



# S32K376 Battery Management System (BMS) and Vehicle Control Unit (VCU) PoC Design

## S32K376POC

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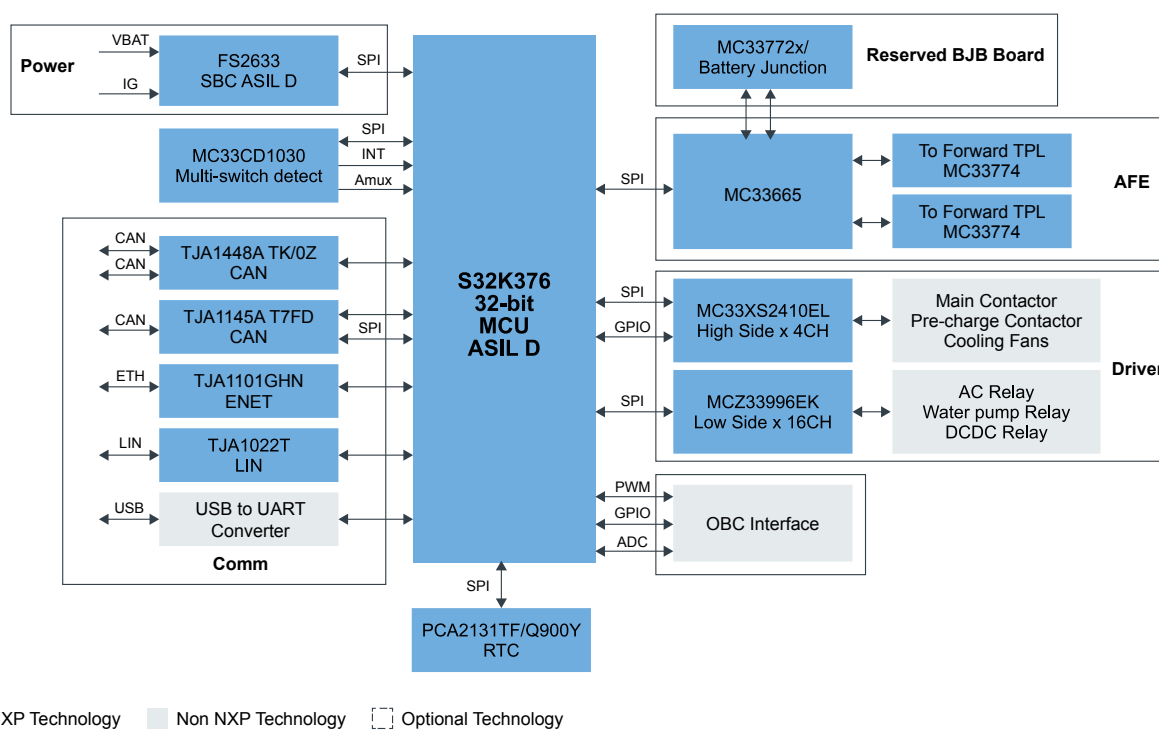
The NXP S32K376 Battery Management System (BMS) and Vehicle Control Unit (VCU) proof of concept design is a demonstration of an integrated, one box Electronic Control Unit (ECU) solution.

The BMS system monitors battery voltage, temperature, fault status, among others and the VCU system samples simulated pedal position, gear, sensors, among others. Software is developed based on NXP's [Real-Time Drivers \(RTD\)](#).

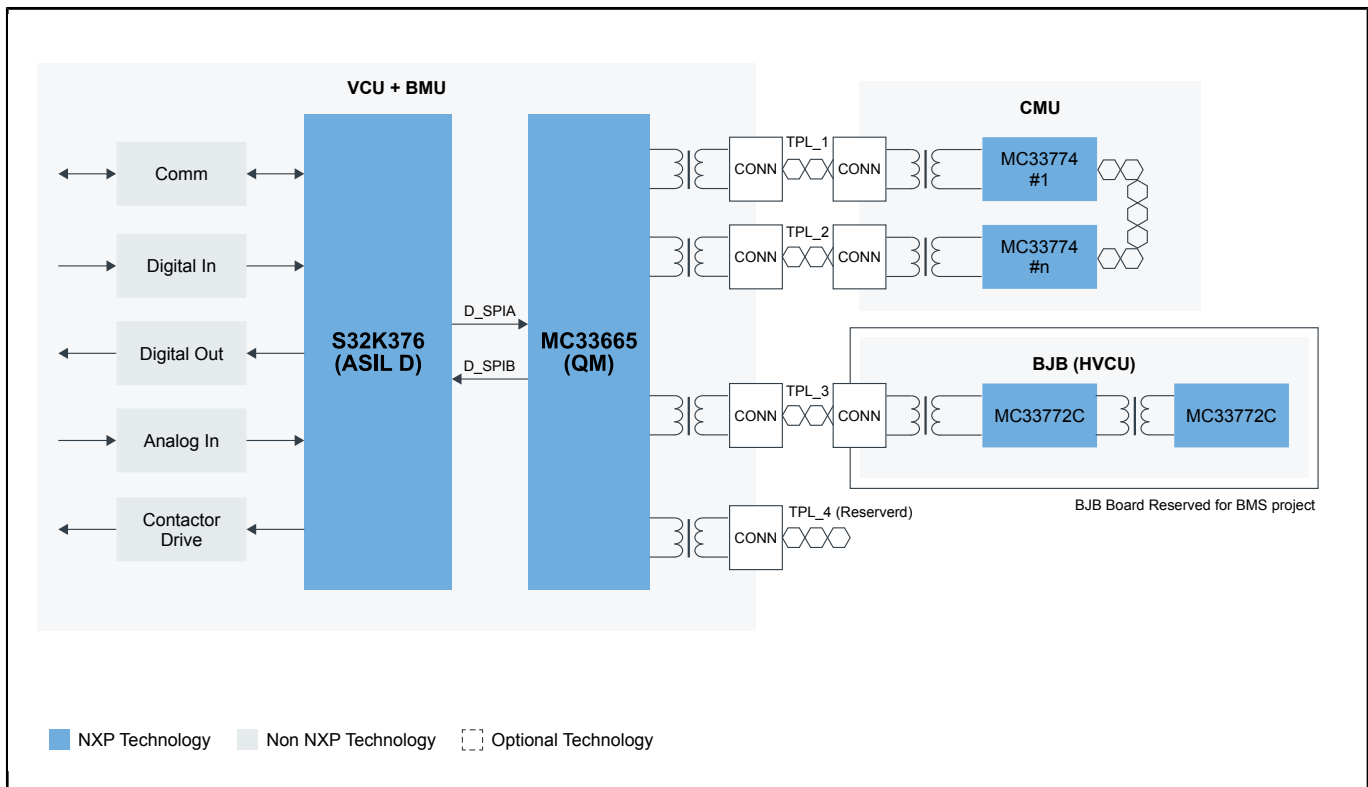
This PoC is intended to provide a mechanism for easy customer evaluation of the S32K37 electrification MCU and to facilitate BMS and VCU hardware and software development. Additionally, Over-the-air (OTA) and bootloader functions are also integrated into the software package, enabling in-field program updates. The [FS26 Automotive Safety Basis Chip \(SBC\)](#) is used for power management and monitoring.

Note: The actual hardware uses a 100% hardware and software compatible superset MCU S32K396.

## S32K376 BMS and VCU PoC hardware Block Diagram



## BMS Total Block Diagram



View additional information for [S32K376 Battery Management System \(BMS\) and Vehicle Control Unit \(VCU\) PoC Design](#).

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