



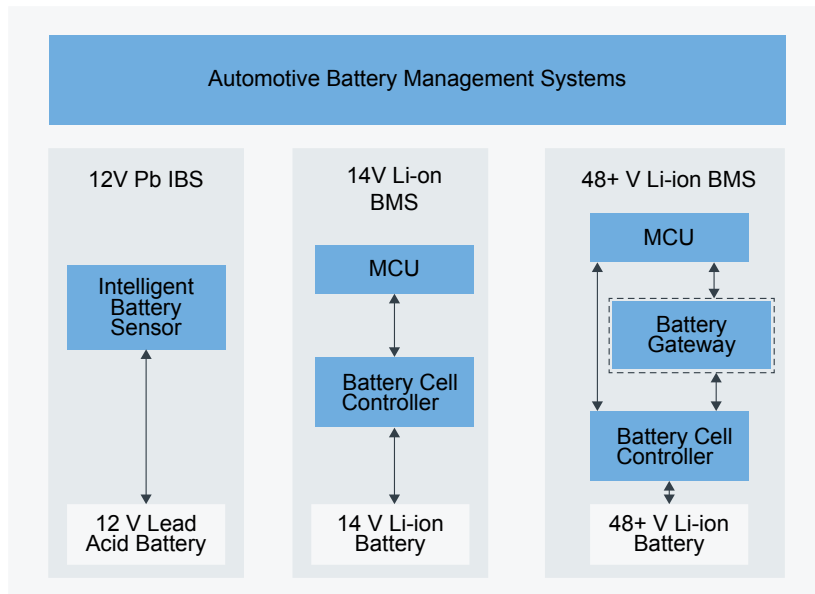
Battery Management System (BMS)

Last Updated: Jan 19, 2023

Battery management systems (BMS) enhances the performance and ensures the safety of a battery pack composed of multiple cells. Functional safety is critical as lithium-Ion batteries pose a significant safety hazard when operated outside of their safe operating area. That's why our BMS portfolio offers high measurement accuracy after soldering and aging in additional ISO 26262 support up to ASIL D functional safety capability.

Committed to sustainable mobility and renewable power grids, we offer BMS solutions including the complete chipset, software and functional safety documentation. With our reference designs, we accelerate our customers' development and enable the latest BMS innovations for automotive and industrial applications.

Low Voltage BMS Block Diagram



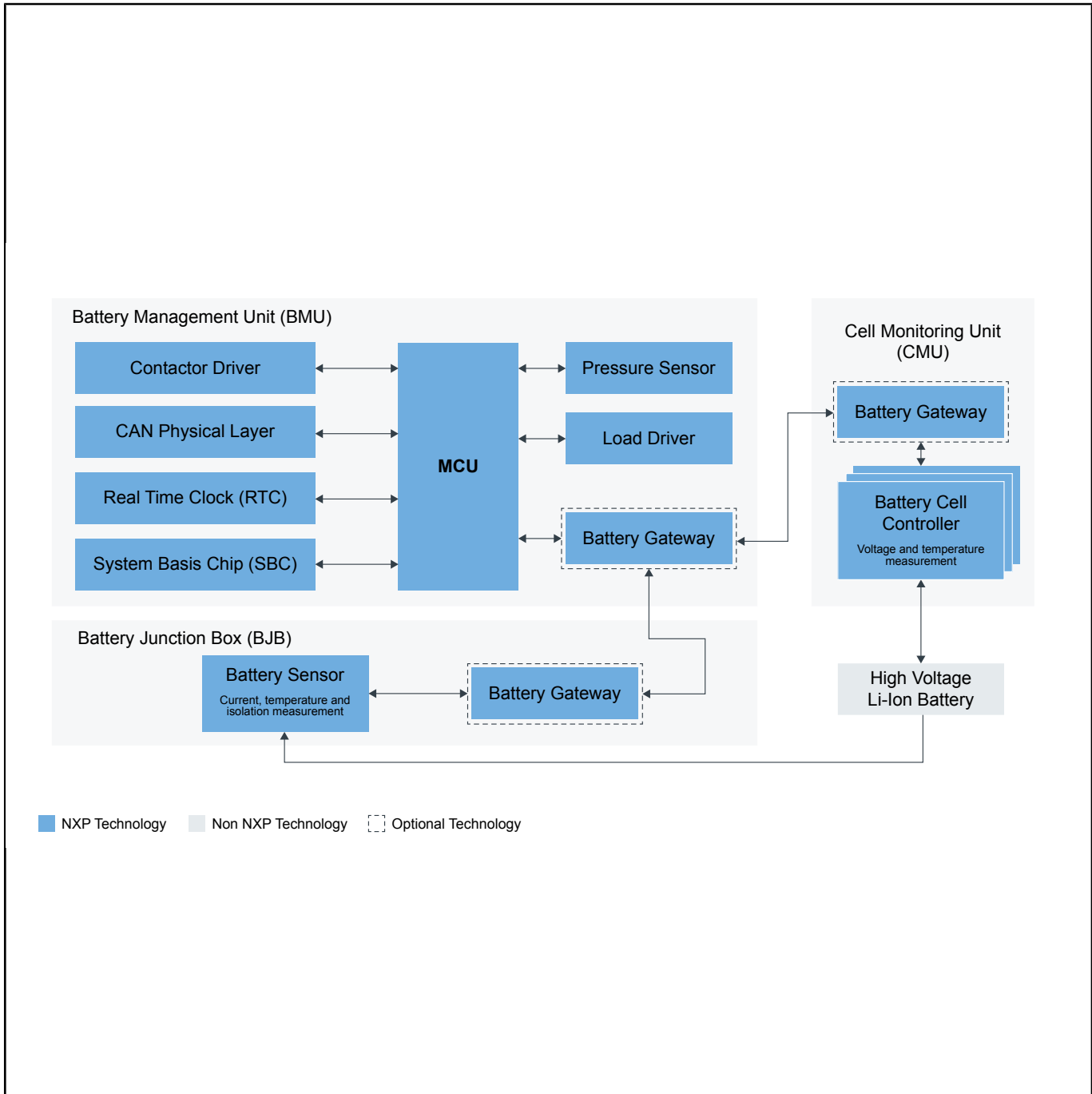
■ NXP Technology ■ Non NXP Technology □ Optional Technology

Recommended Products for Low Voltage BMS

Intelligent Battery Sensor	<ul style="list-style-type: none"> • MM9Z1_638: Battery Sensor with CAN and LIN
MCU	<ul style="list-style-type: none"> • S32K1 Microcontrollers for Automotive General Purpose • S32K3 Microcontrollers for Automotive General Purpose
Battery Gateway	<ul style="list-style-type: none"> • MC33664: Isolated Network High-Speed Transceiver
Battery Cell Controller	<ul style="list-style-type: none"> • MC33772C: 6-Channel Li-Ion Battery Cell Controller IC

Battery Cell Controller	<ul style="list-style-type: none"> • MC33771C: 14-Channel Li-Ion Battery Cell Controller IC
Automotive Battery Management Systems	<ul style="list-style-type: none"> • Battery Management Systems (BMS) Hardware Solutions: Battery Management Systems (BMS) Hardware Solutions

High Voltage BMS Block Diagram



Recommended Products for High Voltage BMS

Automotive High Voltage Battery Management Systems	<ul style="list-style-type: none"> • High Voltage Battery Management System (HVBMS): High Voltage Battery Management System (HVBMS)
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Contactactor Driver	<ul style="list-style-type: none"> • MC33996: 16-Output Switch with SPI Control • HB2000: SPI Programmable 10 A H-Bridge Brushed DC Motor Driver
CAN Physical Layer	<ul style="list-style-type: none"> • TJA1145A: High Speed CAN Transceiver with Partial Networking, CAN FD Data Rates up to 5 Mbit/s
RTC	<ul style="list-style-type: none"> • PCA2131: Nano-Power Highly Accurate RTC with Integrated Quartz Crystal for Automotive Applications
System Basis Chip	<ul style="list-style-type: none"> • FS26: Safety System Basis Chip with Low Power Fit for ASIL D
MCU	<ul style="list-style-type: none"> • S32K3 Microcontrollers for Automotive General Purpose
Pressure sensor	<ul style="list-style-type: none"> • NBP8-9x: Highly Integrated Battery Pressure Monitor Sensor
Load Driver	<ul style="list-style-type: none"> • MC12XS6: External Automotive Lighting Multi-Channel eXtreme Switch
Battery Gateway	<ul style="list-style-type: none"> • MC33664: Isolated Network High-Speed Transceiver • MC33665A: General Purpose BMS Communication TPL Transceiver and CAN FD Gateway • TJA144x: Automotive CAN FD Transceiver Family • TJA1057: High-Speed CAN Transceiver - Mantis Family
Battery Cell Controller	<ul style="list-style-type: none"> • MC33771C: 14-Channel Li-Ion Battery Cell Controller IC • MC33775: 14 Channel Li-Ion Battery Cell Controller IC ASIL D
Battery sensors	<ul style="list-style-type: none"> • MC33772C: 6-Channel Li-Ion Battery Cell Controller IC
Battery Gateway	<ul style="list-style-type: none"> • MC33665A: General Purpose BMS Communication TPL Transceiver and CAN FD Gateway • TJA144x: Automotive CAN FD Transceiver Family
Battery Gateway	<ul style="list-style-type: none"> • MC33665A: General Purpose BMS Communication TPL Transceiver and CAN FD Gateway • TJA144x: Automotive CAN FD Transceiver Family

View our complete solution for [Battery Management System \(BMS\)](#).

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

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