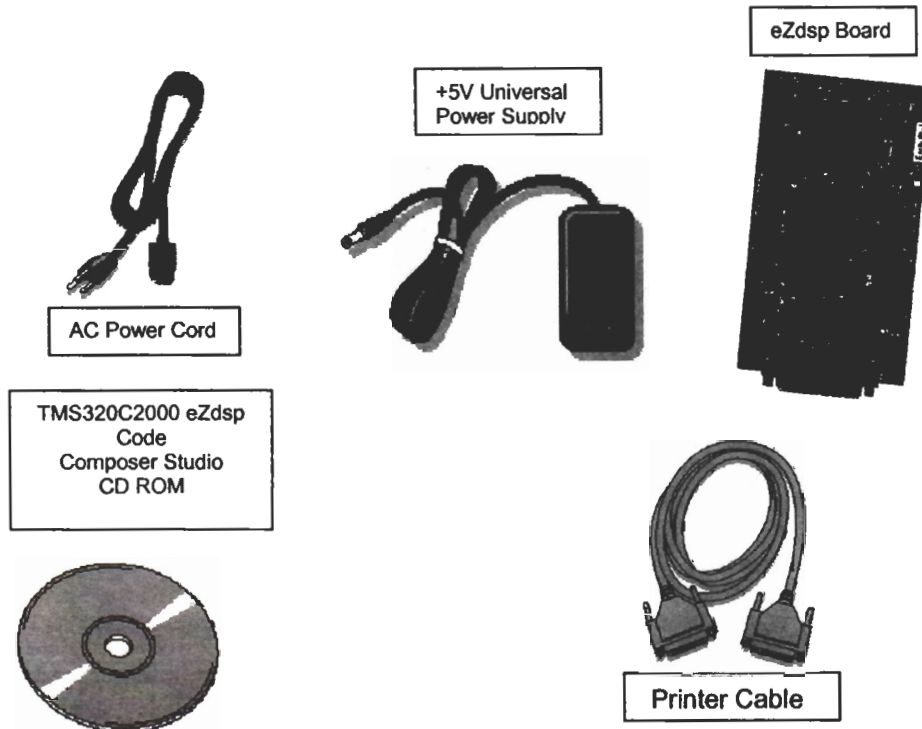


eZdsp™ for the TMS320F240x/TMS320F2812

Quick Start Guide

The TMS320F2xxx eZdsp contains:



System Hardware and Software Requirements

These operating platform requirements are necessary to install the Code Composer Studio (CCS) integrated Development Environment and support the printer port. The requirements for the operating platform are:

Minimum Configuration

- 233 Mhz. or faster Pentium or compatible
- 600MB of free hard disk space
- Microsoft Windows 98SE, ME, NT-4 (SP 6 or higher) 2000(SP2 or higher), or XP
- 64MB of RAM
- SVGA (640x480) color display
- Local CD-ROM Drive
- Internet Explorer (4.0 or later)

Recommended

- 128MB of RAM
- SVGA(1024 x 768) color display
- 500 Mhz. or faster Pentium or compatible

Installing Composer Studio for Windows 98SE/ME/NT4/2000/XP

Note: For Windows NT4/2000 and XP you must install Code Composer Studio (CCS) using Administrator privileges. To run CCS on these systems requires write permission on the registry. If installing hardware, follow the instructions provided with the hardware.

Also prior to installing the Code Composer Studio make sure the Virus checker on your system is turned off or disabled. It may be turned on or enabled after installing

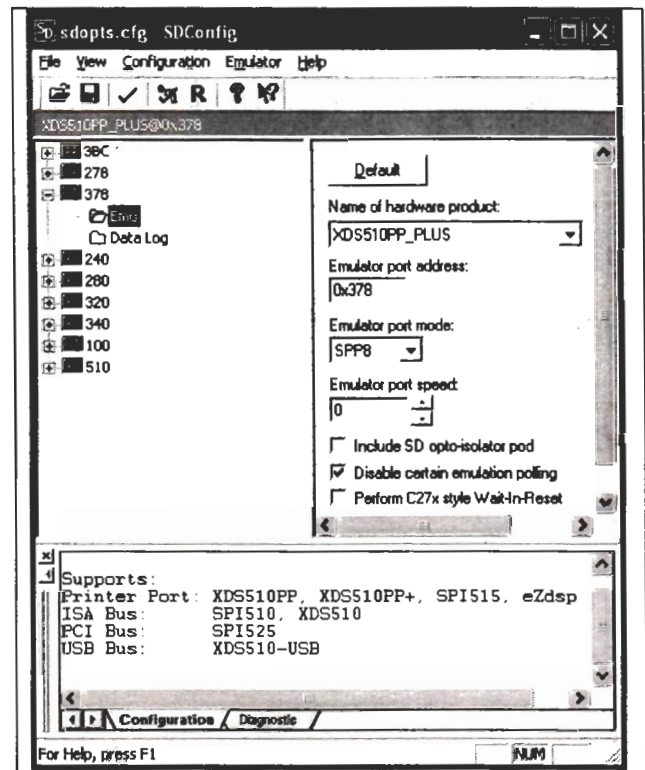
Debugger Setup Checklist

1. Reboot your computer and enter the BIOS setup area. Set the LPT1 mode to ECP+EPP, ECP, EPP, or bi-directional. You can skip this step if you have previously setup your printer port and know the port address.
2. Do NOT connect to any hardware at this time.
3. Insert the Code Composer Studio installation CD into the CD-ROM Drive. An install screen should appear; if not, go to Windows Explorer and run setup.exe from the CD-ROM.
4. Choose the option to install Code Composer. Respond to the dialog boxes as the installation program runs. Following are a few install restrictions for CCS version 2.20:
 - a. You must perform a "new" install vs an "over install"
 - b. CCS version 2.20 is NOT compatible with C2000 CCS 4.x. You must uninstall CCS version 4.x.
 During the installation you may be prompted to connect to the DSK and do a reset. Ignore this dialog, as it does not apply to C2000 eZdsp. Reboot your computer if prompted to do so.
5. **Connect up your eZdsp hardware in the following order:**
 - a. Plug printer port cable into the PC
 - b. Plug printer port cable into the eZdsp
 - c. Plug AC power cord into power supply provided
 - d. Plug AC power cord into AC power outlet
 - e. Plug power supply into the eZdsp
6. Select the SdConfig icon from your desktop.



7. Double click on the emulator ID (port address) that matches the port address from step 1. Valid options for the eZdsp are 3BC, 278, 378. If you did not get printer port information from step 1 above then do the following:
 - a. Remove power from the eZdsp
 - b. Select Configuration->Ports Available->Printer
 - c. This will provide a list of printer ports available on your PC and the default printer port mode.
 - d. Now select the appropriate emulator ID and verify/set your configuration as required.
 - e. Reconnect power to your eZdsp.

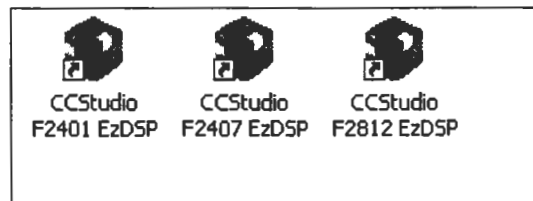
8. If changes are made in the configuration, select "File->Save" before continuing. Following is an example screen for port 0x378, and the default settings. The eZdsp setup is compatible with the XDS510PP PLUS emulator settings.



9. You can reset your eZdsp by selecting the large red "R" icon in the tool bar. Once your eZdsp is reset you can proceed with configuring Code Composer.

Starting Code Composer

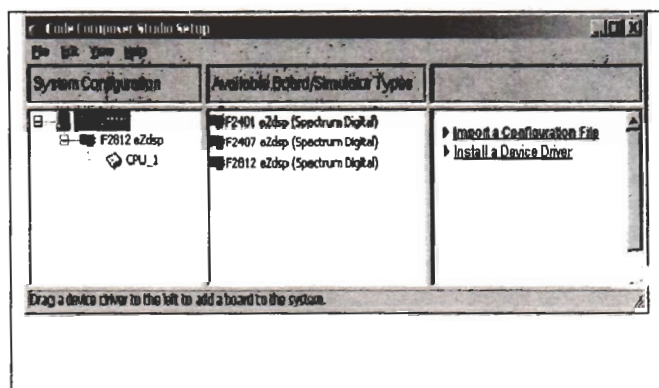
During the Code Composer installation three icons are generated as shown below. Start Code Composer by clicking on the icon for your connected eZdsp.



Manual setup of Code Composer

In the event that you need to change the Code Composer configuration you have to run "cc_setup.exe" from the Code Composer installation directory. The default location is "c:\ti\cc\bin\cc_setup.exe" where, "c:\ti" is the default installation directory.

1. From CC Setup import the configuration that applies to your eZdsp (F2401, F2407 or F2812). Each setup defaults to I/O port address 0x378, one DSP, and the appropriate startup GEL file. You may want to clear the system configuration before importing a different configuration. Now import the configuration. When complete your setup should resemble the following. For more details select "Help" on the CCS Setup menu bar.



2. If you want to change the configuration of your setup simply right mouse click on the eZdsp under **System Configuration** then select **Properties**. You can modify the individual properties for your setup. In general the only property that may need to be modified is your **Board Properties**. This setting must match the **Emulator port address** setup by **SdConfig**. Save your configuration and exit CCS Setup.
3. Start Code Composer by clicking on the appropriate Code Composer icon as described above.

Running the Code Composer Studio IDE Tutorial

The interactive Code Composer Studio IDE tutorial provides an effective method to learn about the new and existing features of this tool.

1. Code Composer Studio IDE should now be running. If it is not already running, double-click on the CCS-DSK icon on your desktop.

2. From the Code Composer Studio IDE Help menu, select Tutorial.

Trouble Shooting

If you have problems try the following

1. The most common problem at this point is the **mode** parameter selected in **SdConfig**. It may not match the hardware setup of the parallel port on your computer. Go back to **SdConfig** and adjust your settings until your setup will perform and emulator reset and emulator test.
2. Reset the computer and enter the BIOS setup. Configure the parallel port for ECP, EPP, EPP 1.9 or bi-directional. ECP or EPP will provided the best performance. Let the computer boot and return to **SdConfig** to test your settings.
3. This install supports a connection to the eZdsp via the printer port. You cannot use the eZdsp version of CCS with an emulator. Emulator support is only available with full tools CCS Studio Install.

Code Composer Registration

Remember to register your product within 30 days of purchase. Texas Instruments may make available DSK specific patches, utilities or promotions to registered DSK users. You must register your DSK through the online web registration form to enable access through the new Internet enabled Update Advisor. You can register online during installation if you are connected to the Internet. To register online after installation or to register via fax or by e-mail you can access the registration forms from within Code Composer Studio TM IDE. From the menu bar select Help → CCS on the Web → Register On-line, select the appropriate registration link for your product and follow the instructions on the form.

You will need your Service Code to register the product. The Service Code is a 16-digit number starting with the letters CCS attached to the CD case.

Note: paid annual software subscription service is not available for eZdsp products.

eZdsp Documentation

The eZdsp Technical Reference and schematics can be found under the install directory at "docs\pdf". These files along with other CCS docs can also be found on the install CD.

Known Problems

1. The F24xx real-time tutorial is missing a step. Before entering real-time mode you must set a breakpoint at MON_GO and run to this breakpoint. You can then enter real-time mode. The following GEL sequence can be used to enable real-time debug.

```
hotmenu SetupRealTime()
{
    /* Start real-time app from reset */
    GEL_Reset();
    /* Init real-time monitor */
    GEL_Go(MON_GO);
    /* Enter real-time mode */
    GEL_EnableRealtime();
}
```

2. There is a problem in F24xx emulation drivers under CCS 2.12 where stepping over breakpoints may skip the instruction at the breakpoint. This problem has been fixed and a new driver is available from Spectrum Digital website. The problem generally occurs under 3 conditions:
 - a. Using GEL_Go(MyFunction) then stepping or running.
 - b. Using Run To Cursor then stepping or running.
 - c. Running to a breakpoint and then clearing the breakpoint before stepping or running.