/arrior Development Studio
for Microcontrollers V10.x Quick Start

SYSTEM REQUIREMENTS	
Hardware	Windows® OS: PC with 1.8 GHz Intel® Pentium® compatible processor 2GB of RAM DVD-ROM drive Depending on host-target connection: Parallel Port, 9-pin Serial Port, or USB Port
Operating System	Microsoft® Windows XP 32-bit and 64-bit (Professional Edition), Microsoft Windows Vista® 32-bit and 64-bit (Home Premium Edition and Business Edition), or Microsoft Windows 7 32-bit and 64-bit (Home Premium Edition and Professional Edition) Microsoft Windows 8 32-bit and 64-bit (Home Premium Edition and Professional Edition)
Disk Space	20GB (When installing full product or updates for all architectures) 1GB on Windows system disk

This Quick Start explains how to download and install the CodeWarrior Development Studio for Microcontrollers V10.x from the online/offline installer, or install it from the DVD software on a Windows operating system. Additionally, it describes how to use the CodeWarrior IDE to create, build, and debug a project. The Quick Start is organized as the following.

- Section A: Download and Install CodeWarrior Software with Online Installer
- Section B: Download and Install CodeWarrior Software with Offline Installer
- Section C: Install CodeWarrior Software from DVD
- Section D: Creating and Building a Project
- Section E: Debugging your Application

arrior Development Studio for Microcontrollers V10.x is available in the following editions. You can select the download that meets your requirements.

NOTE **Special Edition**: The Special Edition license is automatically installed with your product and you do not need to register it. This license allows you to develop projects with unlimited assembly code; up to 64KB of C code for ColdFire+, ColdFire V1, DSC, Kinetis L series, RS08, S08, S12Z derivatives; up to 128KB of C code for Kinetis K series and ColdFire V2-V4 derivatives and up to 512KB for Qorivva and PX derivatives.

NOTE **Evaluation Edition:** The Evaluation Edition license is automatically installed with your product and you do not need to register it. This license allows you to develop projects as Professional Edition within the 30-day evaluation period. After 30 days, the license works as Special Edition license (free permanent, but feature limited) which supports unlimited assembly code; up to 64KB of C code for ColdFire+, ColdFire V1, DSC, Kinetis L series, RS08, S08, S12Z derivatives; up to 128KB of C code for Kinetis K Series and ColdFire V2-V4 derivatives and up to 512KB for Qorivva and PX derivatives.

NOTE **CodeWarrior Eclipse usage on a Microsoft® Windows Vista®, Microsoft Windows 7 or Microsoft Windows 8 system:**
Administrator rights are required to install CodeWarrior software on Microsoft Windows Vista, Microsoft Windows 7, and Microsoft Windows 8 systems, since the installer copies files into the System folder.

Your project workspace needs to be setup in any folder that you can fully access.

Step A: Download and Install CodeWarrior Software with Online Installer

This section describes the steps to:

- Download the online installer, refer step 1.
- Install the online installer, refer step 2.

1. To download the online installer, perform the following steps.
   a. Go to `www.freescale.com/cwmcu10` — the **CodeWarrior for Microcontrollers v10.x Product Summary** page appears.
   b. Click the **Downloads** tab.
   c. Click the **CodeWarrior MCU v10.x Evaluation Edition** hyperlink - a page appears displaying separate online and offline downloads for the Windows operating system.
   d. Click the hyperlink corresponding to online installer. You will be directed to the Freescale log-in page if you are not logged in already.

NOTE You only have to log-in to download the Evaluation Edition. The Special Edition does not require a log-in.

   e. Enter your user name and password and click **Log in**.

NOTE If you are not a registered user, click **Register Now** and follow the on-screen instructions.

   f. A dialog box appears asking you to save the installer file. The extension of the installer file is `.exe` for Windows.
   g. Specify the location where you want to save the installer file.

NOTE The installer image contains the CW MCU v10.x core tools. During the installation process the core tools are installed and you are prompted to select the Freescale architecture support you want to install. The installer will automatically access the Internet, download the necessary archives, and install them in the CodeWarrior installation directory.

To install a new architecture later, you can use Install New Software and use the online update site. The link for the update

e is http://freescale.com/lgfiles/updates/Eclipse/MCU10_6/com.freescale.mcu.updatesite.

NOTE The archives downloaded during the installation will be kept in the CodeWarrior installation folder, under the Archives folder.

NOTE When installing from an online update site the latest version of the features are installed. Any updates released to date automatically form a part of the installation.

2. To install the CodeWarrior online installer downloaded from the Web, perform the following steps.
   a. When the download finishes on the Windows host computer, navigate to the CodeWarrior installer EXE file you have downloaded, double-click the EXE file — the install wizard appears.
   b. Follow the wizard instructions to install the CodeWarrior software.

      When software installation is finished, wizard displays the installation complete page.
   c. Check the **Display Documentation** checkbox and click **Finish** to close the wizard - the documentation page appears in your default browser. The page gives you information about the different documents, such as getting started, user guides, application notes, and cheat sheets available in the product.

NOTE When accessing the network Internet Explorer settings will be used. You will have the possibility to configure the proxy if necessary. If the installer cannot connect to the Internet you can install the Core setup and then add the Freescale architecture support via the Install New Software feature.

NOTE When installing from an online update site latest version of the features are installed. Any updates released to date automatically form a part of the installation.

Section B: Download and Install CodeWarrior Software with Offline Installer

describes the steps to:

- Download the offline installer, refer step 1.
- Install the offline installer, refer step 2.

NOTE This image contains the complete CW MCU v10.x tool suite and an installer, which assumes your computer does NOT have internet access. All data needed by the installer will be downloaded now and no other download will be performed.

1. To download the offline installer, perform these steps.
   a. Go to `www.freescale.com/cwmcu10` - the CodeWarrior for Microcontrollers v10.x Product Summary page appears.
   b. Click the **Downloads** tab.
   c. Click the **CodeWarrior MCU v10.x Evaluation Edition** hyperlink - a page appears displaying separate online and offline downloads for the Windows operating system.
   d. Click the hyperlink corresponding to offline installer. You will be directed to the Freescale log-in page if you are not logged in already.

NOTE You only have to log-in to download the Evaluation Edition. A log-in is not required for the Special Edition.

   e. Enter your user name and password and click **Log in**.

NOTE If you are not a registered user, click **Register Now** and follow the on-screen instructions.

   f. A dialog box appears asking you to save the offline installer - self-extracting package. The extension of the file is .exe for Windows.
   g. Specify the location where you want to save the self-extracting package. This will be the location where the folder containing the setup files will be automatically extracted.

2. To install CodeWarrior offline installer downloaded from the Web, perform these steps.
   a. When the download finishes on the Windows host computer, navigate to the CodeWarrior offline installer EXE file you have downloaded, double-click the EXE file - the self-extracting wizard appears.
   b. A folder called CW MCU10.x will be created and here the setup files will be extracted.

ı the extracting finishes the CodeWarrior installer will start automatically - the install wizard appears.

d. Follow the wizard instructions to install the CodeWarrior software.

When software installation is finished, wizard displays the installation complete page.

e. Check the **Display Documentation** checkbox and click **Finish** to close the wizard - the documentation page appears in your default browser. The page gives you information about the different documents, such as getting started, user guides, application notes, and cheat sheets available in the product.

NOTE The installer and the architecture packages will remain on the computer after installation completes.

NOTE Any updates to the installation can be done using Install New Software, from the CodeWarrior MCU v10.6 update site link or offline, by selecting the needed architecture package from {download_location}\CW MCUv10.6 folder.

Section C: Install CodeWarrior Software from DVD

To install the CodeWarrior software from the DVD, perform these steps.

1. Insert CodeWarrior Development Studio DVD into DVD-ROM drive — CW Auto Install begins.

NOTE If Auto Install does not start, navigate to the CodeWarrior installer EXE file, double-click the EXE file — the install wizard appears.

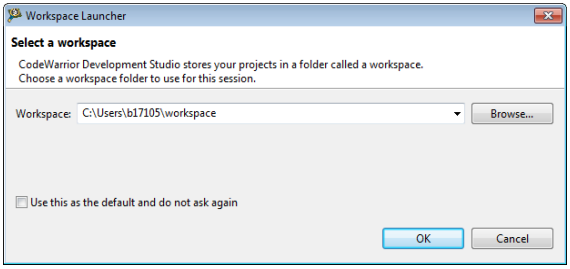
2. Follow the wizard instructions to install the CodeWarrior software.
3. Restart your computer — operating system reboots which ensures that CodeWarrior IDE finds newly installed drivers.

Section D: Creating and Building a Project

To create and build a project, perform these steps.

a. For Windows, select **Start > All Programs > Freescale CodeWarrior > CW for MCU v10.x > CodeWarrior** — the **Workspace Launcher** dialog box appears.

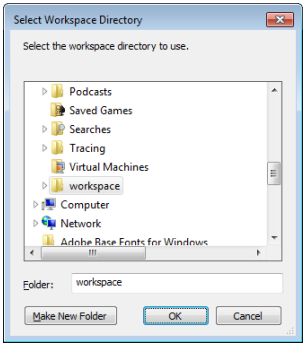
Workspace Launcher Dialog Box



NOTE If you want to store your projects in the default location, click **OK** and proceed to step 2, otherwise follow the steps given below.

b. Click **Browse** — the **Select Workspace Directory** dialog box appears.

Select Workspace Directory Dialog Box



c. Select required folder or click **Make New Folder** to create a new folder for storing your projects.

d. Click **OK** — the **Select Workspace Directory** dialog box closes.

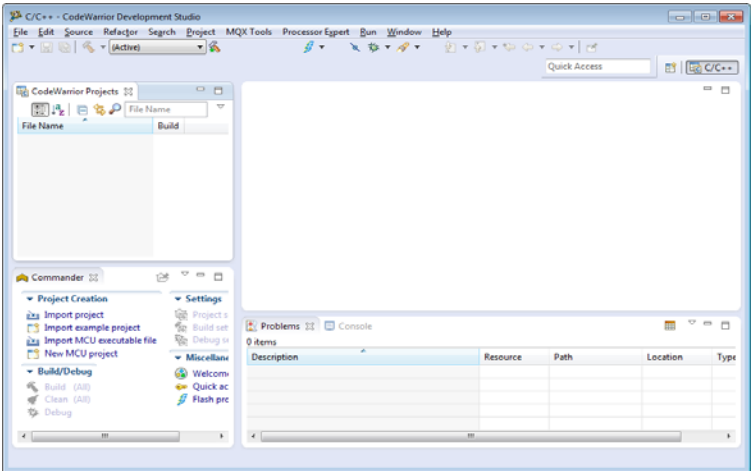
NOTE Check the **Use this as the default and do not ask again** checkbox in the **Workspace Launcher** dialog box to set the chosen path as the default location for storing all your projects.

e. Click **OK** — the CodeWarrior IDE launches and the **Welcome** page appears.

NOTE The **Welcome** page appears only if the CodeWarrior IDE or the selected Workspace is opened first time. Otherwise, the **Workbench** window appears. Switch directly to step 2a if the **Workbench** window appears.

f. In the **Welcome** Page, click **Go to Workbench** — the Workbench window appears.

Workbench Window

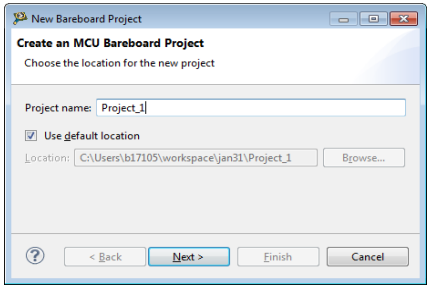


2. Create new project

a. Select **New MCU project** in the **Commander** view.

b. Enter `Project_1` in the **Project name** field.

Create an MCU bareboard Project Page

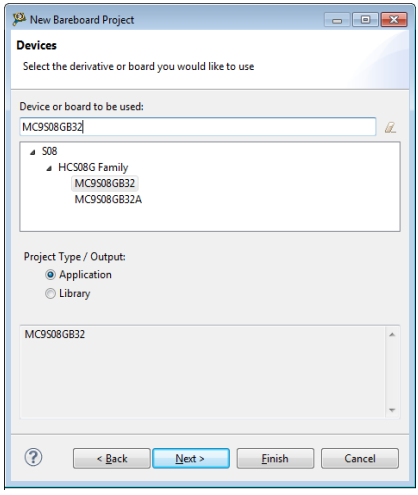


NOTE The **Location** field shows the default project location. If you wish to change this location, clear the **Use default location** checkbox. Click **Browse** and use the subsequent dialog box to specify a new location. Click **OK**. The **Create an MCU bareboard Project** page now shows new location.

c. Click **Next** — the **Devices** page appears.

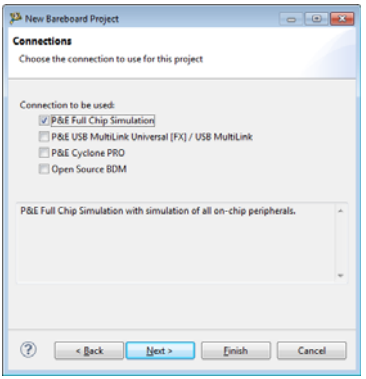
d. Expand the tree control and select **S08 > HCS08G Family > MC9S08GB32**.

Devices Page



e. Click **Next** — the **Connections** page appears.

Connections Page



f. Select the **P&E Full Chip Simulation** connection and clear the checkboxes against default selected options.

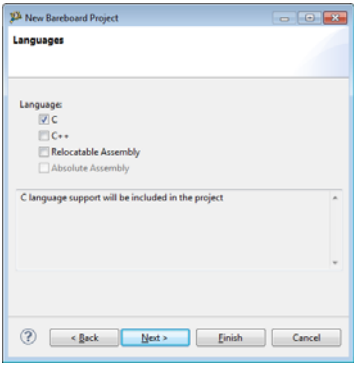
NOTE In the **Connections** page, you can select multiple connections at once.

g. Click **Next** — the **Languages** page appears.

NOTE The page displayed may vary depending on the derivative or board selected. For example, if you select **ColdFire V2 > MCF5221X > MCF52210** and click **Next**, the **ColdFire Build Options** page appears.

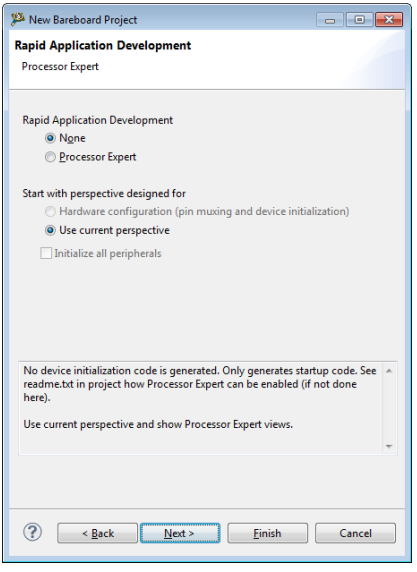
h. Select the **C** language.

Languages Page



i. Click **Next** — the **Rapid Application Development** page appears.

Rapid Application Development Page

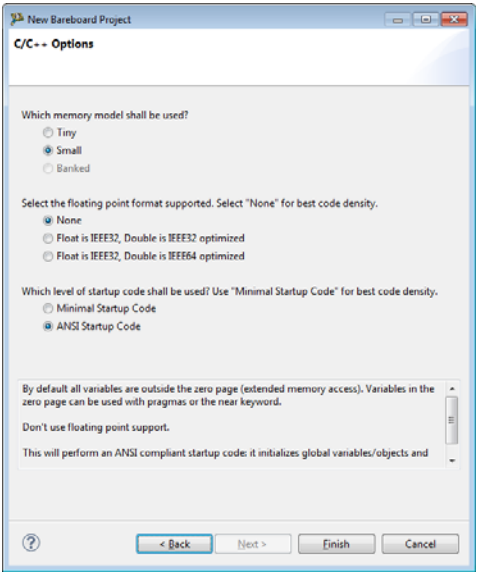


j. Select **None** from the **Rapid Application Development** options.

k. Click **Next** — the **C/C++ Options** page appears.

NOTE .. you check only the **Relocatable Assembly** or **Absolute Assembly** checkbox in the **Languages** page and click **Next**, the **C/C++ Options** page does not appear.

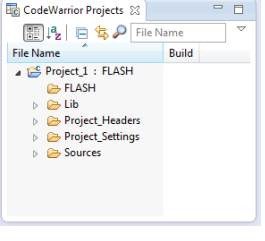
C/C++ Options Page



l. Click **Finish** — the IDE creates the project.

m. Select and expand the project in the **CodeWarrior Projects** view.

CodeWarrior Projects View



n. Select **Build/Debug > Build (All)** in the **Commander** view.

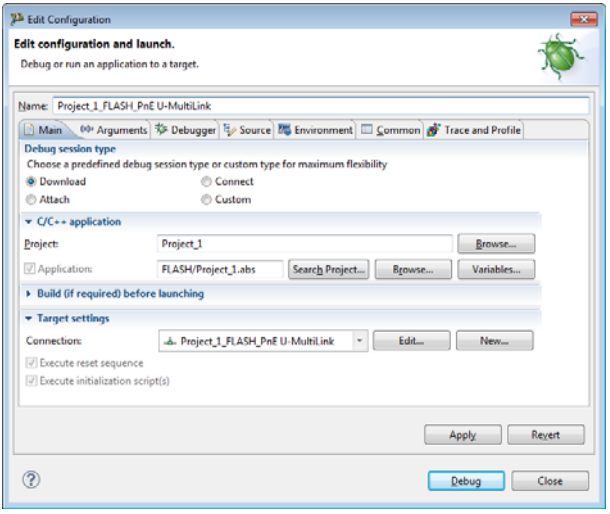
NOTE To set project, build, or debug settings of a project in the **CodeWarrior Projects** view, select the respective settings in the **Commander** view. For example, to set project settings, select **Settings > Project Settings** in the **Commander** view.

Section E: Debugging your Application

To debug a project, perform the following steps.

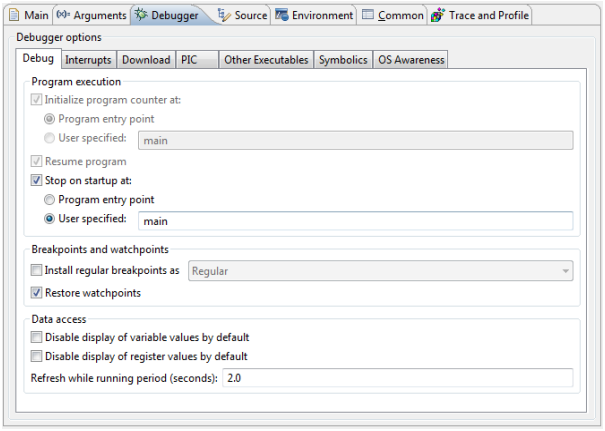
1. To debug a project without changing the default settings, select the project and select **Build/Debug > Debug** in the **Commander** view.
2. To debug a project after changing the default settings, perform the following steps.
   a. Select the project in the **CodeWarrior Projects** view.
   b. Select **Settings > Debug Settings** in the **Commander** view.
      The **Edit Configuration** dialog box appears.

Edit Configuration Dialog Box



   c. Click the **Debugger** tab — the **Debugger** page opens in the right pane.

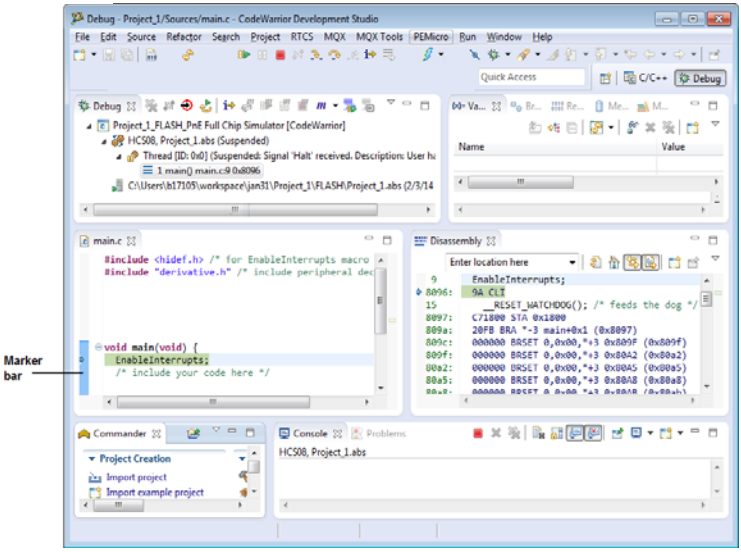
ıug Configurations Dialog Box — Debugger Page



d. Make the appropriate changes in the **Debug** tab.

e. Click **Apply** to save the changes in the settings, if any.

f. Click **Debug** — the debugger downloads program to simulator and the **Debug Perspective** appears. The execution halts at the first statement of `main()` and program counter icon on the marker bar points to the next statement to be executed.



3. Set and run to breakpoint

   a. Double-click on the marker bar next to a statement — the breakpoint indicator (blue dot) appears next to the statement.

   b. From the **Debug** view, click **Resume** — the debugger executes all statements up to but not including the breakpoint statement.

4. Control program

   a. From the **Debug** view, click **Step Over** — the debugger executes breakpoint statement and halts at next statement.

   b. From the **Debug** view, click **Resume** — the simulator resumes program execution.

   c. From the **Debug** view, click **Terminate** — the debug session ends.

5. Select **File** > **Exit** from the IDE menu bar to exit the CodeWarrior IDE.

Congratulations!

You have created, built, and debugged an Microcontrollers project using CodeWarrior for Microcontrollers V10.x software!

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