

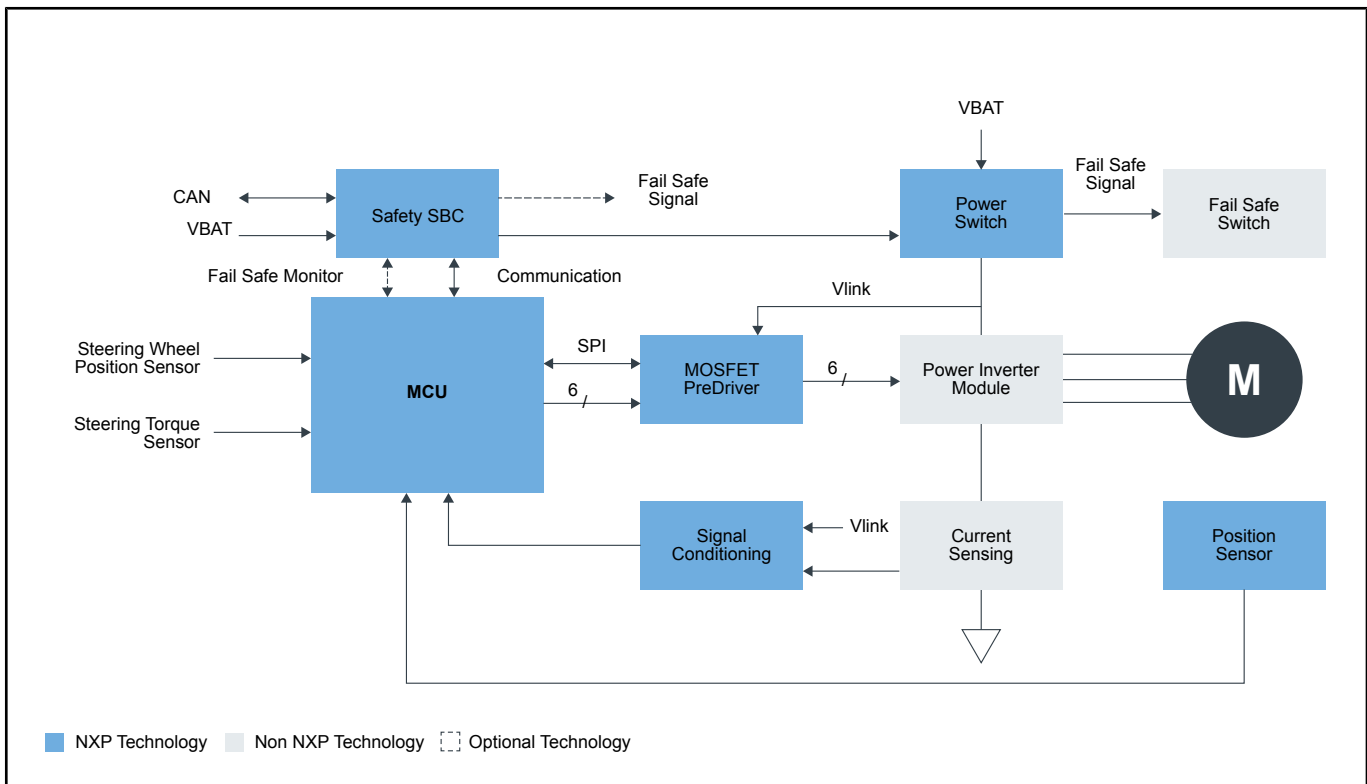


Electric Power Steering (EPS)

Last Updated: Nov 16, 2023

Electric Power Steering (EPS) offers improved handling and steering feel while improving vehicle safety by adopting the steering torque to the vehicle speed and providing active torque in critical driving situations. Our 16-bit and 32-bit single and dual-core automotive MCUs provide enhanced computing power and specialized peripherals for complex electric motor control functions. Integrated power supply solutions are also important elements of a power steering control unit. They provide connectivity to automotive busses, such as CAN and LIN. For MOSFET power stages control, integrated pre-drivers are typically used to interface with the MCU directly or via SPI. For MOSFET power stages control, integrated pre-drivers are typically used to interface with the MCU directly or via SPI.

Electric Power Steering (EPS) Block Diagram



Recommended Products for Electric Power Steering (EPS)

Microcontrollers (MCU)	<ul style="list-style-type: none">• S32K39-37: S32K39/37/36 Microcontrollers for Electrification Applications
------------------------	---------------------------------------------------------------------------------------------------------------------------------------------

	<ul style="list-style-type: none"> • S32E2: S32E2 Safe and Secure High-Performance Real-Time Processors with Actuation Support
Safety SBC	<ul style="list-style-type: none"> • VR5510: Multi-Channel (9) PMIC for S32G Processor – 8 High Power, 1 Low Power, Fit for ASIL D Safety Level • FS86: Safety System Basis Chip For Domain Controller, Fit For ASIL B and D • S32E2: S32E2 Safe and Secure High-Performance Real-Time Processors with Actuation Support • PF5030: Multi-Channel PMIC for Automotive Applications • FS26: Safety System Basis Chip with Low Power, for ASIL D Systems • TJA1103: TJA1103, ASIL B Compliant Automotive Ethernet 100BASE-T1 PHY Transceiver • TJA1462: CAN Signal Improvement Capability Transceiver with Standby Mode • TJA144x: Automotive CAN FD Transceiver Family • TJA1152: Secure HS-CAN Transceiver with Standby Mode
MOSFET Pre-Driver	<ul style="list-style-type: none"> • GD3000: 3-Phase Brushless Motor Pre-Driver • MC33937: 3-Phase Field Effect Transistor Pre-Driver
Signal Conditioning	<ul style="list-style-type: none"> • MC33972: MSDI with Suppressed Wakeup • CD1020: Low-Cost 22-CH Multiple Switch Detect Interface
Position Sensor	<ul style="list-style-type: none"> • NMH1000: NMH1000 Ultra-Low Power and Low-Voltage Magnetic Switch

View our complete solution for [Electric Power Steering \(EPS\)](#).

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

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. © 2024 NXP B.V.