CodeWarrior Development Studio for MPC55xx/MPC56xx Microcontrollers, version 2.xx — Quick Start

SYSTEM REQUIREMENTS

Hardware	PC with 1.4 GHz Pentium®-compatible processor (1.8 GHz recommended) 1GB RAM (2 GB recommended) CD-ROM drive (for installation) USB port (for communication with target hardware) Ethernet port (for network communication) 2nd Ethernet port (optional, but recommended for communication with target hardware)
Operating System	Microsoft® Windows® XP Windows Vista™, 32-bit or 64-bit edition Windows 7, 32-bit or 64-bit edition
Disk Space	1 GB free hard disk space (2 GB recommended), 400 MB of which must be on Windows system disk

This document explains how to install this CodeWarrior product and how to use the IDE to create and build an MPC55xx/MPC56xx project.

Section A: Installing and Updating the Software

- 1. Install the CodeWarrior software.
 - a. Insert the **CodeWarrior Development Studio** installation CD in the CD drive of your PC the CodeWarrior setup menu appears.
- **NOTE** If auto-install is disabled, run Launch.exe manually. This program is in the root directory of the installation CD.

CodeWarrior Installation Menu



- b. Click the Launch the installer option to start the install wizard the installation menu appears.
- c. Follow the wizard instructions to install the CodeWarrior software and the P&E ICDPPCNEXUS[™] Starter Edition debugger. When the installation finishes, the Installation Complete page appears.
- d. In this page, check Yes, check for program updates.
- e. Click Finish the CodeWarrior Updater window appears.
- 2. Check for software updates.
 - a. In the CodeWarrior Updater window, click **Next** the updater checks for newer versions of the CodeWarrior products currently on your PC.
 - b. If updates are available, follow the on-screen instructions to download and install them.
 - c. Click **Finish** the updater exits and software installation is complete.

Section B: Creating and Building a Project

- 1. Create a project.
 - a. From the Windows taskbar, click start the start menu appears.
 - From this menu, select Programs > Freescale CodeWarrior > CW for MPC55xx, MPC56xx 2.xx > CodeWarrior IDE — the Startup dialog box appears.

Startup Dialog Box



c. From the **Startup** dialog box, click **Create New Project** — the **New Project Wizard** starts and displays the microcontrollers derivative page.

The list below explains the purpose of each of the other **Startup** dialog box options:

 Load Example Project — Displays a list of "cookbook" example projects and creates a new project based on the example you select.

 Load Previous Project — Displays a list of recently used projects and opens the one you select.

Start Using CodeWarrior — Lets you use the CodeWarrior IDE's main window.

New Project Wizard - Page	9 1	×
	Select the derivative you would like to use. MPC55xx MPC56cxx MPC56cxA MPC56cxA MPC56cxA MPC56cxA MPC56cxL MPC56cxL MPC56cxM MPC56cxM MPC56cxxP MPC56cx M	
	Creates project for MPC5643L derivative.	>
	< Back Next > Cance	

Microcontroller Derivative Page

- d. From the microcontroller derivative page, select the MPC55xx/MPC56xx microcontroller derivative on your target board.
- e. Click Next the languages and libraries page appears.
- **NOTE** If you selected a multicore device (such as the MPC5514E or the MPC5643L), the multicore configuration page appears instead of the languages and libraries page. In this case, refer to *Targeting MPC55xx-MPC56xx Microcontrollers.pdf* for instructions. This document is in the layout here: *installDir*\Help\PDF.

Languages and Libraries Page

New Project Wizard - Page 2
Please specify the set of languages to be supported initially. You can make multiple selections. Project name:
test_project_1.mcp
Location:
D:\Profiles\RAT748\My Documents\test_project\test_project_1\
Set
C_ASM Use size optimized MSL libraries.
✓ C
When enabled the compiler VLE options will be enabled and the VI libraries selected. If the selected processor does not support VLE, this option will be ignored.
< <u>B</u> ack <u>N</u> ext > Cancel

- f. In the Project name text box, type the name of the new project.
- g. In the Location text box, type the path in which to create this project. Alternatively, click Set to display a dialog box with which to select this path.
- h. Check the C checkbox.
- i. Uncheck the Use size optimized MSL libraries checkbox.
- j. Check the Use unsigned chars checkbox.
- k. Uncheck the Use VLE checkbox.
- I. Click Next the PC-lint page appears.
- **NOTE** If OSEKTurbo is installed, the OSEK page appears. Refer to the targeting manual for instructions that explain how to fill in this page.

PC-lint Page

New Project Wizard - Page 4		×
5 Freescale Eventuation	Do you want to create a project set up for PC-lint (TM)? Yes No PC-lint (TM) is a product from Gimpel Software. You need the PC-lint (TM) software from Gimpel Installed in order to use the CodeWarrior plugin.	
	< <u>B</u> ack <u>N</u> ext > Cancel	

- m. Select No.
- n. Click **Next** the floating-point format support page appears.

Floating-Point Format Support Page

New Project Wizard - Page 5		\mathbf{X}
	Select the floating point format supported. Select 'None' for best code density. None Software SPE-EFPU ARVec Software floating point support.	
	< <u>B</u> ack <u>F</u> inish Cancel	

- o. Select Software.
- p. Click Finish the wizard creates a project according to you specifications and displays it in a project window.

test_project_1.mcp			X
😧 RAM 🔽	1	🤏 💺	Ē
Files Link Order Targets			
🛛 🖌 File	Code	Data 😥	. 🕊 🗉
💉 関 readme.txt	n/a	n/a •	
🛩 🖃 🦳 Sources	0	0 •	• =
🖌 🔚 main.c	0	0 •	• 🔳
🛩 🔤 Exceptions.c	0	0 •	• 🔳
💉 🔤 IntcInterrupts_p0.c	0	0 •	• 🔳
✓ wor_branch_table_p0.c	0	0 •	• 🔳
🕀 🧰 Header Files	0	0 •	
🛩 🕀 🧰 Startup Code	0	0 •	• 🔳
🛩 🕀 🧰 Lof Files	0	0 •	
🛩 🕀 🧰 Runtime	0	0 •	

Project Window

- 2. Build the project.
 - From the project window toolbar, click Make the IDE compiles the project's source code and links the resulting object code into an ELF-format executable file.



- b. Use the debugger of your choice to run and debug the executable file.
- **NOTE** This CodeWarrior product includes a source code debugger and flash programmer from P&E Micro. For instructions that explain how to use these tools, refer to the P&E *ICDPPCNEXUS Quick Start Guide.*

Congratulations!

You have installed your CodeWarrior software, created an MPC55xx/MPC56xx project, and built this project.

NOTE If you obtained this product as part of a CodeWarrior Development Suite, you now have a 30-day evaluation license. To obtain your permanent license, follow the registration and activation instructions in the *CodeWarrior Development Suite Quick Start*.

> If you have the Special Edition of this product, you do not have to register because you have a permanent, but feature-limited license. This license lets you develop projects that generate binaries up to 128 KB in size. To upgrade, you must purchase the CodeWarrior Development Suite - Professional Edition. For more information, go to:

www.freescale.com/CodeWarriorSuites.

Freescale, the Freescale logo, and CodeWarrior are trademarks of Freescale Semiconductor, Inc., Reg. U.S. Pat. & Tm. Off. The Power Architecture and Power.org word marks and the Power and Power.org logos and related marks are trademarks and service marks licensed by Power.org. All other product or service names are the property of their respective owners.

© 2007-2012 Freescale Semiconductor, Inc.

Information in this document is provided solely to enable system and software implementers to use Freescale Semiconductor products. There are no express or implied copyright licenses granted hereunder to design or fabricate any integrated circuits or integrated circuits based on the information in this document.

Freescale Semiconductor reserves the right to make changes without further notice to any products herein. Freescale Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Freescale Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters that may be provided in Freescale Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals", must be validated for each customer application by customer's technical experts. Freescale Semiconductor does not convey any license under its patent rights nor the rights of others. Freescale Semiconductor products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Freescale Semiconductor product could create a situation where personal injury or death may occur. Should Buyer purchase or use Freescale Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold Freescale Semiconductor and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of. directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Freescale Semiconductor was negligent regarding the design or manufacture of the part.

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



Revised: 9 February 2012