Guide to Importing Projects from C2000Ware into Code Composer Studio

Importing using the local installation:

The F28004x header file examples are located in C2000Ware under the `<C2000Ware Installation Directory>device_support\f28004x\examples` directory, and driver library examples are under the `<C2000Ware Installation Directory>\driverlib\f28004x\examples` directory. In order to import an example project into Code Composer Studio (CCS), the following steps need to be followed:

1. On the CCS menu bar, select `Project` → `Import CCS projects`. The "Import CCS Eclipse Projects" window will open, click on `Browse` next to the "Select search-directory" box.
2. In the "`Select Search Directory`" window, navigate to the following folder: `C:\ti\c2000\C2000Ware_<version>\device_support\f28004x\examples`. To import driverlib examples, browse to `C:\ti\c2000\C2000Ware_<version>\driverlib\f28004x\examples`. Click on 'Select `Folder`'.
3. The resulting window displays a list of discovered projects within the F28004x/examples folder.
4. From this window, select the project(s) of your choice. Remember to ***unselect*** the "Copy projects into workspace" box (but for driverlib projects, leave this box checked). Once completed, click the `Finish` button. If the "Copy projects into workspace" is checked, the project is copied into the CCS workspace folder. Many projects are structured such that the include files reside in a common folder and several projects can use/reference the same set of common include files When projects are imported and copied to workspace, the include folders are not necessarily copied. CCS handles the import since the project may still need to reference resources whose paths are set up relative to the original project location.
   Note: It is advisable to periodically clean CCS workspace as it could get corrupted over time. Before cleaning, if there are workspace settings you'd like to preserve, you can save the current workspace settings so they can be imported into the new workspace. Projects will have to be re-imported after cleaning the workspace.
5. The selected project(s) should now be viewable in the "CCS Project Explorer" window.
6. You have now successfully imported an F28004x example project into CCS.

Importing from TI Resource Explorer:

The recommended way to start a new project in Code Composer Studio IDE is to use an appropriate example from the TI Resource Explorer and adapt it. The TI Resource Explorer makes all examples and documentation from the C2000ware available inside Code Composer Studio IDE.

The TI Resource Explorer is available online at http://dev.ti.com/tirex/ and is also included in Code Composer Studio IDE 7.0 and above. In Code Composer Studio IDE, select View → Resource Explorer.

1. In the TI Resource Explorer included in CCS IDE , select your <device part number> in the search field to list only the examples, documentation or content that applies to that device, so that you can more easily find an example that suits you. Basic Empty CCS project examples, for example, are found in the hierarchy (see Figure 1).

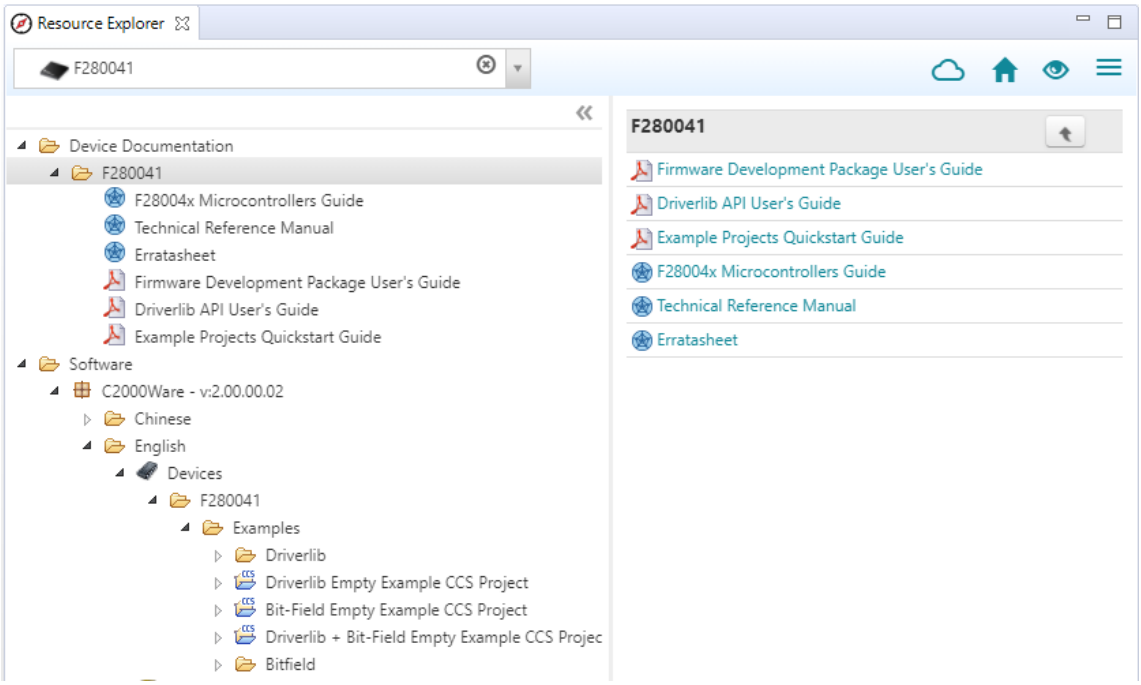

Figure 1: Navigating for a device in TI Resource Explorer

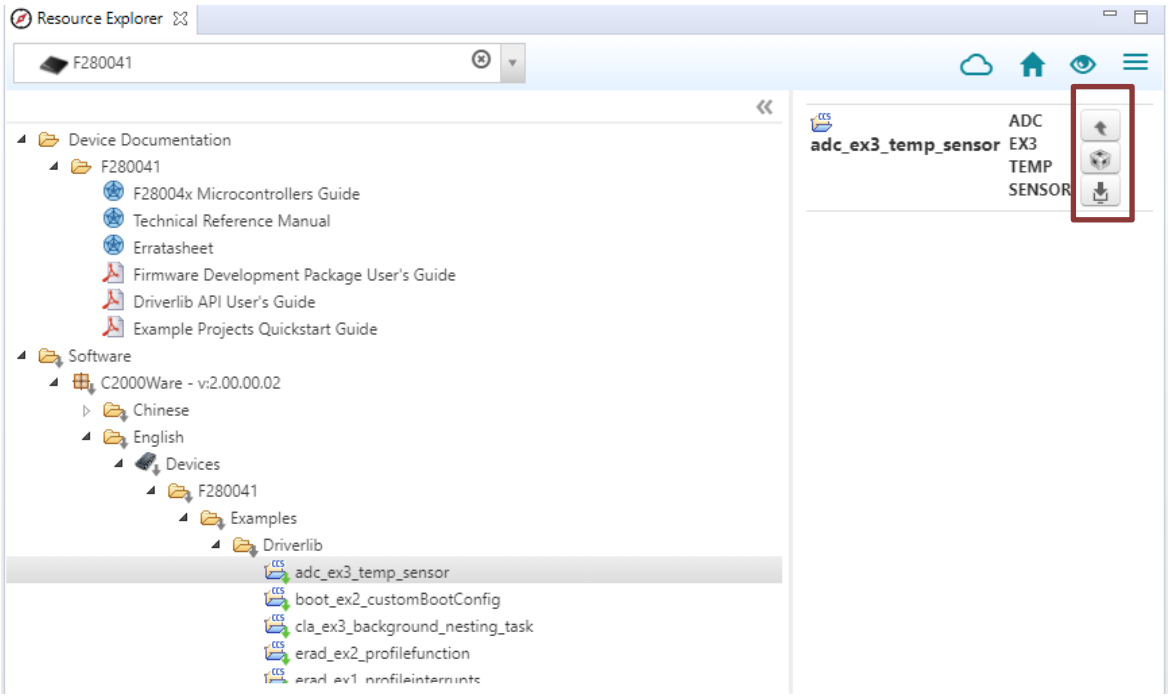

Figure 2: Selecting an Example in TI Resource Explorer

2. Click on one of the example that you would like to import to Code Composer Studio IDE or navigate to. Basic Driverlib examples, for example, are found in the hierarchy (see Figure 2).
3. Click one of the buttons in the top right corner (see Figure 2) to download the C2000ware and import the example to Code Composer Studio IDE. When the C2000ware is already locally installed in the default location, all examples are taken directly from the installed SDK.
4. Follow the steps as instructed to get the example imported into IDE.
5. After import, you can continue to compile or expand the example.

Building:

This section describes how to build an imported C2000 example project:
A project can have multiple build configurations. F28004x example projects have the following configurations

- `CPU1_RAM` -> Indicates that the code runs from RAM on Control Card, this is the default configuration
- `CPU1_Flash` -> Indicates that the code runs from Flash on Control Card
- `CPU1_LAUNCHXL_RAM`-> Indicates that the code runs from RAM on Launch Pad
- `CPU1_LAUNCHXL_Flash` -> Indicates that the code runs from RAM on Launch Pad

1. To change the build configuration, select `Project` → `Build Configuration` → `Manage`. From this window, select the configuration needed for the current build, or create a new one.
2. Once the build settings are configured, select a project(s) to build by clicking on the project. The project is recognized as selected if the name is bolded with the word 'Active' next to it.
3. To build the project, select `Project` → `Build Project`. To build all the projects in the workspace, select `Project` → `Build All`.
4. Notice the tools running in the console window. After the build is complete, a message will appear indicating the build status for the selected project.
5. If the build failed, check the "Problems" window for errors. Resolve the errors and repeat the build process. Verify that the project(s) has built successfully.
6. If no errors exist in the "Problems" window, the project is built and ready to be loaded and run.

Running:

This section describes how to download the code to the target board and run the program:

1. In the "CCS Edit" view, select `Run` → `Debug`.
2. Each build configuration of the project is configured to choose the appropriate target configuration which is launched when the "`Run` → `Debug`" is clicked. `Make sure that the correct target configuration is set to Active based on the board under use (Control Card or Launchpad)`
3. Notice the "CCS Debug" icon in the upper right-hand corner indicates that the perspective has changed to the "CCS Debug" view. After the program is loaded, the console window will indicate that the Memory Map Initialization is complete. At this point, the program ran through the C-environment initialization routine and stopped at `main()`.
4. The source file containing `main()` will open with a blue arrow pointing to the first line of code to be executed. The program has now been successfully loaded on to the target board and it is ready to run.
5. To execute the program, select `Run` → `Resume`.

For more information about Code Composer Studio visit:
http://software-dl.ti.com/ccs/esd/documents/users_guide/index.html

Documentation:

1. All documentation for the C2000ware can be found in the C2000ware installation path in the docs folder. Open **c2000Ware_documentation.html** from that folder and then navigate to the desired document / guide.
2. The C2000ware documents can also be viewed in the Resource explorer (see Figure 3).

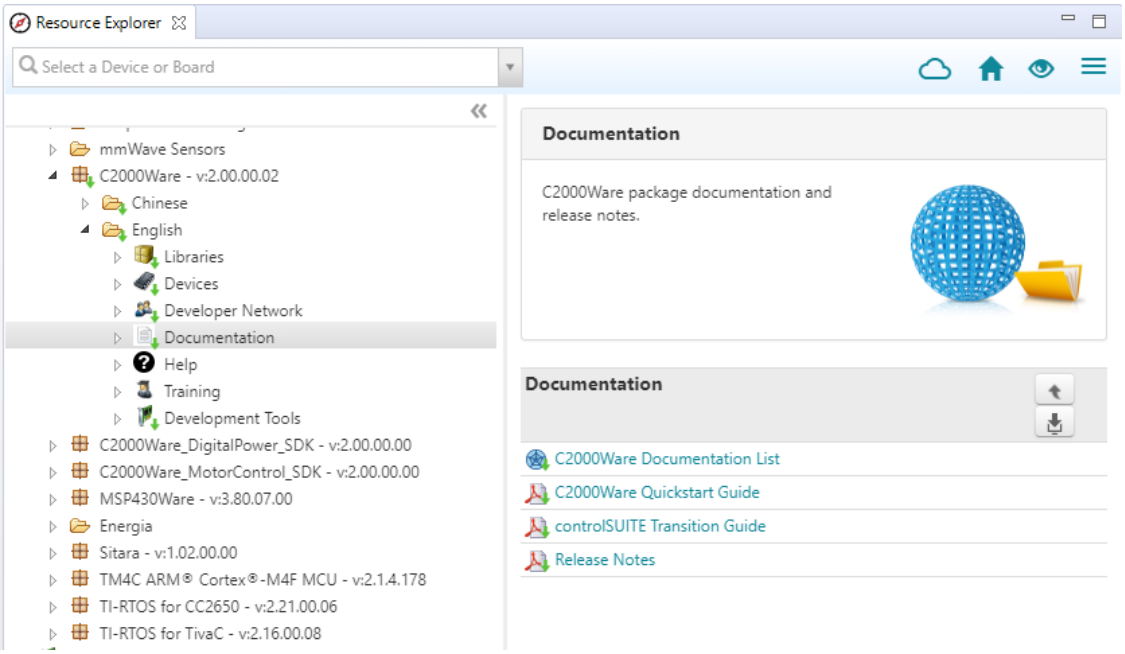

Figure 3: C2000ware documentation navigation

Technical Support:

C2000 microcontroller e2e forum