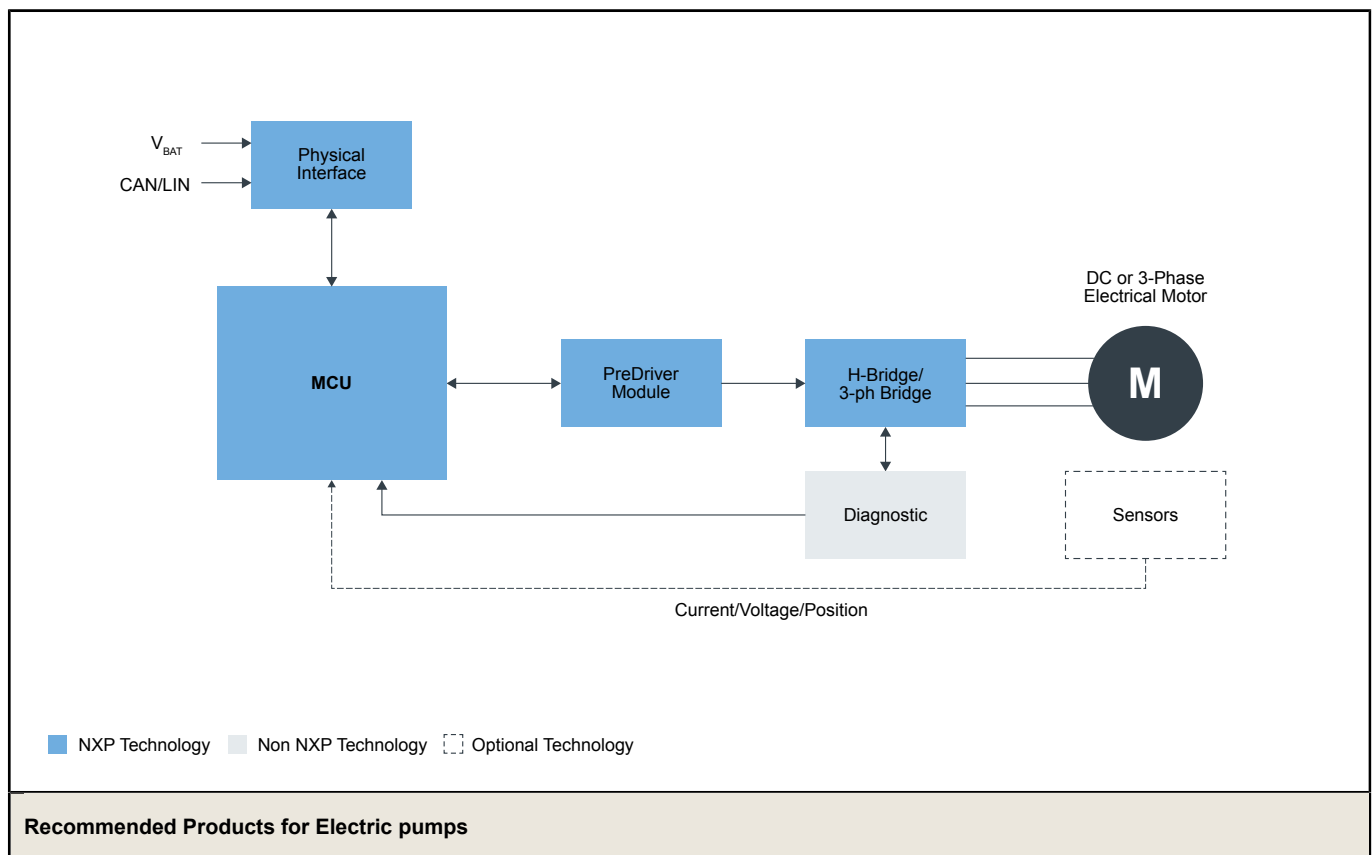




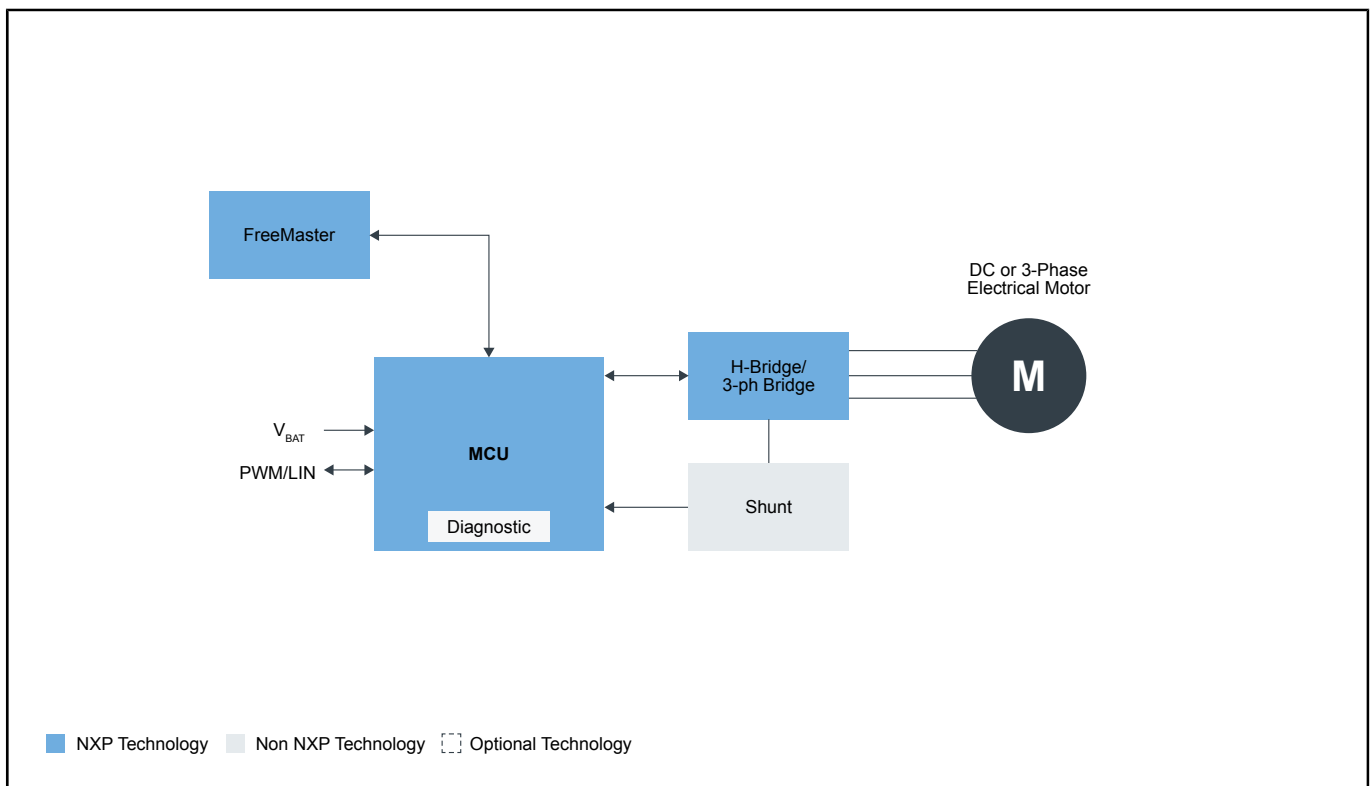
Electrical pumps are more flexible than mechanical pumps as they can be placed closer to what they are pumping when creating a vacuum to tap fuel, water, oil, or coolant from one place to another.

Electric pumps Block Diagram



MCU	<ul style="list-style-type: none"> • S32M2: S32M2 Integrated Solution for 12V Motor Control • S32K3: S32K3 Microcontrollers for Automotive General Purpose • S32K1: S32K1 Microcontrollers for Automotive General Purpose
Physical I/F	<ul style="list-style-type: none"> • FS23: Safety System Basis Chip (SBC) Family with Power Management, CAN and LIN • TJA1029: LIN 2.2A/SAE J2602 Transceiver with TXD Dominant Timeout • UJA113xHW: Buck/Boost High-Speed CAN/Dual LIN System Basis Chip Family • FS24: Safety Mini CAN FD SBC for Automotive Applications Fit for ASIL B
Pre Driver Module	<ul style="list-style-type: none"> • MC33937: 3-Phase Field Effect Transistor Pre-Driver • MC33887: H-Bridge, Brushed DC Motor Driver, 5-28 V, 5 A, 10 kHz
H-Bridge/ 3-ph 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 • HB2001: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver • HB2000: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver

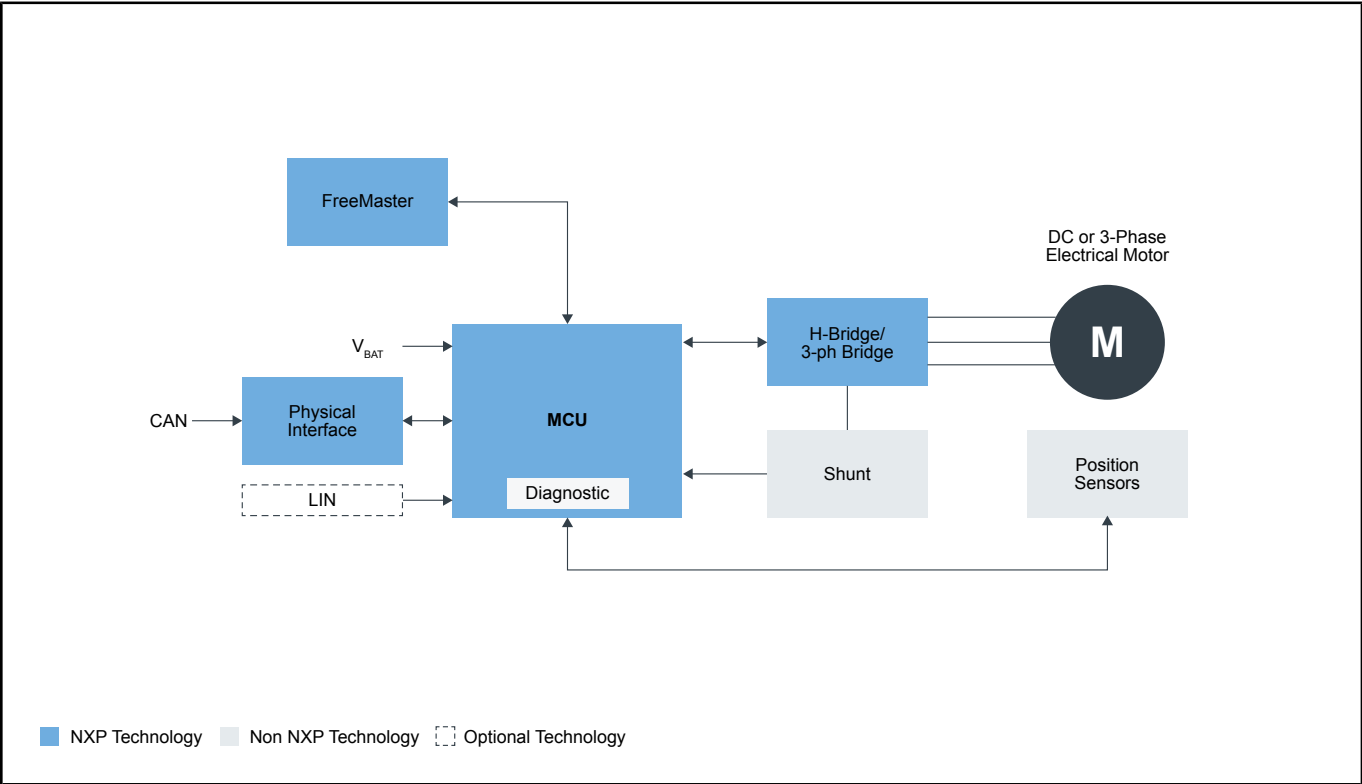
Water/Fuel pump Block Diagram



Recommended Products for Water/Fuel pump

MCU	<ul style="list-style-type: none"> • S12VR: S12VR Mixed-Signal MCU for Automotive and Industrial Relay Based Motor Control • S12ZVM: S12ZVM Mixed-Signal MCU for Automotive and Industrial Motor Control Applications
H-Bridge/ 3-ph 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 • HB2001: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver • HB2000: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver
FreeMaster	<ul style="list-style-type: none"> • FreeMASTER Run-Time Debugging Tool

Oil pump Block Diagram



Recommended Products for Oil pump	
MCU	<ul style="list-style-type: none">• S32K1: S32K1 Microcontrollers for Automotive General Purpose• S12VR: S12VR Mixed-Signal MCU for Automotive and Industrial Relay Based Motor Control• S12ZVM: S12ZVM Mixed-Signal MCU for Automotive and Industrial Motor Control Applications
Physical I/F	<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• TJA1021: ISO17987 LIN 2.1/SAE J2602 Transceiver• UJA113xHW: Buck/Boost High-Speed CAN/Dual LIN System Basis Chip Family
H-Bridge/ 3-ph Bridge	<ul style="list-style-type: none">• MC33937: 3-Phase Field Effect Transistor Pre-Driver• GD3000: 3-Phase Brushless Motor Pre-Driver
FreeMaster	<ul style="list-style-type: none">• FreeMASTER Run-Time Debugging Tool
H-Bridge/ 3-ph 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• HB2001: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver• HB2000: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver

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