

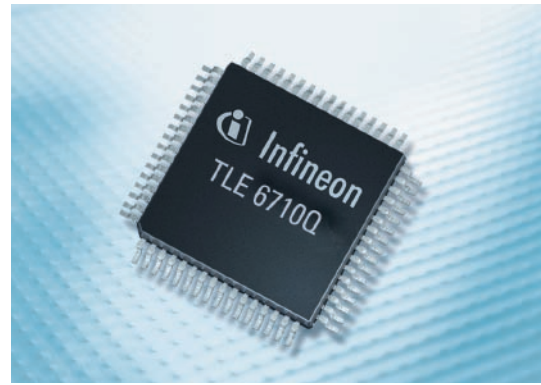


**THE DATASHEET OF  
TLE6710QNUMA1**



## TLE 6710Q

### Combined Power Supply and Firing IC



THE TLE 6710Q is a combined power supply and firing IC specially designed for automotive restraint applications. The device, located in the ECU (Electronic Control Unit) of the airbag system, incorporates several system functions in one single package.

#### Applications

- Automotive Restraint Applications

#### Features

- Boost Converter up to 30 V
- Buck Converter 5 V
- 4 independent firing loops (1.75 A ... 3 A)
- Extra HW lines (Safety Lines) to enable firing
- High Side and Low Side Switch for each firing circuit
- Digital output for firing current detection
- Watchdog for supervision
- Power on/off reset generator
- Serial interface line driver (ISO 9141 and TTL-Level)
- 4 voltage/current sources for diagnostic purposes
- Diagnostic driver for inductive loads or lamps
- Unidirectional Serial Peripheral Interface (SPI) up to 4 MHz
- Logic and analogue output for direct sensing and diagnostic via  $\mu$ C

#### Embedded Protection Functions

- Thermal and short circuit protection for each switch
- Current limitation for each firing loop

#### Embedded Diagnostic Functions

- Squib resistance Measurement with programmable gain
- Programmable Squib Leakage Measurement to GND or BAT
- Detection of safing sensor closure
- Low battery detection
- Average Chip Temperature Measurement
- Supply voltage measurement on external pins

[www.infineon.com/restraint-system-IC](http://www.infineon.com/restraint-system-IC)

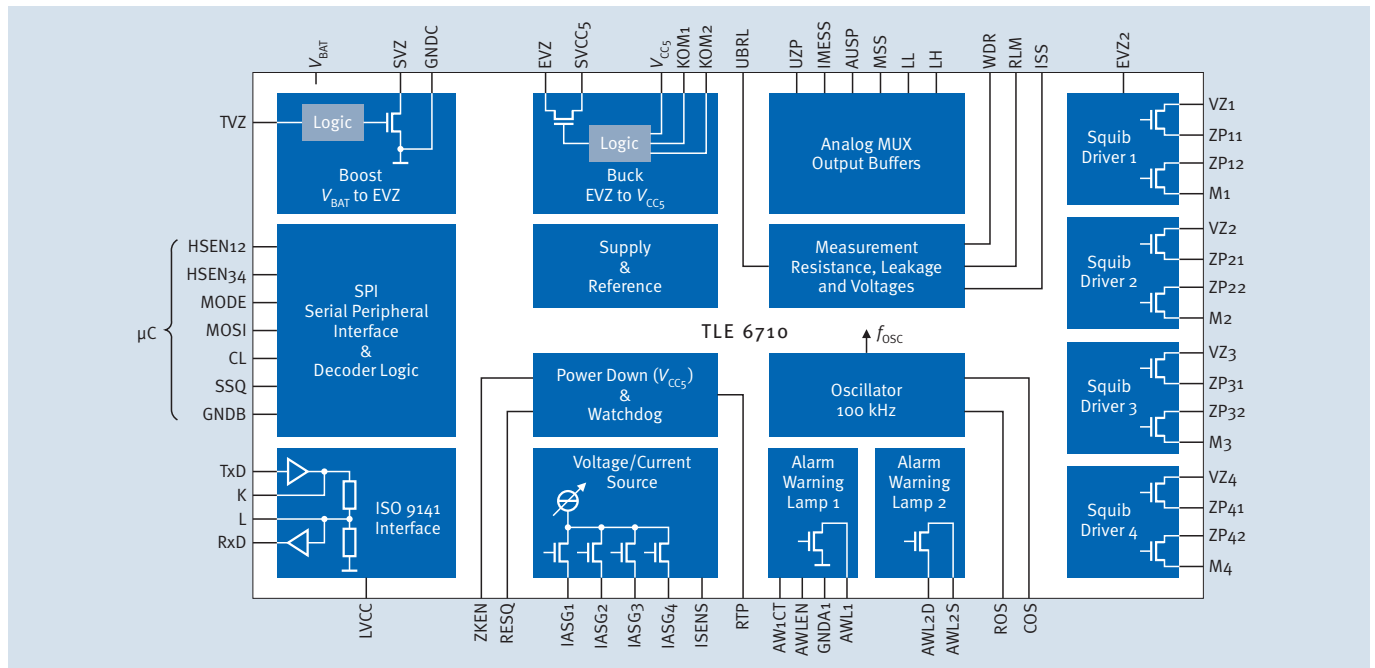
## Automotive Power



Never stop thinking

# Product Brief

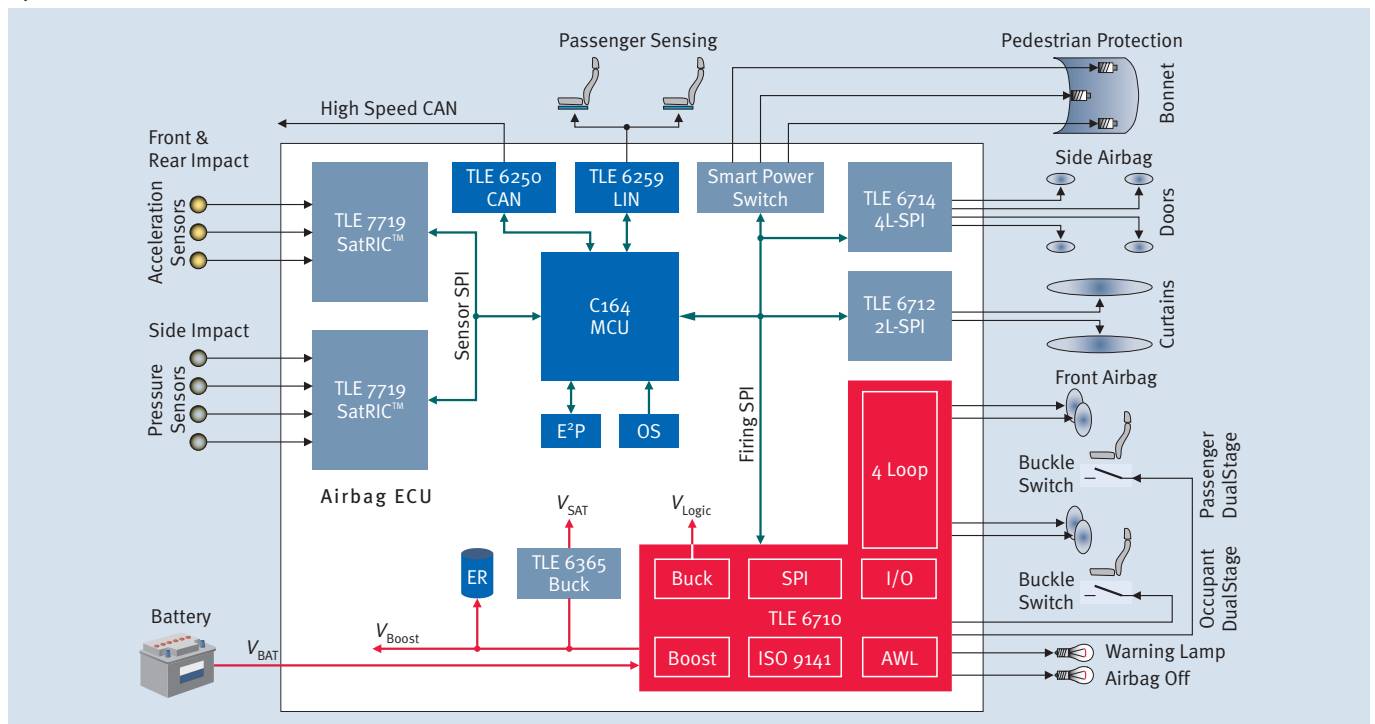
## Block Diagram



## Product Summary

Type	Sales Code	Description	Package
TLE 6710Q	available upon request	Airbag System IC	P-MQFP-64-11

## System Overview



How to reach us:  
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