



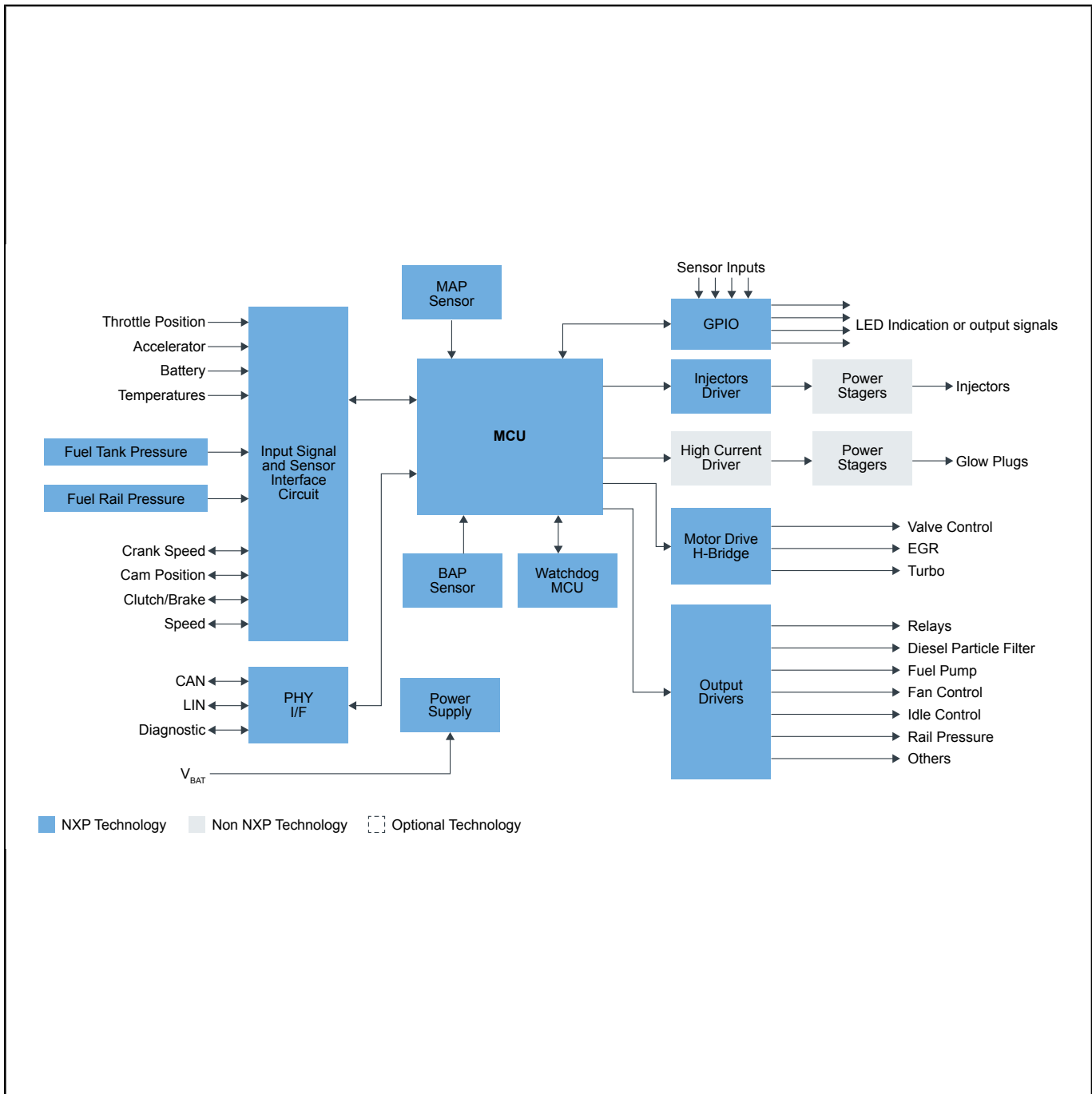
# Diesel Engine Management

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

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

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