

MPC5775B/E Microcontrollers

Ultra-Reliable MCUs Built on
Power Architecture® Technology

Product One-Sheet

Multicore Performance – High performance and integration for motor control and battery management.

Advanced Timers and ADCs – Programmable motor control timer (eTPU) and Sigma-Delta ADC converters on the MPC5775E MCU allow for advanced motor control and implementation of a software resolver without expensive external components.

Quality, Security and Redundancy – AEC-Q100 qualification testing, on-chip security encryption protection using CSE and TDM for tamper proofing, and lockstep cores help support ASIL D and SIL 3 functional safety (ISO26262/IEC61508) requirements.

MPC5775B/E Specifications

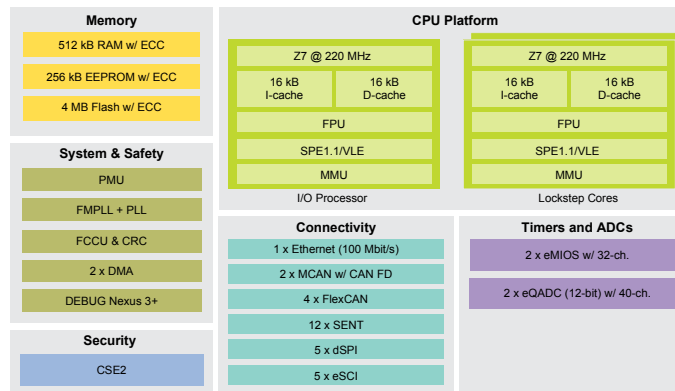
Feature	MPC5775B	MPC5775E
Flash	4 MB	4 MB
RAM	512 KB	512 KB
Cores	2 x z7 (1 in LS)	2 x z7 (1 in LS)
Speed	220 MHz	264 MHz
Timer/PWM	2 x eMIOS, 32-ch. total	2 x eMIOS, 32-ch. total 3 x eTPU, 96-ch. total
Analog	2 x eQADC, 40-ch. total	4 x eQADC, 70-ch. total 4 x SD ADC, 20-ch. total
Ethernet	1 x FEC module	1 x FEC module
SCI/SPI	5/5	5/5
CAN	2 x MCAN FD, 4x FlexCAN	2 x MCAN-FD, 4 x FlexCAN
Security	Hardware CSE module	Hardware CSE module
Op Range	3.0 V – 5.5 V	3.0 V – 5.5 V
Temp (Ta)	-40 °C to 125 °C	-40 °C to 125 °C
Package	416 BGA	416 BGA

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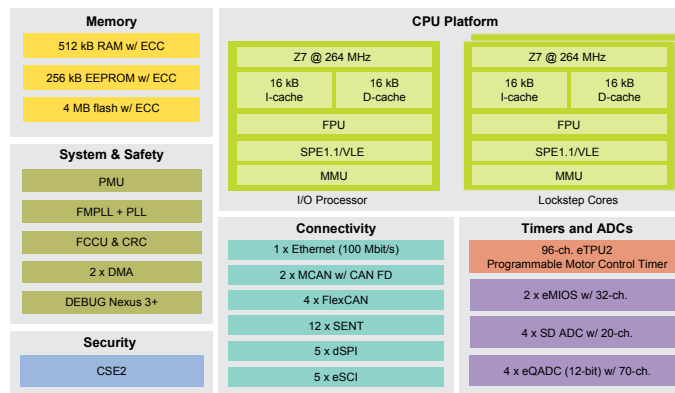
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MPC5775B Block Diagram



MPC5775E Block Diagram



Target Applications

- Hybrid and electric traction motors
- Battery management systems (BMS)
- Engine control units (ECU)
- Safety-critical applications

Enablement Tools

- Evaluation boards:
 - MPC5775BE-416DS
 - MPC57XXXMB motherboard
- S32 Design Studio (S32DS)
- NVM/flash drivers
- AUTOSAR® MCAL drivers (SDK)
- Green Hills®, Wind River® (Diab)
- Lauterbach
- iSystem
- P&E Micro, ETAS and PLS

Orderable Samples

Part Number	Temp Range (Ta)	Package
SPC5775BDK3MME2	-40 to 125 °C	416-pin MAPBGA
SPC5775EDK3MME3	-40 to 125 °C	416-pin MAPBGA

