

MPC574xB/C/D/G Series Microcontrollers

Power Architecture®-based MCU for Automotive and Industrial Applications

Features

- AEC-Q100 Grade1, Ta 125 °C
- 12-bit ADC, PWM/Timers
- CAN, LIN, Ethernet, USB
- Ultra-reliable MCU

Product One-Sheet

Get Samples

Data Sheet

Tools

Performance and Low Power – Up to two 160 MHz cores with single precision floating point, variable length encoding (VLE), one 80 MHz core with VLE, low-power unit, pretended networking support

High Reliability – AEC-Q100, automotive quality, 125 °C ambient temperature

Features Rich – Ethernet with AVB and optional 2nd Ethernet, USB, FlexRay™, LIN, CANFD, μSDHAC, I²C, SAI, DSPI

Enablement – Hardware security module, ISO26262/IEC61508, ECC, MNIST/LBIST, FCCU, voltage and clock monitors

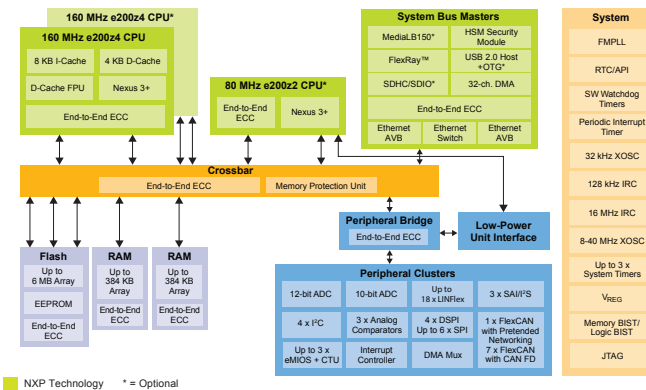
MPC5748G Specifications

Flash	Up to 6 MB	Timer/PWM	96-ch. EMIOS
RAM	Up to 768 KB	Other Timer	16 PIT, 3 STM, 4 SWT
Core	2 x Z4, one Z0	Analog	Two ADC (10 and 12-bit), 3 comparators, CTU
Speed	2 x 160 MHz 1 x 80 MHz	Comm	4 DSPI, 6 SPI, 18 LIN, 8 CAN w/ FD, 4 I ² C, USB, 2 x ENET, SDHC
Package	up to 246 GPIO	Audio	3 x SAI and fractional clock driver
Op Range	3.3 to 5.5 V	HMI	Configurable I/O domains
Temp	125 °C	Security	HSM, PASS and TDM, FCCU

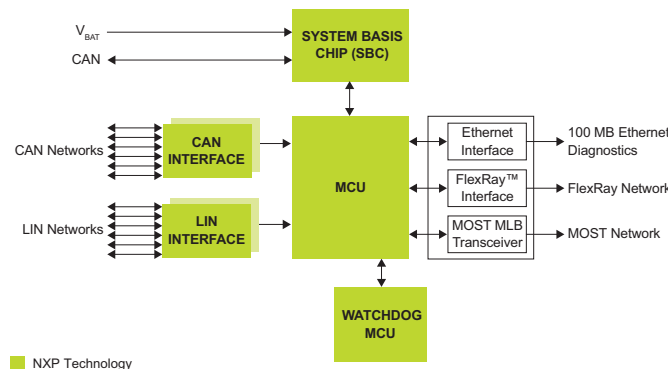
Orderable Samples

Part Number	Temp Range	Core	Flash	Package
SPC5747/8/C/G	-40 °C to 125 °C	Up to 3	Up to 6 MB	176 LQFP, 256/32 4BGA
SPC54745/6/B/C	-40 °C to 125 °C	Up to 2	Up to 3 MB	176 LQFP, 256/32 4BGA

Block Diagram



Central Gateway/Networking Application



Success Stories

- Ethernet gateway
- Central control module
- Freight truck lighting
- Audio gateway

Target Applications

- Battery management
- High-End control module
- Infotainment gateway
- Central gateway
- Security and building control systems
- Process control
- Home/Industrial automation

Enablement Tools

- Development hardware:
 - Evaluation board
 - Nexus adapter boards
- Runtime software:
 - Flash and EEPROM driver
 - Software core self test
- Compiler: Green Hills®, Wind River®, High Tec
- Debugger: Lauterbach®, iSystem, PLS, Green Hills, P&E®

www.nxp.com/MPC574xB-C-D-G

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