

Freescale Semiconductor Application Note

Document Number: AN4884

Migrating CodeWarrior Projects from Rev1 to Rev2 for B4860/B4420

1. Introduction

This application note explains the migration process of projects created for Rev1 to projects that can work on Rev2.

CodeWarrior for StarCore v10.6.4 is the last release that will support Rev1 targets for B4860/B4420. So, it is necessary to convert the projects that were made for Rev1 into Rev2 projects, in order to transition from Rev1 hardware to Rev2 hardware. After successfully completing the conversion, the converted project can be imported into CodeWarrior for StarCore v10.6.5 or later.

> **NOTE** Screenshots used in this Application Note are based on the CodeWarrior for StarCore v10.6.4 release.

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2. Migrating a project from Rev1 to Rev2

For migrating a project from Rev1 to Rev2, change the following:

- <u>Architecture</u>
- <u>Linker files</u>
- <u>Libraries</u>
- <u>Macros</u>
- <u>Remove old model</u>

2.1. Architecture

Follow these steps to change the architecture of the project, so that the compiler can generate the appropriate instruction set.

- 1. Open CodeWarrior IDE.
- 2. Select the project, then choose **Project** > **Properties**, to open the properties of the project.
- 3. From the **Properties** dialog, select **Settings**, under **C/C++ Build** menu.
- 4. Now, from the right pane select **StarCore Environment**.
- 5. In the right pane, change the Architecture to B4860 from B4860 rev1, as shown in Figure 1.
- 6. After changing the architecture, choose an appropriate **Floating Point** Hardware/Software, as shown in <u>Figure 2</u>.



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Resource Builders C/C++ Build Build Variables Discovery Options Environment Logging Settings Tool Chain Editor C/C++ General Code Analysis Code Style Documentation File Types Indexer Language Mappings Paths and Symbols Run/Debug Settings	 StarCore Environment Architee StarCore 3900 Disassembler Disassembler Settings StarCore 3900 C/C++ Linker Application Linker Settings C/C++ Options Libraries StarCore 3900 C/C++ Compiler C/C++ Language Compiler Control Hardware Configuration Output Listing Xarmings Acchitee Architee Architee StarCore 3900 C/C++ Compiler Compiler Compiler Compiler Front End Messages Assembler Linker Preprocessor Include Search Paths Optimization Configuration Files 	ture B4860 rev1 B4860 rev1 B4860 rev1 C++ Compliation Point Hardware	~

Figure 1. Project properties dialog - Architecture

Figure 2. Project properties dialog - Floating Point



2.2. Linker files

Follow these steps to change the Linker Command File:

1. Open CodeWarrior IDE.

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- 2. Select the project, then choose **Project** > **Properties**, to open the properties of the project.
- 3. From the **Properties** dialog, select **Settings**, under **C/C++ Build** menu.
- 4. Now, from the right pane select Linker Settings, under StarCore 3900 C/C++ Linker Application menu.
- 5. In the right pane, replace the default path specified in Linker Command File with

<install_path>\CW_SC_v10.6.4\SC\StarCore_Support\SmartDSP\demos\s
tarcore\b4860\basic_demo\linker_files\os_b4860_link.13k

as shown in <u>Figure 3</u>.

NOTE The default .lcf (Linker Command File) file is for Rev1. So, this has to be replaced with an .lcf for Rev2. The os_b4860_link.l3k is an .lcf for Rev2 and can be used as a starting point.

Figure 3. Project properties dialog – Linker Settings

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Resource Builders C/C++ Build Build Variables Discovery Options Environment Logging Settings Tool Chan Editor C/C++ General Code Analysis Code Style Documentation File Types Indexer Language Mappings Paths and Symbols Run/Debug Settings	Settings - migration StarCore Environment StarCore 3900 Disassembler Disassembler Settings StarCore 3900 C/C++ Linker Application Linker Settings C/C++ Universe StarCore 3900 C/C++ Compiler C/C++ Language StarCore 3900 C/C++ Compiler C/C++ Language Compiler Control Hardware Configuration Compiler Front End Messages Compiler Front End Messages Assembler Linker Preprocessor Preprocessor	Map File	\${ProjDirPath}/basic_demo_dbg.map \${ProjDirPath}/Linker_Command/os_b4860_link_rev1.l3k -XInk " -enable-error-placing-section-on-first-fit-basis -enable-display-padd	E
	Macros Macros Moressor Optimization Configuration Files Additional Arguments			Ŧ
?	<u>1</u>		OK Cancel	

2.3. Libraries

Follow these steps to specify Rev2 libraries:

- 1. Open CodeWarrior IDE.
- 2. Select the project, then choose **Project** > **Properties**, to open the properties of the project.
- 3. From the **Properties** dialog, select **Settings**, under **C/C++ Build** menu.
- 4. Now, from the right pane select **Libraries**, under **StarCore 3900 C/C++ Linker Application** menu.

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5. In the right pane, edit the library names and remove the suffix - rev1, from the names, as shown in Figure 4.

NOTE The libraries for Rev2 are at: <install_path>\CW_SC_v10.6.4\SC\StarCore_Support\SmartDSP \lib\b4860_family

Figure 4. Project properties dialog - Libraries

Settings - migration			🗢 🕶 🗢 🔹
Resource Builders C/C++ Build Build Variables Discovery Options Environment Logging Tool Chain Editor C/C++ General Code Analysis Code Style Documentation File Types Language Mappings Paths and Symbols Run/Debug Settings	Additional Libraries S(SMARTDSP_LOC)/lib/b4860_family/c S(SMARTDSP_LOC)/lib/b4860_family/c Library Search Paths	 ● 값 값 가 있 >> b4860_debug_rev1.elb" >> b4860_drivers_debug_rev1.elb" 	

2.4. Macros

Follow these steps to edit the macros:

- 1. Open CodeWarrior IDE.
- 2. Select the project, then choose **Project** > **Properties**, to open the properties of the project.
- 3. From the **Properties** dialog, select **Settings**, under **C/C++ Build** menu.
- 4. Now, from the right pane select Macros, under Preprocessor menu.
- 5. In the right pane, remove the macro named OS_B4_REV1, as shown in Figure 5.

NOTE The OS_B4_REV1 macro is used to specify that the application runs on Rev1 of B4860/B4420, when CodeWarrior for StarCore v10.6.1 - v10.6.4 are used.

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Figure 5. Project properties dialog - Macros



2.5. Remove old model

Follow these steps to remove the old model:

- 1. Open CodeWarrior IDE.
- 2. Select the project, then choose **Run** > **Debug Configurations**, to open the **Debug Configuration** dialog.
- 3. From the Debug Configuration dialog, select the resource you want to edit.
- 4. Now, from the right pane select **Edit**, under **Target settings** menu, to open **Hardware or Simulator Connection** dialog.
- 5. From the **Hardware or Simulator Connection** dialog, remove the -imodel sc3900rev1 flag from the **CCS executable**, under **Connection** tab, as shown in Figure 6.
- 6. Select **OK** to close the **Hardware or Simulator Connection** dialog.
- 7. Select **Debug** to start debugging the project.
- 8. Apply the changes to the project from **Remote Systems** view, as shown in Figure 7.



Properties for migration_Debug	_B4860_Download	
Hardware or Simulator Conr	Hardware or Simu	lator Connection $(\Rightarrow \neg \Rightarrow \neg \neg$
	Parent profile: BO	02404-01
	Name	nigration Debug 84860 Download
	Description:	
	Template:	None Apply Defaults
	Target:	migration_Debug_B4860_Download Target
	Connection type:	CCSSIM2 ISS 🗸
	Connection	
	Connection Adva	anced
	 Automatic lau 	unch
	Server port n	umber: 41475
	CCS execu	rtable: "\${SCToolsBaseDir3900}/ccs/bin/ccssim2.exe -imodel "sc3900rev1"
	Manual launc Server hostna	h ame/ID· 127.0.0.1
	Server port n	umber: 41475
	· · ·	
?		OK Cancel

Figure 6. Hardware or Simulator Connection dialog

Figure 7. Remote Systems view



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