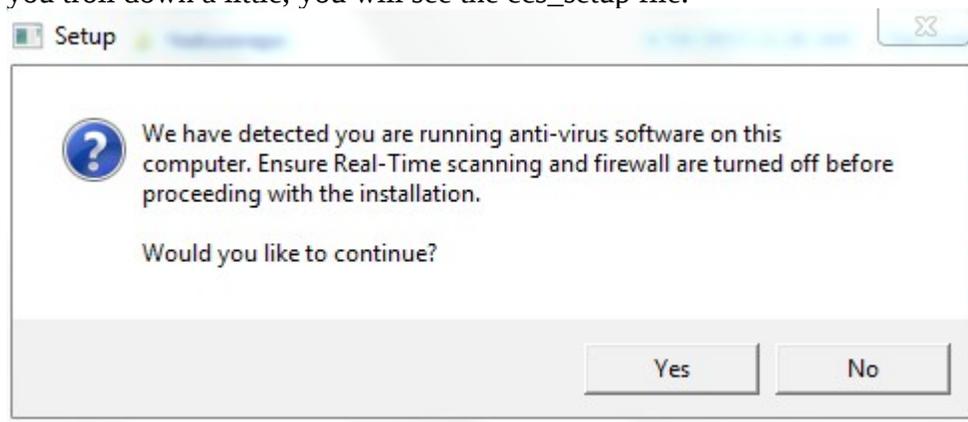

Figure 2. Launching Code Composer

When the Code Composer installer begins, you will get a notice like the one shown in Figure 2 about antivirus software. Just click yes.   You will be asked again just to make sure you were reading correctly the first time. Say yes again.
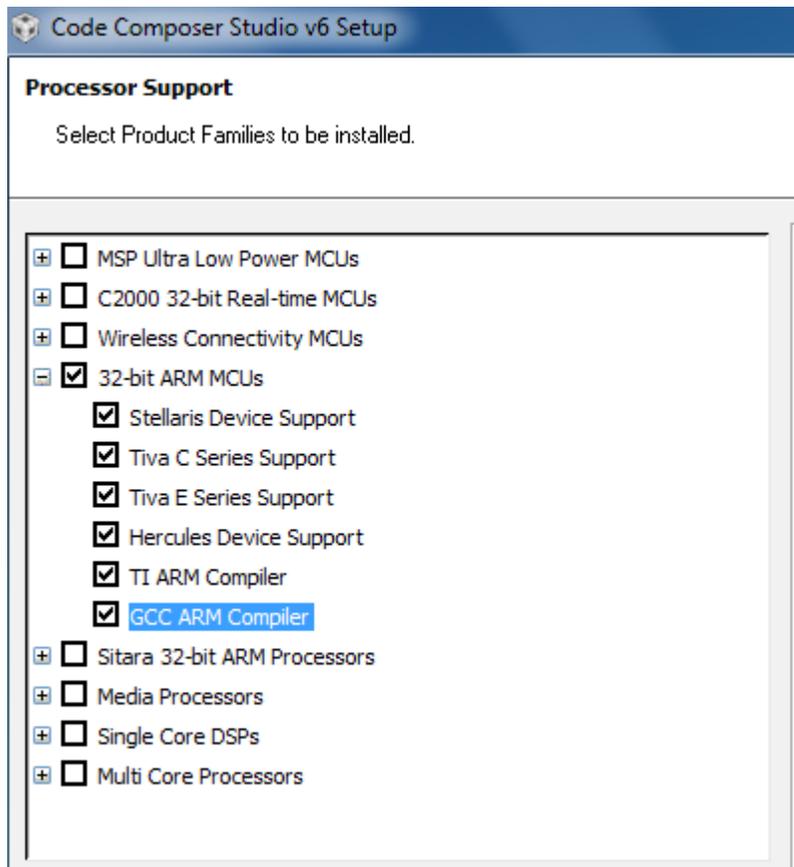

Figure 3. Code Composer Selection

This is the first part on the Code Composer installer where you choose something other than the defaults. Pick the options shown in Figure 3.   All other options are just accepting the defaults. Install in the default locations since others installers that run after this build upon the belief that things are in the right places.

Figure 4. App Center

In addition, add in the App Center.   It will take a little while for it to install but is worth the trouble to obtain neat applications that will be investigated later in the workshop.
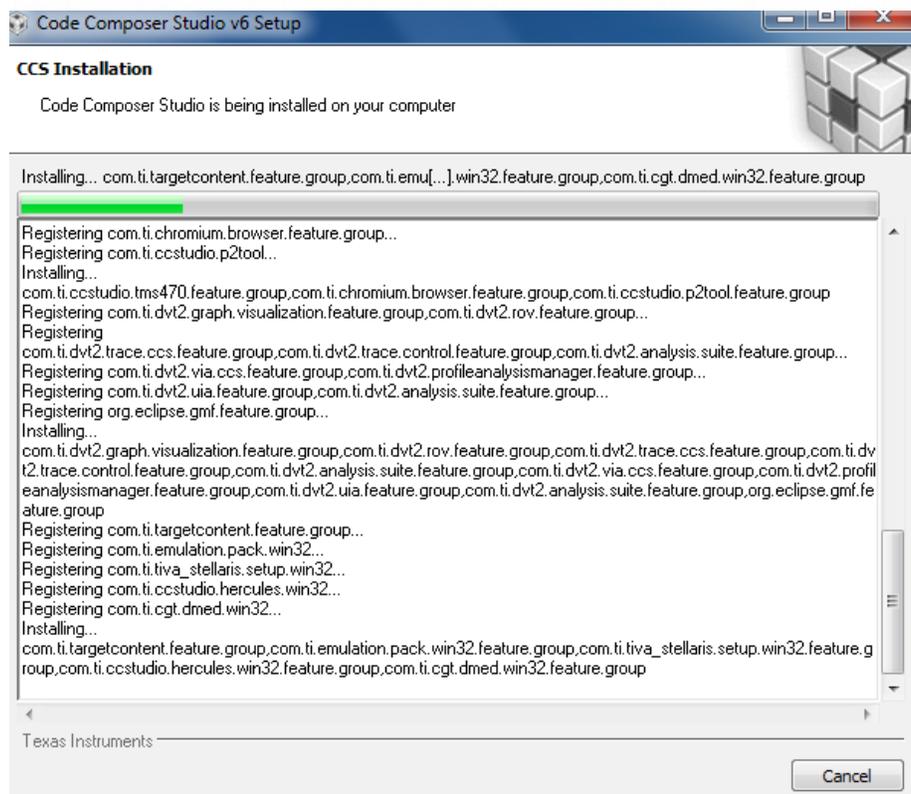
Figure 5. Code Composer Installation

The Code Composer installation screen shows up as above. This installer could take up to a half hour. During the installation, there are 4-5 times where it will ask you for permission to install subcomponents to the main CCS installation. Just click on yes/approve to continue the installation.
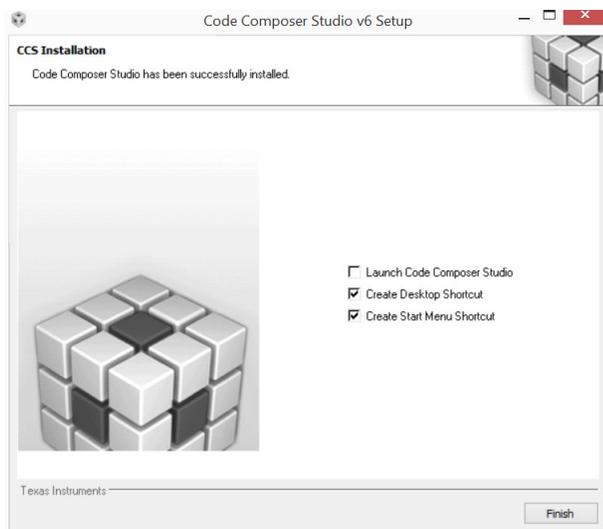

Figure 6. Code Composer Done

When the CCS installer is complete, deselect the Launch Code Composer Studio button. There is no sense in launching it at this time. What is needed now is to finish the remainder of the installation process.

Figure 7. Install Tivaware

Go back to the root of the unzipped folder as shown in figure 1 above. Double click on the 2 SW-T… installer to begin to launch Tivaware. Tivaware resides under Code Composer. For Tivaware, just select all the default options. This installation is very brisk.
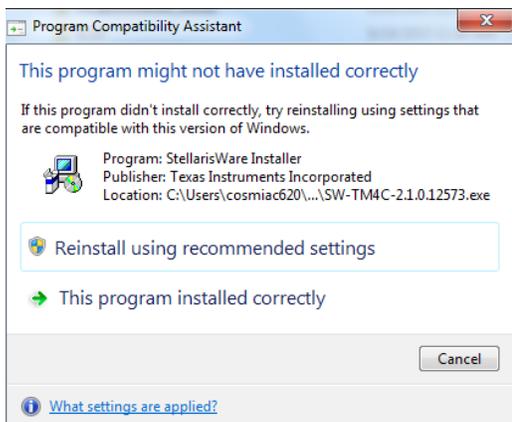

Figure 8. Tivaware Installed Correctly?

At the end of the Tivaware installation, the figure above might be presented. The program was installed correctly so just go ahead and select "This program installed correctly".
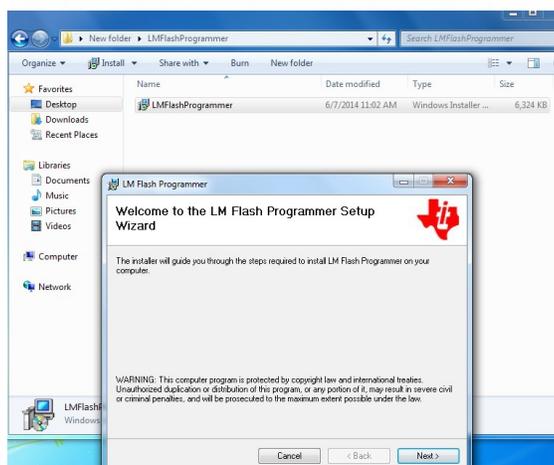
Figure 9. Installing Flash Programmer

After Tivaware is installed go back to the root directory and go into the 3 LMFlashProgrammer directory. Launch the windows installer. Accept the defaults. This installation also goes very quickly. This will install the driver files to be able to communicate/program the Tiva board via the USB cable.

Figure 10. ATE Workshop Installer

After the FlashProgrammer is complete, go back to the root unzip director. Go into the 4 ATE_uC_Workshop directory.   There is a single file in this directory. This is an automatic installer.   All it does is to put the Lab files on the hard drive and then point the CCS workspace link to their location. Follow all the defaults on the installer. When you first click on it you will get a notice shown in Figure 10. Just click OK.

Figure 11. ATE Installer

Click on Setup and Next to run the COSMIAC installer.   After this, you could install Notepad ++ and copy Putty to the desktop or could just wait until they are needed.   Next, launch Code Composer.   It is the dice looking icon on your desktop.
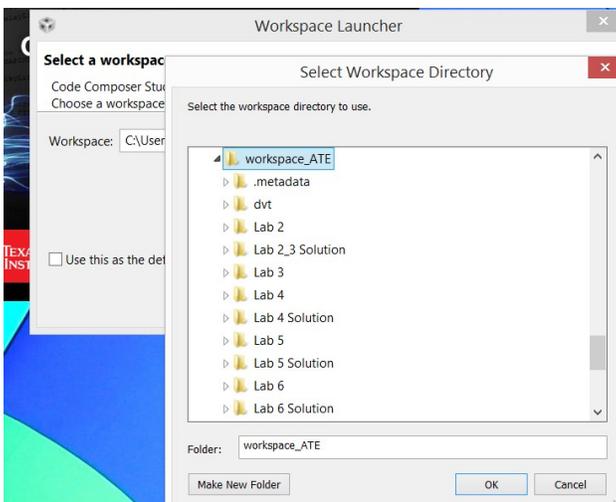

Figure 12. Workshop Workspace

When Code Composer launches, it will ask for you to set the Workspace Directory.   Point to C:\workspace_ATE.   You are ready for the workshop tutorial 2.