

TI Tiva C Series LaunchPad ARM M4 Software Installation

Note: File originated from COSMIAC: U of New Mexico and BTC

Install the software to perform the work associated with TI ARM based processors utilizing the Tiva evaluation kit.

Instead of download all the individual components such as; Code Composer, TivaWare etc., manually, we are going to use the short cut that is provided by Configurable Space Microsystems Innovations & Applications Center (COSMIAC) at U of New Mexico funded by NSF.

Objective:

Learn and Experience the TI Tiva C Series LaunchPad software installation such as: Code Composer, Putty, Tiva library, and FlashProgrammer

Procedures:

Step 1 – Download the software: www.ucdistancetraining.org, **Select Download**

- 1) Go to this website: <http://www.ucdistancetraining.org>
- 2) Select **Download**. (See Figure 1)

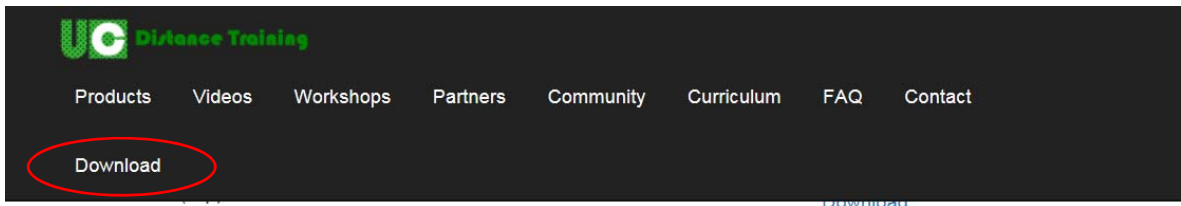


Welcome to uC Distance Training

This is an academic community for better teaching and learning of the embedded system related classes and projects. A place where you can find course modules and lab modules using different programming languages in various microcontrollers. This is an on-line community where instructors can share, learn, and collaborate on teaching and applied engineering projects.

Figure 1. Website <http://www.ucdistancetraining.org>

3) Select **TI ARM M4** and download the files as below: (See Figure 2)



TI ARM M4

1. Code Composer Studio	Download (.zip)
2. TivaWare	Download
3. LMFlashProgrammer	Download
4. ICDI(for legacy systems)	Download
5. other programs	
Notepad ++	Download (.exe)
Putty	Download (.exe)
Realterm setup	Download (.exe)

Figure 2. Download Files via Website <http://www.ucdistancetraining.org>

Step 2 – Install the **Code Composer Studio**.

- 1) Create a folder name “**Workspace_ARM**” at the root directory. For example: C:\Workspace_ARM, and save all the downloaded files to the root folder.
- 2) Got to **1. Code Composer Studio**, click on **Download (.zip)**, and download the zip file. Unzip the file to the root folder and you will find the **ccs_setup_6.0.0.00190.exe**, double clicks on it to run (See Figures 3 and 4)

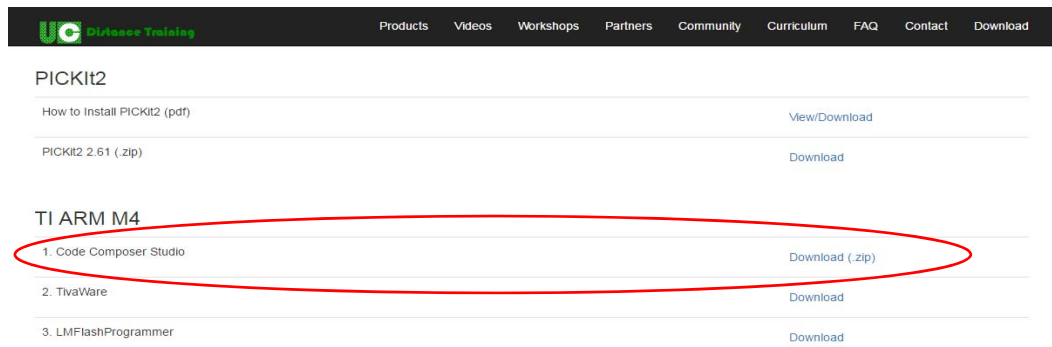


Figure 3. Select 1 CCS6.0.0.00190_win32 Folder

Name	Date modified	Type	Size
.artifactlock	5/12/2016 11:26 A...	File folder	
baserepo	5/12/2016 11:26 A...	File folder	
binary	5/12/2016 11:26 A...	File folder	
featurerepo	5/12/2016 11:26 A...	File folder	
features	5/12/2016 11:26 A...	File folder	
artifacts.jar	4/17/2014 4:31 PM	JAR File	1 KB
ccs_setup_6.0.0.00190	6/7/2014 10:02 AM	Application	8,926 KB
content.jar	4/17/2014 4:31 PM	JAR File	2 KB
README_FIRST	6/7/2014 10:02 AM	Text Document	2 KB
timestamp	6/7/2014 10:02 AM	Text Document	1 KB

Figure 4. Location of the excitable file: ccs_setup_6.0.0.00190.exe

- 3) When the installer begins, you will get a note like the one shown here about the 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 5)
 (Note: If the installation does not begin, then some anti-virus software might need to turn it off in order to make it works)

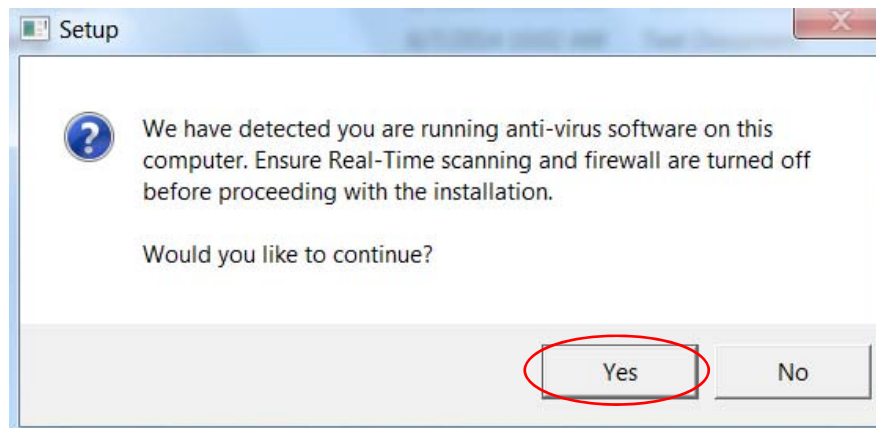


Figure 5. Antivirus Note before Installation

- 4) Select **I Accept...** to accept the License Agreement and click next. (See Figure 6)

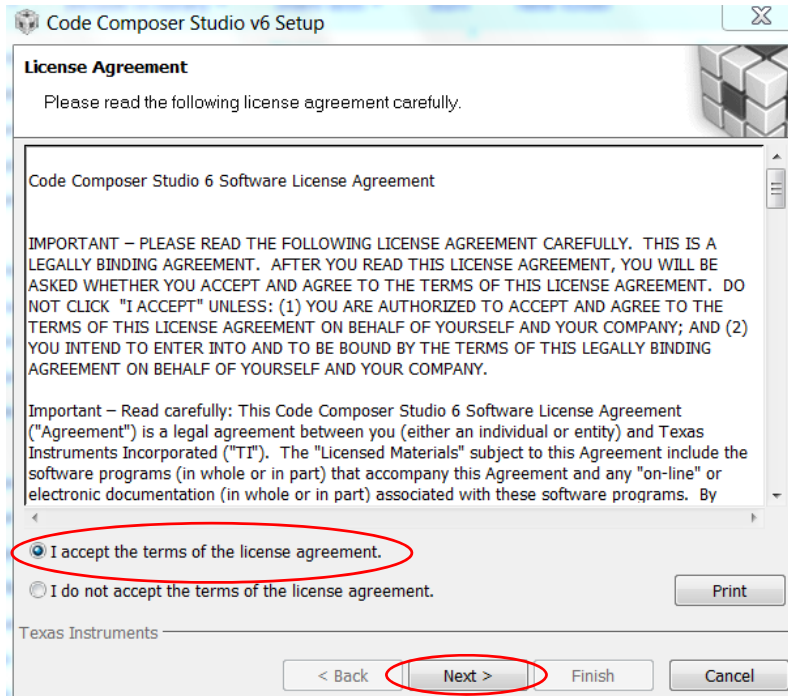


Figure 6. Accept Software License Agreement

- 5) Use the default folder, **C:\ti** at the root directory, then click on **Next** to install the Code Composer. (See Figure 7)

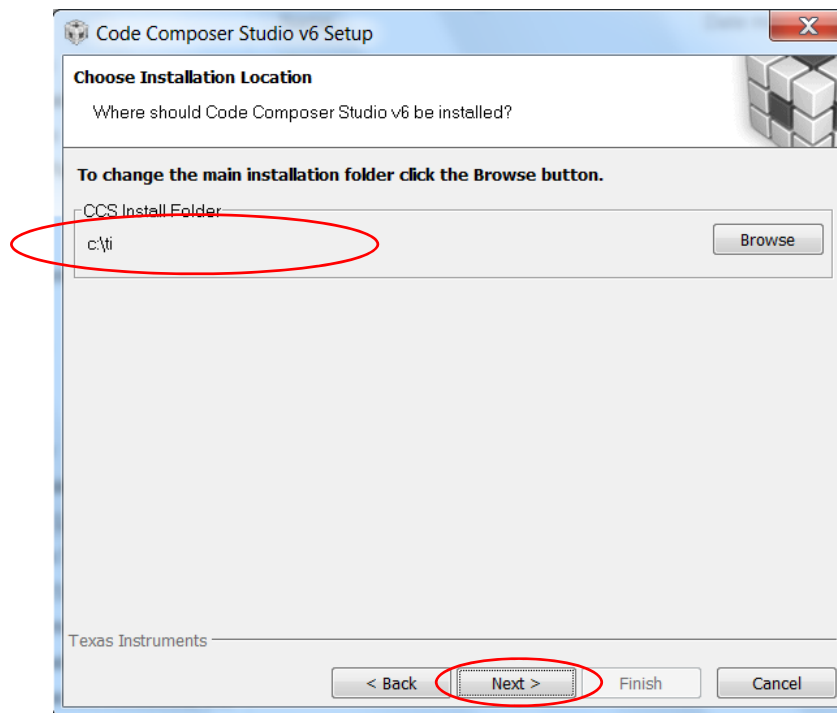


Figure 7. Install Code Composer Studio to C:\ti

- 6) Enable all options at the **32-bit ARM MCUs**. All other options are just accepting the default, then click on Next. (See Figures 8 & 9)

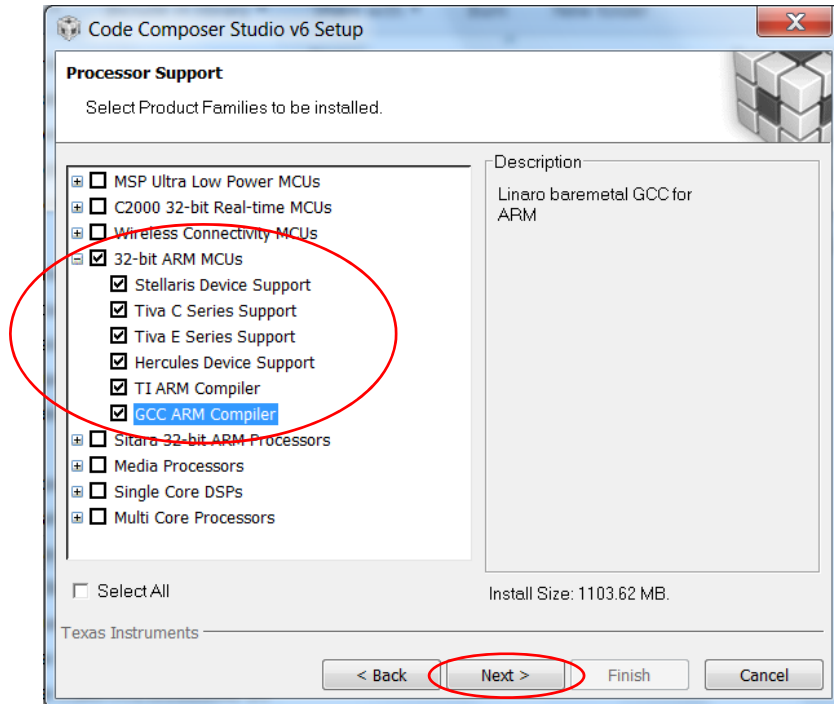


Figure 8. Select 32-bit ARM MCUs I

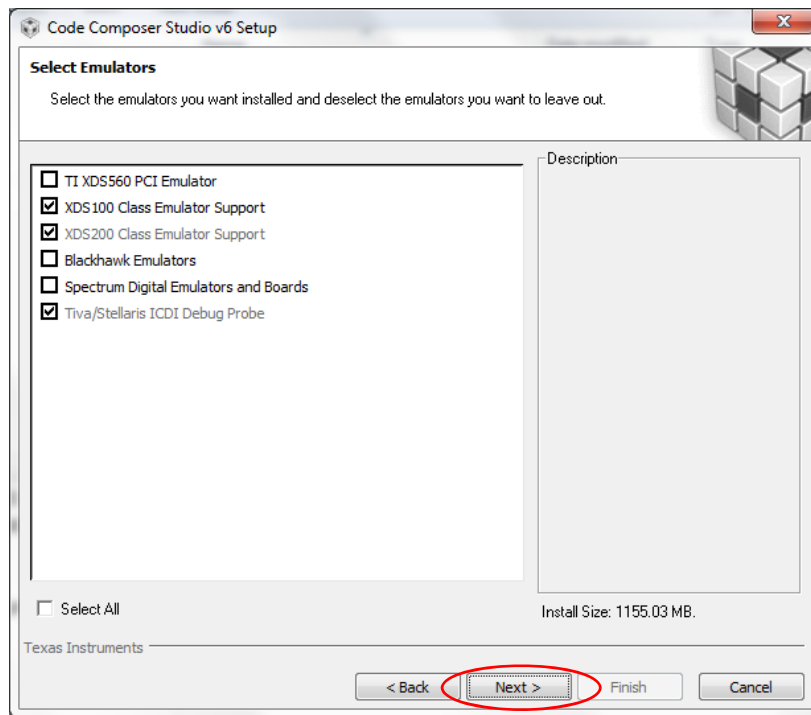


Figure 9. Select 32-bit ARM MCUs II

- 7) Select the App as shown below. Ensure you are online and then click Finish the installation will begin. (See Figure 10)



Figure 10. Select the App Window

- 8) The Code Composer installation window will begin as shows in Figure 11 and the green bar shows the progress, it will take up to half hour depend on the speed of your system. 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** or **Install/Approve** to continue the entire installation process. Dependent upon your internet speed, this could take up to a half hour. Slow internet connections can cause this to time out and fail.

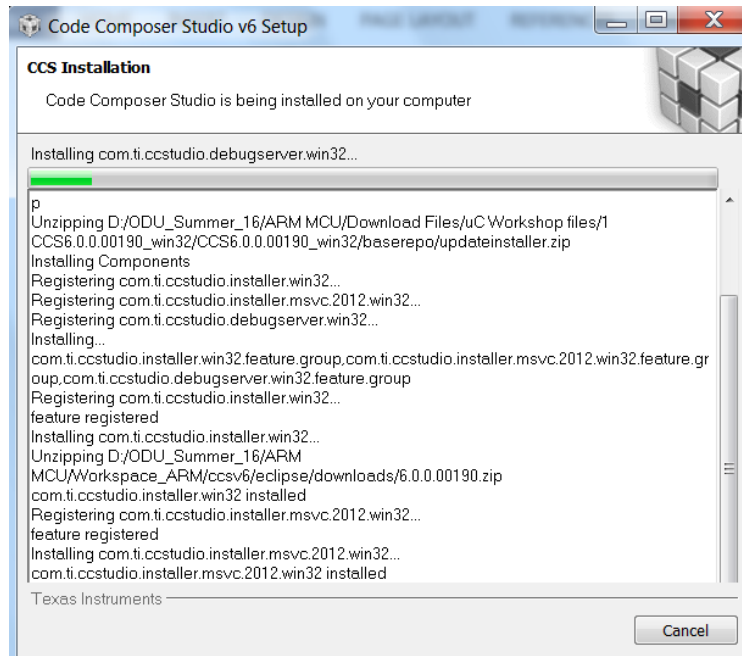


Figure 11. Installation Window and Green Bar

9) When the CCS installer is completed, then click on **Finish**. (See Figure 12)

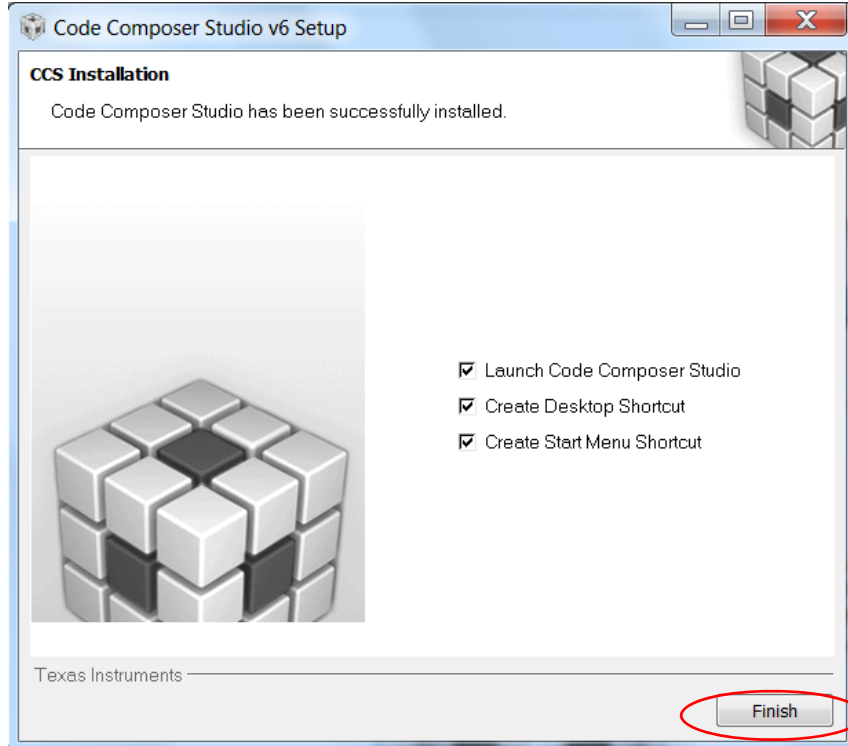


Figure 12. Installation Completed Window

10) At the end of the CCS installation, use Browse link the previous created folder "**Workplace_ARM**" to the Select a workspace, then click **OK**. (See Figure 13)

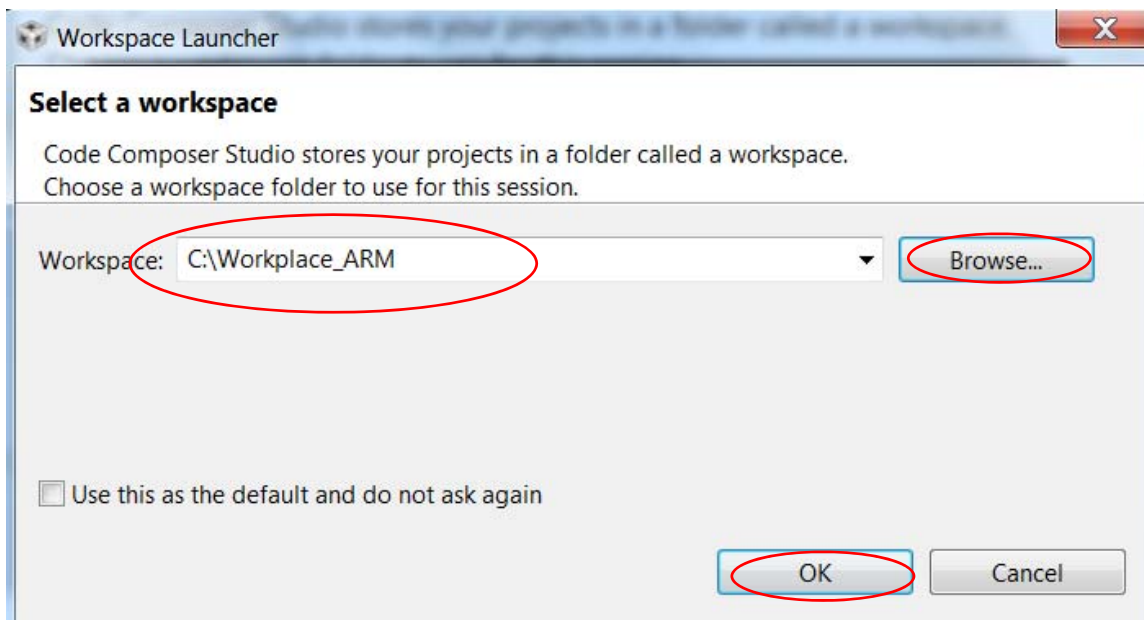


Figure 13. Select a Workplace Window

11) The CCS Edit - Code Composer Studio will launch and select **No** on “Add-ons to CCS” for now, then exit this window. (See Figure 14)

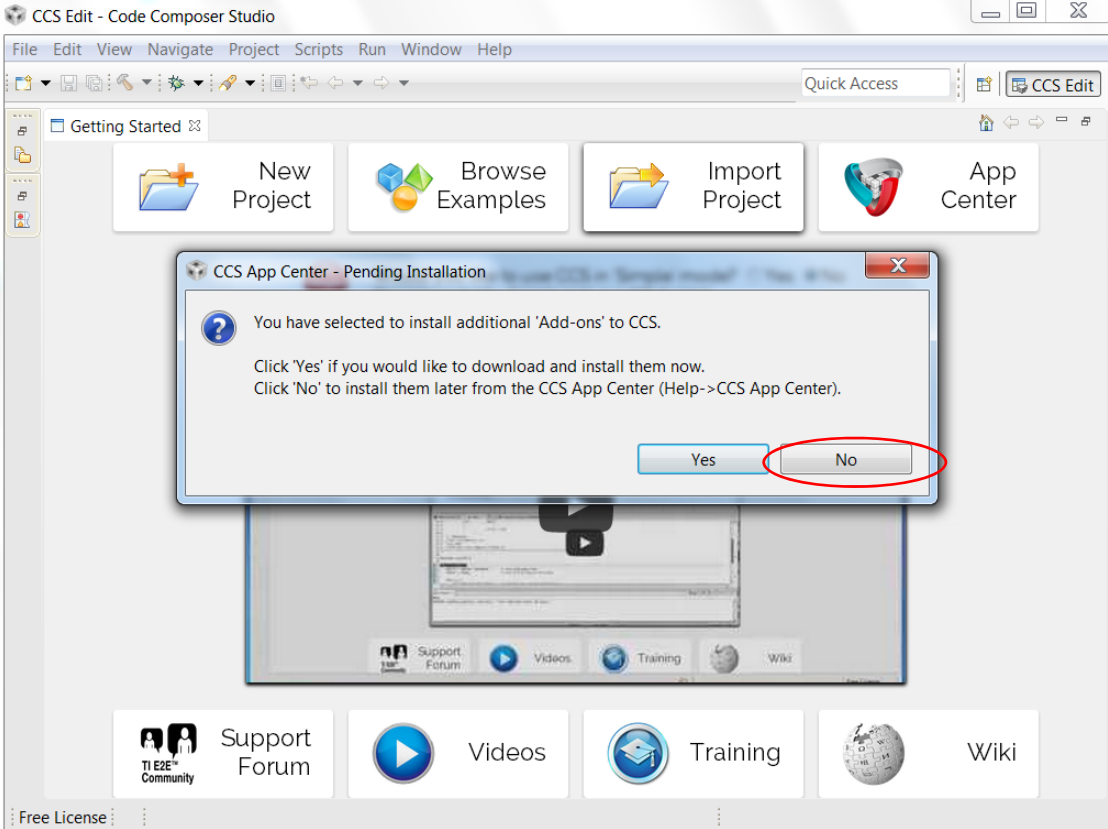


Figure 14. Select a No to Exit the CCS App Center Window

Step 3 – To install the **TivaWare**.

- 1) Download TivaWare to the root folder (shown in Figure 15), then double clicks on it to run the program.

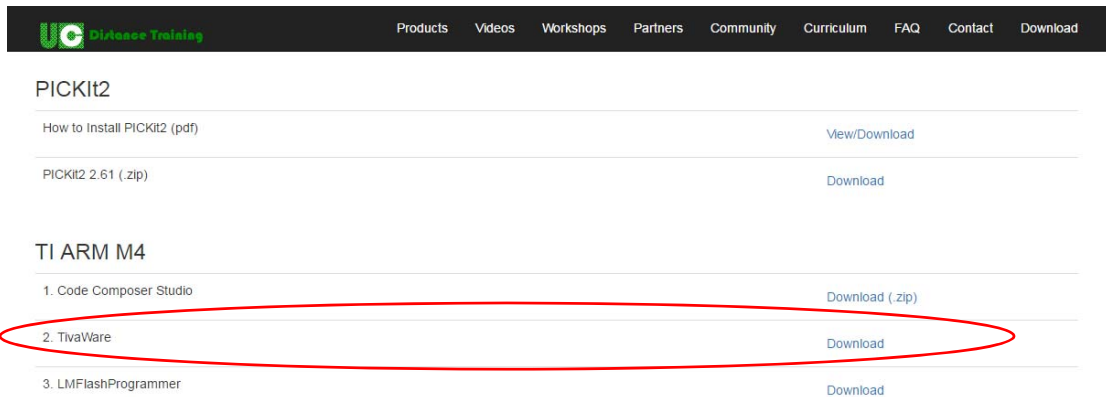


Figure 15. Location of TivaWare Window

- 2) Double click on the **SW-TM4C-2.1.9.12573.exe** to run it. (See Figure 16)

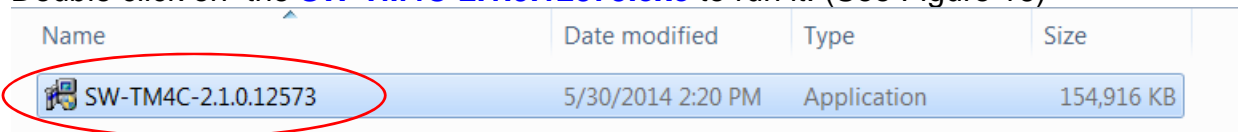


Figure 16. Location of SW-TM4C-2.1.9.12573.exe Window

- 3) The TivaWare resides under Code Composer. For TivaWare to run just select all the default options continuously and agree with license agreement. This installation is brief. (See Figure 17)



Figure 17. Installation of TivaWare Window

- 4) If you used the default folder for the Code Composer, then use the same default folder here (See Figure18). Click **Next** and **Install** in the next window.

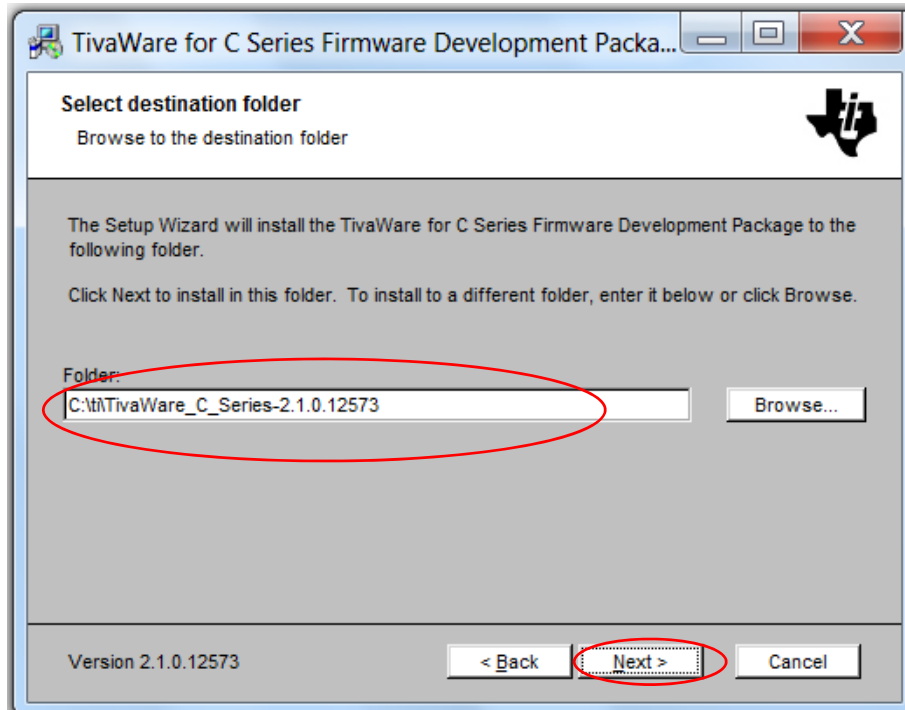


Figure 18. Use the TivaWare Default Window

- 5) Select **Finish** to complete the installation of the TivaWare (Figure 19).



Figure 19. TivaWare Installation Completed Window

- 6) At the end of the TivaWare installation the following extra window may pop out (See Figure 20). The program was installed correctly so just go ahead and click on “**This program installed correctly**”.

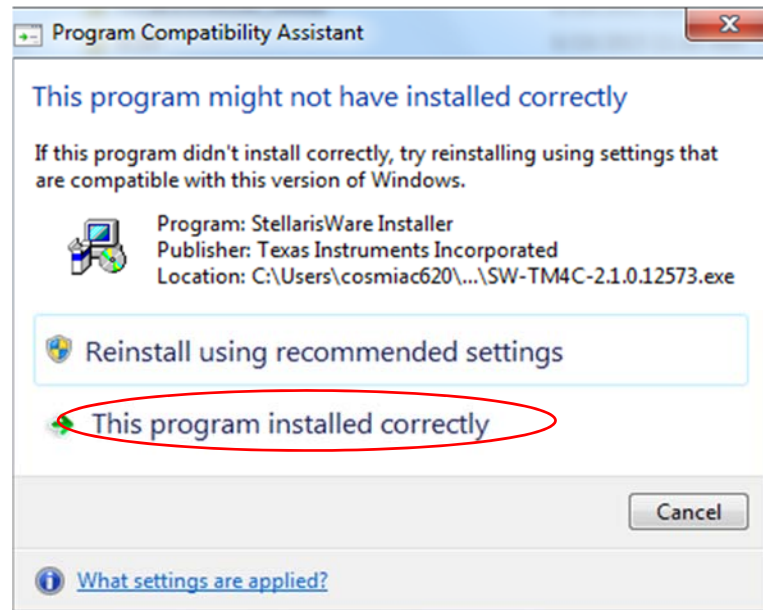


Figure 20. Extra Pop out Window

Step 4 – To install the **LMFlashProgrammer**.

1) Download the file to the root folder and run the program (See Figure 21)

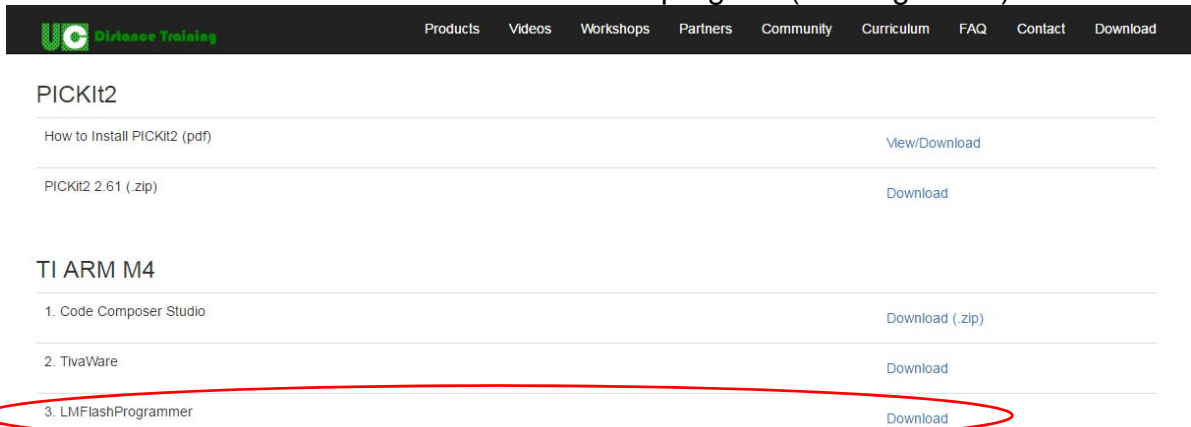


Figure 21. Location of LMFlashProgrammer Window

2) Select the **3 LMFlashProgrammer** folder (See Figure 19) and double clicks on **LMFlashProgrammer.msi** (See Figure 22).

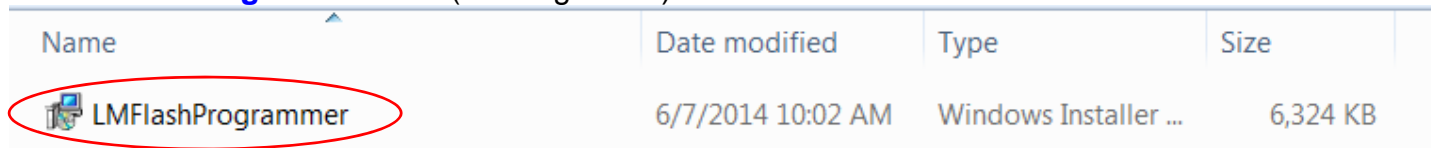


Figure 22. LMFlashProgrammer Window

3) Accept all the defaults and use the default folder, the installation goes very quickly. This will install the driver files to be able to communicate/program the Tiva board via the USB cable. This installation is also brief. (See Figures 23 and 24)

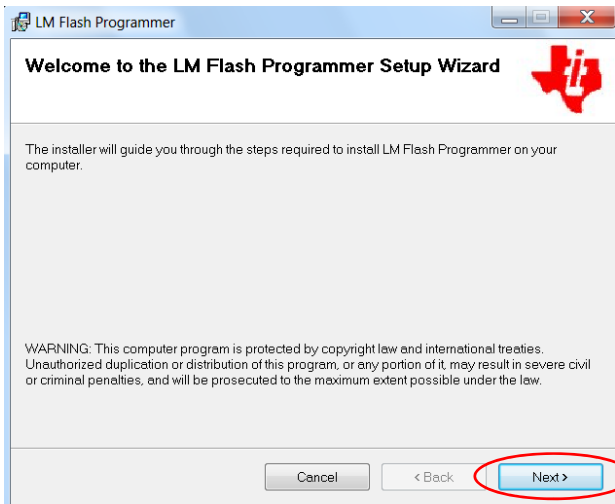


Figure 23. Programmer Window

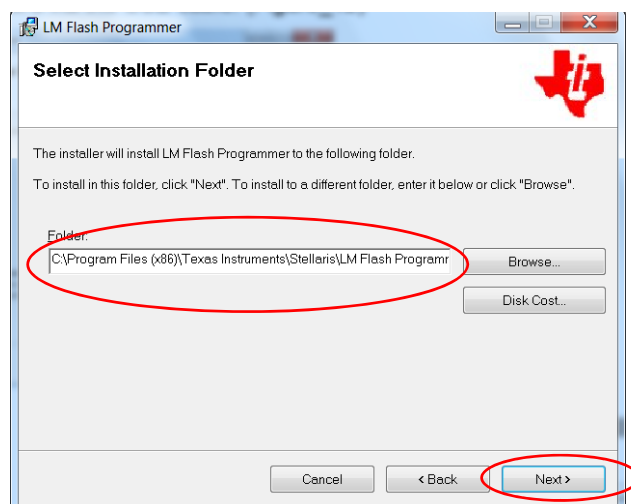


Figure 24. Default Setting Window

- 4) Next to confirm the installation of **LM Flash Programmer**, then close when finished. (See Figures 25 and 26)

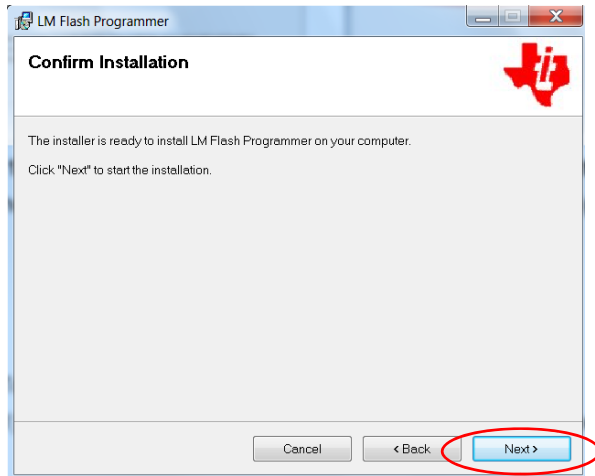


Figure 25. Confirm Installation Window

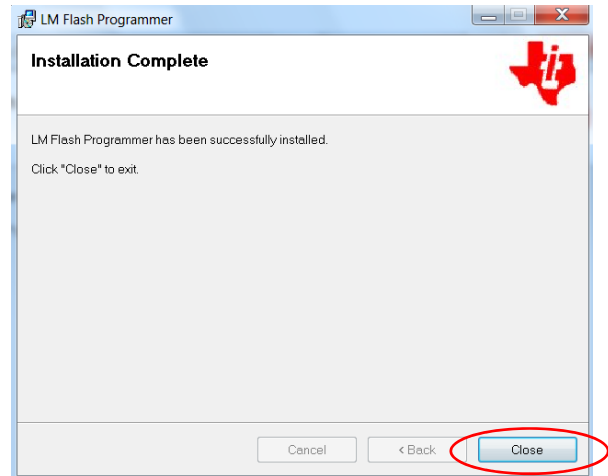
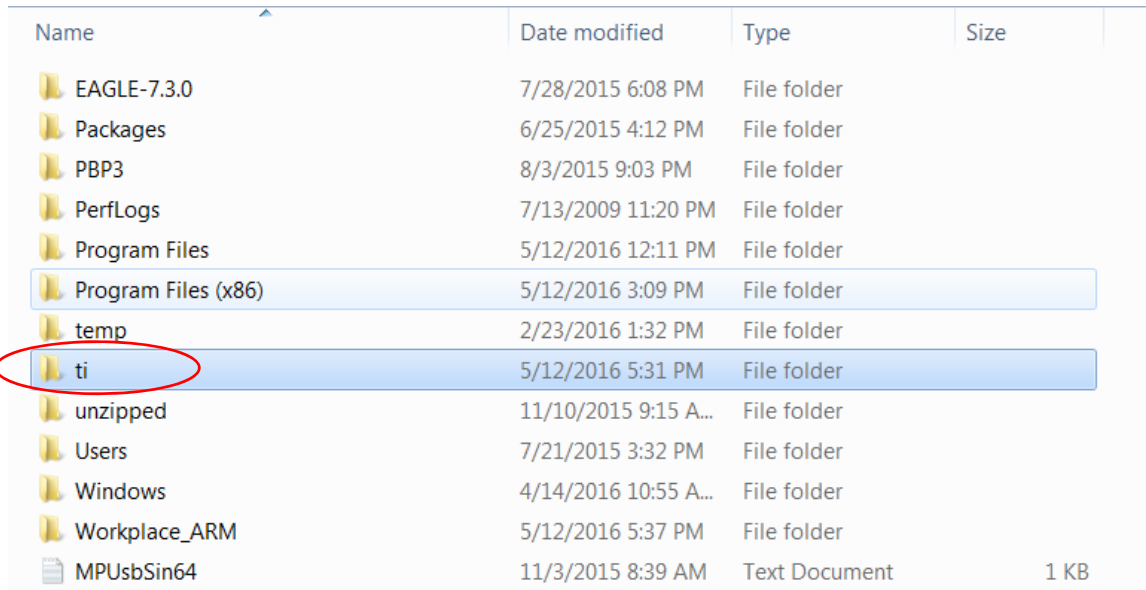


Figure 26. Close Installation Window

Check and Verify All the Installed Files

If everything installed correctly, you should see the followings

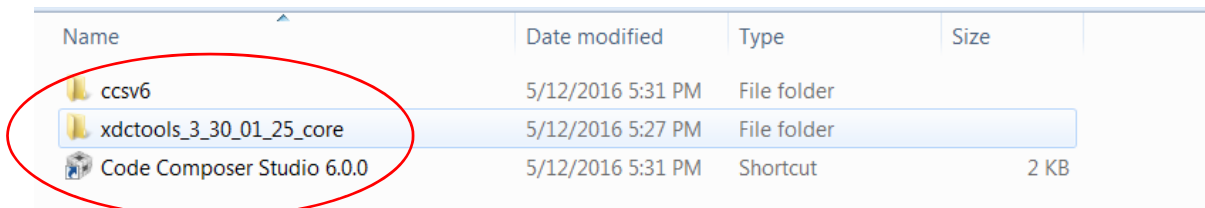
1) The root files in HD C:/ (See Figure 27)



Name	Date modified	Type	Size
EAGLE-7.3.0	7/28/2015 6:08 PM	File folder	
Packages	6/25/2015 4:12 PM	File folder	
PBP3	8/3/2015 9:03 PM	File folder	
PerfLogs	7/13/2009 11:20 PM	File folder	
Program Files	5/12/2016 12:11 PM	File folder	
Program Files (x86)	5/12/2016 3:09 PM	File folder	
temp	2/23/2016 1:32 PM	File folder	
ti	5/12/2016 5:31 PM	File folder	
unzipped	11/10/2015 9:15 A...	File folder	
Users	7/21/2015 3:32 PM	File folder	
Windows	4/14/2016 10:55 A...	File folder	
Workplace_ARM	5/12/2016 5:37 PM	File folder	
MPUsbSin64	11/3/2015 8:39 AM	Text Document	1 KB

Figure 27. ti Installation Window

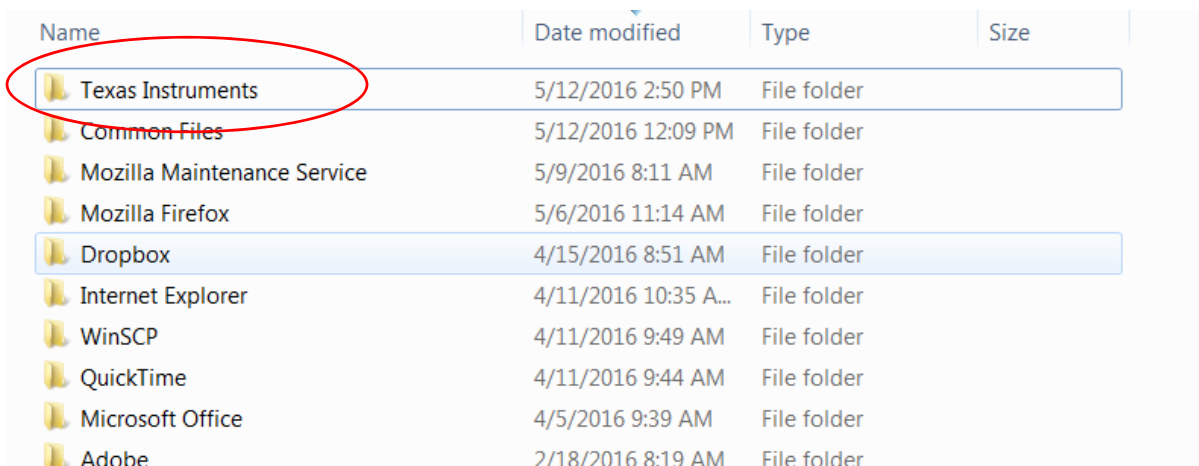
2) Under the ti folder, the files are: (See Figure 28)



Name	Date modified	Type	Size
ccsv6	5/12/2016 5:31 PM	File folder	
xdctools_3_30_01_25_core	5/12/2016 5:27 PM	File folder	
Code Composer Studio 6.0.0	5/12/2016 5:31 PM	Shortcut	2 KB

Figure 28. Files in ti Folder Window

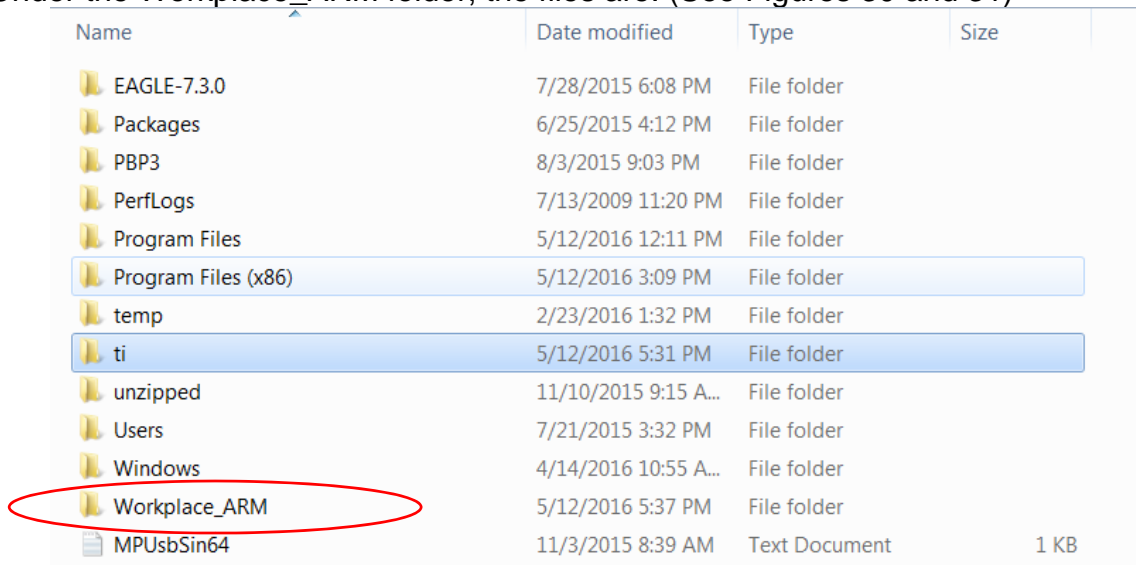
3) Under the Program files (x86) folder, the files are: (See Figure 29)



Name	Date modified	Type	Size
Texas Instruments	5/12/2016 2:50 PM	File folder	
Common Files	5/12/2016 12:09 PM	File folder	
Mozilla Maintenance Service	5/9/2016 8:11 AM	File folder	
Mozilla Firefox	5/6/2016 11:14 AM	File folder	
Dropbox	4/15/2016 8:51 AM	File folder	
Internet Explorer	4/11/2016 10:35 A...	File folder	
WinSCP	4/11/2016 9:49 AM	File folder	
QuickTime	4/11/2016 9:44 AM	File folder	
Microsoft Office	4/5/2016 9:39 AM	File folder	
Adobe	2/18/2016 8:19 AM	File folder	

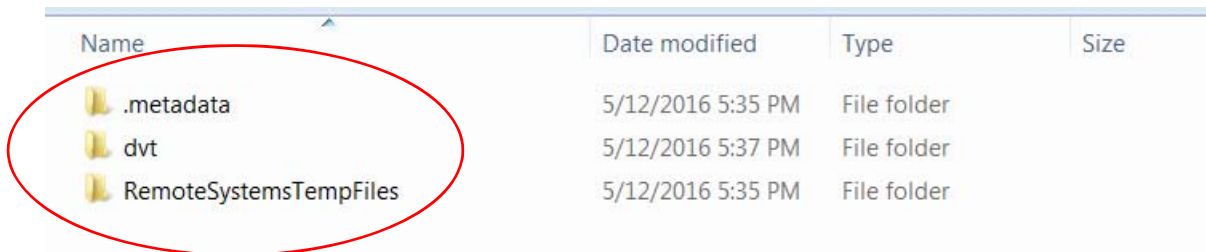
Figure 29. Files in x86 Folder Window

4) Under the Workplace_ARM folder, the files are: (See Figures 30 and 31)



Name	Date modified	Type	Size
EAGLE-7.3.0	7/28/2015 6:08 PM	File folder	
Packages	6/25/2015 4:12 PM	File folder	
PBP3	8/3/2015 9:03 PM	File folder	
PerfLogs	7/13/2009 11:20 PM	File folder	
Program Files	5/12/2016 12:11 PM	File folder	
Program Files (x86)	5/12/2016 3:09 PM	File folder	
temp	2/23/2016 1:32 PM	File folder	
ti	5/12/2016 5:31 PM	File folder	
unzipped	11/10/2015 9:15 A...	File folder	
Users	7/21/2015 3:32 PM	File folder	
Windows	4/14/2016 10:55 A...	File folder	
Workplace_ARM	5/12/2016 5:37 PM	File folder	
MPUsbSin64	11/3/2015 8:39 AM	Text Document	1 KB

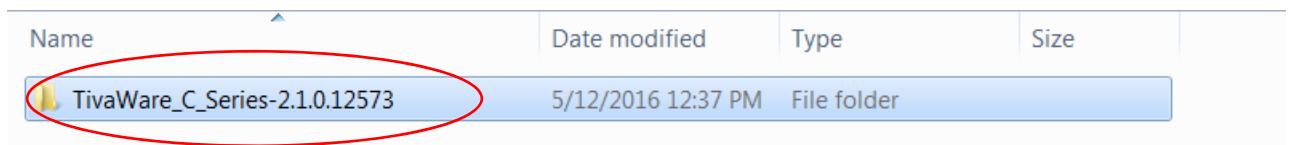
Figure 30. Workplace_ARM Window



Name	Date modified	Type	Size
.metadata	5/12/2016 5:35 PM	File folder	
dvt	5/12/2016 5:37 PM	File folder	
RemoteSystemsTempFiles	5/12/2016 5:35 PM	File folder	

Figure 31. Workplace_ARM File Window

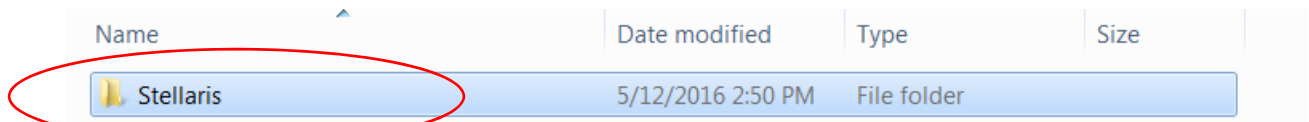
5) The **TivaWare** files are under the ti folder: (See Figure 32)



Name	Date modified	Type	Size
TivaWare_C_Series-2.1.0.12573	5/12/2016 12:37 PM	File folder	

Figure 32. TivaWare File Window

6) The **LMFlashProgrammer** files are under the Stellaris folder at C:\Program Files (x86)\Texas Instruments: (See Figures 33 and 34)



Name	Date modified	Type	Size
Stellaris	5/12/2016 2:50 PM	File folder	

Figure 33. Stellaris File Window


Name	Date modified	Type	Size
 LM Flash Programmer	5/12/2016 2:50 PM	File folder	

Figure 34. LM Flash Programmer File Window

7) There will be two small icons on your Window desktop, as shown in Figure 35.



Figure 35. Window Desktop Icons