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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Speed</th>
<th>Temp Range</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPC5777CCK3MME3</td>
<td>264 MHz</td>
<td>-40°C to 125°C</td>
<td>416-pin MAPBGA</td>
</tr>
<tr>
<td>SPC5777CCK3MMO3</td>
<td>264 MHz</td>
<td>-40°C to 125°C</td>
<td>516-pin MAPBGA</td>
</tr>
<tr>
<td>SPC5777CDK3MME4</td>
<td>300 MHz</td>
<td>-40°C to 125°C</td>
<td>416-pin MAPBGA</td>
</tr>
<tr>
<td>SPC5777CDK3MMO4</td>
<td>300 MHz</td>
<td>-40°C to 125°C</td>
<td>516-pin MAPBGA</td>
</tr>
</tbody>
</table>

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

MPC5777C Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash</td>
<td>8 MB</td>
</tr>
<tr>
<td>RAM</td>
<td>512 KB</td>
</tr>
<tr>
<td>Cores</td>
<td>Dual z7 (1 in lockstep)</td>
</tr>
<tr>
<td>Speed</td>
<td>Up to 300 MHz/core</td>
</tr>
<tr>
<td>Op Range</td>
<td>3.0 V - 5.5 V CAN</td>
</tr>
<tr>
<td>Temp</td>
<td>-40°C to 125°C Security</td>
</tr>
</tbody>
</table>

MPC5777C Block Diagram

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