Quick Guide for Creating & Running Assembly Projects in CCS/F28379D LaunchPad

Install the **ControlSuite** libraries into your TI directory, eg: C:\ti, before continuing

[<http://www.ti.com/tool/C2000WARE>](http://www.ti.com/tool/CONTROLSUITE)

Former DSP TA, Raz Aloni, has a video with a ton of good information on everything in this tutorial, but for the old 335 processor.

<https://www.youtube.com/watch?v=S14Kt27zff0&feature=youtu.be>

* **Creating a C Project**
  + Click **File**, hover over **New**, select **CCS Project**
  + Select the **2837xD Delfino** as the target, and select the **TMS320F28379D** in the dropdown to the right
  + Name your project, select **Empty Project (with main.c)**
  + Add a target file manually or select **Automatically Generate** if your board is plugged in
* **Include Files**
  + Right click the project name, select properties. Click **Include Options** under **C2000 Compiler**. Click the **Add** icon in the include path box. Add the following directories, note that your “ti” folder may be installed in a different place.

**C:\ti\c2000\C2000Ware\_2\_00\_00\_02\device\_support\f2837xd\headers\include**

**C:\ti\c2000\C2000Ware\_2\_00\_00\_02\device\_support\f2837xd\common\include**

**Navigate to the common\include folder and move the device.h and driverlib.h files into the parent directory for potential future use**

* **Source Files**
  + Create new two folders in your project directories, such as “Common” and “Header”.
  + Right click the project name and select **Add Files** and add the following files:

**C:\ti\controlSUITE\device\_support\F2837xD\v210\F2837xD\_common\source\Add all the files in this folder EXCEPT device.h, driverlib.h, and F2837xD\_SWPrioritizedPieVect.c**

* + Select **Copy Files**. After the source files have been added to your project, move them to your **Common** folder
  + Right click the project name and select **Add Files** and add the following files:

**C:\ti\c2000\C2000Ware\_2\_00\_00\_02\device\_support\f2837xd\headers\cmd\F2837xD\_Headers\_nonBIOS\_cpu1.cmd**

**C:\ti\c2000\C2000Ware\_2\_00\_00\_02\device\_support\f2837xd\headers\source\F2837xD\_GlobalVariableDefs.c**

* + Select **Copy Files** when adding each one. Move them into your **Header** folder.
* **Predefined Symbols**
  + Right click your project name, select properties, and under C2000 Compiler select **Predefined Symbols**
    - Add **CPU1** and **\_LAUNCHXL\_F28379D** as predefined symbols
* **Project Properties Modification**
  + Right click the project name, select properties. Under the C2000 Compiler dropdown select the Advanced Options dropdown, then click Language Options. Where it says C dialect, click the dropdown and change it from "ANSI C89" to "C99" mode.
* **Linker Files**
  + If your project has the FLASH linker selected, switch to RAM.
* **Running your project**
  + Attempt to build your C project. If it doesn’t build, go back through the tutorial before asking for help.
  + An example C project is given below, you can right click any function and select **Open Declaration** to see how it is setup.

/\* Author: Dave

\* Blink a light, don't forget your EALLOWs

\*/

**#include** <F28x\_Project.h>

**int** **main**(**void**)

{

//init system clocks and get board speed running at 200 MHz

//your board will run at 100 MHz if you do not have all the predefines!

**InitSysCtrl**();

EALLOW;

GpioCtrlRegs.GPADIR.bit.GPIO31 = 1; //set blue light on LP as an output

**while**(1){

//delay for 1 second

DELAY\_US(1E6);

//toggle the light

EALLOW;

GpioDataRegs.GPATOGGLE.bit.GPIO31 = 1;

}

}