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SPRU303	<b>TMS320C6000 DSP/BIOS™ User's Guide</b>	How to use DSP/BIOS tools and APIs to analyze embedded real-time DSP applications
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SPRU187	<b>TMS320C6000 Optimizing C Compiler User's Guide</b>	Compiler tools designed for the TMS320C6000 32-bit devices: <ul style="list-style-type: none"> <li>• Parser</li> <li>• Optimizer</li> <li>• Code generator</li> <li>• Interlist utility</li> <li>• Assembly optimizer</li> <li>• Library-build utility</li> </ul>
SPRU198	<b>TMS320C6000 Programmer's Guide</b>	How to program TMS320C6x digital signal processor devices
SPRU189	<b>TMS320C6000 CPU and Instruction Set Reference Guide</b>	The CPU architecture, pipeline, instruction set, and interrupts for the TMS320C6000 digital signal processors
SPRU190	<b>TMS320C6000 Peripherals Reference Guide</b>	The on-chip peripherals of the TMS320C6201/6701 digital signal processors: <ul style="list-style-type: none"> <li>• Program memory</li> <li>• Data memory</li> <li>• Direct memory access (DMA) controller</li> <li>• Host-port interface (HPI)</li> <li>• External memory interface (EMIF)</li> <li>• Boot configuration</li> <li>• Multichannel buffered serial ports (McBSPs)</li> <li>• Timers</li> <li>• Interrupt selector and external interrupts</li> <li>• Power-down modes</li> </ul>
SPRU197	<b>TMS320C6000 Technical Brief</b>	The CPU architecture, peripherals, and development tools for the TMS320C6000 DSPs

# Code Composer Studio™

## Quick Start Reference Guide

### Installing the Hardware

If you will be using the EVM6x board, you must install this system driver and support software. It is recommended that you install the system driver and support software before you install the board in the machine.

#### Installing the EVM6x System Driver and Support Software on a PC

- 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 [EVM6x Driver and Utilities](#).

#### Installing the EVM6x Board into a PC

- 1 Shut down and power off the PC.
- 2 Verify that dip switches 3, 4, 5, and 9 are in the up/off position.
- 3 Install the EVM board into an unobstructed full-length PCI slot.
- 4 Attach any necessary cables (e.g., headphones or microphones) to the EVM.
- 5 Turn on and power up the PC.

If you are using Windows NT™, your EVM hardware installation is complete. If you are using Windows 95™ and you have already installed the

EVM support software, you must reboot before this installation is complete.

**Note:** If you are using Windows 95 and you did not install the EVM software first, the PCI bus enumerator will detect new hardware and request that you provide the required file(s).

- Browse the Code Composer Studio CD (assuming it is in drive d:) to d:\evm6x.inf
- Follow the on screen instructions.

### 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 setup application configures the driver interface and enables Code Composer Studio to communicate with your DSP simulator or target board. 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 (800 x 600) 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.

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 help menu from Code Composer Studio Setup.

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 and displays a list of prebuilt system configurations.

- [Available Configurations](#) – lists the standard board configurations shipped with Code Composer Studio
- [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 Select the appropriate board or simulator configuration. Use the filters to help narrow the available choices, and then click [Add to System Configuration](#). If your exact configuration is not available, choose [Close](#) and go to step 4.
  - 2 Repeat the step above for each board or simulator you wish to add to your system (up to one of each). Click [Close](#) after you have finished adding configurations to your system.
  - 3 If the configuration you selected is correct, the boards/simulators you have added will appear in the [System Configuration](#) window. Select [File -> Save](#), [File -> Exit](#), and continue to run Code Composer Studio.
  - 4 To manually add your own system configuration, double click on the appropriate [Available Board/Simulator Types](#).
    - Use either the [C6xxx EVM](#) or [C6xxx XDS](#) configurations if you are communicating directly with actual DSP hardware.
    - Use the [C6xxx Simulator](#) configuration if the DSP hardware is not available or if you do not want to start development on a target system.
    - Click [Next](#) or select the [Board Properties](#) tab. Type the appropriate I/O port value for the board.
    - Click [Next](#) or select the [Processor Configuration](#) tab. Select and add the appropriate processor to the board.
    - Click [Finish](#). Select [File -> Save](#), [File -> Exit](#), and continue to run Code Composer Studio.

## Before Running Code Composer Studio

Before you run Code Composer Studio it is a good idea to reset the hardware. You can do this in two ways:

- For the EVM6x, use [Start -> Programs -> Code Composer Studio '6000 -> EVM Reset](#).
- For XDS510, use [Start -> Programs -> Code Composer Studio 'C6000 -> Reset XDS510 Board](#); then, select [GEL -> reset](#).

## Running the Code Composer Studio Tutorial

The best way to learn Code Composer Studio is to run the tutorial.

- 1 Double click on the CCStudio icon on your desktop.
- 2 From the Code Composer Studio menu, select [Help -> Tutorial -> Code Composer Studio Tutorial](#).

**Note:** For assistance with specific tasks, see the online help.

## 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.

**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](#).

- 2 **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**Note:** Do not try to specify include or header files directly. These files are automatically added to the project by scanning the source files for dependencies.
- 3 **To set tool options:** Select [Project -> Options](#) from the menu. You can change options for the compiler, assembler and linker.
- 4 **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.
- 5 **To load the program:** Select [File -> Load Program](#). This loads the executable file.
- 6 **To debug the program:** Select [Debug](#) from the menu and choose the debugging activity you want.

## Using the Online HELP

To obtain help for any aspect of Code Composer Studio, 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.