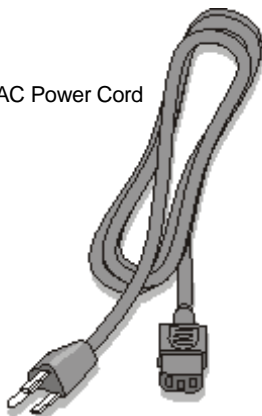


Code Composer Studio™

Quick Start Guide

The TMS320C5402 DSK kit contains:

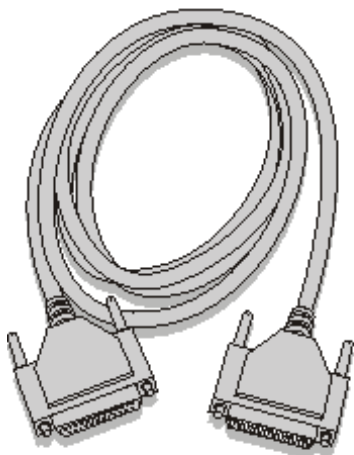
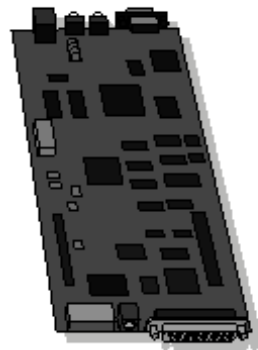
AC Power Cord



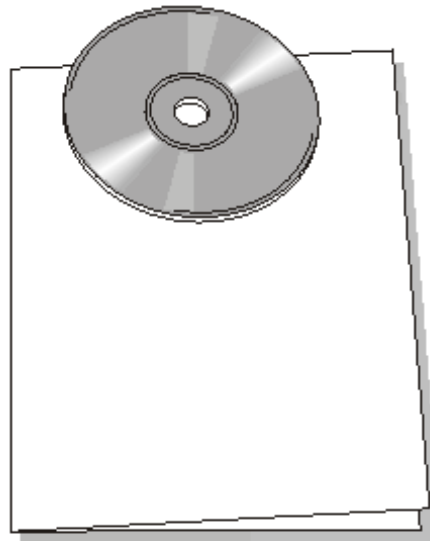
CE-Compliant 5V Universal
Power Supply (UPS)



'C5402 DSK Board



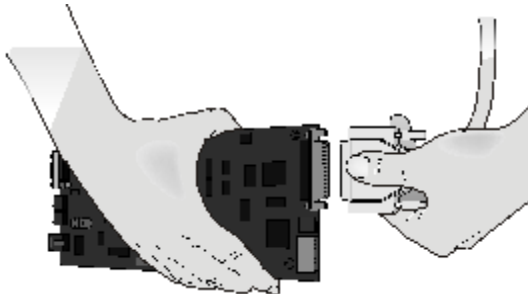
Parallel Port Cable



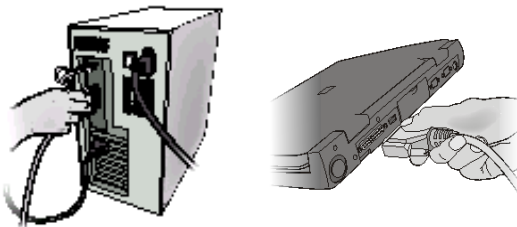
'C5402 DSK CD-ROM

Connecting the 'C5402 DSK to Your PC

- 1 Shut down and power off the PC.
- 2 Connect the supplied parallel (printer) port cable to the board.

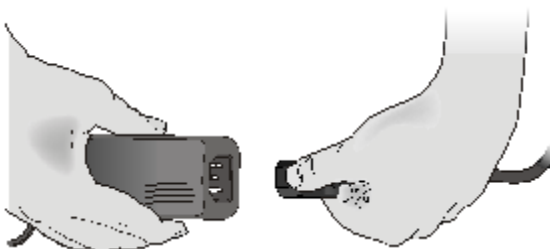


- 3 Connect the other end of the cable to the parallel (printer) port of your PC.

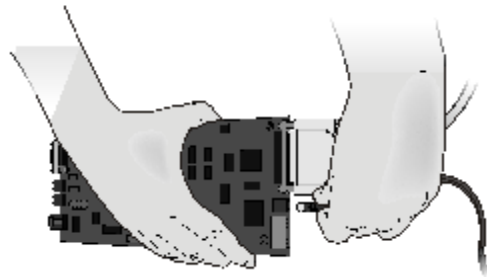


If you plan to install a microphone, speaker, and/or daughter card, these must be plugged in properly before you connect power to the DSK board.

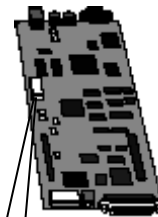
- 4 Plug the power cable into the board.



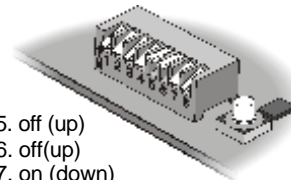
- 5 Plug the other end of the power cable into a power outlet.



- 6 Power up the PC.



Make sure the DIP switch settings are as shown below (default configuration); for other settings, consult the online help.



- | | |
|--------------|--------------|
| 1. on (down) | 5. off (up) |
| 2. on (down) | 6. off (up) |
| 3. on (down) | 7. on (down) |
| 4. on (down) | 8. on (down) |

Before you install the DSK software, make sure the PC parallel (printer) port is configured for ECP and EPP mode of operation.

To check parallel (printer) port configuration, use the following path:

[Start menu -> Settings -> Control Panel](#)

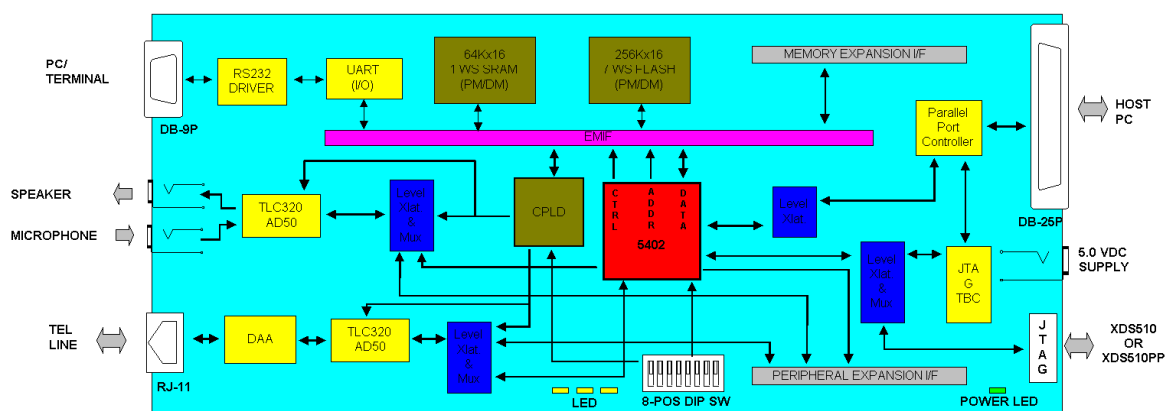
- Display the window associated with the System icon. On the Device Manager tab, expand the Ports listing to see all the configured ports. If ECP or EPP are displayed, your parallel (printer) port is configured correctly.

If ECP or EPP are not displayed, you must restart your PC and follow the manufacturer's instructions for BIOS

setup. Most commonly, you will need to access peripherals to change printer mode to ECP or EPP.

- Once you confirm the parallel (printer) port is set to ECP or EPP, display the properties for that port. Identify and record the printer address for later use. (The printer address is normally 0378.)

Functional Block Diagram



Installing the Software

Code Composer Studio installation consists of two steps: **installing** the software on your system and running the Code Composer Studio **setup** application. The requirements for the operating platform are:

Minimum

- 486 IBM PC or compatible
- Microsoft Windows™ 95, 98 or NT 4.0
- 100 megabytes of hard-disk space
- 16 megabytes of RAM
- SVGA (640 x 480) display

Recommended

- Pentium 133 IBM PC or compatible
- Netscape Navigator™ 3.0 or later, or Internet Explorer™ 3.0 or later (to read release notes, to register, etc.)
- 32 megabytes of RAM
- SVGA (1024 x 768) display

Installing Code Composer Studio for Windows 95/98/NT

Note: For Windows NT, you must install Code Composer Studio using administrator privileges.

- 1 Insert the installation CD into the CD ROM drive.

An install screen should appear; if not, go to Windows Explorer and run [setup.exe](#) from your CD-ROM.
- 2 Choose the option to install [Code Composer Studio](#).

- 3 Respond to the dialog boxes as the installation program runs.
- 4 Run [port95nt.exe](#) to install the parallel port I/O drivers.

This utility is found in the Code Composer Studio [cc\bin](#) directory.

- 5 Respond to the dialog boxes as the driver installation program runs.

Note: You must restart your computer for the drivers to be loaded.

The installation procedure creates [CCStudio](#) and [Setup CCStudio](#) program icons on your desktop.

Setting Up Code Composer Studio

Note: Online help for Code Composer Studio Setup is available by using the Code Composer Setup Help menu.

The Code Composer Studio Setup utility runs when you reboot your computer after installing Code Composer Studio (provided the checkbox was selected). You can also invoke the setup application by double clicking on the [Setup CCStudio](#) icon that appears on your desktop. The [Import Configuration](#) dialog box appears.

The [Import Configuration](#) displays a quick selection of prebuilt system configurations.

- [Available Configurations](#) – lists the standard board configurations shipped with CCStudio
- [Additional Information](#) – describes the prebuilt configuration
- [Filters](#) – drop-down boxes that allow you to narrow the list of available configurations

- **Add to System Configuration** button – makes the board configuration you selected the active configuration for Code Composer Studio
 - **Clear System Configuration** button – removes all board configurations from your system configuration
- 1 Close the **Import Configuration** dialog box.
 - 2 Select **Install** device driver and then pick **tipp54x_dsk.dvr**.
 - 3 Enter a name for the DSK parallel port driver and press **OK**.
 - 4 Move the DSK parallel port board to the **System Configuration** window.
 - 5 Enter a name for the board and press **Next**.
 - 6 Enter the address of the parallel (printer) port (normally 0x378) and press **Next**.
 - 7 Press the **Add Single** button. This action adds a C54x DSP to the configuration.
 - 8 Press **Finish**.
 - 9 Save changes and exit **Code Composer Setup**.

Before Running Code Composer Studio

Before you run Code Composer Studio, it is a good idea to perform a software-controlled reset.

Use **Start -> Programs -> C5402 DSK Development Tools -> Reset Parallel Port**

Starting a Project

- 1 **To create a new project:** Select **Project -> New** from the menu. This opens the **Save New Project As** dialog box. Navigate to the correct project directory where you want the project to reside. In the **File Name** field, type the new project file name and press **Save**.

*Note: If an existing project is already open, its compiler, assembler, and linker options are copied to the new project and the existing project is automatically closed. If a project is not open, the new project inherits the default project options. The title bar changes to display the name of the new project and the **Project Edit** dialog box is created for you to add files to the project list.*

- 2 **To open an existing project:** Select **Project -> Open** from the menu. The **Project Open** dialog box appears. Navigate to the correct project directory. Highlight the project you want to use and choose **Open**.
- 3 **To add files to the project:** Select **Project -> Add Files to Project** or select **View -> Project** to open the Project View window, right-click on the project name, and select **Add Files**. If the file type is not correct, type or select the correct extension in the Files of Type drop-down field. Every project is divided into the following four file types:

- include – contains all header/include files: *.h
- libraries – contains all library files: *.lib
- source – contains all source files: *.c, *.asm
- linker command files (*.cmd) are placed externally to the project folders

- 4 **To set tool options:** Select [Project -> Options](#) from the menu. You can change options for the compiler, assembler and linker.
- 5 **To build the program:** Choose [Project -> Rebuild All](#) to recompile, reassemble, and relink all the files in the project. Messages about this process are shown in a frame at the bottom of the window.
- 6 **To load the program:** Select [File -> Load Program](#) from the menu. Navigate to the correct executable file. Highlight the executable file you want to use and choose [Open](#).
- 7 **To debug the program:** From the debug menu, select the debugging activity you want to perform.

Using the Online HELP

- To obtain help for any aspect of CCStudio, select [Help -> General Help](#) from the menu. Browse or search the [CCStudio General Help Contents](#) and Index to obtain information on any tool, feature, or functionality of the Code Composer Studio product.
- To get help specifically regarding the DSK, select [Help -> General Help](#) from the menu. Select [TMS320C5402 DSK](#) from the contents list. Once you select a DSK topic, the General Help closes and the DSK-specific help displays.

NOTES

Related Documentation

Use this document		If you need information about:
SPRU102	TMS320C54x Assembly Language Tools User's Guide	The assembly language tools (assembler, linker, and other tools used to develop assembly language code), assembler directives, macros, common object file format, and symbolic debugging directives for the 'C54x generation of devices
SPRU103	TMS320C54x Optimizing C Compiler User's Guide	The 'C54x C compiler. The C compiler accepts ANSI standard C source code and produces TMS320 assembly language source code for the 'C54x generation of devices.
SPRU131	TMS320C54x DSP Reference Set, Volume 1: CPU and Peripherals	The TMS320C54x 16-bit, fixed-point, general-purpose digital signal processors. This volume covers its: <ul style="list-style-type: none"> • Architecture • Internal register structure • Data and program addressing • Instruction pipeline • DMS • On-chip peripherals
SPRU172	TMS320C54x DSP Reference Set, Volume 2: Mnemonic Instruction Set	The TMS320C54x individual mnemonic instructions. Includes a summary of instruction-set classes and cycles
SPRU179	TMS320C54x DSP Reference Set, Volume 3: Algebraic Instruction Set	The TMS320C54x individual algebraic instructions. Includes a summary of instruction-set classes and cycles
SPRU173	TMS320C54x DSP Reference Set, Volume 4: Applications Guide	Software and hardware applications for the TMS320C54x digital signal processor
SPRU326	TMS320C54x DSP/BIOS User's Guide	How to use DSP/BIOS tools and APIs to analyze embedded real-time DSP applications
SPRU327	TMS320C54x Code Composer Studio Tutorial	How to use Code Composer Studio. Lists key features and provides help with specific tasks.
SPRU328	Code Composer Studio User's Guide	How to set up and run Code Composer. Also contains basic concepts and features that are essential to a debugging session.



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