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Freescale   Embedded Software and Tools   Run-time Software   MC_TOOLBOX

Motor Control Development Toolbox ☆

Overview   Documentation   Downloads   Buy / Specifications

The motor control development toolbox provides an integrated development enviroment 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

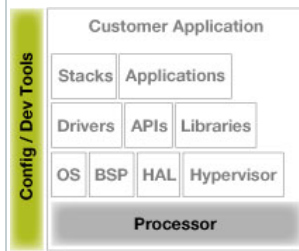MTRCTRTLBXFS: Motor Control Development Toolbox Fact Sheet

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 : RAppID@freecale.com
▪ Email and Phone Support provided to purchased customers.

This Software Includes

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Software Meets Silicon Blog
by Freescale's software experts

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Products	Documentation	Software and Tools	Applications
MPC564xL: Qorivva 32-bit MCU f...	Motor Control Development Tool...	Automotive Math and Motor Cont...	Brushless DC (BLDC) Motor
S12ZVM: S12 MagniV Mixed-Signa...	Automotive Math and Motor Cont...	Embedded Software and Motor Co...	Permanent Magnet Synchron...
PXS20: Functional Safety MCU m...	Automotive Math and Motor Cont...	RAppID ToolBox	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: RAppID Initialization for Power Architecture

More