



Product Brief

TLE9471

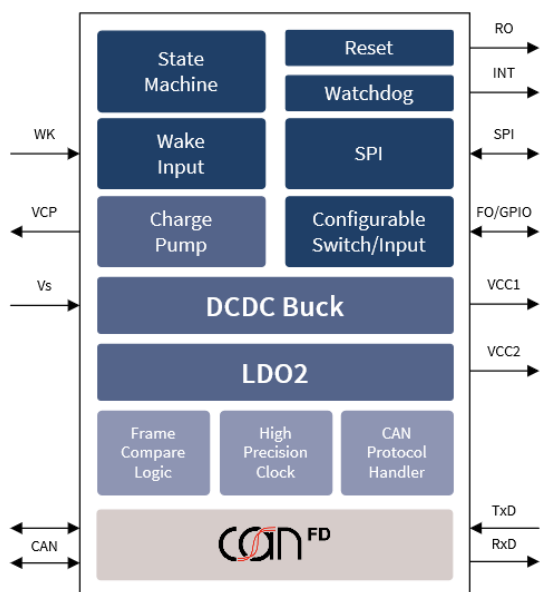
Lite DCDC System Basis Chip supports CAN Flexible Data-Rate (FD) and Partial Networking (PN)

The Lite SBC family (TLE94x1) is available as 5V or 3.3V output voltage version for microcontrollers, network transceivers, sensors and other peripherals' power supply. The Lite DCDC SBCs feature a buck converter with up to 500mA as well as an auxiliary 5V low-drop voltage regulator with up to 100mA of output current. The communication interface incorporates one CAN transceiver with Flexible Data-Rate performance up to 5Mbit/s according to ISO 11898-2:2016 (including Partial Networking option). It complies with the latest automotive standards and OEM requirements. All devices feature a PG-TSDSO-24 (8.65mm x 6mm). The entire Lite SBC family (TLE94x1) is hardware compatible, and is also software compatible with TLE926x & TLE927x.

Key benefits

- > Reduced system cost through low component count and small PCB footprint
- > Integrated charge pump that can drive an external N-FET
- > Extends battery life with very low quiescent current modes
- > Enables design flexibility and reduces software design effort by shared state machine and SPI access within the entire Lite SBC family
- > Meets major car OEM requirements with excellent EMC and ESD performance

Block diagram



Key features

- > 5V/3.3V Buck converter up to 500mA
 - o Programmable switching frequency up to 2.4MHz
 - o Spread Spectrum for EMI mitigation
- > 5V Linear Voltage Regulator up to 100mA (Vcc2)
- > CAN FD up to 5Mbps (acc. to ISO 11898-2), CAN PN FD Tolerant ("-3" variants)
- > 1x HV Wake input, Watchdog, Reset, Interrupt, Fail Output
- > Charge Pump Output for Load Switch / Reverse Current Protection
- > Alternative Functions for Fail Output: Wake, Low-Side or High-Side Switch (up to 45mA)
- > Low Power Modes with full wake capability

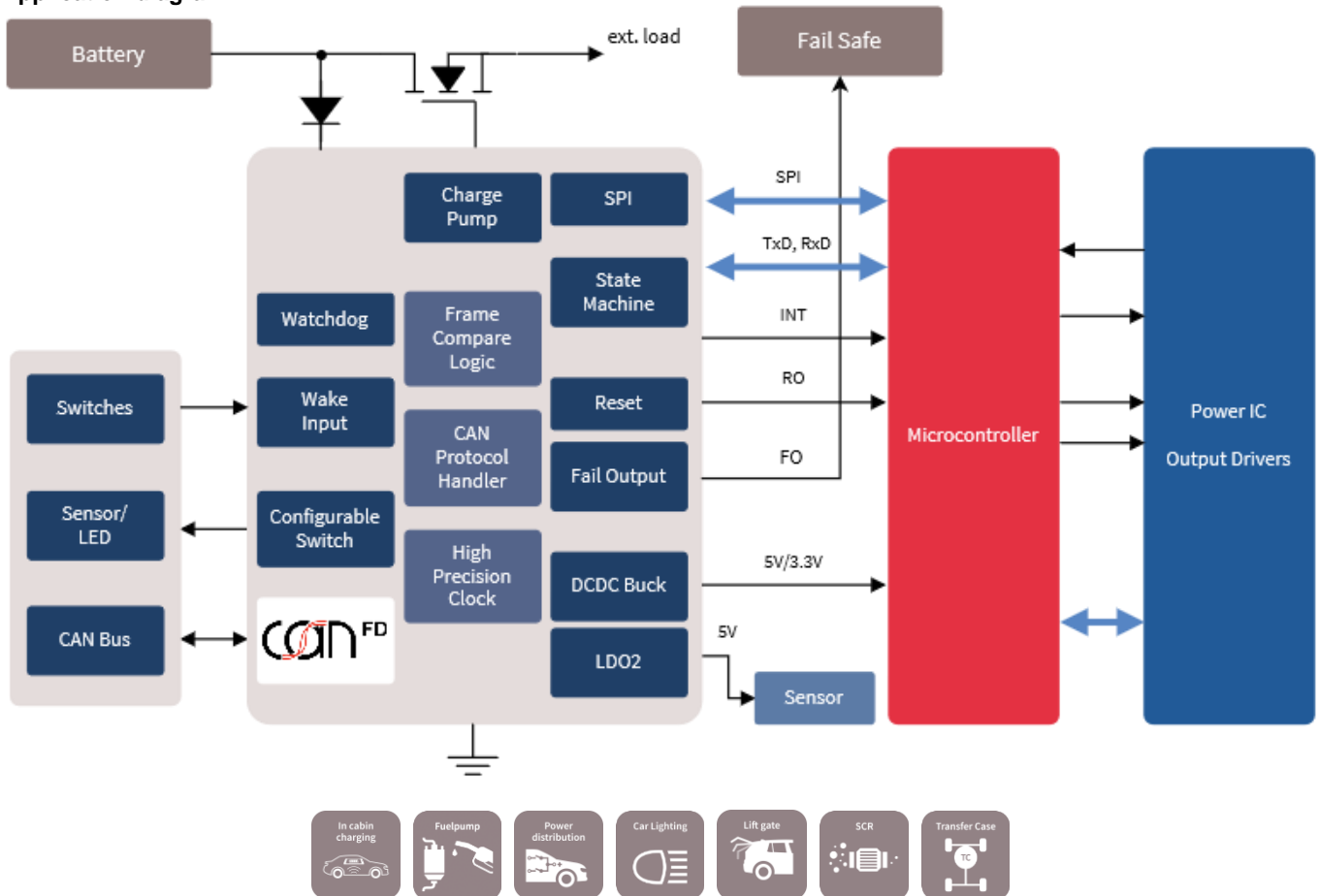
Key applications

- > In-Cabin Wireless Charger
- > Auto Transmission
- > Transfer Case
- > Exhaust module and NOx sensor
- > HVAC ECU and Control panel
- > Wiper ECU
- > Water pump
- > Light Control Unit (LCU) for front and rear
- > Smart Power Distribution modules

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Application diagram



Product Table

Product Variant	VCC1	VCC2	CAN FD	CAN PN
TLE9471ES	5V up to 500mA	5V up to 100mA	✓	✗
TLE9471-3ES	5V up to 500mA	5V up to 100mA	✓	✓
TLE9471ESV33	3.3V up to 500mA	5V up to 100mA	✓	✗
TLE9471-3ESV33	3.3V up to 500mA	5V up to 100mA	✓	✓

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