CodeWarrior™ Development Studio
for Freescale™ HC(S)08/RS08 Microcontrollers Quick Start

SYSTEM REQUIREMENTS	
Hardware	400 MHz Pentium® II processor or AMD-K6® class processor, 128 MB of RAM, and CD-ROM drive Depending on host-target connection: Parallel Port, 9-pin Serial Port, or USB Port
Operating System	Microsoft® Windows® 98 SE/2000/XP
Disk Space	Compact: 500 MB Full: 635 MB

This Quick Start explains how to install the CodeWarrior Development Studio for HC(S)08/RS08 V5.x software, how to use the IDE to create a project, and how to start debugging a project.

Section A: Installing CodeWarrior Software

1. **Install CodeWarrior software**

   a. Insert **CodeWarrior Development Studio** CD into CD-ROM drive — CW Auto Install begins

NOTE If Auto Install does not start, run launch.exe, which is located in the root directory of the CD.

   b. Follow setup program's on-screen instructions

2. **Restart your computer — operating system reboots which ensures that CodeWarrior IDE finds newly installed drivers**

NOTE Standard Edition and Professional Edition must be registered. Refer to appendices "Registering and Obtaining License Key for Standard Edition or Professional Edition" or "Manually Installing License Key" to register your software and obtain a permanent license key

Section B: Creating And Building A Project

1. Launch CodeWarrior IDE

a. Select **Start > Programs > Freescale CodeWarrior > HC08 V5.x** — menu appears

b. Select **CodeWarrior IDE** — IDE starts, and Startup window appears

Startup window

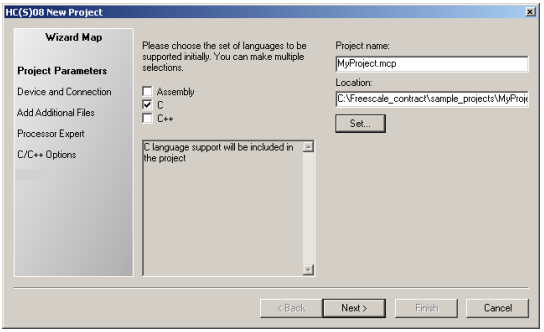


2. Create new project

NOTE This quick start shows you how to use the New Project Wizard. We use an MC68HC908GZ60 target as an example.

a. Select **Create New Project** — HC(S)08 New Project window appears

New Project Wizard - Page 1



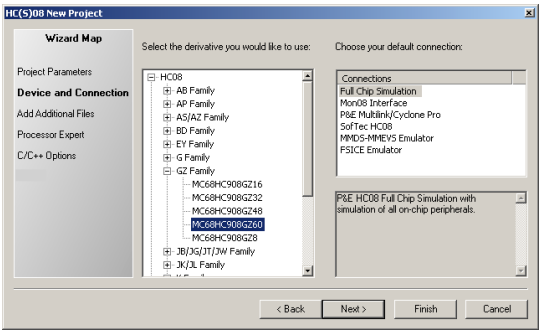
b. In **Project name** text box, type name you want to give project – IDE automatically adds `.mcp` extension when it creates project

c. In **Location** text box enter location to store project. Click **Set...** button to browse to folder location

d. Select **C** as language to be supported by project

e. Click **Next** — Page 2 of New Project wizard appears

New Project Wizard - Page 2



f. Expand **HC08** and **GZ Family** and select **MC68HC908GZ60** derivative

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NOTE If your MCU is missing from the list, you will need to download a service pack for that device at http://www.codewarrior.com/mw/download/

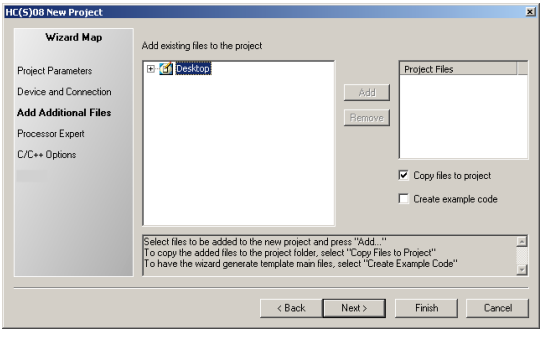
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g. Select **Full Chip Simulation** as your default connection

NOTE You can select FINISH to accept defaults for remaining options

h. Click **Next** button — Page 3 of New Project Wizard appears

New Project Wizard - Page 3

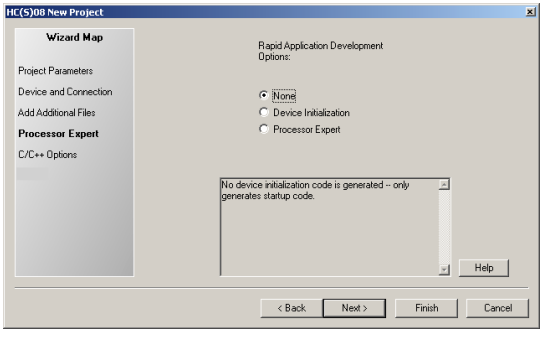


i. This page allows you to browse folders and add files to or remove from the project.

j. Click **Next** button — Page 4 of New Project Wizard appears; it allows you to specify whether you want your project configured to use Device Initialization or Processor Expert

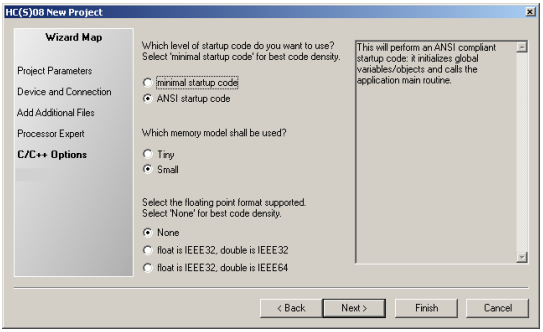
k. Select **None**

New Project Wizard - Page 4



l. Click **Next** button — Page 5 of New Project Wizard appears; it allows you to specify C/C++ Options

New Project Wizard - Page 5



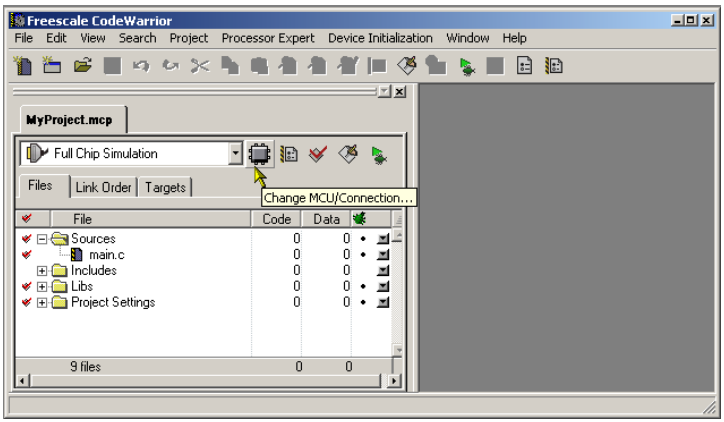
m. Select **ANSI startup code** as code the New Project Wizard will place in your project as startup code

n. Select **Small** as memory model to use

o. Select **None** for floating point format to support

p. Click **Finish** button — system creates new project based on information you specified in New Project Wizard; Project window appears, docked at left side of main window

Project Window



NOTE To undock Project window, double-click the double gray lines. To re-dock window, right click in title tab and select **Docked**.

3. **Select connection**

For this example, we specified the Full Chip Simulation (FCS).

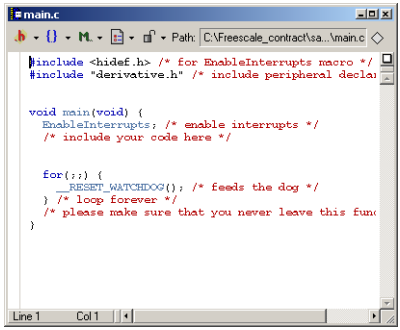
a. Make sure Full Chip Simulation is selected in drop down list

b. To change MCU and connection, click Change MCU/ Connection... button

4. **Edit source code**

a. Double click **main.c** in Sources folder – Editor window opens displaying contents of file

`main.c` **in Editor Window**



b. Make changes to contents of `main.c` file if desired

c. If you make changes to file, from IDE main menu bar, select **File > Save** – IDE saves changes

5. **Add files if appropriate**

a. In Project window, Highlight a folder

b. From IDE main menu bar, select **Project**

c. Select **Add Files** — dialog box appears

d. Navigate to directory that contains file you want to add

e. Select (highlight) filename of file you want to add to project

f. Click **Open** button — Project messages appear indicating access path has been added to target, if path is new to project

g. In Project window, filename of added file appears under selected folder

6. Build project

a. From IDE main menu bar, select **Project**

b. Select **Make** — IDE builds (assembles, compiles, and links) project; Error & Warnings window opens showing error messages and warning messages if detected

Section C: Debugging Your Application

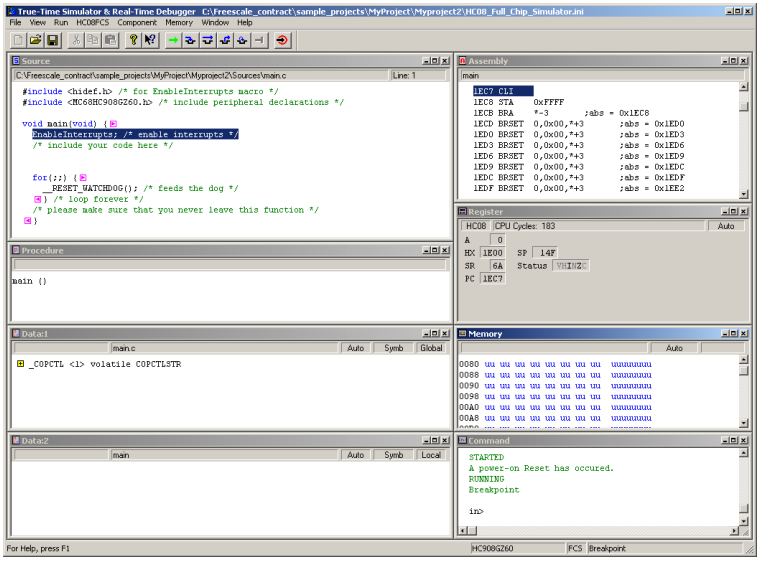
1. Start debugger

a. Click on Project window titlebar (ensures that window is active project)

b. From main menu bar, select **Project**

c. Select **Debug** — **True-time Simulator & Real-time Debugger** window opens

True-time Simulator & Real-time Debugger Window

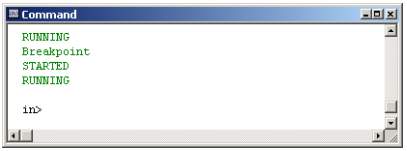


NOTE Source and Assembly panes display the `main.c` program and code.

2. **Right click mouse on executable line of source code in Source pane to set breakpoints in program code**
3. **Run application**
   a. From Debugger Simulator main menu, select Run – Run menu appears
   b. Select Start/Continue — program executes until encountering the first breakpoint; Command pane displays program status

NOTE Alternatively, you can click on Start/Continue icon 

Debugger Simulator Command Pane



4. **Click Start/Continue icon**  **— Simulator resumes program execution**
5. **Click Halt icon**  **— Simulator stops program execution**
6. **In Debugger Simulator Window tool bar, select File > Exit to exit Debugger**
7. **In IDE Main Window tool bar, select File > Exit to exit CodeWarrior IDE**

Congratulations!

You have successfully created, built, and run an HC08 application with the CodeWarrior for HC(S)08/RS08 V5.x software!

Appendix A: Registering and Obtaining License Key for Standard Edition or Professional Edition

1. **Launch CodeWarrior IDE**

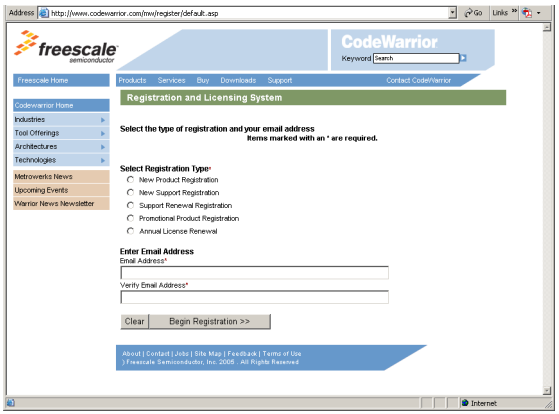
   a. Select **Start > Programs > Freescale CodeWarrior > CW08 V5.x** — menu appears

   b. Select **CodeWarrior IDE** — IDE starts; main window appears and Startup dialog prompts you to use wizard to create new project or start using CodeWarrior.

2. **Register CodeWarrior software**

   a. Select **Help > Register Product** from the main menu — CodeWarrior IDE starts your browser, taking you to Step 1 of the on-line registration form

Register Form Step 1



   b. Enter your email address in appropriate fields

NOTE If you downloaded the software from the Freescale web site, you might not have a registration code. You can request a registration code from `license@freescale.com`. Special Edition customers do not need to register. The Special Edition license file is automatically installed with the software.

c. Click **Begin Registration** button — Step 2 appears

d. Follow on-screen instructions to complete remaining pages of form (Thank You page is last) — within a few minutes Freescale emails your license authorization code

3. Obtain license key

a. From email message you receive from Freescale, copy license authorization code

b. Start CodeWarrior IDE

c. From CodeWarrior main menu bar, select **Help** > **License Authorization** — **Licence Authorization** dialog box appears

d. Paste license authorization code into **License Authorization** dialog box

e. Click **OK** button — **License Authorization** dialog box updates; IDE automatically gets the license key and installs it in the correct location

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NOTE The license.dat file with your license key is also emailed to you

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f. From IDE main menu bar, select **File** > **Exit** – IDE closes

Appendix B: Manually Installing License Key

NOTE Following steps explain how to manually install license key. You can find the `license.dat` file in the directory where you installed CodeWarrior software. The default is: `C:\Program Files\Freescale\CodeWarrior for HC08 V5.x`

1. **Open license.dat**
   a. Start a text editor such as Notepad
   b. Open `license.dat` file
2. **Copy license key you received from Freescale**
3. **Paste license key on new line at bottom of** `license.dat` **file**
4. **Save** `license.dat` **file**
5. **Close** `license.dat` **file – license is installed; IDE uses new license next time you start the CodeWarrior IDE**

NOTE Do not move or delete the `license.dat` file. If you receive additional keys for other CodeWarrior components, you can add the additional keys to the `license.dat` file.

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