Motor Control Development Toolbox

Installation Quick-Start

An Embedded Target for the MPC564xL Family of Processors

By **freescale**

Version 1.3.0

Target Based Automatic Code Generation Tools
For MATLAB™/Simulink™/Stateflow™ Models working with Simulink Coder ™ and Embedded Coder®

Motor Control Development Toolbox Installation Quick-Start is for use with the Motor Control Development Toolbox, an embedded target and block set library for MATLAB/Simulink/Stateflow Modeling.

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1 Installation

Installing the Motor Control Development Toolbox is your first step to getting up and running on the target processor.

1.1 Minimum Platform Requirements

The minimum recommended PC platform is Windows XP, Vista, 7 or 8 with a minimum CPU Speed of 2.0 GHz and Minimum of 4GB of RAM.

1.2 Installation Steps

1. Run installation on USB flash drive setup.exe (or downloaded from Motor Control Development Toolbox Website)
2. Setup the MATLAB path for Motor Control Development Toolbox
3. Run FreeMASTER Installer from Motor Control Development Toolbox Menu
4. Request and Install license file
5. Set the Target Compiler Environment Variables

1.2.1 Run Setup.exe

Install the Motor Control Development Toolbox by running the Setup.exe; this will activate the installer. Click through the dialogs entering in the appropriate location for the installation. It is best if this is NOT installed on a network drive.

1. The Motor Control Development Toolbox Installation Wizard dialog will appear. Click "Next" to proceed.
2. Indicate acceptance of the end users license agreement. Click "Next" to proceed.
3. The "Choose destination directory" dialogue box will appear. The default install directory is "C:\MCToolbox\". To change the install directory by click "Browser" button. Click "Next" button to proceed.
4. A confirmation of installation settings screen will appear. Click "Install" to proceed.
5. Installation is complete. Click "Finish" to exit.

1.2.2 Setting the Path for Motor Control Development Toolbox

In order for MALAB to recognize the Motor Control Development Toolbox, the path needs to be setup in the MATLAB environment. This is done by navigating the MATLAB Current Directory to the MC Toolbox/rappid564xl installation directory and running the "rappid_path" script:

```
>> rappid_path
Treating 'C:\MC_Toolbox\rappid564xl' as RAppID installation root.
RAppID path prepended.
Successful.
>>
```

1.2.3 Run FreeMASTER Installer

1. START->Programs->Motor Control Development Toolbox for MPC564xL->Installers->FreeMASTER Installer

1.2.4 **License Request & Installation**

Permanent and Trial licenses are supported by the Motor Control Development Toolbox.

1.2.4.1 Trial Licenses

If you have already installed Motor Control Development Toolbox and would like a Trial license, please perform the following steps:

1. Go to [Motor Control Development Toolbox Website](#)
2. Click on "Download Eval"
3. Login. If not registered yet, click register.
4. Product Information page appears, click on "SW Motor Control Toolbox for MATLAB/Simulink MBD supporting MPC564xL EVAL".
5. Click "I Agree" to consent to the software license agreement.
6. If you need to download the tool, click on the linked file name. Otherwise, click on "License Keys" tab.
7. Verify the correct tool is identified and click on "Generate".
8. Enter your Disk Serial Number as the Host ID. If you do not know your Disk Serial Number, go to 'Locating the Host ID' in the document Motor Control Toolbox License Installation to learn how to locate your Disk Serial Number, which is needed to generate your license.
9. Enter a name for your license. (Optional)
10. Click "Generate"
11. Either click on "Save All" or copy and paste the file into a text editor, and save the file as 'license.lic' to the folder "C:\MCToolbox\ rappid564xl\lic"
12. Your installation of the license is now complete.

1.2.4.2 Permanent Licenses

If you have purchased the tools and need to get a permanent license it can be obtained from by following one of the two paths outlined below. If you encounter issues getting a license please send an email to rappid@freescale.com describing the issue so help can be obtained.

1.2.4.2.1 Entitlement ID

If you received your installation of Motor Control Development Toolbox WITH an Entitlement ID/Registration Code, please perform the following steps to obtain your license:

1. Go to [Motor Control Development Toolbox Website](#) and login.
2. Once you have logged in, the 'My Freescale' page appears. Select 'Software Licensing and Support' to bring up the Product Information page.
3. Click on "Register".
4. Enter the Entitlement Id/Registration Code and select 'Register Product'.
5. Next, on the Registration Confirmation page, click "View Products".
6. Click "I Agree" to consent to the software license agreement.
7. If you need to download the tool, click on the linked file name. Otherwise, click on "License Keys" tab.
8. Verify the correct tool is identified and click on "Generate".

9. Enter your Disk Serial Number as the Host ID. If you do not know your Disk Serial Number, go to 'Locating the Host ID' in the document Motor Control Toolbox License Installation to learn how to locate your Disk Serial Number, which is needed to generate your license.
10. Enter a name for your license. (Optional)
11. Click "Generate"
12. Either click on "Save All" or copy and paste the file into a text editor and save the file as 'license.lic' to the folder "C:\MCToolbox\ rappid564xl\lic"
13. Your installation of the license is now complete.

1.2.4.2.2 No Entitlement ID

If you received your installation of Motor Control Development Toolbox WITHOUT an Entitlement ID, please perform the following steps to obtain your license:
1. Go to 'Locating the Host ID' in the document Motor Control Toolbox License Installation to learn how to obtain your license locking code, which is needed to generate your license.
2. Send email to support@freescale.com containing your locking code, purchase order number and indicate the tool for which you are requesting a license. (e.g. Motor Control Development Toolbox for MPC564xL)
3. Follow the instructions provided in the response email containing your license

1.2.5 **Setting up the Target Compilers**

The target compiler for Motor Control Development Toolbox to use will need to be configured. Ensure a system environment variable called <COMPILER_STRING>_TOOL is defined to value as shown below:

DIAB_TOOL = C:/WindRiver/diab/5.9.0.0
GHS_TOOL = C:/GHS/multi517
MW_TOOL = C:/"Program Files"/Freescale/"CW for MPC55xx and MPC56xx 2.8"
CW_TOOL = C:/Freescale/"CW MCU v10.6"

Note: Pls. use "/" when defining compiler path as shown above and pls. use" " around any directories that have spaces in the names eg: C:/"Program Files"/compiler path. Alternatively, install the compiler into path which does not contain spaces eg: C:/Freescale/CW_MCU_v10_6. Paths shown are for illustration, your installation path may be different. Once Environmental variables are setup you will need to restart MATLAB in order for the environment to see these.