Freescale Semiconductor
Application Note

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DSC Build Tools Options for Optimal Performance

1 Introduction

This document describes two sets of options that can be used with the DSC build tools for optimal performance. One set optimizes the execution speed; another set optimizes the size. You can use the build tools options described in this document for optimal performance, but the build tools settings must be set according to the application being developed.

For more information on the build tools, refer to the following compiler documents.

- mwcc56800e.txt available at: `<CWInstallDir>\MCU\DSP56800x_EABI_Tools\command_line_tools\`
- MCU_DSC_Compiler.pdf available at: `<CWInstallDir>\MCU\Help\PDF\`

where `<CWInstallDir>` is the CodeWarrior installation directory.

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2 Optimization for Speed

In order to reduce the overall cycle count of the code, pass the following options to the compiler (mwcc56800e):

```
-char signed -enum min  -g -O4 -Op -inline auto -noinitializedzerodata
-nosegchardata -noasmout -DO nested -nopadpipe -chkasm
conflict_and_stall -chkcsrcpipeline conflict
```

3 Optimization for Size

In order to optimize the generated code for smaller size, pass the following options to the compiler (mwcc56800e):

```
-char signed -enum min -g -O4 -Os -ipa file -noinitializedzerodata -
nosegchardata -noasmout -DO nested -nopadpipe -chkasm off -
chkcsrcpipeline conflict
```

4 Common Linker Option

The following linker (mwld56800e) option is used for both speed and space optimization.

```
-g -map -lRuntime 56800E.Lib -lMSL C 56800E.lib
```

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