



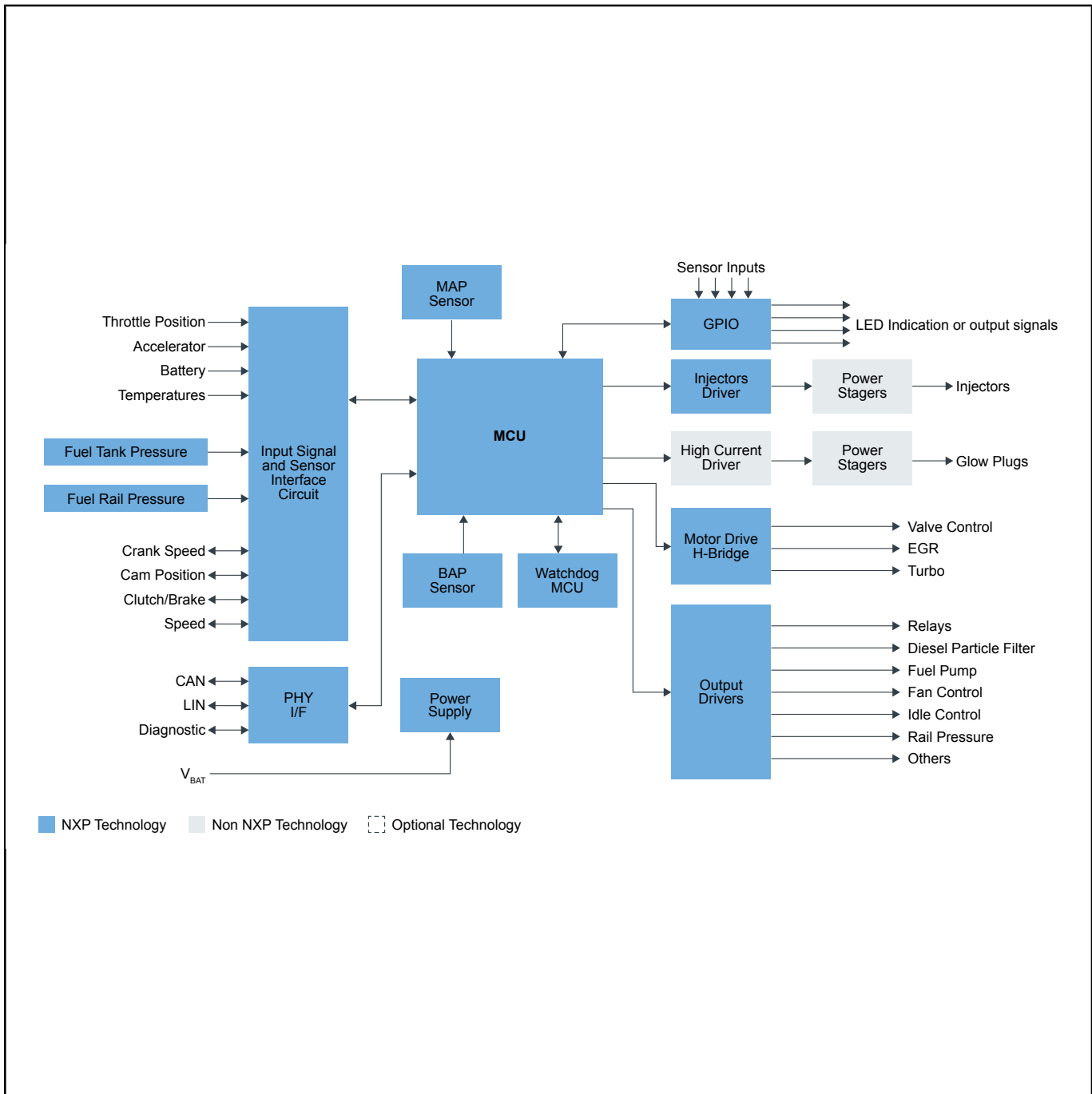
Diesel Engine Management

Last Updated: Nov 6, 2023

Today's diesel engines offer better performance, improved fuel efficiency, reduced noise and lower smoke emissions.

NXP provides a full range of MCUs, barometric pressure sensors (BAP), and analog/mixed-signal IC drivers for improving diesel vehicle fuel economy, enhancing performance and meeting emissions requirements.

Diesel Engine Management Block Diagram



Recommended Products for Diesel Engine Management	
Microcontrollers (MCU)	<ul style="list-style-type: none"> • S32K1: S32K1 Microcontrollers for Automotive General Purpose • MPC5777C: Ultra-Reliable MPC5777C MCU for Automotive and Industrial Engine Management • MPC5746R: Automotive and Industrial Engine Management MCU
GPIO	<ul style="list-style-type: none"> • PCAL9722: 22-Bit SPI I/O Expander with Agile I/O Features • PCAL9714: 14-Bit SPI I/O Expander with Agile I/O Features
Watchdog Microcontrollers (MCU)	<ul style="list-style-type: none"> • S08SG: 8-bit Small Package SG MCUs
Output Drivers	<ul style="list-style-type: none"> • MC33800: Engine Control Integrated Circuit • MC33879: Configurable Octal Serial Switch • GD3000: 3-Phase Brushless Motor Pre-Driver • MC33937: 3-Phase Field Effect Transistor Pre-Driver
PHY Interface	<ul style="list-style-type: none"> • TJA1120: TJA1120, ASIL B Compliant Automotive Ethernet 1000BASE-T1 PHY Transceiver • TJA1103: TJA1103, ASIL B Compliant Automotive Ethernet 100BASE-T1 PHY Transceiver • TJA1021: ISO17987 LIN 2.1/SAE J2602 Transceiver • TJA1044: High-Speed CAN Transceiver with Standby Mode - Mantis Family • TJA1462: CAN Signal Improvement Capability Transceiver with Standby Mode
Input Signal and Sensor Interface Circuits	<ul style="list-style-type: none"> • MC33975: MSDI with 32 mA Suppressed Wakeup
Safety SBC	<ul style="list-style-type: none"> • FS23: Safety System Basis Chip (SBC) Family with Power Management, CAN and LIN • FS24: Safety Mini CAN FD SBC for Automotive Applications Fit for ASIL-B • FS6600: Safety System Basis Chip for S32S2 Microcontroller, Fit for ASIL D • FS86: Safety System Basis Chip For Domain Controller, Fit For ASIL B and D • FS4500: Grade 1 and Grade 0 Safety Power System Basis Chip with CAN Flexible Data Transceiver • FS26: Safety System Basis Chip with Low Power, for ASIL D Systems • FS6500: Grade 1 and Grade 0 Safety Power System Basis Chip with CAN Flexible Data Transceiver
Injectors Drivers	<ul style="list-style-type: none"> • PT2000: Programmable Solenoid Controller Gate Driver • PT2001: Programmable Gate Driver for Solenoid Control
Motor driver H-Bridge	<ul style="list-style-type: none"> • MC33931: H-Bridge, Brushed DC Motor Driver, 5-28 V, 5 A, 11 kHz • MC33926: H-Bridge, Brushed DC Motor Driver, 5-28 V, 5 A, 20 kHz • HB2000: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver • HB2001: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver
BAP Sensor	<ul style="list-style-type: none"> • MPXHZ6130A: Absolute, Integrated Pressure Sensor (15 to 130 kPa)
MAP Sensor	<ul style="list-style-type: none"> • MPX4250: Differential, Gauge and Absolute Integrated Pressure Sensor (0 to 250 kPa)
Fuel Tank and Rail Pressure	<ul style="list-style-type: none"> • FXPS7xx0A4: Analog Absolute Pressure Sensor (20 to 550 kPa) • FXPS7xx0D4: Digital Absolute Pressure Sensor (20 to 550 kPa)
Fuel Tank and Rail Pressure	<ul style="list-style-type: none"> • FXPS7xx0A4: Analog Absolute Pressure Sensor (20 to 550 kPa) • FXPS7xx0D4: Digital Absolute Pressure Sensor (20 to 550 kPa)

View our complete solution for [Diesel Engine Management](#).

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.