

## Product Brief

# TLE926xB

## Mid-Range+ System Basis Chip family supporting CAN Flexible Date-rate (FD) and Partial Networking (PN)

Infineon's highly integrated Mid-Range+ System Basis Chip (SBC) family TLE926xB offers best performance and scalability for various automotive applications. The Mid-Range+ SBCs feature three low-drop voltage regulators with 5V or 3.3V output voltage options for microcontroller, network transceivers, sensors and other peripherals' power supply. As communication interfaces they incorporate one CAN transceiver (including Partial Networking option) Flexible Data-rate performance up to 5 Mbit/s and up to two LIN transceivers complying with the latest automotive standards and OEM requirements. The devices include diagnostic and supervision features for support of ECU functional safety concepts like under-voltage monitoring, window watchdog with reset, fail-safe operating mode, and fail-safe outputs. Four high-side switches are available in order to drive external loads, three wake-inputs and two General Purpose Input-Outputs (GPIOs) allow monitoring of inputs or activation of loads. The Mid-Range+ SBCs can be put into low power modes with full wake capability for very low quiescent current consumption in order to support applications that are connected permanently to the battery. All devices feature an exposed pad VQFN-48 (7mm x 7mm) power package supporting Automatic Optical Inspection (AOI). The entire family is pin-to-pin and software compatible, also to other Infineon SBC families, and is designed to withstand the severe conditions of automotive applications.

### Key benefits

- › Reduced system cost through low component count and small PCB footprint
- › Low-drop voltage regulators for on- and off-board supply
- › Wide supply input voltage and temperature range
- › High-performance network transceivers
- › Flexible number of integrated LIN transceivers
- › Very low quiescent current modes
- › Very small package supporting AOI
- › Pin and software compatibility amongst all family members
- › Excellent EMC and ESD performance meeting major car OEM requirements

### Target applications

- › Body Control Modules (BCM) and Gateways
- › Heating, ventilation and air conditioning (HVAC)
- › Door, roof, tailgate, trailer and closure modules
- › Passive keyless entry, passive start modules
- › Seat control modules
- › Light control modules
- › Gear shifters and selectors

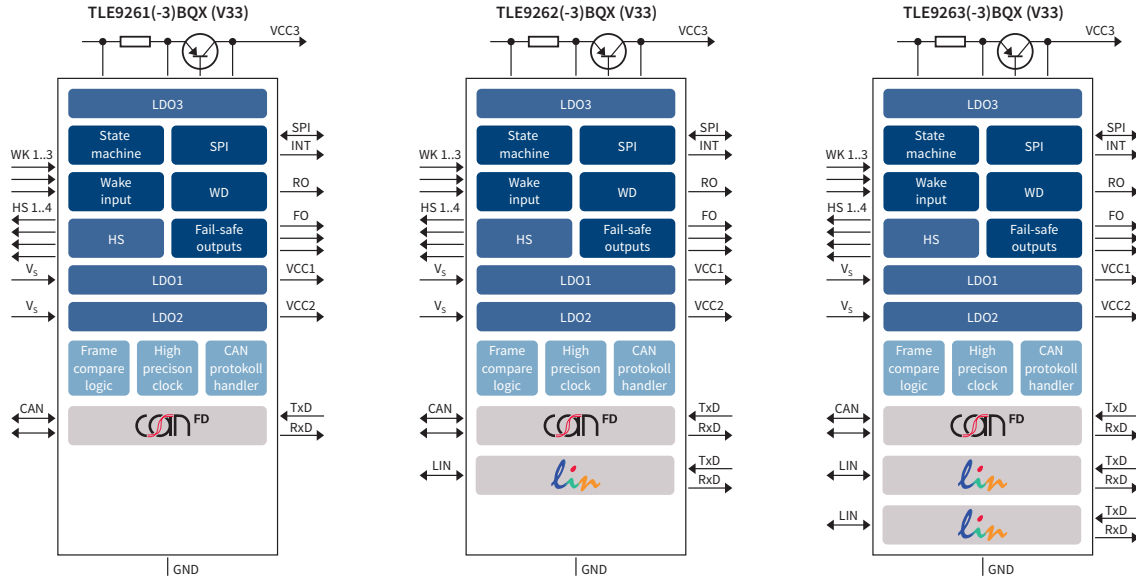
[www.infineon.com/sbc](http://www.infineon.com/sbc)

### Key features

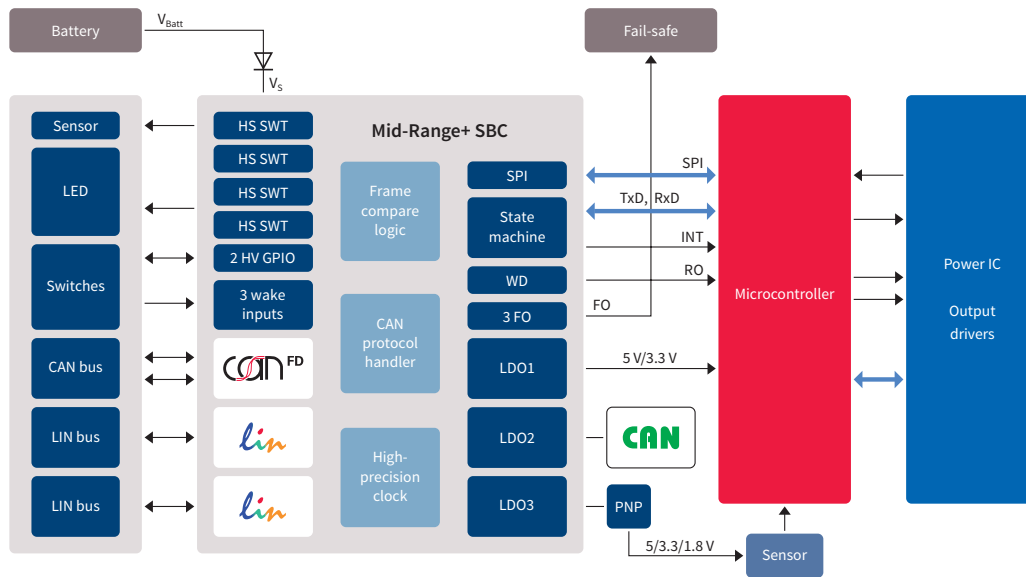
- › Integrated low-drop voltage regulator (5 V or 3.3 V up to 250 mA)
- › Integrated low-drop voltage regulator (5 V up to 100mA), protected for off-board usage
- › Voltage regulator (5 V, 3.3 V or 1.8 V) with external PNP transistor, protected for off-board usage or for load-sharing
- › 1 CAN transceiver supporting FD communication up to 5 Mbit/s according ISO 11898-2:2016
- › CAN Partial Networking FD tolerant mode
- › 2 LIN transceivers LIN2.2/J2602
- › 4 high-side outputs 7  $\Omega$  typ.
- › 2 HV GPIOs, 3 HV wake inputs
- › Interrupt, reset output
- › Integrated fail-safe functions: 3 fail-safe outputs, watchdog, fail-safe operating modes
- › 16-bit SPI for configuration and diagnostics
- › Voltage, current and temperature protection and monitoring

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## Family overview



## Application diagram



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