/arrior Development Studio for Microcontrollers V10.x

Profiling and Analysis for ColdFire V1 Quick Start

This Quick Start explains how to collect trace and critical code data after creating, building, and running a project on the ColdFire V1 MCF51JM128 target in the CodeWarrior for Microcontrollers version 10.x debugger. The document also explains how to view trace and critical code data on the ColdFire V1 target hardware.

NOTE In the procedures that follow, advanced users can use numbered steps. Novices may use the more detailed instructions provided by substeps.

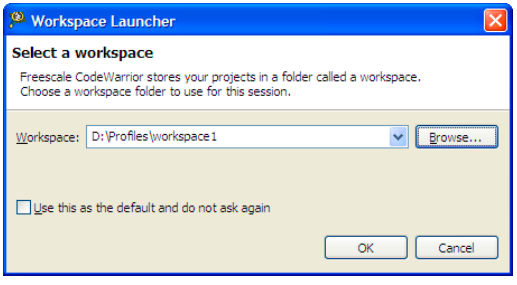
Section A: Setting Up MCF51JM128 Device

Before collecting trace and critical data on the ColdFire V1 target hardware, make sure that MCF51JM128 device is connected to the target board. To connect and set up MCF51JM128 device to the board, refer *DEMO51JM128LAB Quick Start*.

Section B: Collecting Trace and Critical Code Data

1. Launch the CodeWarrior IDE
   a. Select **Start > Programs > Freescale CodeWarrior > CodeWarrior for MCU v10.0 > CodeWarrior** — the **Workspace Launcher** dialog box appears.

Workspace Launcher Dialog Box



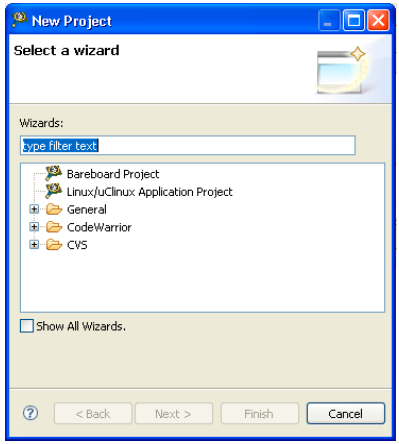
Browse to specify the location where you want to store your project.

c. Click **OK** — CodeWarrior launches.

2. Create a new project

a. From the CodeWarrior IDE menu bar, select **File > New > Project** — the **New Project** dialog box appears.

New Project Dialog Box



b. Select **Bareboard Project** and click **Next** — the **Create an MCU Bareboard Project** page appears.

NOTE You can also open the **Create an MCU Bareboard Project** page directly by selecting **File > New > Bareboard Project**.

c. In the **New Project Name** field, type the name of your project.

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

e. Select **ColdFire V1 > MCF51JM Family > MCF51JM128**.

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

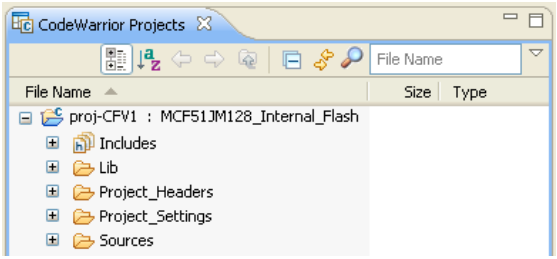
g. Select the available connection and click **Next** — the **Add Files** page appears.

h. Click **Next** — the **ColdFire Build Options** page appears.

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

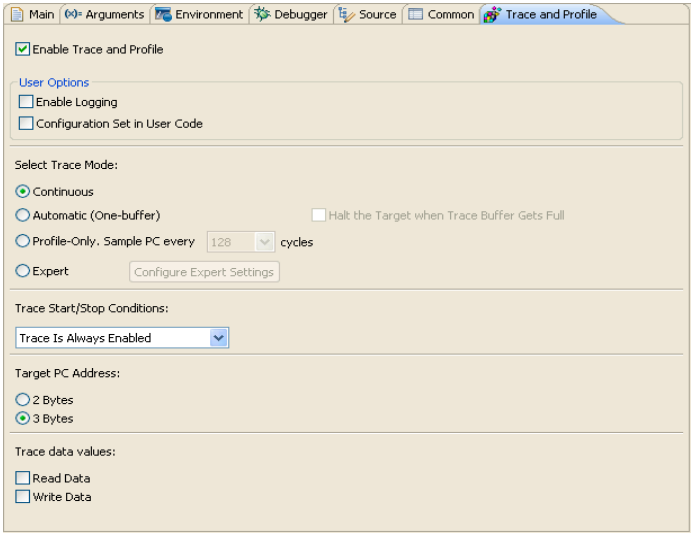
j. Accept the default settings and click **Finish** — the project is created and appears in the **CodeWarrior Projects** view.

CodeWarrior Projects View

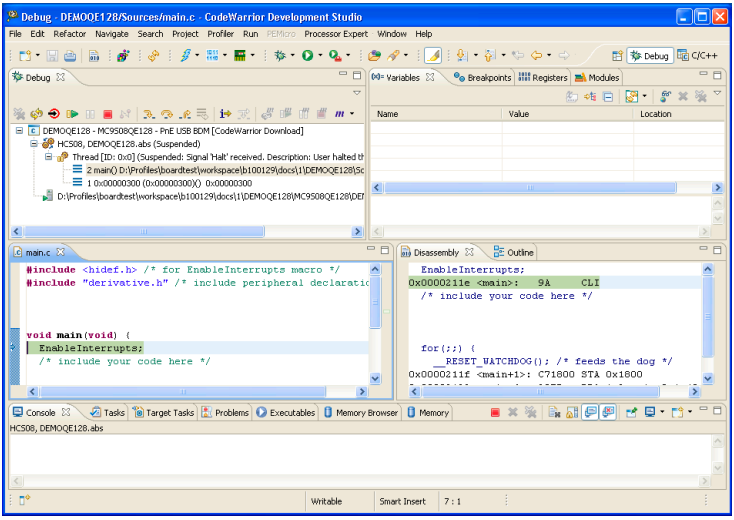


3. Build project
   a. Select the project in the **CodeWarrior Projects** view.
   b. Select **Project > Build Project** to build the project.
4. Configure launch configuration
   a. Right-click on the project in the **CodeWarrior Projects** view and select **Debug As > Debug Configurations** from the context menu — the **Debug Configurations** dialog box appears.
   b. Expand **CodeWarrior Download** in the tree structure on the left, and select the launch configuration corresponding to the project you are using. For example, select *proj-CFV1 - MCF51JM128_Internal_Flash - PnE USB BDM*.
   c. Click the **Trace and Profile** tab.
   d. Check the **Enable Trace and Profile** checkbox to enable the disabled options on the page.
   e. Select the **Continuous** option from the **Select Trace Mode** group.
   f. Click **Apply** to save the settings.

Trace and Profile Page



5. Debug project
   a. Click the **Debugger** tab — the **Debugger** page appears in the right pane.
   b. Click the **Connection** tab in the **Debugger** page.
   c. Make sure correct interface type and connection port of the target device is selected in the **Interface** and **Port** drop-down lists.
   d. Click **Apply** to save the settings.
   e. Click **Debug** — the **Debug** perspective appears and the execution halts at the first statement of `main()`.



6. Collect trace and critical code data

   a. In the **Debug** view, click **Resume** — the execution begins and data measurement starts.

   b. Let the application run for several seconds.

   c. In the **Debug** view, click **Suspend** — the execution stops.

Section C: Viewing Trace and Critical Code Data

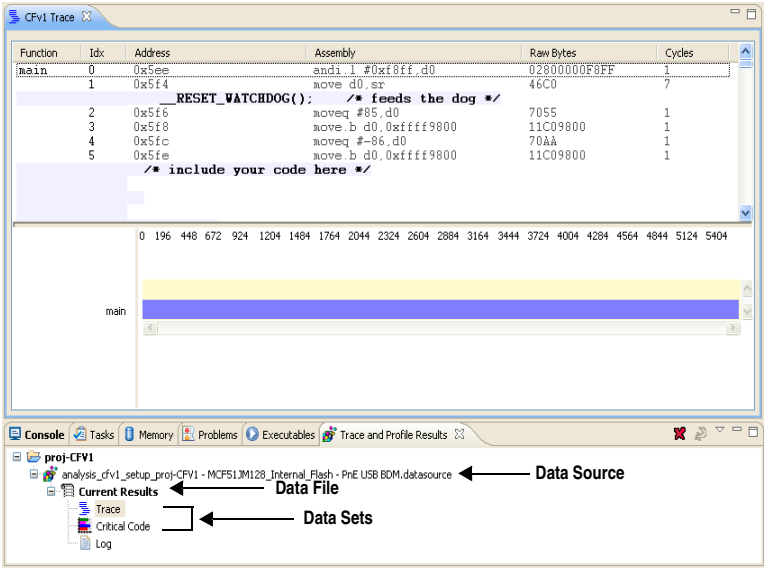
1. View trace data

   a. From the menu bar, select **Profiler > All Results** — the **Trace and Profile** view opens.

   b. Expand the data source — the **Current Results** node appears.

   c. Expand **Current Results** — the **Trace** and **Critical Code** nodes appear. These nodes are referred as the data sets for the collected data.

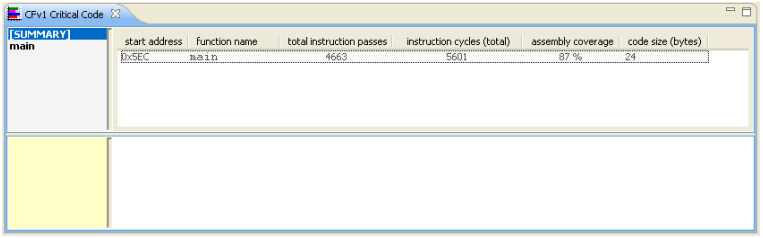
   d. Double-click the **Trace** node — the **CFV1 Trace** viewer appears displaying the trace data.



2. View critical code data

   a. In the **Trace and Profile** view, double-click the **Critical Code** node — the **CFV1 Critical Code** viewer appears.

CFV1 Critical Code Viewer



3. In the **Debug** view, click **Terminate** — the debug session ends.

4. Select **File > Exit** — the CodeWarrior IDE window closes.

NOTE For more information on **CFV1 Trace Data** viewer and **CFV1 Critical Code Data** viewer, refer *Profiling and Analysis Tools User Guide*.

Congratulations!

You have created, built, and debugged a Microcontrollers ColdFire V1 JM128 project using CodeWarrior and collected trace and critical code data successfully!

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How to Contact Us

Corporate Headquarters	Freescale Semiconductor, Inc. 6501 William Cannon Drive West Austin, Texas 78735 U.S.A.
World Wide Web	`http://www.freescale.com/codewarrior`
Technical Support	`http://www.freescale.com/support`

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