

'C6711 One-Day Workshop Installation

Notes

Some notes about these installation instructions:

- Primarily written for classroom installation (for CompUSA or other such classrooms)
- Additional details have been included to assist those others (such as TI customers or employees) who want to install the DSK on their own systems, though, this is not the intended audience.

Checklists

Verify CompUSA requirements

- ☐ Verify hardware specifications for all 13 PC's (see pg. 4 of this guide)
- ☐ Verify working data projector (1024 x 768 resolution) attached to Instructor PC
- ☐ 4' x 8' (or better) White Board (+ whiteboard markers)
- ☐ Flip Chart

Verify receipt of items from Texas Instruments

- ☒ 'C6711 One-Day Workshop Installation Guide (this document)
- ☐ Student Workshop Manuals (1 per student)
- ☐ Student Workshop CD-ROMs with VAB Registration-Key sticker (1 per student)
- ☐ DSK boards (includes CCS v2.0 CD-ROM) (1 per student)
- ☐ Master 1-day Workshop Installation CD-ROM (for classroom installation)
- ☐ Class Roster with return mailer

Installation Checklist

To be installed on each workstation:

- ☐ 'C6711 DSK Hardware
- ☐ Code Composer Studio (version 2.0)
- ☐ Acrobat 4 (or 5)
- ☐ Visual Application Builder (VAB)
- ☐ Workshop Lab Files
- ☐ Configure CCS Desktop Icon
- ☐ Configure Windows Explorer
- ☐ Test DSK Installation (Confidence Test)
- ☐ Run and configure CCS

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Specifications

13 PC's: 12 Student + 1 Instructor PC **(provided by classroom vendor)**

Hardware

- 17" Monitor (or better) set at 1024 x 768 resolution and 16-bit color
- Pentium II 266 MHz (or better)
- 64MB RAM (or better)
- 600 megabytes of hard-disk space
- Read/Write access to C:\ drive
- 3.5" Floppy disk drive
- CD-ROM drive
- Open Parallel Port (EPP preferred)
- Amplified external mono speaker w/mini plug
- A/C power at each station – need A/C power for TI DSP board (DSK)
- Cables to connect to Speaker and Audio source
- Audio source (PC sound card, portable audio player, etc.)

Software/Other

- Win98, WinNT4, Win2000 ONLY
- Microsoft Excel 97 (or later)
- Windows Media Player (or some other midi player)
- Internet Explorer 4.0 (or Netscape Navigator 4.0) or later

Install 'C6711 DSK Hardware

The C6711 DSK should be connected prior to the installation of Code Composer Studio (CCS) software in order for the parallel port to be configured properly.

Preparing PC Parallel Port

Before the installation of Code Composer Studio software, you may want to ensure that the PC parallel (printer) port is configured for EPP mode of operation. This will provide better performance when using Code Composer Studio.

1. To check parallel (printer) port configuration, using the following path:

Start menu → Settings → Control Panel

- a. Display the window associated with the System icon.
- b. View the *Device Manager*. On some Windows machines, you must select the *Hardware* tab and click on the *Device Manager...* button.
- c. Expand the *Ports* listing to see all the configured ports. If the enhanced *EPP Printer Port* is displayed, your parallel (printer) port is configured correctly.

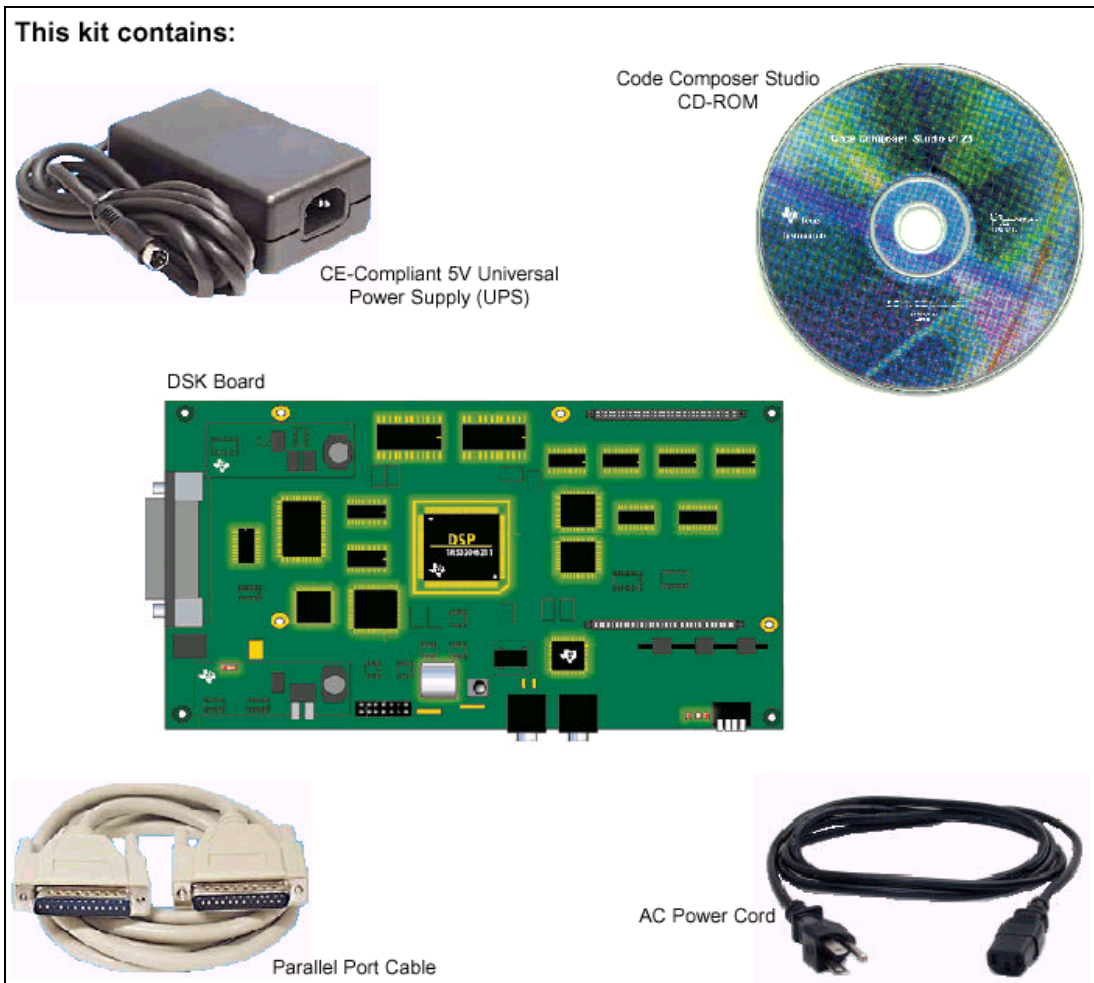
If EPP is not available, either *ECP Printer Port* or *Standard (SPP) Printer Port* will also work, though EPP is preferred due to its greater bandwidth.

- d. If a printer port is not displayed, you must restart your PC and follow the manufacturer's instructions for BIOS setup. This step can also be followed if EPP was not displayed in the previous step, but you believe the computer is capable of EPP mode.
- e. Once you confirm the parallel (printer) port is available, display the properties for that port. Find the printer address setting and write it down below – it is normally 0x378.

Printer Address Setting: _____

DSK Hardware and Workshop Supplies

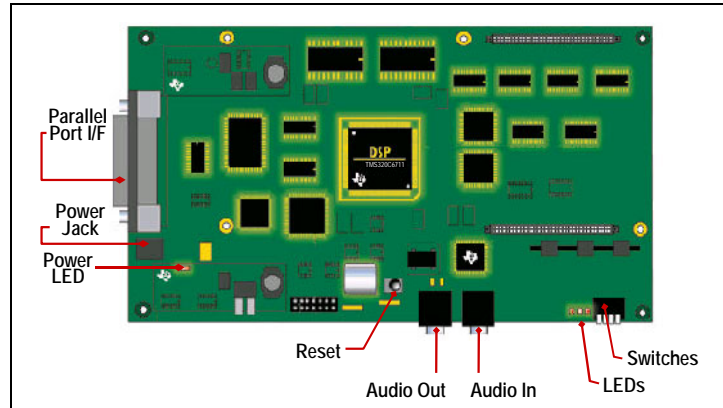
2. Remove the 'C6711 DSK board, parallel port cable, and power supply from the packaging:



3. Find, if necessary, the other workshop supplies. These are the additional items needed within the workshop:
- **Speaker**

In most cases, you will use the external speakers already connected to the PC. These will be disconnected and re-connected to the DSK audio output. If your PCs do not have speakers, you will need to provide an external, powered speaker.
 - **Audio Input Cable**
 - TI or you should supply an audio input cable. This will be connected between the audio source (usually the PC soundcard) to the DSK input.
 - Again, this is not part of the DSK kit itself, rather, if supplied by TI it will be shipped in along with the other supplies.
 - **Workshop CD-ROM**
 - This is separate from the CD-ROM shipped with the C6711 DSK.
 - The workshop (2nd) CD-ROM will be used later for installing the lab exercises and Visual Application Builder (VAB).

Connecting the DSK to Your PC



4. While no switches or jumpers affect the operation of the board, the Power-On-Self-Test (POST) routine does read switch 2 to decide if a short or long POST should be executed.

To this end, we suggest you set all the switches *UP*, indicating the long POST should be run.

5. Shut down and power off the PC.
6. Connect the supplied parallel port (printer) cable to the board. Connect the other end of the cable to the parallel (printer) port of your PC.
7. Connect the speaker cable.

In most cases you will use the external speakers supplied with the classroom machines. Find the cable that connects the external speakers to PC you're using. Remove the speakers mini-jack from the back of the computer and plug it into the AUDIO OUT connector on the DSK.

8. Install an audio cable from the PC's sound-card output to the DSK audio input.

You may or may not have audio input cables available. If you do, then connect it. During the Power On Self-Test (POST) and board confidence test (run later) you will hear the audio input passed through to the speaker if an audio input is connected.

9. Finally, plug the DSK power supply into the wall and the DSK.

When you connect the power, a 'Power-On-Self-Test' (POST) will boot-load from the DSK flash memory and execute.

- The DSK LEDs will count as it sequences through the test.
- If audio is connected to the MIC input, audio pass-through should be heard first ...
... followed by a tone.
- The test completes with all LEDs flashing, then all OFF.
- If the test sequence does not begin or complete successfully, try 'cycling' the power by plugging and unplugging the power cord. (If this doesn't work, then either the flash memory must be reprogrammed or the DSK hardware is defective.)

10. Power up the PC.

Install 'C6711 DSK Software Tools (CCS)

If you have a previous version of CCS installed, CCS version 2.0 installation will allow you to either uninstall the previous version or install to a separate folder. For the 'C6711 One-Day Workshops, for simplicity sake it is suggested that you uninstall any previous version of Code Composer Studio.

Note: If you have the full version of CCS version 2.x, you can install this rather than the limited version of CCS version 2.x that comes with the C6711 DSK.

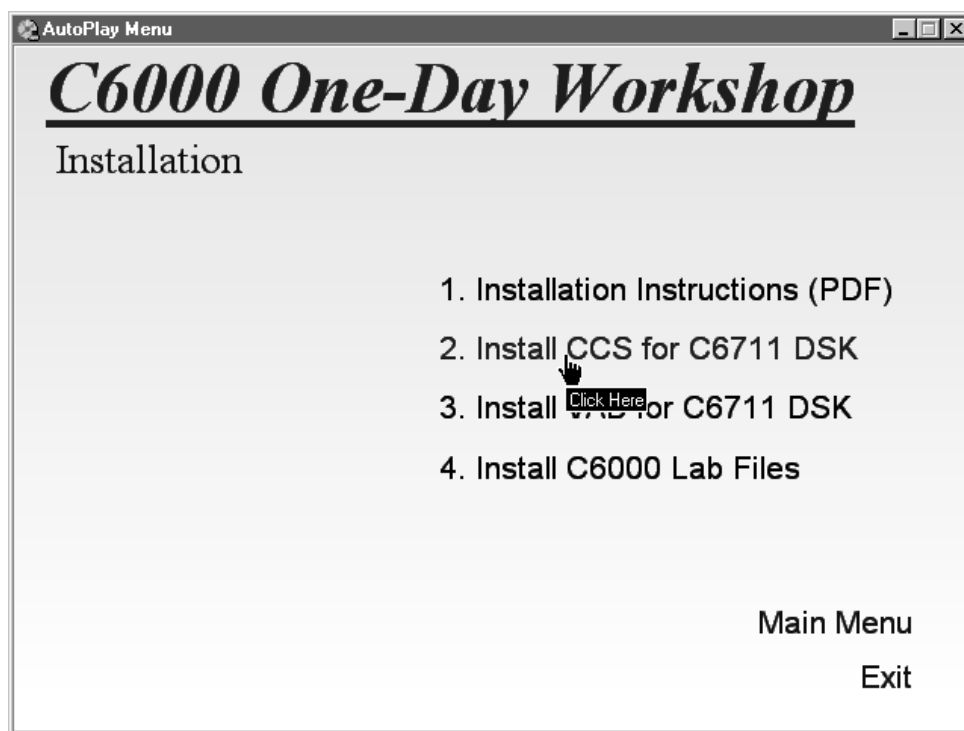
Find Code Composer Studio Installation Setup File

For your convenience, TI has constructed a single CD-ROM which contains all the files needed to install any one of the five 1-day workshops offered by Texas Instruments. Not only does this mean you won't have to swap between two CD-ROMs to install all the required files, but a menu helps you find (and remember) the various files and software.

11. Insert **Master 1-day Workshop Installation CD-ROM** into your computer. The following menu should appear automatically (if it doesn't run *autorun.exe* from the CD-ROM).



12. Click on the **Install C6000 1-day Workshop** menu item. This should cause the next screen to appear ...



13. Choose the Install CCS for C6711 DSK menu item. This should start the setup.exe file for the CCS installation. You should see the graphic shown for step 14.

As an alternative to steps 11 thru 0.

- Find the Code Composer Studio (version 2.x) software CD-ROM that ships with the DSK.
Note: a second 'C6711 DSK Workshop CD-ROM has been provided for installing the other software required by the workshop.
- Insert the CCS CD-ROM into the computer.
We will use <CD-ROM path> to indicate the path where the CD-ROM resides.
- Open Windows Explorer to the <CD-ROM path>.
- Run Code Composer setup (SETUP.EXE). The path should be:

<CD-ROM path>\setup.exe

Install Code Composer Studio

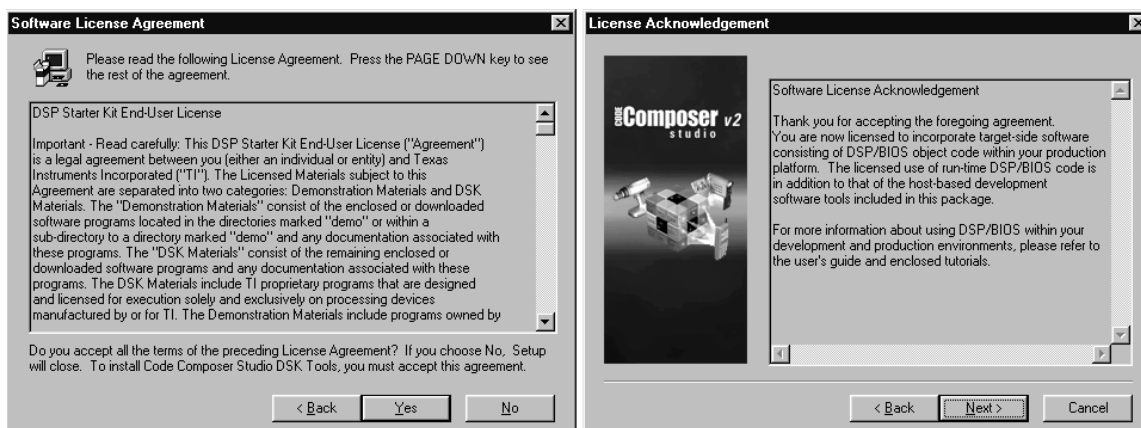
14. When the CCS Installation menu appears, select **Code Composer Studio**.



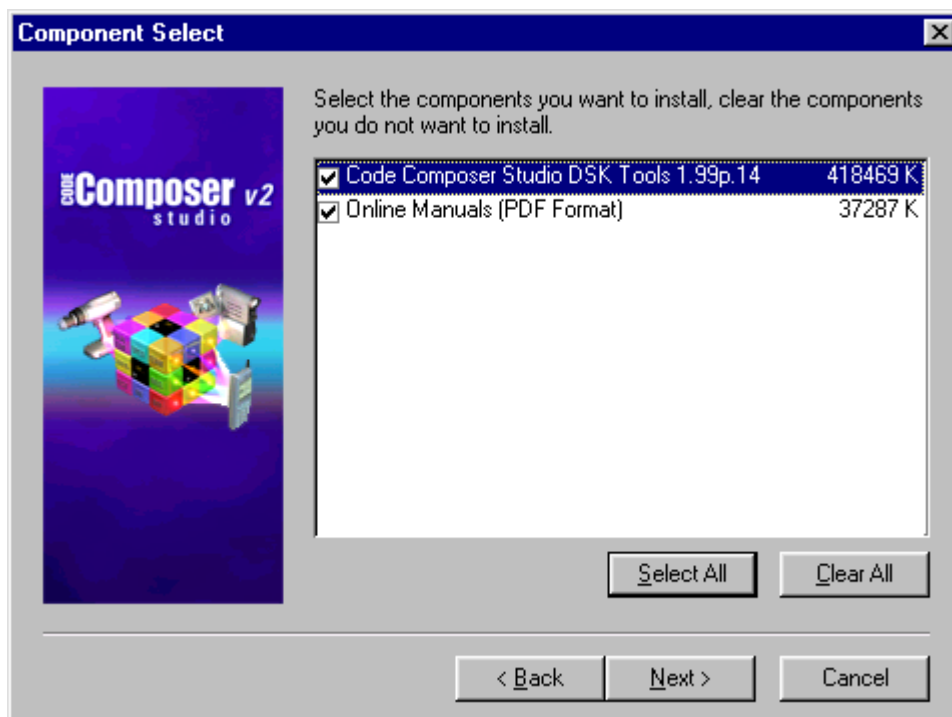
15. Once Code Composer Studio's setup begins, you'll have to respond to a number of questions. You can choose the default response for most choices; we'll indicate when you need to select something different.



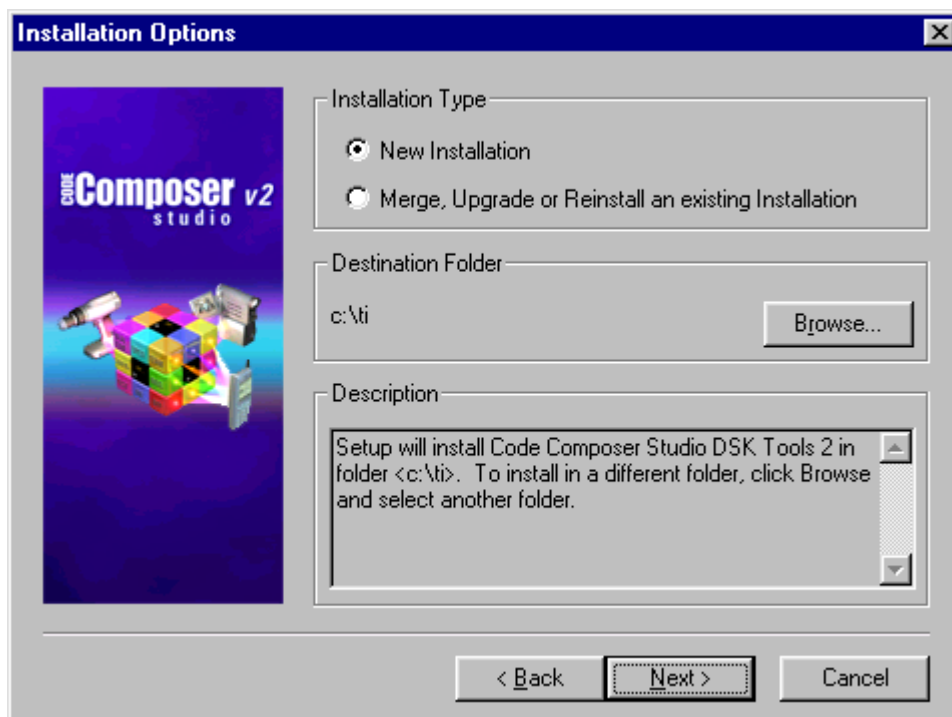
16. The next two dialogs deal with the End User License.



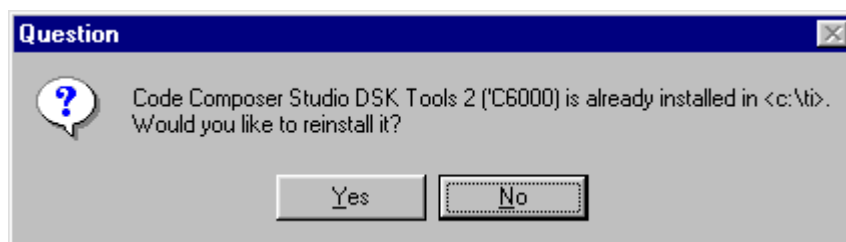
17. Again, take the default to install both CCS and the online PDF manuals.



18. Select *New Installation*.



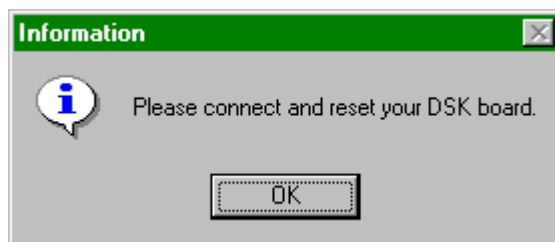
Again, if a previous installation exists, we suggest you uninstall it.



19. Next you'll run into the summary of current settings and installation plans. Go ahead and click *Next*.



20. CCS setup program will remind you to connect the DSK. You should have already done this as described on page A2-5. Go ahead and click OK.



21. You should see the installation progressing. At one point, a DOS window will open while the parallel port is configured.

If a DSK was not connected, you will see the DOS window pause with a message indicating how to configure the DSK once it is connected.

22. When installation is completed, you should see the following dialog.

We suggest you **deselect both checkboxes.**



23. If requested, go ahead and let the computer reboot. If a reboot is not required, the CCS installation program won't request it.

24. Upon completing CCS installation successfully, you should see the following window.



You have successfully installed Code Composer Studio.

Install Acrobat Reader

If this PC already has Adobe Acrobat installed then these steps may be skipped.

Note: If you have a version of Acrobat prior to 4.0, we suggest you upgrade to version 4.0.

25. Similar to steps – , open Windows Explorer to the *<CD-ROM path>* and run setup.

<CD-ROM path>\setup.exe

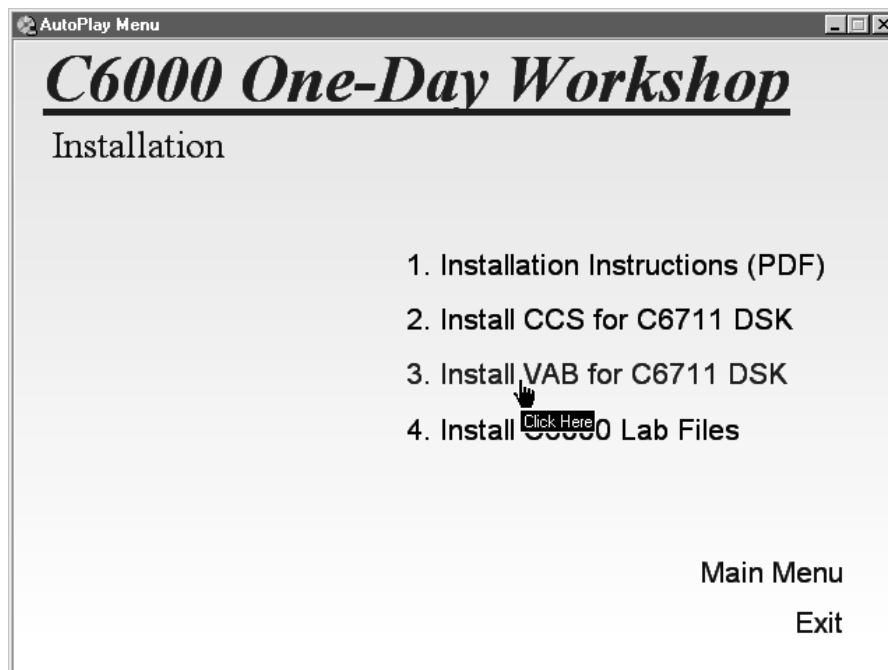
26. When the CCS Installation menu appears, select **Adobe Acrobat Reader**.



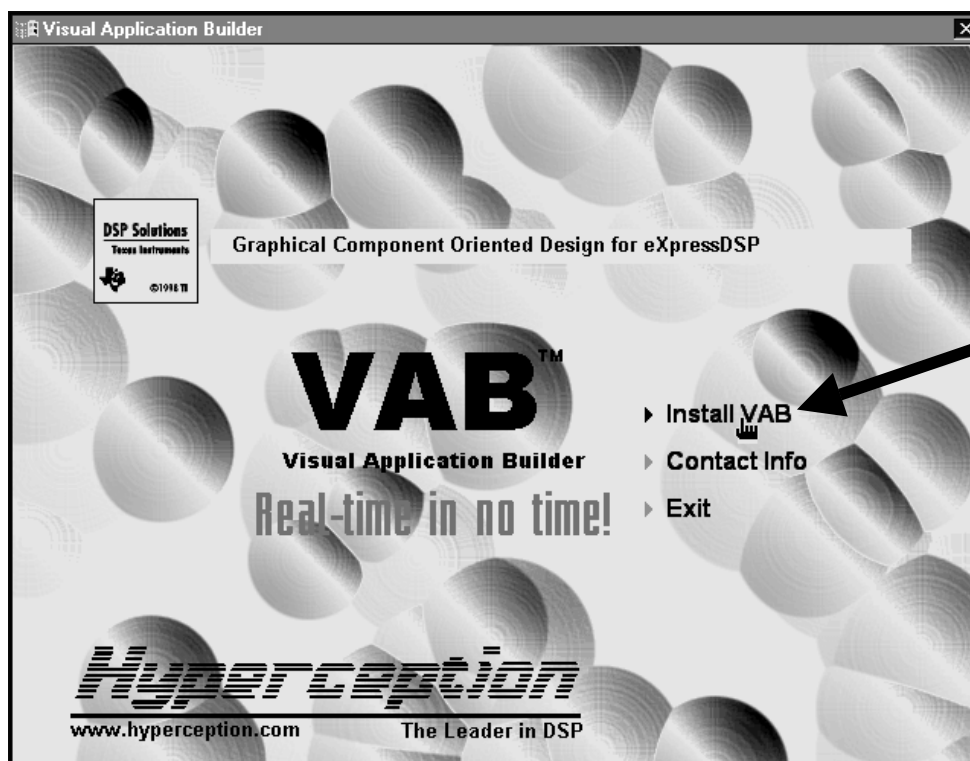
27. You can go ahead and accept all the defaults while installing Adobe Acrobat 4.0.

Install VAB

28. From the same **Install C6000 1-day Workshop** menu page (accessed in steps 11-12), choose Install VAB for C6711 DSK.



29. On the VAB installation screen, choose *Install VAB*.



30. Once VAB installation has begun, it will ask you for a KEY number.

If installing in a classroom, use the following key for all the classroom computers:

JJJJJ-JEXXX-XXXXX-XXXXX-XXXXX

This key installs a demo version of VAB. It does not require authorization via the Internet, but it will only be good for 90 days.

Other VAB Key options/comments

- If you are a student, locate your VAB Key on the Workshop files CD-ROM (or CD-ROM jewel case). Each CD-ROM should have its own KEY number. A couple of points about the VAB CD KEY:
- If you did not receive a KEY number or you cannot find it, please contact Hyperception and they will provide one via the phone or email. They can be reached at:

Hyperception, Incorporated

Voice: 214-343-8525 ... Fax: 214-343-2457

info@hyperception.com

www.hyperception.com

- Each user should have their own KEY number (unless you have purchased a site license from Hyperception).
- If you are a TI employee, contact Hyperception for a key which provides full access to VAB and its features.
- A specific KEY is not tied to the installation CD, rather, once installed it's tied to a specific installation on a computer.

31. If you encounter any dialogs that VAB displays, take the default options.

- When asked if changes should be made to the autoexec.bat file, choose “yes”.
- *Note, when installing the full version of VAB, you'll want to choose the appropriate driver – say 'C6711 DSK. Using the demonstration version, you only have the choice of the DSK driver.*

32. When all the components of VAB have been installed you will be asked to reboot the computer.

33. After VAB installation has completed run VAB from the Start menu to verify it was installed correctly. (Note, you should have the DSK connected and CCS closed when starting VAB.)

Note: When installing VAB on a WinNT machine, only the user performing the install will have the proper setup (specifically, the toolbars). Therefore, you must install VAB for each NT user to properly setup the registry. This only presents a problem when an administrator sets up VAB for use by another WinNT user.

To solve this problem, double-click on the *.reg files located in the c:\c60001day\lab7 folder.

Note: Should you need to uninstall VAB, you may be asked to unauthorize the software. This is particularly important if you have purchased the full version. This is easily accomplished from the Help menu within VAB.

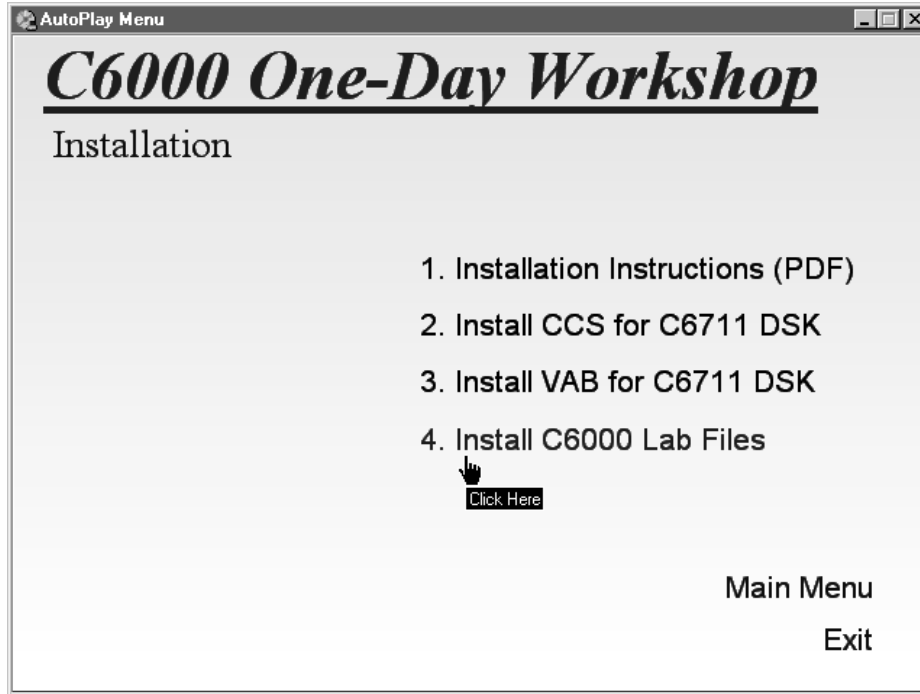
Install 'C6000 Workshop Files

These steps install the lab exercises used in the 'C6711 One-Day Workshop.

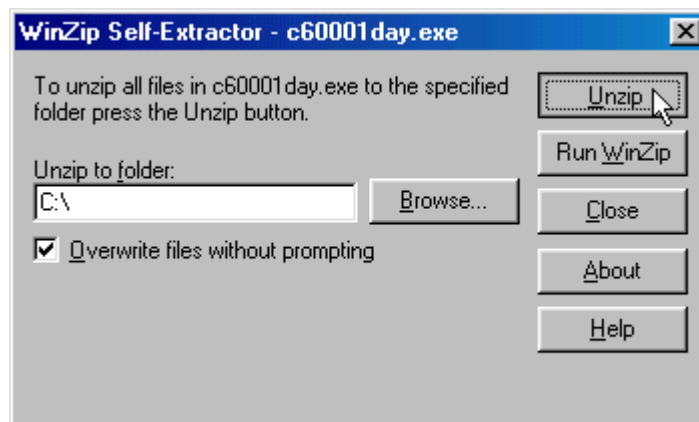
34. Verify that the folder **C:\c60001day** does **NOT** exist.

If it exists, DELETE it.

35. From the same **Install C6000 1-day Workshop** menu page (accessed in steps 11-12), choose **Install C6000 Lab Files**.

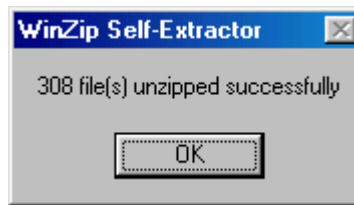


36. This selection runs *C60001day.exe* which will open the following dialog box. Use the default location (C:\) and extract the files by clicking on the **Unzip** button.



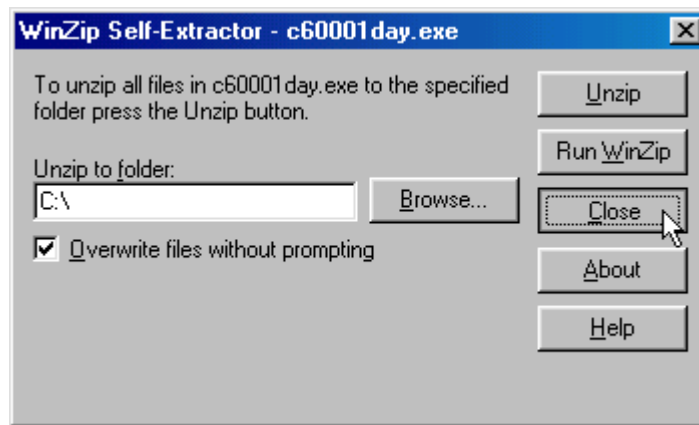
This creates the folder **c:\c60001day** and its subfolders.

37. When the file installation is complete, you'll see the following notice. Click OK.



(Note, the number of files shown in the example above may be different from what you see.)

38. Now you can **Close** the *C60001day.exe* dialog.



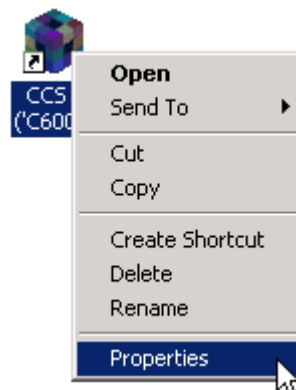
39. Go ahead and hit the **F5** key. This will force Windows Explorer to refresh its windows. After refreshing, you should see the *C:\c60001day* subdirectory.

Desktop Configuration

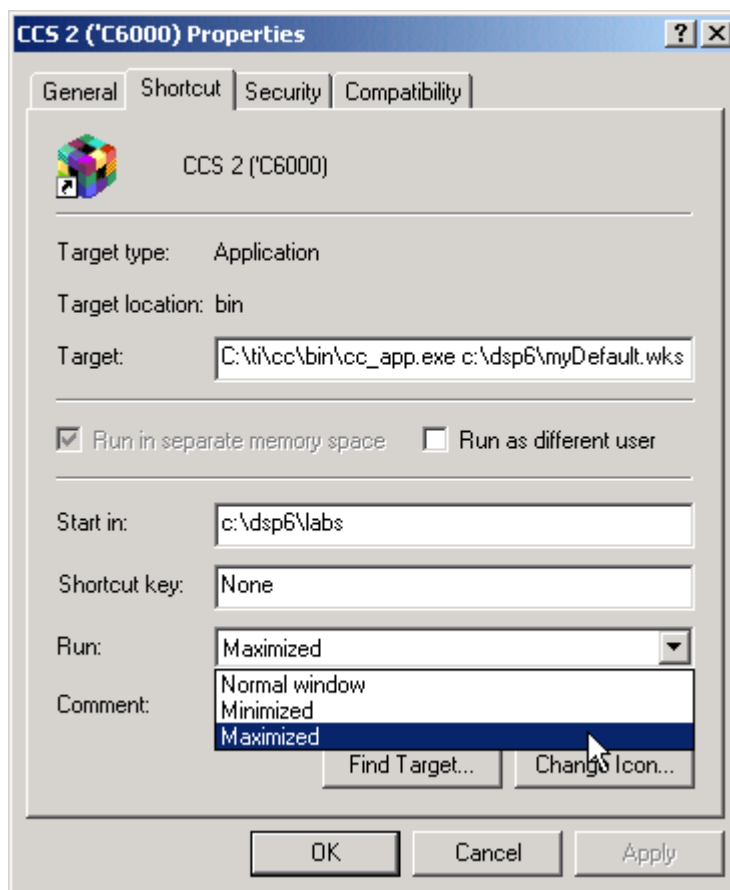
Configure CCS Desktop Icon

40. Next, let's modify the desktop icon.

Right-click on the CCS icon on the desktop and choose *Properties*.



41. In the CCS icon properties, change the **Run** line to *Maximized*.



Configure Windows Explorer

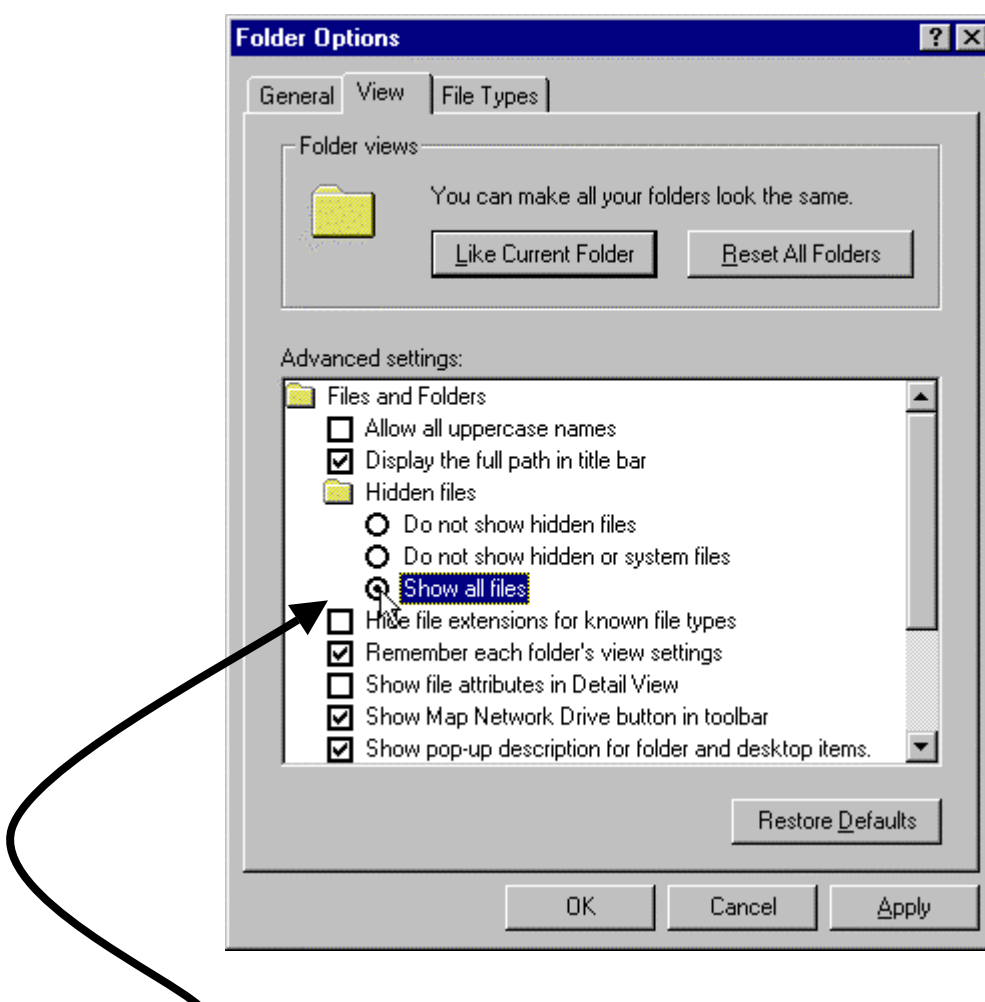
42. Open Windows Explorer.
43. In Windows Explorer, we need to change a couple viewing options. Without this, it's difficult to decipher between lab files.

Select View:Folder Options...

On some Windows systems, you may find it at:

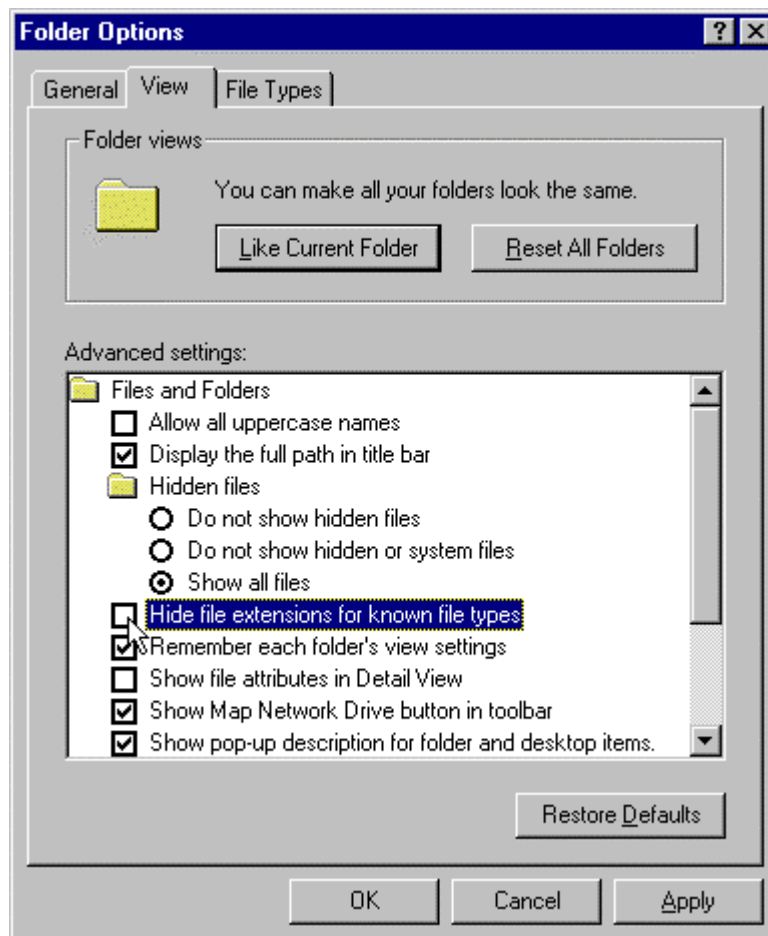
Tools:Folder Options...

44. Select the **View** tab in the Folder Options dialog box:



45. Check the **Show all files** radio button.

46. Then, **uncheck** the Hide file extensions for all known file types checkbox.



Test 'C6000 DSK Installation and Configure CCS

Before you trying running these tests, has the parallel port been properly configured?

- If the DSK was attached to the PC when installing Code Composer Studio, the parallel port should have been configured.
- If it wasn't attached, please attach the DSK and configure the parallel port using the instructions provided in the Appendix. Then come back to this step.

DSK Confidence Test

Here's a couple notes before you begin the test:

47. Run Confidence Test from the PC Host.

For your convenience, we have created a conftest.bat file in the directory with the other workshop lab files.

- Navigate to: **c:\c60001day\labs\lab2**
- Double-click on the batch file: **ConfTest.bat**
- Close the DOS window when the tests are completed

48. You should see something along these lines ...

```
TMS320C6x11 DSK Confidence Test, Version 1.30, Oct 1999
Copyright (c) 1999 by Texas Instruments Incorporated.
All rights reserved.

Test Run Time: 09:39:39 PM Test Run Date: Dec 14, 1999

USER_SW3=0 USER_SW2=0 USER_SW1=0 Board Rev=1

Command=ISRAM.....Result=> PASSED!
Command=SDRAM.....Result=> PASSED!
Command=FLASH.....Result=> PASSED!
Command=MCBSP.....Result=> PASSED!
Command=TIMER.....Result=> PASSED!
Command=QDMA.....Result=> PASSED!
Command=LEDS...Are They Flashing?.....Result=> PASSED!
Command=CODEC..Is Tone/Music Playing?...Result=> PASSED!

TMS320C6211 DSK Confidence Test PASSED!
... No test failures found!

Closing Log File: dsk6xtst.log

** TMS320C6x11 DSK Confidence Test Complete! **
```

- The SDRAM may take a while due to the large amount of SDRAM on the 'C6711 DSK.
- The CODEC test performs two operations: 1KHz tone output, and an audio input-to-output loopback. To hear these tests the speaker and audio source must be connected.

Note: If the DSK fails the Confidence Test, please assure that you have properly connected all wires and that none of them are loose.

If the wiring is OK, did the POST run when power was applied? Try unplugging and plugging back in the power jack to test this again?

If all else fails, please ask your TI contact for assistance.

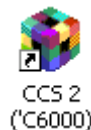
Run/Configure Code Composer Studio

Finally, you need to confirm CCS runs and set/verify three option settings.

- Program load after build
- Choose text-based linker
- Disable debugger's memory mapping

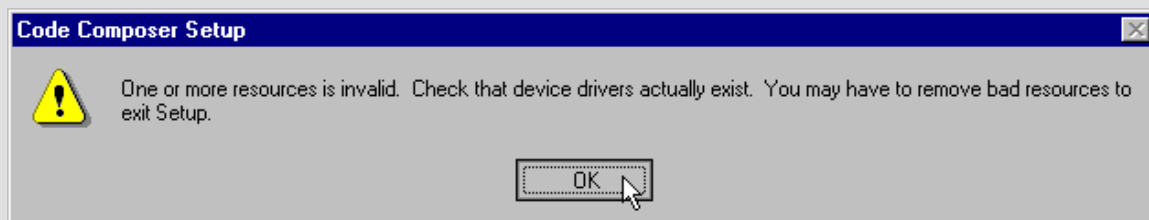
49. Run Code Composer Studio.

double-click on the CCS desktop icon



Note:

If you see the following dialog:



It usually means that a previous version of CCS wasn't completely uninstalled. The CCS uninstall does not always remove all the registry entries. This should only occur once.

Note:

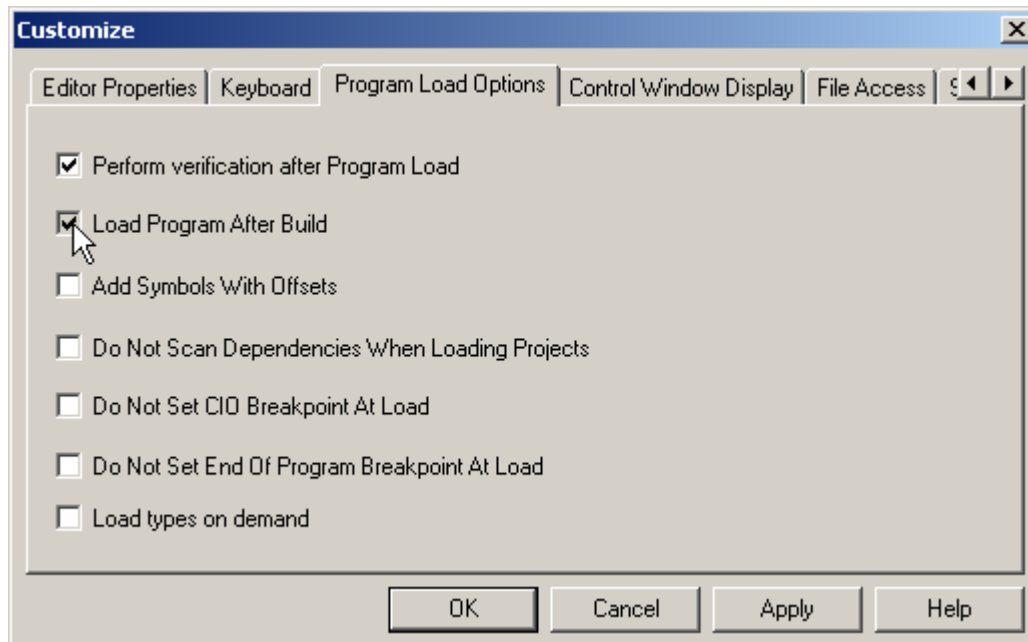
If you see this dialog:



CCS is not able to connect to the DSK. In fact, the Confidence Test you ran earlier also should have failed. If it did not fail, then either CCSetup needs to be run (see page A2-26), or CCS must be reinstalled. If both the Confidence Test and CCS connection have failed, then you most likely are encountering a physical and/or Windows parallel port driver connection problem.

Set Program Load after Build

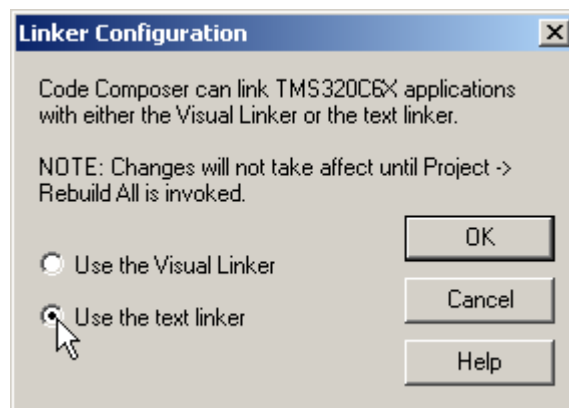
50. Open the CCS customize options dialog: **Option:Customize...**
51. Navigate to the *Program Load Options* tab and click *Load Program After Build*.



52. Click **OK** to save the change and close the *Customize* dialog.

Choose Text-Based Linker

53. Open the CCS linker selection dialog: **Tools:Linker Configuration**
54. Select *Use the text linker* and click **OK** (as shown below).



55. Close CCS.

Installation Appendix

Configure Code Composer Studio

Code Composer Studio (CCS) can be used with various TI processors – such as the C6000 and C5000 families – and each of these has various target-boards (simulators, EVMs, DSKs, and XDS emulators). Code Composer Studio must be properly configured using the CCS_Setup application.

In this workshop, you should initially configure CCS to use the *C6x11 DSK 378 EPP Mode*.

Procedure

1. Start the CCS Setup utility using its desktop icon:

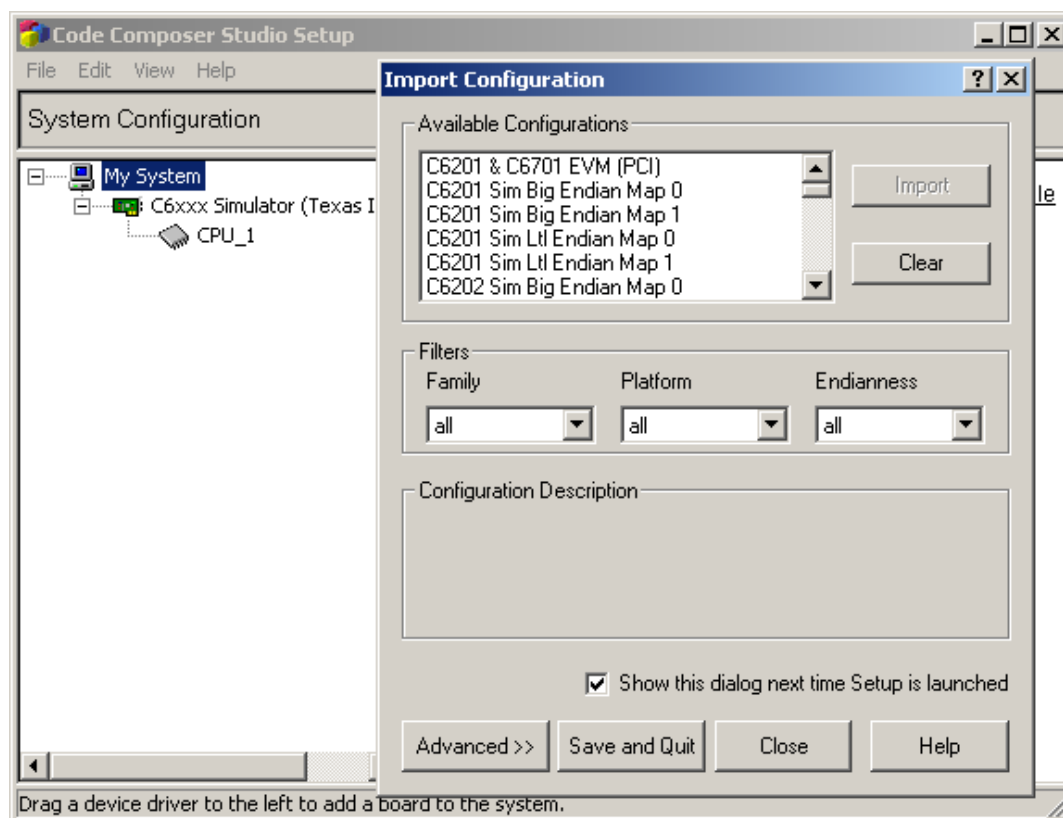


Note: Be aware there are two CCS icons, one for setup, the other to start the main CCS application. You want the Setup CCS C6000 icon.

If you cannot find the desktop icon shortcut, try looking for it under the Windows START menu (*Start→Programs→Texas Instruments→Code Composer Studio 2 ('C6000')→Setup Code Composer Studio*).

If all else fails, you should be able to find the program itself at: `c:\ti\cc\bin\cc_setup.exe`

2. When you open CC_Setup you should see a screen similar to this:



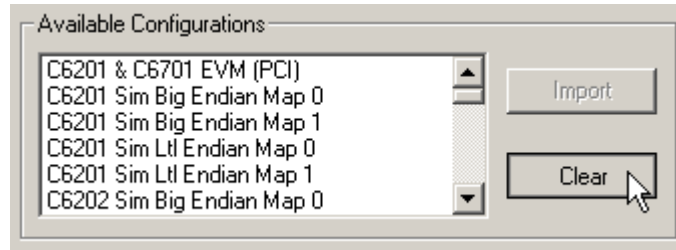
Note: If you don't see the *Import Configuration* dialog box, you should open it from the menu using **FILE:IMPORT...**

Once the *Import Configuration* dialog box is open, you can change the CC_Setup default to force this dialog to open every time you start CC_Setup. Just check the box in the bottom of the import dialog.

☒ Show this dialog next time Setup is launched

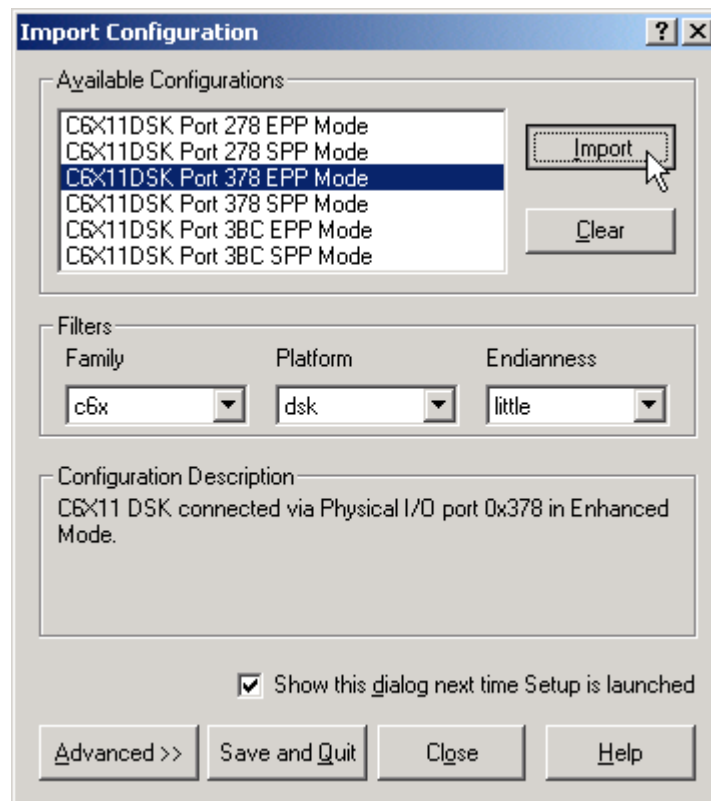
3. Clear the previous configuration.

Before you select a new configuration you should delete the previous configuration. Click the *Clear System Configuration* button. CC_Setup will ask if you really want to do this, choose “Yes” to clear the configuration.



4. Select a new configuration from the list and click “Add to system configuration button”.

Select the *C6x11 DSK 378 EPP Mode* configuration as shown below and click *Import*.



Port 378 is the most commonly used option. The port required will depend upon which port is enabled and supported on your PC. Please refer to step 1 (page A2-**Error! Bookmark not defined.**).

5. Save and Quit the *Import Configuration* dialog box.

Configure Parallel Port

If you installed the Code Composer Studio software without a 'C6711 DSK attached, the parallel port was not configured. It's easy to run the PP config utility, though.

1. Hook up the DSK as described earlier.
2. Run the Parallel Port Configuration utility.

Start→Programs→Texas Instruments→Code Composer 2 ('C6000)
→C6x11 DSK Utilities→Configure C6x11 DSK