



# **MPC5775E 3-phase PMSM Development Kit**

## **MCSPTR2A5775E**

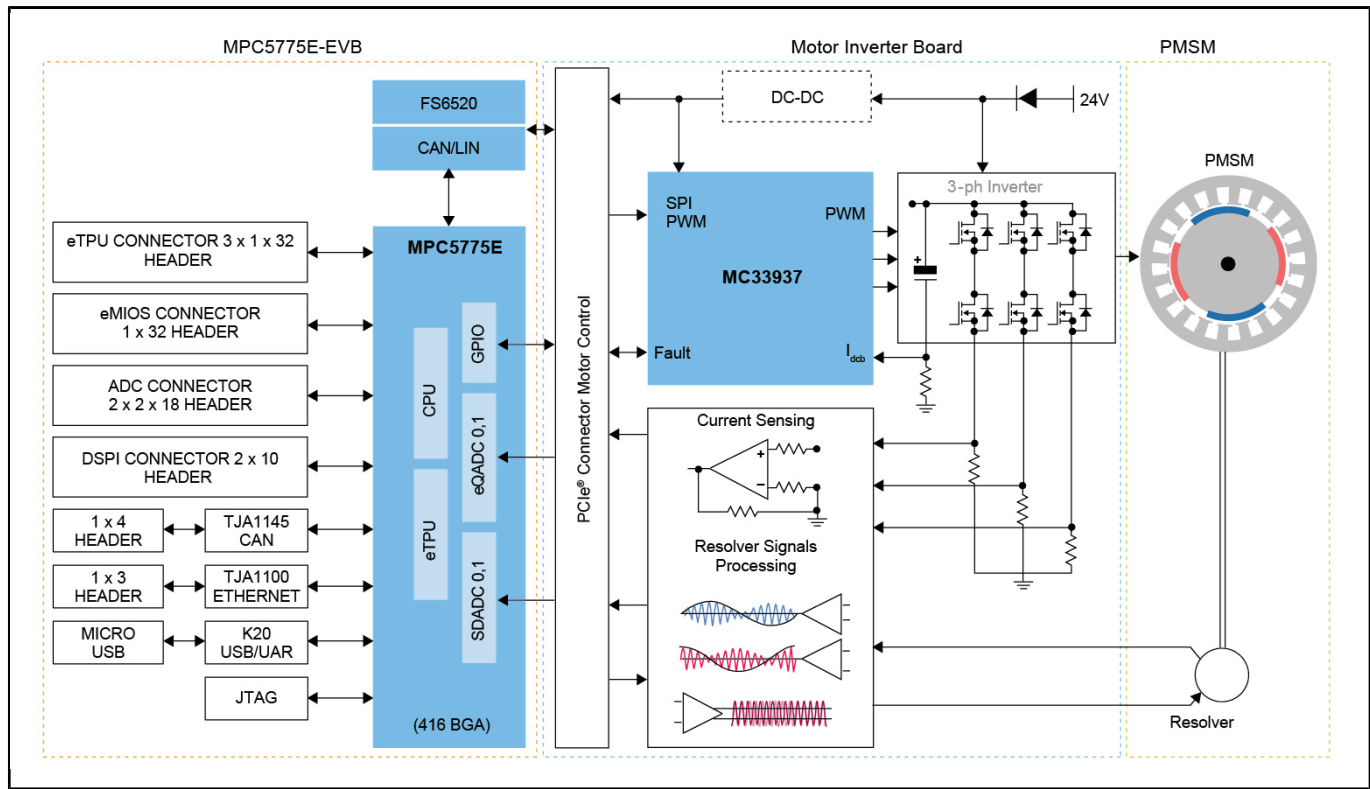
Last Updated: Jun 5, 2025

The MCSPTR2A5775E is a compact and highly-optimized development kit engineered for 3-phase Permanent Magnet Synchronous Motor (PMSM) control, 3-shunt current sensing, and resolver position sensing.

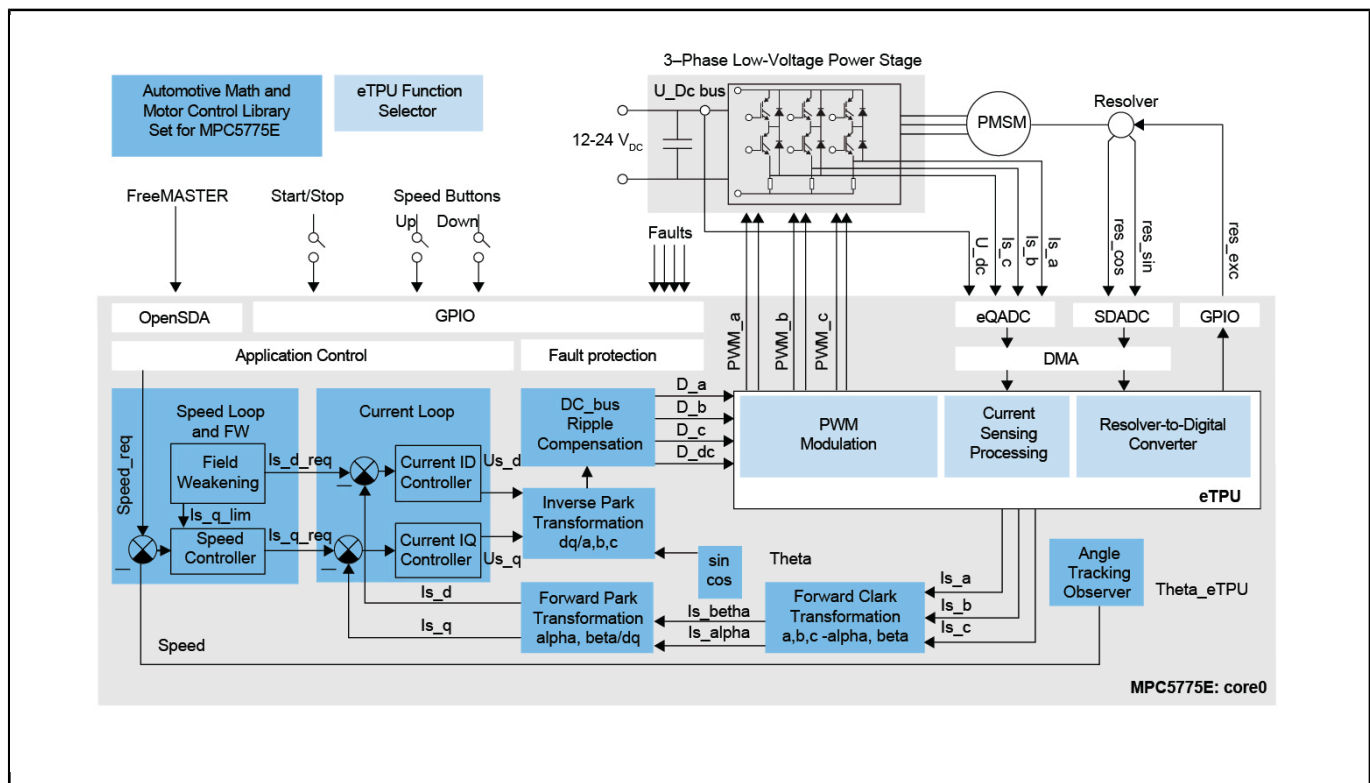
MCSPTR2A5775E supports efficient electric motor and inverter control, targeting advanced powertrain motor control and real-time control applications requiring up to ISO 26262 ASIL D.

Based on the 32-bit Power Architecture® MPC5775E microcontroller, the MCSPTR2A5775E offers high-performance computing, safety, and security capabilities. Its dedicated co-processor enhanced time processing unit (eTPU) helps to enable software-based resolver to digital conversion (RDC) implementation, allowing CPU offload.

## MCSPTR2A5775E architecture Block Diagram Block Diagram



## MCSPTR2A5775E FOC Control Loop Block Diagram



View additional information for [MPC5775E 3-phase PMSM Development Kit](#).

**Note:** The information on this document is subject to change without notice.

---

**[www.nxp.com](http://www.nxp.com)**

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2025 NXP B.V.