

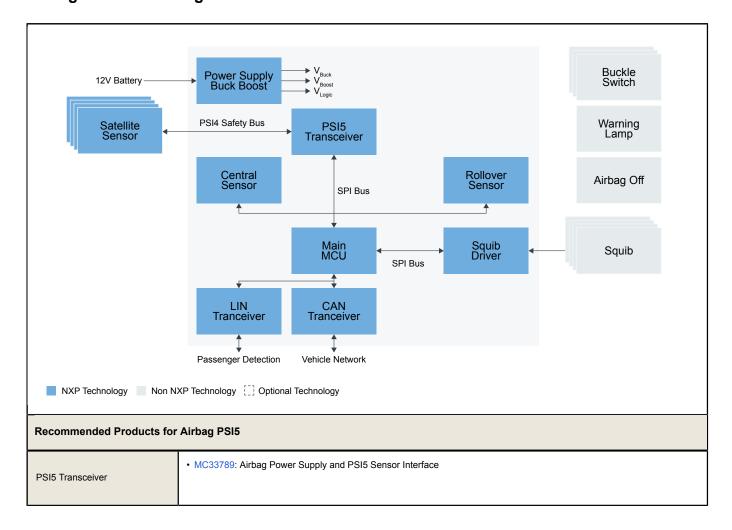
Airbag and Crash Detection

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

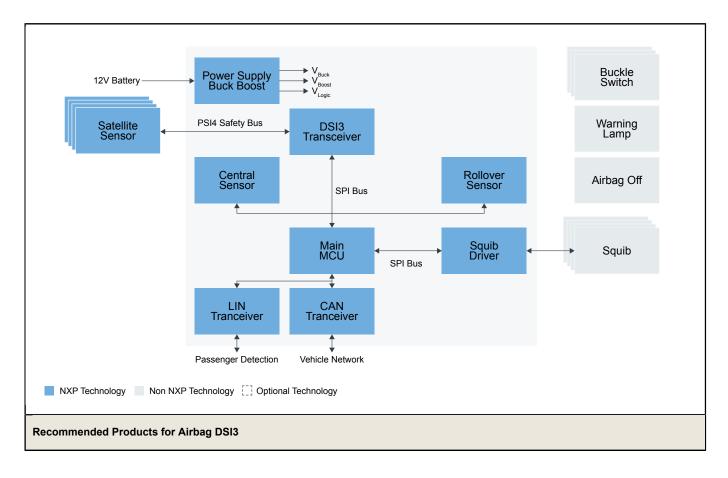
NXP sensors and MCU, developed following ISO26262 standard, monitor vehicle acceleration variation and help deploy airbags in case of a collision. Multiple accelerometers detect abrupt changes in acceleration. An integrated IC helps transmit data from remote sensors to the main electronic control unit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

Airbag PSI5 Block Diagram



Satellite/Central/Rollover Sensor	FXLS93: PSI5 Automotive Safety Digital Accelerometer
Satellite/Central/Rollover Sensor	FXLS93: PSI5 Automotive Safety Digital Accelerometer
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



Power Supply	MC33789: Airbag Power Supply and PSI5 Sensor Interface
Satellite/Central/Rollover Sensor	FXLS93: PSI5 Automotive Safety Digital Accelerometer
Satellite/Central/Rollover Sensor	FXLS93: PSI5 Automotive Safety Digital Accelerometer
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.

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