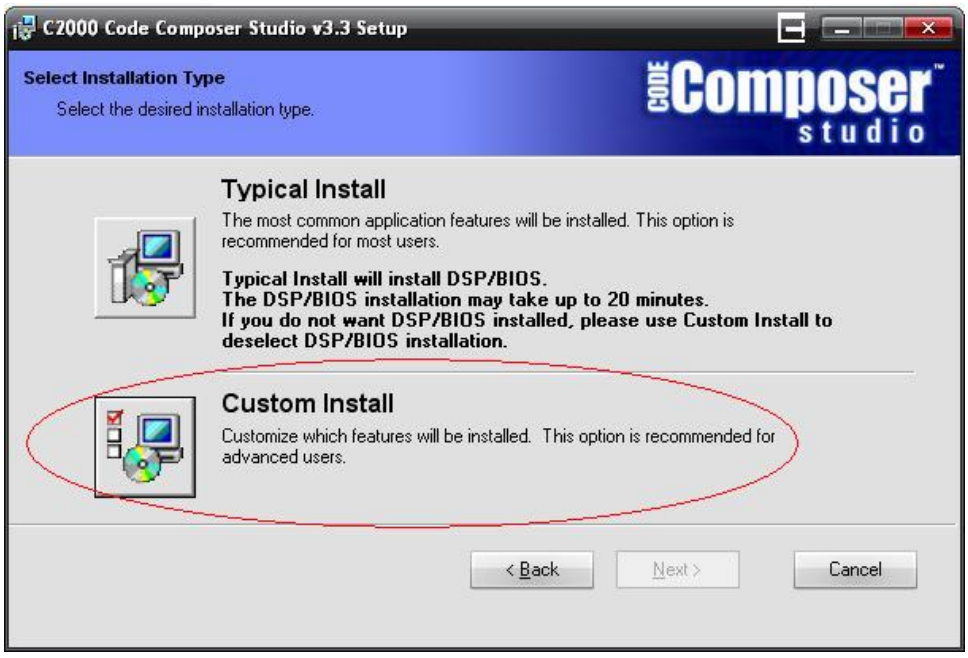
Code Composer Studio v3.3 Quick Start Guide

June 2009

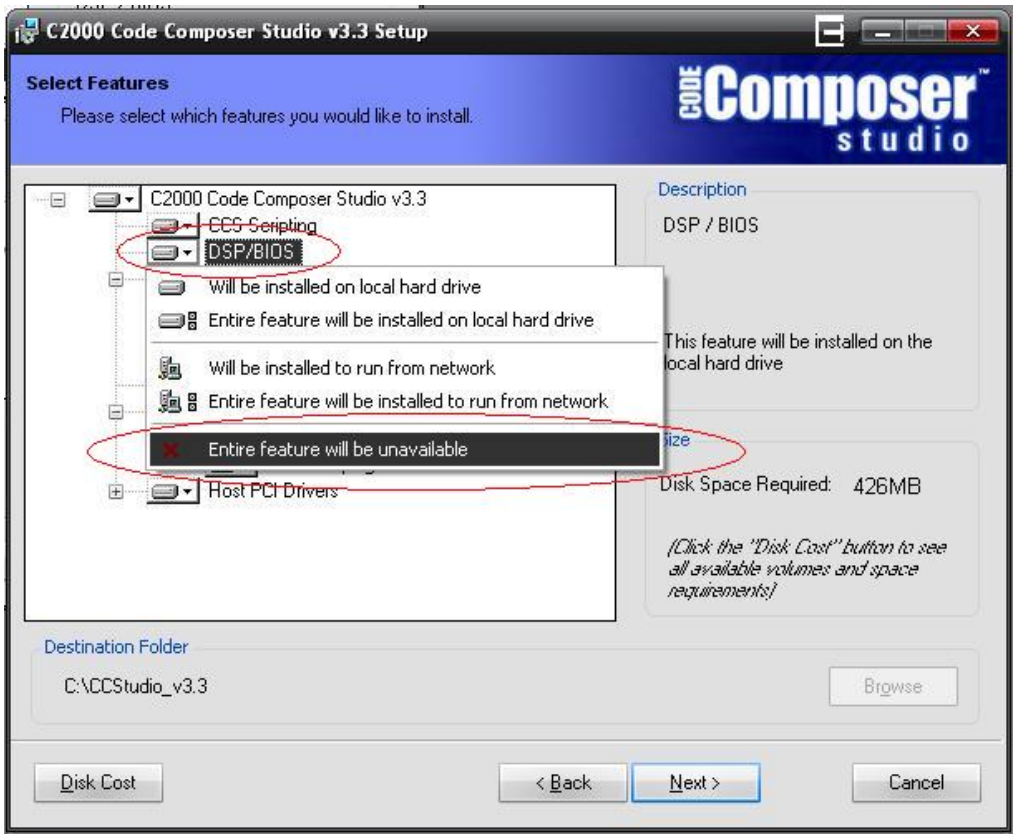
Code Composer Studio (CCS) is the IDE supplied by Texas Instruments for developing and debugging programs on the C2000 microcontroller. This quick start guide gives a very high level overview of how to configure CCS to work with a C2000 microcontroller. For more detailed information on CCS please visit http://www.ti.com/lit/htm/spru509

Installing CCS V3.3

1) Insert the Code Composer CD into your CD drive and open the "setup.exe" program.
2) When you come to the Installation Type screen, select "custom install."



3) Under the install options, click DSP/BIOS and then select the "entire feature will not be available" option. DSP/BIOS is a real time operating system designed by Texas Instruments to run on various TI processors, including the C2000. However, most C2000 applications do not require DSP/BIOS and the installation time is quite long. DSP/BIOS can always be installed later on top of an existing CCS installation.

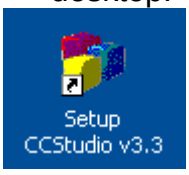


4) Install CCS into the desired directory. If CCS is already installed, installing into a different directory will leave the existing version of CCS untouched and you will be able to use both CCS versions.

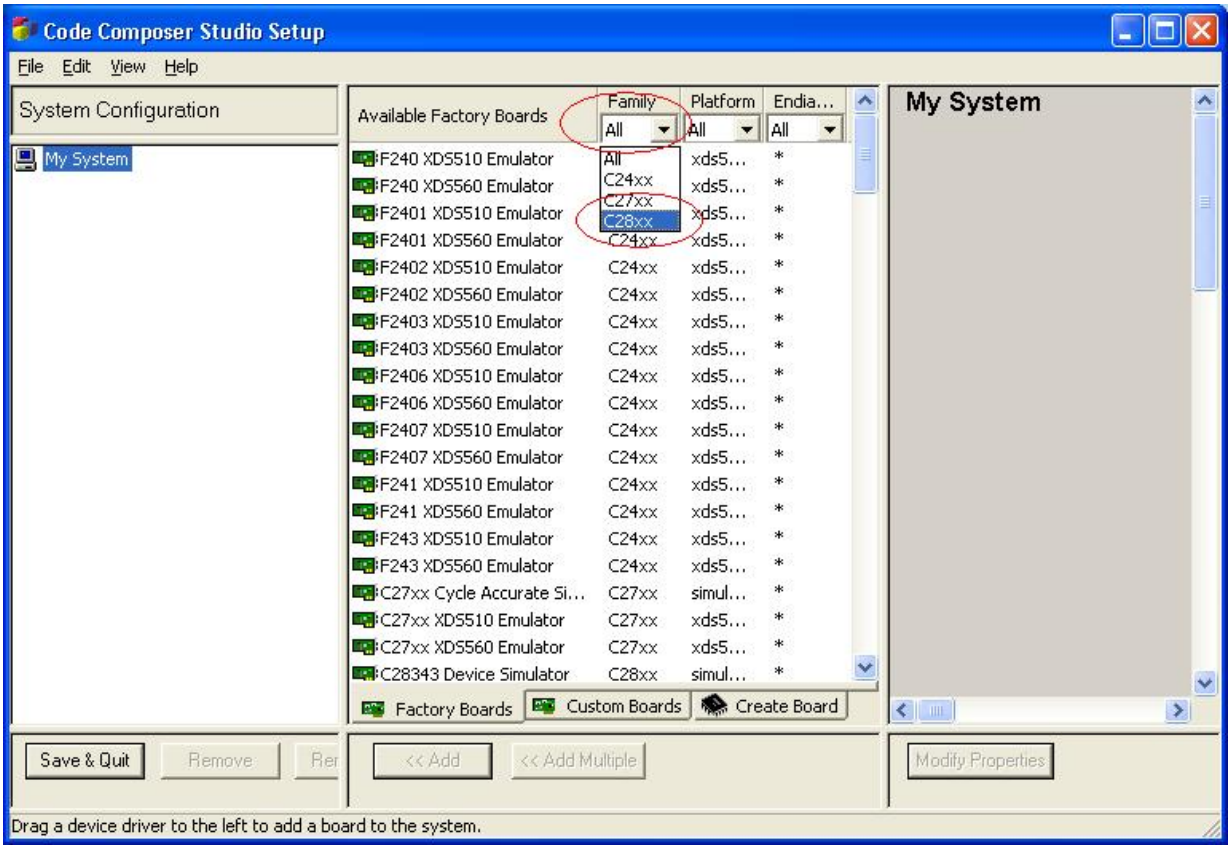
Configuring CCS for a C2000 Microcontroller

Note: If you are using a JTAG emulator other than the onboard USB JTAG emulation built into many C2000 development tools you should install the drivers for the emulator at this point.

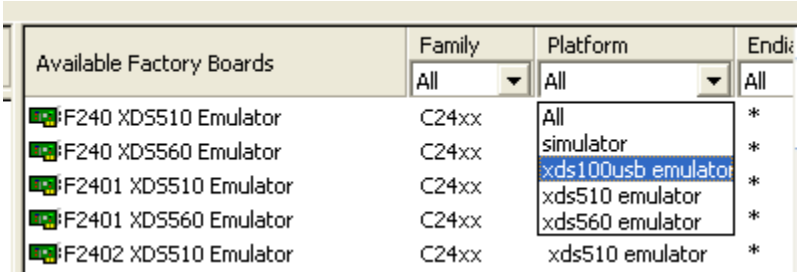
1) Launch the “Setup CCStudio v3.3” application the installer created on your desktop.



2) Under the “Family” dropdown menu select “C28xx”

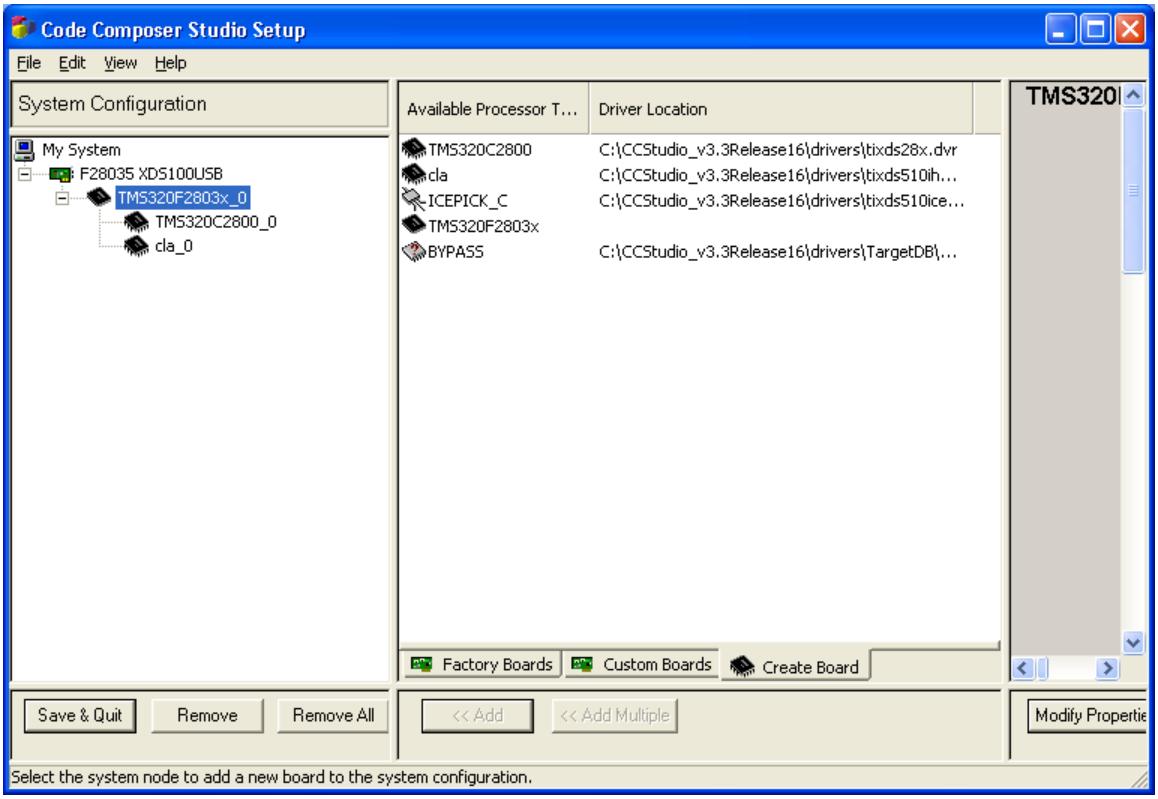


3) Under the “Platform” dropdown menu select the type of emulator you are using. If you are using the on board USB JTAG emulation included in many C2000 development tools select “xds100usb”. If you are using a different emulator you should be able to select it from this drop down menu.



4) Now all of the configurations that are not C28xx (the current generation of C2000 microcontrollers) and are not XDS100 or the emulator you selected have been eliminated from the selectable board configurations. It is now much easier to find the configuration for the C2000 MCU you are using. In this quick start guide we’ll assume the MCU is a Piccolo F28035. Select the “F28035 XDS100 Emulator” configuration.

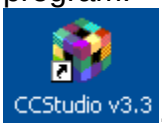
5) Now click “<< Add” The configuration you selected should now appear under “System Configurations”.
Note: The F28035 contains the CLA, which is an independent co-processor and thus the configuration shows there are two “CPUs.” For other C2000 microcontrollers there will only be one CPU. For more information on the CLA please visit www.ti.com/piccolo



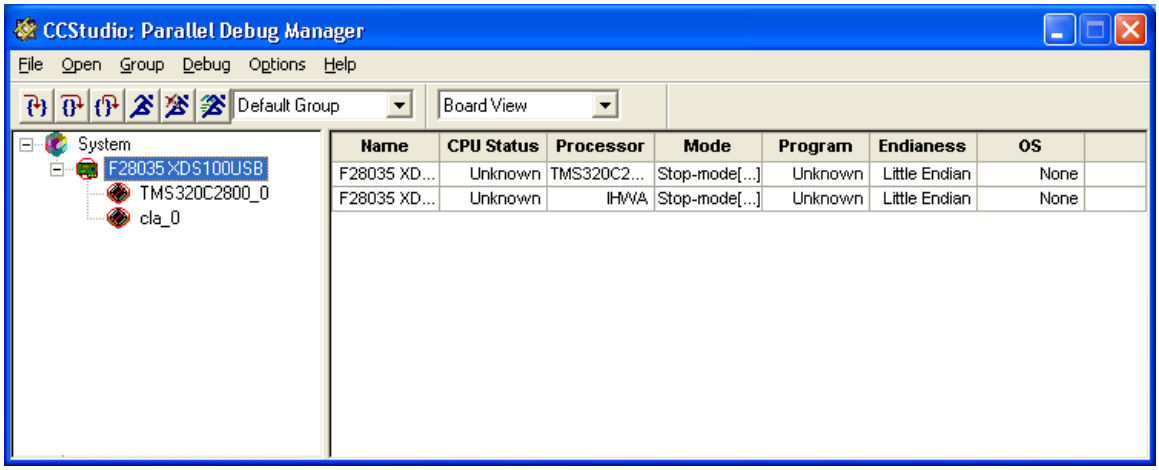
6) Click “Save & Quit” and click “Yes” to launch CCS on exit.

CCS is now configured for your particular JTAG emulator and C2000 microcontroller. Unless you need to change your emulator or C2000 MCU,

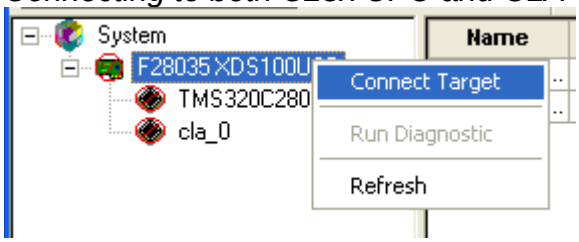
from now on you can directly launch CCS by opening the “CCStudio V3.3” program.



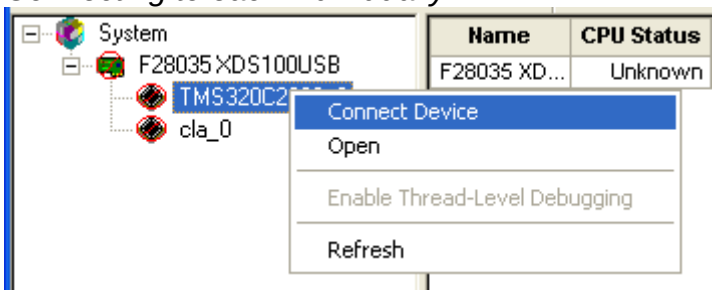
7) ***This step applies ONLY to Piccolo F28035 users***. Because the CLA is treated as a separate CPU core, CCS will ask which core you would like to develop on. You can simply right click on the upper level “F28035XDS100USB” and connect to both, or connect to each core individually by right clicking on either the “TMS320C2800_0” or the “cla_0”



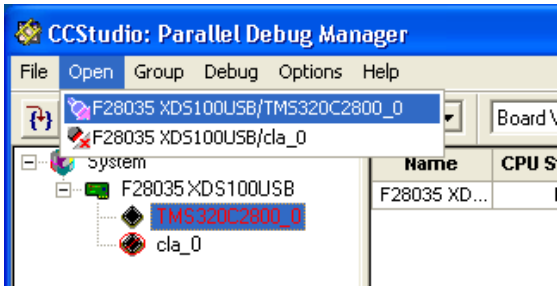
Connecting to both C28x CPU and CLA



Connecting to each individually



8) ***This step applies ONLY to Piccolo F28035 users.*** Once the C28x CPU or CLA is connected you can now launch the CCS debugging window under the “Open” menu.



9) The CCS development and debugging window should now open. From here you can open a Workspace, open a project, write a program, or download code onto the C2000 microcontroller. For more information on CCS please visit http://www.ti.com/lit/htm/spru509 From this point you can start developing your own C2000 project or begin going through the projects included with your C2000 development tool, available at www.ti.com/c2000tools. Note that if you are not using the F28035, you may need to use “Debug -> Connect” to connect to your target and get the screenshot shown below.