MPC560xB/C Family
Automotive body and gateway applications

Overview

The MPC560xB/C family of 32-bit microcontrollers (MCUs) includes Freescale's latest in integrated devices for automotive body electronics applications. The advanced, cost-efficient host processor core takes full advantage of Power Architecture®'s strengths, such as processing capability, on-chip memory, analog capabilities, timing systems and other features required to handle complex control and diagnostic systems. In addition, these scalable devices are supported by an enablement ecosystem that includes software drivers, operating systems and configuration code to help you quickly implement your designs.

Applications
- Central body controllers
- Gateway controllers
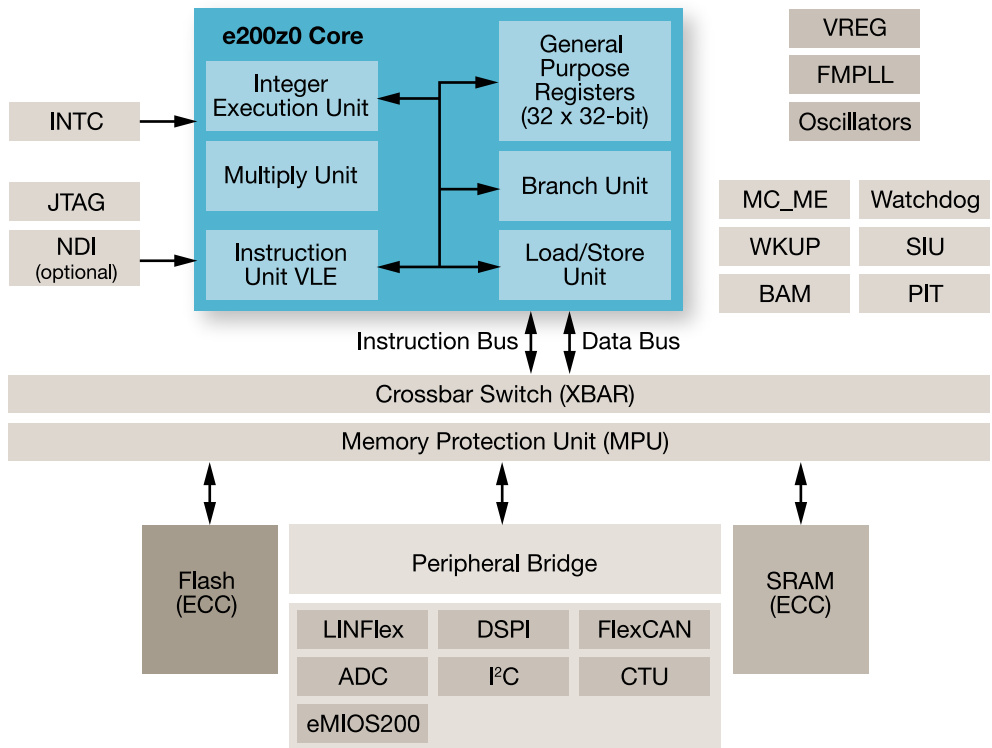- Body applications
- Comfort applications

MPC560xB/C Key Features

Includes CAN, LIN and other peripherals necessary to implement a range of different functionalities in the automotive body network:

- FlexCAN module supporting both FIFO and mailbox data storage, ideal for Controller Area Network(CAN) gateways to manage event driven vs. periodic bus traffic
- LINFlex module provides a fully automated Local Interconnect Network (LIN) message management, reducing CPU load intervention and message latencies

- eMIOS timer combines multiple counter sources to input capture, output compare and PWM capabilities in one very flexible module; PWM function supports shifted signal output to improve EMC
- Cross Triggering Unit (CTU) synchronizes PWM output signals with analog-to-digital conversions; this enables very accurate diagnostic and control capabilities

- Scalable e200z0 core to enable migration toward higher performance solutions
- Compatible family of products ensuring reuse of software and tools infrastructures

MPC560xB/C Block Diagram

Selector Guide

Product Number	Temp. Ranges	Features	Package	Speed
MPC5604B	-40°C to 125°C	512K Flash, 3 CAN, 3 SPI, 4 LINFlex, 64K DataFlash® EEPROM, 32K RAM, 16-bit Timer (up to 56 channels), 10-bit ADC (up to 36 channels)	100LQFP 144LQFP	Up to 64 MHz
MPC5604C	-40°C to 125°C	512K Flash, 6 CAN, 3 SPI, 4 LINFlex, 64K DataFlash® EEPROM, 32K RAM, 16-bit Timer (up to 28 channels), 10-bit ADC (up to 16 channels)	100LQFP	Up to 64 MHz
MPC5603B	-40°C to 125°C	384K Flash, 2 CAN, 3 SPI, 4 LINFlex, 64K DataFlash® EEPROM, 28K RAM, 16-bit Timer (up to 56 channels), 10-bit ADC (up to 36 channels)	100LQFP 144LQFP	Up to 64 MHz
MPC5603C	-40°C to 125°C	384K Flash, 6 CAN, 3 SPI, 4 LINFlex, 64K DataFlash® EEPROM, 32K RAM, 16-bit Timer (up to 28 channels), 10-bit ADC (up to 16 channels)	100LQFP	Up to 64 MHz
MPC5602B	-40°C to 125°C	256K Flash, 2 CAN, 2 SPI, 3 LINFlex, 64K DataFlash® EEPROM, 24K RAM, 16-bit Timer (up to 56 channels), 10-bit ADC (up to 36 channels)	100LQFP 144LQFP	Up to 64 MHz
MPC5602C	-40°C to 125°C	256K Flash, 6 CAN, 3 SPI, 4 LINFlex, 64K DataFlash® EEPROM, 32K RAM, 16-bit Timer (up to 28 channels), 10-bit ADC (up to 16 channels)	100LQFP	Up to 64 MHz

Development Tools

Part Number	Description	Pricing*
xPC560BKIT144S	JDP motherboard—(P/N xPC56XXMB) + Mini-module (P/N xPC560BADPT144) (Soldered) • Kits include main board, mini-module and P&E wiggler • Mini-modules/kits available in socketed (~$450) and soldered (~$350) versions; Final production version will be soldered • Mini-module can be used standalone • Final production with soldered MCUs planned for Rev A silicon	$360
xPC560BKIT100S	JDP motherboard—(P/N xPC56XXMB) + Mini-module (P/N xPC560BADPT100) (Soldered) • Kits include main board, mini-module and P&E wiggler • Mini-modules/kits available in socketed (~$450) and soldered (~$350) versions; Final production version will be soldered • Mini-module can be used standalone • Final production with soldered MCUs planned for Rev A silicon	$350
xPC560BKIT208S	JDP motherboard—(P/N xPC56XXMB) + Mini-module (P/N xPC560BADPT208) (Soldered) • Kits include main board, mini-module, and P&E wiggler • Mini-modules/kits available in socketed (~$450) and soldered (~$350) versions; Final production version will be soldered • Mini-module can be used standalone • Final production with soldered MCUs planned for Rev A silicon	$350
MPC5604BDEMO	MPC5604DEMO Board • Low-cost board • USB powered • CAN/LIN transceivers • I/O access • Serial to USB converter	$100
144LQFP to 208MAPBGA—Nexus Access Board	Adapter to allow customers to use 208 MAPBGA to be use in a 144 LQFP Footprint; Allows customers to access Nexus 2.0 functionality	

MPC560xB Family

*Manufacturer Suggested Resale Price

Learn More: For more information about MPC560xB family solutions, please visit **www.freescale.com/automotive**.

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