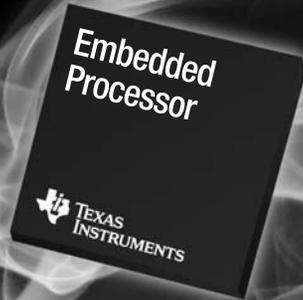




Code Composer Studio™ IDE v4

Quick Start Guide

```
26*****
27void ShapingFilter
28{
29    int i;
30    /* shift one delay
31    for(i = 0; i < SIZE_DELAY_FILTER
32    {
33        delayLine[i] = delayLine[i-1];
34    }
35    /* clear end of delay
36    for( i = SIZE_DELAY_FILTER
37    {
38        delayLine[i] = 0;
39    }
40    /* add new sample
41    for( i = 0; i < SIZE_DELAY_FILTER
42    {
43        delayLine[i] = delayLine[i] + sample;
44    }
45    return delayLine[0];
46    }
```



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Quick Start Guide

Installation Requirements

These operating platform requirements are necessary to install the Code Composer Studio Integrated Development Environment (IDE):

Minimum

- 1.5-GHz Pentium-compatible CPU
- 1 GB of RAM
- 300 MB of free hard disk space (minimal custom installation)
- Local DVD-ROM drive

Recommended

- Dual-core processor
- 2 GB of RAM
- 2 GB of free hard disk space (typical installation)

Supported operating systems

1. Windows XP
2. Windows Vista
3. Windows 7 (level of support will vary depending on the Code Composer Studio IDE version. Please check the Code Composer Studio IDE release notes for the latest information on Windows 7 support)

Installing Code Composer Studio™ IDE

1. Insert the installation DVD in the DVD-ROM drive.
2. Go to Windows Explorer and run “**setup_CCS_4.x.x.xxxxx.exe**” from your DVD-ROM.
3. Respond to the dialog boxes as the installation program runs. You can customize the components that are installed. A standard evaluation license agreement will appear during installation. Note that when Code Composer Studio IDE is activated using an activation code (see section 3b of

“Launching Code Composer Studio™ IDE”), another license agreement will appear that is specific to the license activated.

Launching Code Composer Studio IDE

The following steps apply to launching Code Composer Studio IDE for the first time.

1. Invoke Code Composer Studio IDE by double clicking on the “Code Composer Studio v4” icon that appears on your desktop.
2. A prompt will appear asking for a workspace location. The workspace is the main working folder for Code Composer Studio IDE. The default location will be (on Windows XP) “**C:\Documents and Settings\<user name>\My Documents\workspace**”. This path may vary on other operating systems. Code Composer Studio IDE will ask for the location of the workspace each time on startup. To have Code Composer Studio IDE automatically default to the specified workspace location, select the “Use this as the default and do not ask again” option.
3. A dialog box will appear indicating that Code Composer Studio IDE is unlicensed. Code Composer Studio IDE must be activated to use it. One of the following activation options may be used:
 - a. **Evaluate Code Composer Studio IDE for 30 days:** This will activate Code Composer Studio IDE for 30 days without any feature restriction. Simply select the option to “Evaluate Code Composer Studio for 30 days” and hit the “OK” button at the bottom of the dialog box to continue.
 - b. **Activate a License:** This will provide options to generate a license with an Activation Code and then install it. Select the option to “Activate a License”.
 - i. **Step 1 – Generate License File:**
 1. **Node-Locked License:** Record one of your HostIDs (displayed above the “Register” button). A HostID will be needed to generate a license. Then select the desired license file type to generate by hitting the applicable button (“Register” or “Use Free Limited License”). This will open a web page in your web

browser to guide you through the steps of generating a license file with your activation code and HostID. The generated license file will then be e-mailed to you.

2. **Floating License:** Select the “Register” button to generate a license for a multi-user floating license. This will open a web page in your web browser to guide you through the steps of generating a license file with your activation code. The generated license file will then be e-mailed to you along with instructions on how to setup the license on a server.

ii. **Step 2 – Install License File:** Choose the license type:

1. **Node-Locked License:** Select the “Specify a license file” option to install a node-locked license file has been received by e-mail. Select the file using the “Browse...” button. This will activate Code Composer Studio™ IDE.
2. **Floating License:** Select the “Specify a license server” option and enter the “Address” and “Port Number” information for the floating license installed on a server.

Hit the “OK” button at the bottom of the dialog box to continue.

4. A “Welcome Page” will appear, welcoming you to Code Composer Studio IDE. On this page, there are several links that can be clicked to give more information on Code Composer Studio IDE such as additional getting started information, examples, links to additional resources on the web, and so forth. It is recommended to take some time to look at this information, especially the “Getting Started” section. Once you are finished with the “Welcome Page,” you can then proceed to the main Code Composer Studio IDE workbench by closing the “Welcome Page.”
5. Code Composer Studio IDE workbench will appear and be in the “C/C++” Perspective.
6. Code Composer Studio IDE will check for updates and will notify you if updates have been detected. You can then choose to have Code Composer Studio IDE download and

install the updates or decide to update Code Composer Studio™ IDE at a later time.

Using Code Composer Studio IDE to Create a Project

To create a new project:

1. Select “File→New→CCS Project” from the menu. This opens the “New CCS project” wizard. In the “Project Name” field, type the new project name. The “Use default location” option, if enabled, will create the project in your workspace folder. The option is enabled by default. Uncheck the option to select a new location (by using the “Browse...” button). Click “Next” to continue.
2. Specify the architecture in the “Project Type” field using the drop-down menu. You can also specify which build configurations to create for the project. “Debug” and “Release” are enabled by default. Click “Next” to continue.
3. In the “Projects” tab, you can create dependencies with other projects in the workspace. If there are no other projects currently open in the workspace, the “Referenced Projects” list will be blank. In the “C/C++ Indexer” tab, you can specify which indexer to use for the project. The indexer is used by Code Composer Studio IDE to obtain information on the project for such things as auto-complete and “go to definition” features in the editor. The default option is “Full C/C++ Indexer”, which will provide the most functionality. Click “Next” to continue.
4. In the “Output type”, select “Executable” or “Static Library”, depending on the type of output you are creating. Then set the various fields in the “Project settings” to specify more information about the project. In the “Device Variant” field, select the device you are creating the project for. If your specific device is not present, select the “Custom” or “Generic” device option that is closest. Selecting an option in this field will apply some default settings for the other fields, such as picking a run-time support library and linker command file to use. If you wish to change these default options, use the “Browse...” button to do so. Click “Finish” to exit the wizard.

- a. The “Target content” section will also be visible if DSP/BIOS™ real-time kernel is supported for your project type. If you wish to use DSP/BIOS kernel in your project, select the radio button option applies to the version of DSP/BIOS kernel you plan to use.
5. Your project has now been created and added to the workspace. The contents of the project will be visible from the “C/C++ Projects” view, even on re-launching Code Composer Studio™ IDE, as long as the workspace folder is not changed.

To add files to a project:

1. Create/add new source files to your project by right-clicking on the project in the “C/C++ Projects” view and selecting “New→Source File” in the context menu. This opens the “New Source File” dialog box. In the “Source File” field, type the new project name. Make source the name also has the file extension (ex: main.c). Click “Finish” to exit the dialog. This will open a blank file of the specified name in the editor and add the file to the project.
 - a. (Optional): Code Composer Studio IDE comes with some code templates that can be used from the editor. Code templates are templates of code that can be referenced using the “Content Assist” feature of the editor. Custom code templates can also be created. It is a quick way to get started with Code Composer Studio IDE.
 1. MSP430: Type the letter “b” in blank file in the editor. Then press “CTRL-SPACE” (press the “CTRL” key and “SPACE” key at the same time). This will add source for the MSP430 “blink LED” example (note the “TODO” comment for line 21).
 2. Other ISA: Type the letter “h” in blank file in the editor. Then press “CTRL-SPACE” (press the “CTRL” key and “SPACE” key at the same time). This will bring up a list of code template options for “hello world”. Selecting the “helloworld” option will add the source for a standard “hello world” example.
2. To add existing source files, right-click on the project in the “C/C++ Projects” view and select either “Link Files to

Project...” (create a reference to the file) or “Add Files to Project” (make a physical copy of the file and put it in the project folder) in the context menu. This will open a dialog box which will allow you to browse for files to link/add.

Creating Your Target Configuration File

Before a debug session can be launched, a target configuration file is needed to configure Code Composer Studio™ IDE for the target board or simulator that you want to use. This file can be added to a project or exist standalone. The steps below will show how to add it to a project.

Note: For MSP430 projects, a target configuration file is automatically created and added to the project after project creation. The following steps for creating a target configuration file is not needed for MSP430 users.

1. Right-click on the project in the “C/C++ Projects” view and select “New→Target Configuration File”. This opens the “New Target Configuration” dialog box. In the “File name” field, type in a new file name. Give it a file extension of (*.ccxml). Click “Finish” to exit the dialog. This will open the target configuration file in the editor.
2. In the “Connection” field, select the connection type by enabling the checkbox for the desired device.
3. In the “Device” field, select the device to connect to. Use the text filter field above the list of devices to shorten the list.
4. Save the file by hitting the “Save” button under “Save Configuration”.

Note: If your device does not appear in the list of devices, you will need to use the “Advanced” setup tool to create it. Check the documentation for more information on how to use the “Advanced” setup tool.

Building and Running the Program

- **Setting Build Options:** Right-click on the project in the “C/C++ Projects” view and select “Build Properties...” from the context menu. You can change options for the compiler and linker.

- **Building and loading the program:** Choose “Target→Debug Active Project” to build the project, switch to the “Debug” Perspective, start a debug session for the target specified in the target configuration file, load the executable file (*.out), and run to “main”. All of these steps are done automatically. Now you are ready to start debugging or running your application. Note that if any build errors are encountered and no executable file is created, a warning will appear and a debug session will not be started.

Resources

- **Welcome Page:** The Welcome Page has links to additional documentation, guides, examples and such. The Welcome Page can be opened by selecting “Help→Welcome” from the main menu.
- **Online Help:** Code Composer Studio™ IDE is accompanied by searchable online documentation. Select “Help→Help Contents” to bring up the online help.
- **Code Composer Studio IDE MediaWiki:** The Code Composer Studio IDE MediaWiki site has the best and latest information regarding the usage of Code Composer Studio IDE. It provides a wealth of information on Code Composer Studio IDE, flash captures on how to use various features, information on how to obtain support and much more. A link to the MediaWiki site is available from the Welcome Page.
tiexpressdsp.com/index.php/Category:Code_Composer_Studio_v4
- **TI E2E Community Forum:** The TI E2E Community Forum is a place for users to discuss and find answers to questions regarding Code Composer Studio IDE. A link to the forum site is available from the Welcome Page.
e2e.ti.com/forums/138.aspx

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