

# 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_EAB  
I_Tools\command_line_tools\`
- MCU\_DSC\_Compiler.pdf available at:  
`<CWInstallDir>\MCU\Help\PDF\`

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

### Contents

<b>1 Introduction</b> .....	<b>1</b>
<b>2 Optimization for Speed</b> .....	<b>2</b>
<b>3 Optimization for Size</b> .....	<b>2</b>
<b>4 Common Linker Option</b> .....	<b>2</b>

## 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 -chkcsripeline 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 -  
chkcsripeline 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
```

***How to Reach Us:***

**Home Page:**  
[www.freescale.com](http://www.freescale.com)

**E-mail:**  
[support@freescale.com](mailto:support@freescale.com)

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

Freescale reserves the right to make changes without further notice to any products herein. Freescale makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does Freescale 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 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 does not convey any license under its patent rights nor the rights of others. Freescale sells products pursuant to standard terms and conditions of sale, which can be found at the following address: [freescale.com/SalesTermsandConditions](http://freescale.com/SalesTermsandConditions).

Freescale, the Freescale logo, and CodeWarrior are trademarks of Freescale Semiconductor, Inc., Reg. U.S. Pat. & Tm. Off. All other product or service names are the property of their respective owners.

© 2013 Freescale Semiconductor, Inc.