# Airbag and Crash Detection

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NXP enables passive vehicle safety features such as crash detection to maintain driver and passenger safety.

NXP sensors and MCU, developed following ISO26262 standard, monitor vehicle acceleration variation and help deploy airbags in case of a collision. Multiple accelerometers detect abrupt changes in acceleration. An integrated IC helps transmit data from remote sensors to the main electronic control unit (ECU). NXP also offers multiple solutions for ECU power management, designed to meet airbag application requirements.
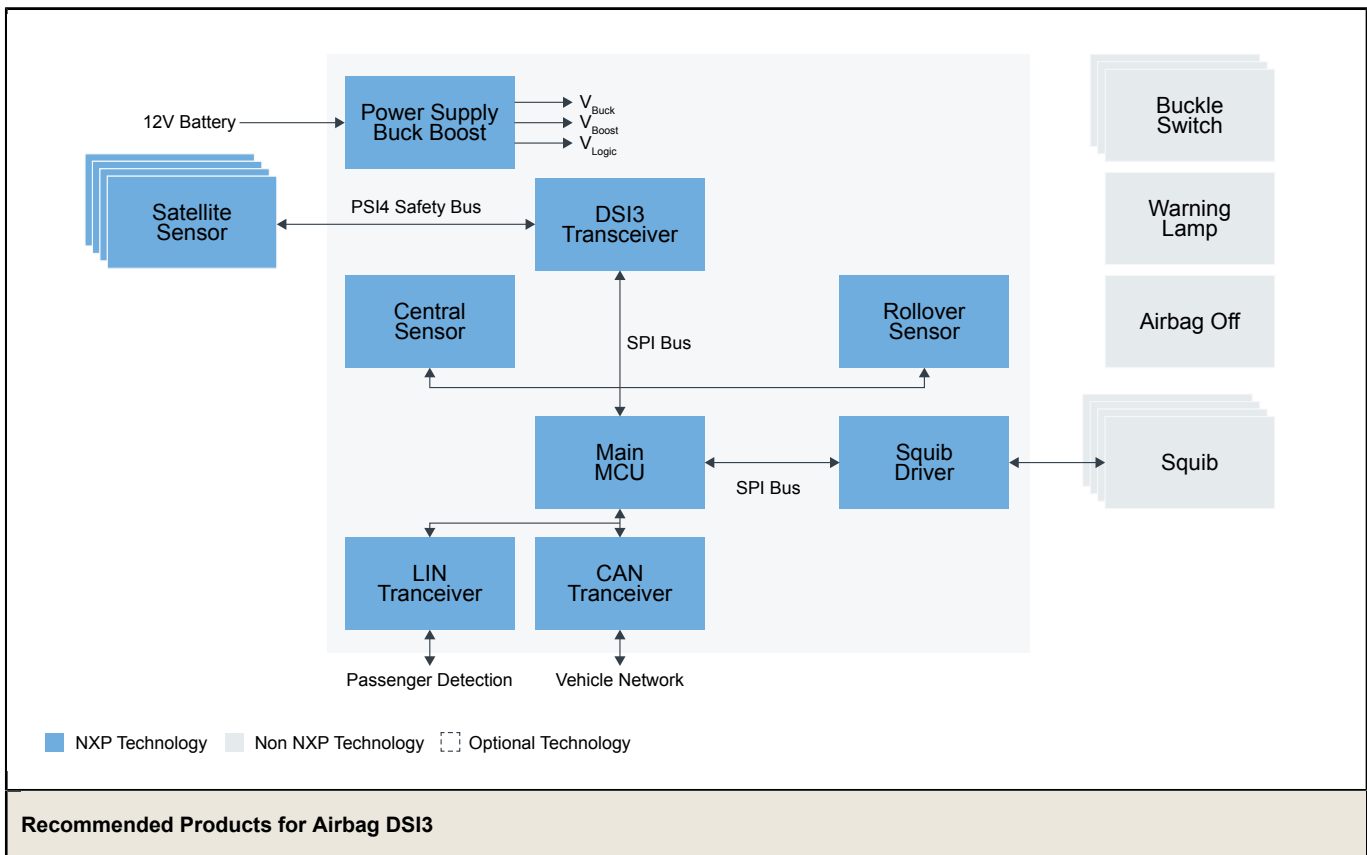
Airbag PSI5 Block Diagram
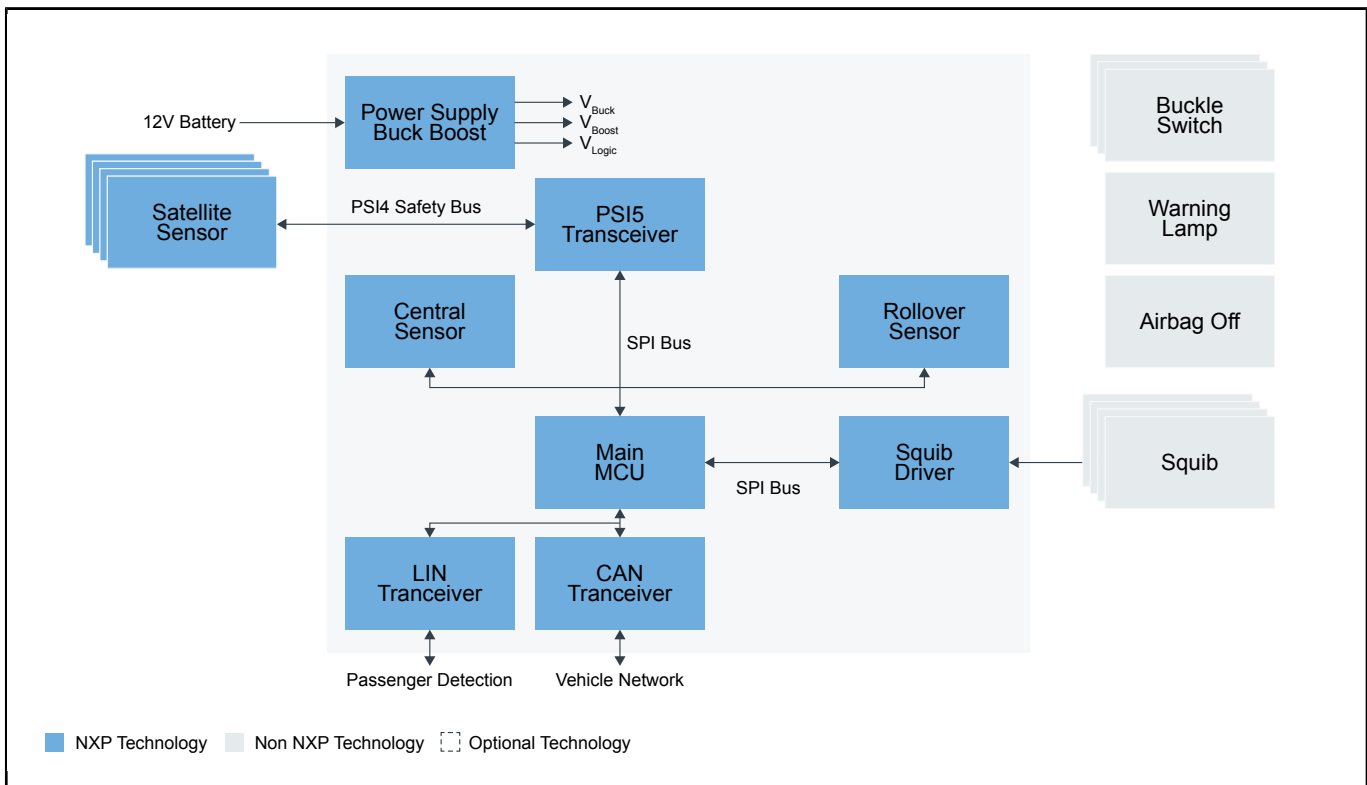
Recommended Products for Airbag PSI5	
PSI5 Transceiver	• MC33789: Airbag Power Supply and PSI5 Sensor Interface

Satellite/Central/Rollover Sensor	• FXLS93: PSI5 Automotive Safety Digital Accelerometer
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PSI5 Transceiver	• MC33789: Airbag Power Supply and PSI5 Sensor Interface
Main MCU	• S32K1: S32K1 Microcontrollers for Automotive General Purpose
LIN Transceiver	• TJA1029: LIN 2.2A/SAE J2602 Transceiver with TXD Dominant Timeout
CAN Transceiver	• TJA1042: High-Speed CAN Transceiver with Standby Mode
Squib Driver	• MC33797: Four Channel Squib Driver IC
Satellite/Central/Rollover Sensor	• FXLS93: PSI5 Automotive Safety Digital Accelerometer

Airbag DSI3 Block Diagram

Recommended Products for Airbag DSI3

Power Supply	• MC33789: Airbag Power Supply and PSI5 Sensor Interface
Satellite/Central/Rollover Sensor	• FXLS93: PSI5 Automotive Safety Digital Accelerometer
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Main MCU	• S32K1: S32K1 Microcontrollers for Automotive General Purpose
LIN Transceiver	• TJA1029: LIN 2.2A/SAE J2602 Transceiver with TXD Dominant Timeout
CAN Transceiver	• TJA1042: High-Speed CAN Transceiver with Standby Mode
Squib Driver	• MC33797: Four Channel Squib Driver IC
DSI3 Tranceiver	• SA0528: Dual DSI3 Leader Transceiver for Automotive Applications
Satellite/Central/Rollover Sensor	• FXLS90: DSI3/SPI Automotive Safety Digital Accelerometer

View our complete solution for Airbag and Crash Detection.

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