

Product Brief

TLE9461

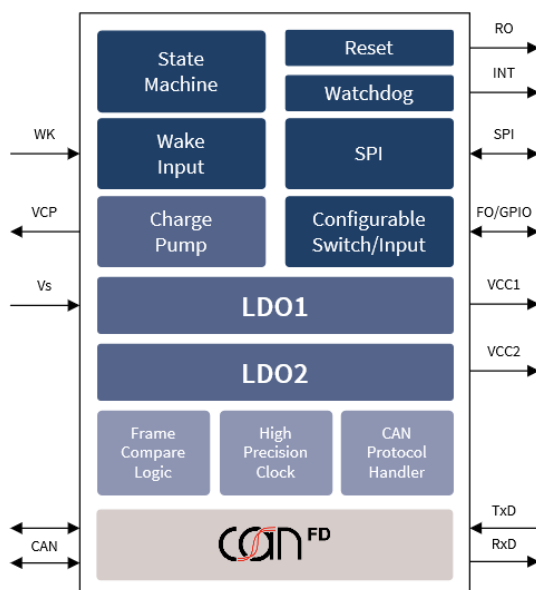
Lite LDO System Basis Chip supports CAN Flexible Data-Rate (FD) and Partial Networking (PN)

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 LDO SBCs feature a low-dropout voltage regulator with an output current of 150mA as well as an auxiliary 5V low-dropout voltage regulator with 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 Linear Voltage Regulator up to 150mA (Vcc1)
- > 5V Linear Voltage Regulator up to 100mA (Vcc2)
- > CAN FD up to 5Mbps (acc. to ISO 11898-2:2016), CAN PN and 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

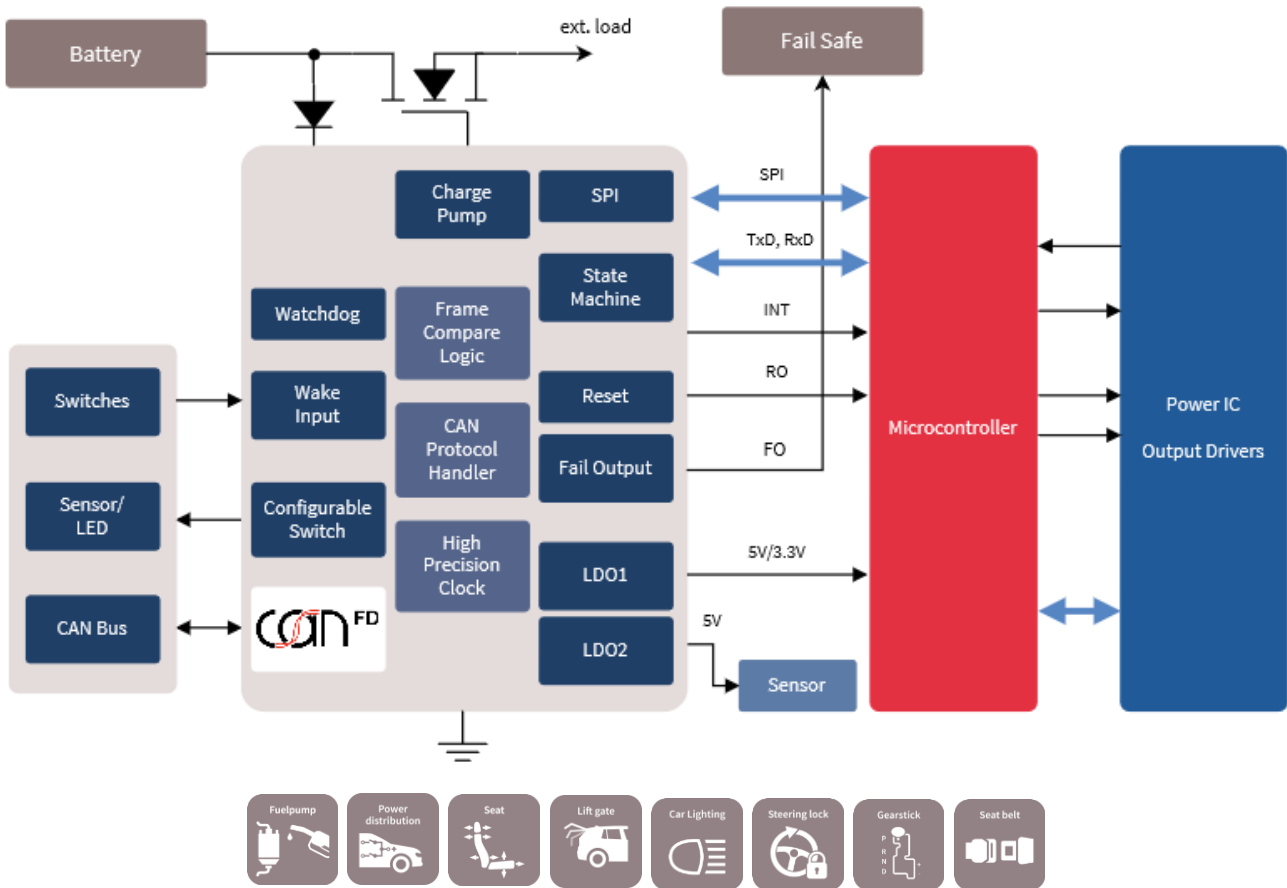
Key applications

- > Steering column and steering lock
- > Seat control module
- > Seat belt pretension
- > Closure (power lift gate, sliding door, etc.)
- > Heating, ventilation and air conditioning (HVAC)
- > Gear shifter and selectors
- > Light Control Unit (LCU) for front, and rear
- > Smart Power Distribution modules
- > Fuel pump

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Application diagram



Product Table

| Product Variant | VCC1 | VCC2 | CAN FD | CAN PN |
|-----------------|------------------|----------------|--------|--------|
| TLE9461ES | 5V up to 150mA | 5V up to 100mA | ✓ | ✗ |
| TLE9461-3ES | 5V up to 150mA | 5V up to 100mA | ✓ | ✓ |
| TLE9461ESV33 | 3.3V up to 150mA | 5V up to 100mA | ✓ | ✗ |
| TLE9461-3ESV33 | 3.3V up to 150mA | 5V up to 100mA | ✓ | ✓ |

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