

# **CodeWarrior**

# **Development Studio**

for Freescale MPC55xx/MPC56xx Microcontrollers V2.7

**Quick Start** 



# **CodeWarrior Development Studio** for MPC55xx/MPC56xx Microcontrollers, version 2.7 — 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 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<sup>™</sup> Starter Edition debugger. When 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 Windows menu appears.
  - b. From Windows menu, select Programs > Freescale CodeWarrior > CW for MPC55xx, MPC55xx 2.7 > 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 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	×
estimate Concertante	Select the derivative you would like to use.  MPC55xx MPC56ax MPC56ax MPC56xxA MPC56xxB MPC56xxB MPC56xxL MPC56xxL MPC56xxL MPC56xxM MPC56xxM MPC56xxN MPC56xxS MPC56xxS	
	Creates project for MPC5643L derivative.	~
	< Back Next > Cancel	

#### **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 a multicore device is selected (such as the MPC5514E or the MPC5643L), a 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 3	×
Please specify the set of languages to be supported initially. You can make multiple selections. Project name:	
Project.mcp	-
Location:	
D:\Profiles\b13648.FSL\My Documents\Project\	_
Set	
C_ASM Use size optimized MSL libraries.	
C Use unsigned chars.	
C++ VLE	
This will set up your application with an ANSI-C compliant startup code (doing initialization of global variables).	~
< Back Next > 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. Clear the Use size optimized MSL libraries checkbox.
- j. Check the Use unsigned char 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		$\mathbf{X}$
	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.	
	< Back Next > Cancel	

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

#### Floating-Point Format Support Page

New Project Wizard - Page 5		×
	Select the floating point format supported. Select 'None' for best code density. None Software SPE-EFPU AltiVec Software floating point support.	
	< <u>B</u> ack <u>Finish</u> Cance	el

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

Project.mcp			
🔹 RAM 🔄 🔝 😽	🤏 💺		
Files Link Order Targets			
🛩 File	Code	Data 🔞	<b>*</b> <u>*</u>
💉 📓 readme.txt	n/a	n/a •	<b>x</b>
🛩 🖃 😓 Sources	0	0 •	• 🔳 🗌
🛩 🛄 main.c	0	0 •	• 🔳
🕀 🧰 Header Files	0	0 •	
🖋 🕀 🧰 Startup Code	0	0 •	• 🔳
🛩 🕀 🧰 PRCO Sources	0	0 •	• 🔳
🛩 🕀 🧰 Lof Files	0	0 •	
🛩 🕀 🧰 Runtime	0	0 •	
			Y
18 files	0	0	1

#### **Project Window**

- 2. Build 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.



- Make Button
- b. Use a 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 explaining how to use the P&E debugger, 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.

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Revised: 20 Sept 2010



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