Lab 0: Code Composer Studio V5 with DSK6713 [1]

This set of instructions use code composer studio v5 with DSK6713 board [2]

1   One time setup

1. Get the support files from Spectrum digital

    http://c6000.spectrumdigital.com/dsk6713/V2/files/DSK6713.zip

   unzip the file under `C:`. The folder will be labeled `dsk6713`

2. Browse to `C:\dsk6713\drivers`. On each of `c6713dsk.exe` and `c6713dskdiag.exe`, right mouse click on `c6713dsk.exe`, try recommended settings and make sure compatibility mode is XP.

3. Get files that will be frequently used

    http://ee.nmt.edu/~rene/Fall_2015/EE451/Labs/C6713_support_CCS_V5_ver2.zip

   unzip the file under `C:`. The folder will be labeled `C6713_support_CCS_V5`

2   Starting a New Project

- Start Code Composer studio.
- Start a new CCS project.
- Give the project a name (select the U: drive as default location)
- `General tab`

   -Family: `C6000`

   -Variant: **Note:** Leave left box as is. On the right box: `TMS320C6713`
   -Connection: `Spectrum Digital DSK-EVM-eZdsp onboard USB Emulator`

   -Runtime support library: `rts6700.lib`
   -click `finish`.
   -right-click on project name, and click on `show build settings`

---

[1] This lab is based on a lab by Dr. Aly El-Osery.

[2] Digital Spectrum still sells DSK6713 with CCSv3 meant to run on XP. Thanks to Darrell Thomas we can easily use CCSv5. This information was compiled from http://e2e.ti.com/support/dsp/tms320c6000 high performance dsps/f/115/t/215890.aspx

- C6000 Compiler tab

  On `Procesor Options`
  -Target Processor Version: `6700`

  -Include Options tab:
  `$CG_TOOL_ROOT/include` (already there)
  Add the following:
  `C:\DSK6713\c6000\dsk6713\include`
  `C:\DSK6713\c6000\bios\include`

  -Advanced Options

  * Predefined Symbols tab: Edit and write `CHIP_6713`
  * Runtime Model Options: `Data access model (--mem_model:data) far`

- C6000 Linker
  -File Search Path: (In top window)
  `C:\DSK6713\c6000\dsk6713\lib\dsk6713bsl.lib`
  `C:\DSK6713\c6000\bios\lib\csl6713.lib`

3   Copy Needed Files

- Before copying needed files, navigate to your project in U: drive and delete the current `c6713.cmd` file.

- Copy the following files from `C:\C6713_support_CCS_V5` to the folder containing your project

- `C6713dsk.cmd`
- `c6713dskinit.c`
- `c6713dskinit.h`
- `dsk6713_aic23.h`
- `dsk6713.gel`
- `Vectors_poll.asm` if using polling (or `Vectors_intr.asm` if using interrupts)

4   Final Step

- In `CCS` Project, expand Target Configuration folder and double click on Target Configuration on `TMS320C6713.ccxml`

- Click on `advanced`

- Choose the `gel` file that you just copied to your directory by Clicking on TMS320c671x (last in tree)

- `Initialization script`: Browse to the `.gel` file in your project directory and save it.

- Go to `C:\dsk6713\drivers`, click on `c6713dskdiag.exe`. Click on `Start`. At the end of diagnostics you expect `PASS` signaling that the board is working correctly.

- Start `debug` clicking on the little green bug a the top.

- Wait for GEL startup to complete.