CodeWarrior Development Studio for ColdFire Architectures V7.2

Overview

When you are building network-connected, industrial-control products, a comprehensive tool suite is crucial to your success. Freescale's CodeWarrior Development Studio for ColdFire architectures V7.2 is a single, integrated tool suite designed to get you on the design fast track with V2, V3, V4 and V4e ColdFire members of the Freescale Controller Continuum.

The CodeWarrior tool suite has been re-engineered to provide the tools you need to get quality products to market faster. A quick start guide eases installation and helps create a first example project. The Startup Dialog gives you immediate access to the New Project Wizard, Example Projects and Previous Projects. With the built-in New Project Wizard you can start a new project in as few as six mouse clicks for a specific ColdFire derivative or any of Freescale's ColdFire evaluation and demonstration boards.

Processor Expert

Processor Expert is a rapid application design tool integrated into the CodeWarrior V7.2 tool suite that combines easy-to-use component-based application creation with an expert knowledge system. CPU, on-chip peripherals and software functionality are encapsulated into components called Embedded Components. You can tailor each component's functionality to fit your application requirements by modifying the component's properties, methods and events. When you build the project, Processor Expert automatically generates highly optimized C code and places the files into your project.

Processor Expert also makes porting a breeze. Simply select the new ColdFire derivative and Processor Expert maps the software and peripheral components that describe your application's functionality to the resources available on the new derivative. All you have to do is resolve any problems flagged by Processor Expert and you're finished.

Device Initialization

Device initialization provides a fast and easy way to configure and generate initialization code for ColdFire derivatives. The device initialization tool contains only one set of beans: peripheral initialization beans. The initialization code can be generated in C code. During the code generation process the device initialization tool generates a function named MCU_Init with the initialization code for the CPU peripherals you selected—configured to your specifications. To use the MCU_Init function, just insert the function call at the start of your application code.

Build System

The CodeWarrior build system helps you develop applications with the smallest code size and fastest execution time. The CodeWarrior C/C++ Compiler Suite includes:

- ANSI C and ISO C++ compatible standard library
- Global optimizations for C/C++
- Support for ColdFire native data alignment to increase performance
- Graphical control of compiler/linker settings
- Enhanced standard libraries for deeply embedded applications

Source-Level Debugger

The graphical source-level debugger is equipped with the latest features to shorten hardware bring-up and application development time.

- Use pop-up windows to display/edit variable and register values
- Display application code in source, assembly or mixed mode
- Debugging and analysis support for industry-leading real-time operating systems (RTOS)
  - ThreadX
  - Quadros RTXC™
  - MQX v3.5

Editor and Code Navigation System

The editor and code navigation system allows you to create and manipulate source code and other text files.

- Set breakpoints in the editor
- Click on compile-time error links to view the source of the error
- Edit compile-time errors from inside the build system
- Use pop-up menus to navigate quickly to project functions and headers
- Use drag-and-drop functionality to edit source code

Search Engine

The search engine allows you to locate a specific text string, compare files and graphically see the differences.

- Differences can easily be viewed with color-coded, line-by-line comparisons
- Compare files and selectively apply differences with a single mouse click

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What's New

- New optimized compiler and embedded libraries: Embedded Warrior Libraries (EWL) to further improve code executing efficiency (The projects created by v7.1 or past need to be manually converted to v7.2. For details, please refer to Technical Note.)
- IDE 5.9
- Processor Expert V1.04.01
- Open source BDM support for M52259DEMO board
- M53015EVB board and MCF5301x derivative support

Specifications

- IDE version: 5.9
- Host platforms: Microsoft® Windows® XP/Vista (32-bit)
- Language support: Assembly, C/C++
- Build tools output formats: ELF/DWARF 2.0, Freescale S Record, binary
- Silicon support:
  - **V2 ColdFire**: MCF520x, MCF521x, MCF523x, MCF524x, MCF525x, MCF527x, MCF528x, MCF521x0, MCF5221x, MCF5222x, MCF5223x, MCF5225x, MCF5227x
  - **V3 ColdFire**: MCF530x, MCF532x, MCF537x, MCF5301x (New)
  - **V4 ColdFire**: MCF540x, MCF5445x
  - **V4e ColdFire**: MCF547x, MCF548x

- Board support:
  - **V2 ColdFire**: M5206EC3, M5208EVB, M5208EVBE, M5213EVB, M5249C3, M5234BCCKIT, M5235EVB, M5253DEMO, M5253EVBE, M5271EVB, M5272C3, M5275EVB, M5282EVB, M52211EVB, M52223EVB, M52235EVB, M5211DEMO, M52210DEMO, M52221DEMO, M52230DEMO, M52233DEMO, M52259DEMO, M52259EVB, M52277EVB
  - **V3 ColdFire**: M5307C3, M5329EVB, M5329EVBE, M5373EVB, M53015EVB (New)
  - **V4 ColdFire**: M5407C3, M54451EVB, M54455EVB
  - **V4e ColdFire**: M5475EVB, M5475EVBE, M5485EVB, M5485EVBE
- Host target interfaces:
  - CodeWarrior USB TAP, CodeWarrior Ethernet TAP
  - Cyclone Max, USB BDM Multilink, Parallel BDM Multilink, Lightning (P&E Microsystems)
  - BDI1000 and BDI2000 (Abatron)
  - Open Source BDM (S08JM60 based)

System Requirements

- 1.0 GHz Pentium® compatible processor or better
- Microsoft Windows XP/Vista (32-bit)
- 1 GB RAM
- Disk Space: 2 GB total, 400 MB on Windows system disk
- CD/DVD-ROM drive for installation
- USB port for communications with target hardware
- Ethernet port for communications with target hardware (optional)

Support Policy

- Online help and documentation
- Includes 12-month technical support
- Free 30-day evaluation license available

Special Suite—CodeWarrior for Microcontrollers, Special Edition	
Special Edition	CWX-MCF-SE

Basic Suite—C Compiler Upgrade	
Perpetual	**$995**
• Node Locked	CWP-BASIC-NL
• Floating	CWP-BASIC-FL
• Tech Support *After first year*	CWT-BASIC $195
Annual Subscription	**$395**
• Node Locked	CWA-BASIC-NL
• Floating	CWA-BASIC-FL

Standard Suite—CodeWarrior for Microcontrollers, Standard Edition	
Perpetual	**$2495**
• Node Locked	CWP-STANDARD-NL
• Floating	CWP-STANDARD-FL
• Tech Support *After first year*	CWT-STANDARD $495
Annual Subscription	**$995**
• Node Locked	CWA-STANDARD-NL
• Floating	CWA-STANDARD-FL

Professional Suite—CodeWarrior for Microcontrollers, Professional Edition	
Perpetual	**$4995**
• Node Locked	CWP-PRO-NL
• Floating	CWP-PRO-FL
• Tech Support *After first year*	CWT-PRO $995
Annual Subscription	**$1995**
• Node Locked	CWA-PRO-NL
• Floating	CWA-PRO-FL

Contact your local Freescale representative for more information.

*The Flexis™ series of products is supported by CodeWarrior Development Studio for Microcontrollers V6.x.

Learn More: For more information about Freescale products, please visit **www.freescale.com/codewarrior**.

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