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Motor Control Development Toolbox ☆

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The motor control development toolbox provides an integrated development environment and tool chain for configuring and generating all of the necessary software (including initialization routines, device drivers and a real-time scheduler) to execute motor control algorithms on the Qorivva MPC564xL and MPC567xK automotive MCUs and PX series PXS20 and PXS30 industrial MCUs. The toolbox includes the [automotive math and motor control library set](#) developed by Freescale's Motor Control Center of Excellence. It also includes dozens of blocks optimized for fast execution on Freescale MCUs with bit-accurate results compared to Simulink® simulation using single precision math. Built-in support for software- and processor-in-the-loop (SIL and PIL), enables automated comparison and plotting of numerical results.

Features

- Generate code for standalone application with direct download to target support
- Complete support for MPC564xL/MPC567xK/PXS20/PXS30 MCU families; single/dual core, IEC 61508 (SIL3) and ISO 26262 (ASIL-D)
- Optimized motor control library blocks including Park/Clarke transforms, digital filters, and general functions
- I/O blocks including CAN, SPI, PIT timer, Sine Wave Generation, eTimer, PWM and A/D.
- On-target profiling of functions and tasks
- Data acquisition and calibration using FreeMASTER tool
- Boot loader utility for programming application in flash or RAM
- Seamless integration with embedded coder including

Supported Devices

Qorivva MPC56xx
PX Series Power Architecture® Microcontrollers

Featured Documentation

[MTRCTRTLBFXS: Motor Control Development Toolbox Fact Sheet](#)

Current Updates and Releases

[MC_MPC564xL](#): Motor Control for MPC564xL
[MC_PXS20](#): Motor Control for PXS20
[MC_MPC567xK](#): Motor Control for MPC567xK
[More](#)

Support Policy

- Email Support : RApplID@freescall.com
- Email and Phone Support provided to purchased customers.

This Software Includes

Config / Dev Tools

Customer Application

StacksApplications

DriversAPIsLibraries

OSBSPHALHypervisor

Processor

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[Software Meets Silicon Blog](#)
by Freescale's software experts

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MPC564xL: Qorivva 32-bit MCU f...
S12ZVM: S12 MagniV Mixed-Signa...
PXS20: Functional Safety MCU m...

Motor Control Development Tool...
Automotive Math and Motor Cont...
Automotive Math and Motor Cont...

Automotive Math and Motor Cont...
Embedded Softw are and Motor Co...
RApplID ToolBox

Brushless DC (BLDC) Motor
Permanent Magnet Synchron...
3-Phase AC Induction Moto...

More

- MATLAB® Coder™
- Simulink® Coder™
- Embedded Coder™

MathWorks products recommended

- Stateflow®
- IEC Certification Kit (for ISO 26262)

Related Software and Tools

[AUTOMATH_MCL](#): Automotive Math and Motor Control Library Set
[RD68HC908BLDCMOTOR](#): BLDC Motor Control Board for Industrial and Appliance Applications
[RAPPID](#): RApplID Initialization for Power Architecture

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