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Product Brief

TLE 7729

4 Channel Airbag Satellite Receiver IC SatRIC™



THE TLE 7729 – SatRIC™ - is a highly integrated interface IC specially designed for automotive restraint applications. The device, located in the ECU (Electronic Control Unit) of the airbag system, is able to receive data from different types of intelligent sensors like inertia and pressure sensor satellites for front-, side-, or rear-crash sensor applications. It provides a pre-regulated power supply voltage to the satellites over a twisted pair of wires. The satellite module transmits digital data to TLE 7729 by modulating the line current.

Applications

- Automotive Restraint Applications

Features

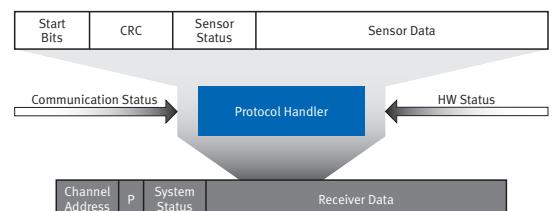
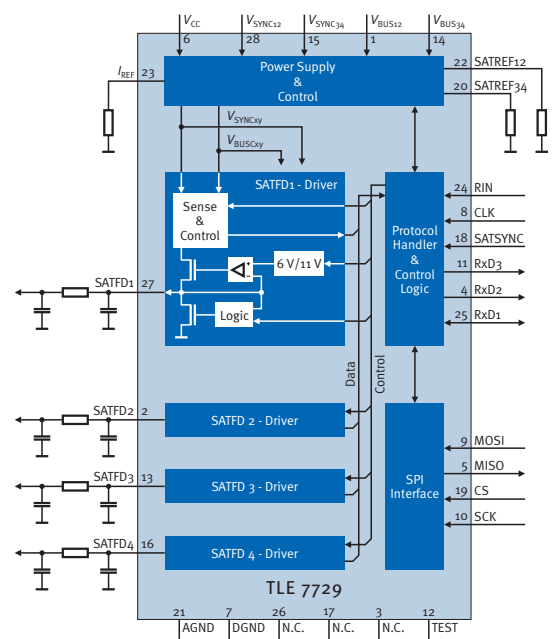
- 4 independent satellite receiver channels for current modulated data
- Each channel can support up to two satellites with a total of up to eight sensors
- Data rate 125 kBaud
- Support of 11-, 13-, 18-Bit Manchester 1 or 2 encoded messages
- Channel configuration in pairs (Bus Mode, Protocol Type)
- Supply of satellite channels via 4 independent voltage regulators
- Adjustable current level detection thresholds
- Asynchronous and synchronous data transmission modes
- All digital I/Os are 3.3 V and 5 V compatible
- 4 Digital outputs for voltage-converted received satellite signals
- 16-bit 8 MHz Serial Peripheral Interface (SPI)
- Embedded protocol handler for data preprocessing
- Small P-TSSOP-28 Package

Embedded Protection Functions

- Current limitation in case of satellite output shorted to GND or Battery
- Channel specific over-temperature shutdown

Embedded Diagnostic Functions

- Leakage detection to GND and Battery
- Ground loss detection
- Short to GND and open detection at every reference pins



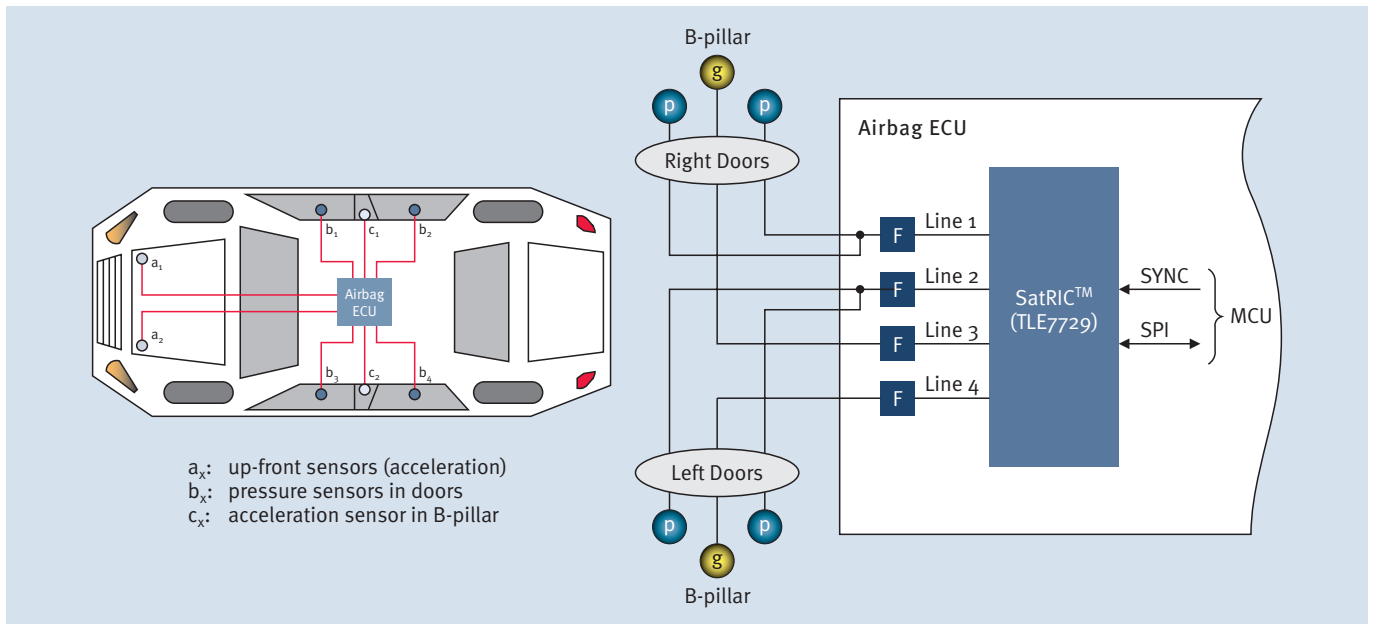
www.infineon.com/restraint-system-IC

Automotive Power



Product Brief

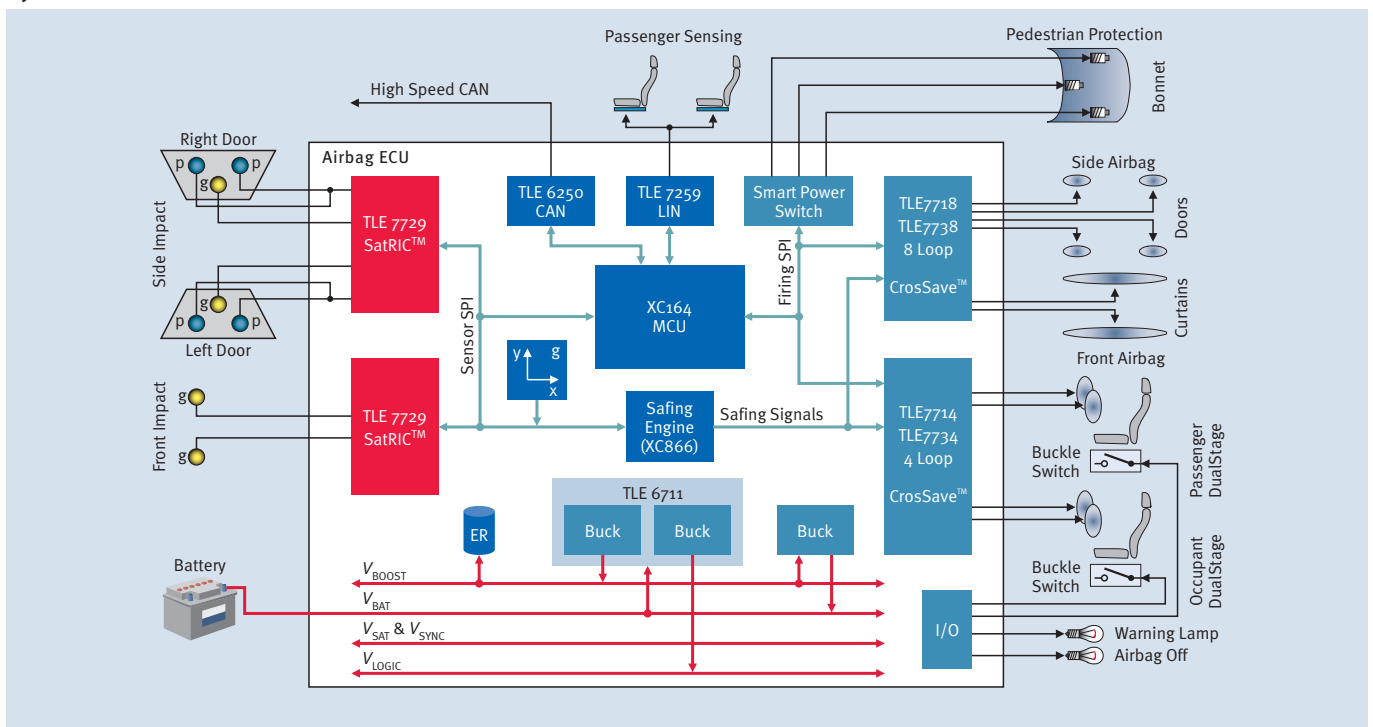
Application Examples (Side Impact)



Product Summary

| Type | Sales Code | Description | Package |
|----------|------------------------|------------------------------|------------|
| TLE 7729 | Available upon request | 4 Channel Satellite Receiver | P-TSSOP-28 |

System Overview



How to reach us:
<http://www.infineon.com>

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Information

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