MPC5777C Microcontroller

Ultra-Reliable MCUs Built on Power Architecture® Technology

Product One-Sheet

Get Sample	Datasheet	Tools

Multi-core Performance – High performance and integration for powertrain control within a power envelope of previous-generation MCUs.

Advanced Timers and ADCs – eTPU timers and Sigma-Delta ADC converters allow for advanced filtering using on-chip knock hardware.

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-1 functional safety (ISO26262/ IEC61508) requirements.

Features

▸ AEC-Q100 Grade1, Ta 125°C
▸ Ethernet, CAN-FD
▸ Precision eTPU Timers and ADC
▸ Ultra-Reliable MCU

## Orderable Samples

Part Number	Temp Range	Package
SPC5777CCK3MME3	-40°C to 125°C	416-pin MAPBGA
SPC5777CCK3MMO3	-40°C to 125°C	516-pin MAPBGA

MPC5777C Specifications

Flash	8 MB	Timer/PWM	96ch eTPU, 32ch eMIOS
RAM	512 KB	Other	128-ch DMA, ECC, 12ch SENT, Zipwire®, MSB, 2ch PSI-5
Cores	2x z7(1 in LS)	Analog	70-ch ADCs and 12-ch SD-ADCs
Speed	264 MHz/core	Ethernet	Ethernet (FEC)
Package	416 to 516 pins	SCI/SPI	5/5
Op Range	3.0 V - 5.5 V	CAN	2 x MCAN-FD and 4 x FlexCAN
Temp	-40°C to 125°C	Security	CSE, TDM, WDOG, CRC

MPC5777C Block Diagram
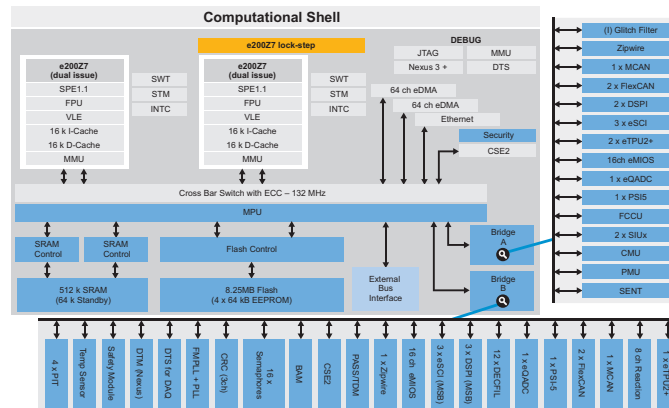
Success Stories

▸ Engine Management
▸ Hybrid and Electric Motors
▸ Transmissions

Target Applications

▸ Safety Critical Applications
▸ Engine Control Units (ECU)
▸ Electric DC motor control
▸ Ethernet Connectivity
▸ Aerospace Engines

Enablement Tools

▸ Evaluation Boards:
  – MPC5777C-416DS 416-pin adapter
  – MPC5777C-516DS 516-pin adapter
  – MPC57XXXMB motherboard
▸ S32 Design Studio (S32DS)
▸ NVM/Flash Drivers
▸ AUTOSAR MCAL drivers (SDK)
▸ GreenHills, Wind River (Diab)
▸ Lauterbach
▸ iSystem
▸ P&E Micro, ETAS and PLS

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