

# MPC5775BE-EVB: MPC5775BE Evaluation System for Battery Management System

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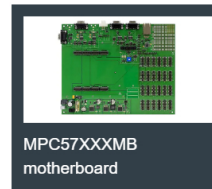
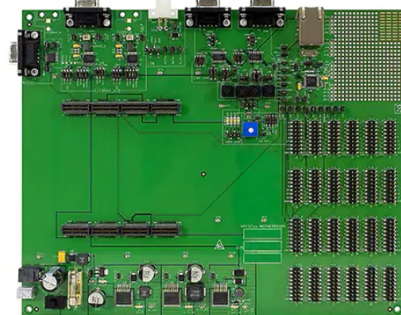
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## Overview

The MPC5775BE-EVB is an evaluation system for battery management systems (BMS) and Hybrid Electric Vehicle (HEV) and Electric Vehicle (EV) inverter control applications requiring advanced performance, eTPU based timer system, and up to ASIL D ISO 26262 or IEC 61508 functional safety support.

Based on the 32-bit Power Architecture® MPC5777B/E ultra-reliable microcontroller together with the FS65 System Basis Chip (SBC), the MPC5775BE-EVB includes a motherboard and a daughterboard working together or as standalone.

## Target Applications

[Battery Management System](#)
[Hybrid and Electric Vehicle](#)
[Hybrid and Electric Vehicle Power Inverter](#)
[Powertrain](#)


MPC5775BE-EVB motherboard



MPC5775BE-416DS daughterboard

## Specifications

### Technical and Functional Specifications

<b>Microcontroller (MCU)</b>	<ul style="list-style-type: none"> <li>32-bit Power Architecture e200z7 based <a href="#">MPC5777B/E</a></li> </ul>
<b>MPC5775BE-EVB motherboard</b>	<ul style="list-style-type: none"> <li>2 x CAN, 1 x LIN with Molex Connector, 1 x SCI channel with transceiver and DB-9 Connector</li> <li>2 x FlexRay channels with jumper enable, transceiver, and DB-9 Connector</li> <li>1 x Ethernet PHY and RJ45 connector</li> <li>0.10 pin headers for access to all I/O</li> <li>2.5" x 2.5" prototyping area with 5 V and GND rails</li> <li>1 x Potentiometer for analog voltage generation, 4 x user LEDs, 4 x push-button switches</li> <li>12 VDC power supply input barrel connector, supply included</li> </ul>
<b>MPC5775BE-416DS daughterboard</b>	<ul style="list-style-type: none"> <li>Socketed MPC5777B/E support in 416 MAPBGA package</li> <li>40 MHz onboard clock oscillator circuit in EVB for MCU Clocking</li> <li>USB (Type B) / UART transceiver to interface with MCU</li> <li>Liberal scattering of ground and test points (surface mount loops) placed throughout the EVB</li> <li>Power SBC for standalone function of Daughter Card</li> <li>1 x standard 14-pin JTAG debug connector, 1 x 50-pin SAMTEC Nexus connector</li> <li>1 x CAN, 1 LIN connector supported by <a href="#">FS65 Power SBC</a></li> <li>1 x user reset switch with reset status LEDs and Power Indication LEDs</li> </ul>

[Buy](#)

## MPC57XXXMB ACTIVE

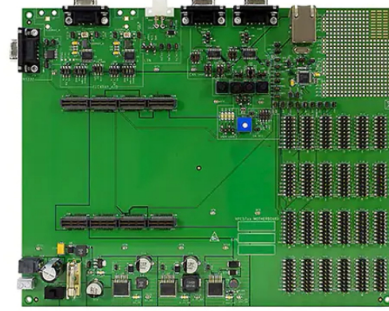
MPC57XXX evaluation motherboard

1 @ US  
\$439.00

 Buy Direct

Distributor

[Availability?](#)



## MPC5775BE-416DS ACTIVE

MPC5775BE MAPBGA 416 daughtercard for BMS

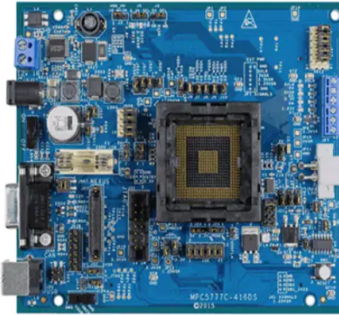
- Adapter board
- MCU sample of both MPC5775B and MPC5775E
- 12V Power adapter for EVB
- 2x10-pin to 2x5-pin adapter for JTAG

1 @ US  
\$399.00

 Buy Direct

Distributor

[Availability?](#)



## Documents and Software

### DOCUMENTS (2)

- [Application Note \(1\)](#)
- [Users Guide \(1\)](#)

### DESIGN RESOURCES (5)

- [Design Tools & Files \(5\)](#)

### SOFTWARE (1)

- [Embedded Application Software \(1\)](#)

## Documents

### Application Note (1)

[AN5418, Using Cryptographic Service Engine 2 \(CSE2\) \(REV 0\)](#) 

AN5418, This application note describes the usage of Cryptographic Services Engine2 (CSE2).

 PDF 477.6 kB 21 Mar 2017 AN5418 [English]

### Users Guide (1)

[MPC5775BE-EVB evaluation system – User Manual \(REV 0\)](#)

User Manual for the MPC5775BE-EVB evaluation system

 PDF 1.5 MB 10 Jul 2018 MPC5775BEEVBUG [English]

## Design Resources

### Design Tools & Files (5)

#### Printed Circuit Boards and Schematics (5)


[MPC57XXXMB Rev A – Schematics \(REV A\)](#) NEW

Schematics for the MPC57XXXMB motherboard

[Download](#)

## Training and Events

 [Learn How to Optimize Your Battery Management System \(BMS\) Design with Ready-to-Use Systems](#)

 [Managing the drivetrain for e-Mobility with BMS to reduce CO<sub>2</sub> emissions](#)



### System (BMS) Design with Ready-to-Use System Solutions

Type: On-demand

BMS systems, with the latest ready-to-use ICs solutions from NXP to ease your design: Analog Front-End Battery Cell Controllers, Ultra-reliable Microcontrollers, and Functional Safety Power Management solutions.



### reduce CO<sub>2</sub> emissions

Type: On-demand

Take a deep dive into the architecture of Battery Management Systems (BMS) solutions, providing insights into critical parameters for automotive and other applications, like drone battery systems.

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