



Product Brief

TLE9255W

CAN FD transceiver with partial networking



The TLE9255W is part of the latest Infineon CAN transceiver family being fully compliant to the new ISO 11898-2:2016 and also to the former ISO 11898-6. Besides CAN with Partial Networking (CAN PN), the transceiver is fully compliant to CAN FD 5 Mbit/s and is also fulfilling the worldwide OEM wake filter time requirement of 1.8 μsec as well as 0.5 μsec .

The TLE9255WSK is offered in standard DSO-14, while the TLE9255WLC is realized in tiny leadless TSON-14 package with Lead Tip Inspection (LTI) feature providing Automated Optical Inspection (AOI) capability. This makes the TSON-14 packaged CAN with partial networking transceiver perfectly suited for applications where tight space restrictions mandate the use of the smallest package possible.

The SPI interface of the TLE9255W is used to setup the wake-up functions as well as the INH output, the mode and the undervoltage control of the device. This allows a very flexible usage of the TLE9255W in different automotive applications.

The two non-low power modes (normal-operating mode and receive-only mode) and the two low power modes (sleep mode and stand-by mode) provide minimum current consumption based on the required functionality. In sleep mode for example the TLE9255W draws only 26 μA quiescent current and can still detect a Wake-Up Pattern (WUP) on the CAN bus.

The TLE9255W can also be used to block the payload of CAN FD messages. This CAN FD tolerant feature allows the usage of microcontrollers in CAN FD networks, which are not CAN FD capable.

The unique power-supply concept supports different supply architectures like for example the usage of the TLE9255W even without the battery supply being connected. In this case the TLE9255W is supplied via the V_{CC} pin.

The V_{IO} voltage reference supports 3.3 V microcontroller interfaces as well as 5.0 V. Based on Infineon Smart Power Technology (SPT), the TLE9255W provides excellent ESD robustness together with a very high Electromagnetic Immunity (EMI). This TLE9255W is AEC qualified and tailored to withstand the harsh conditions of the automotive environment.

Key features

- > Fully compliant to ISO 11898-2 edition 2016
- > CAN FD data rates up to 5 Mbit/s
- > Wake filter time of 1.8 $\mu\text{sec} > t_{\text{filter}} > 0.5 \mu\text{sec}$ meeting worldwide OEM requirements
- > Excellent ESD robustness of $\pm 8 \text{ kV}$ at HBM and $\pm 11 \text{ kV}$ according to IEC 61000-4-2
- > Advanced bus biasing according to ISO 11898-2:2016
- > Wake-Up Frame (WUF) detection according to ISO 11898-2:2016
- > Backwards compatible to classical CAN standard
- > Wake-up frame detection with CAN FD tolerant feature
- > Wide common mode range for Electromagnetic Immunity (EMI)
- > Very low Electromagnetic Emission (EME)
- > Independent supply concept on V_{CC} and V_{Batt} pins
- > Fail safe features like TxD-timeout
- > CAN short circuit proof to ground, battery and V_{CC}
- > Local wake-up input
- > SPI clock frequency up to 4 MHz
- > Green product (RoHS compliant)
- > AEC qualified

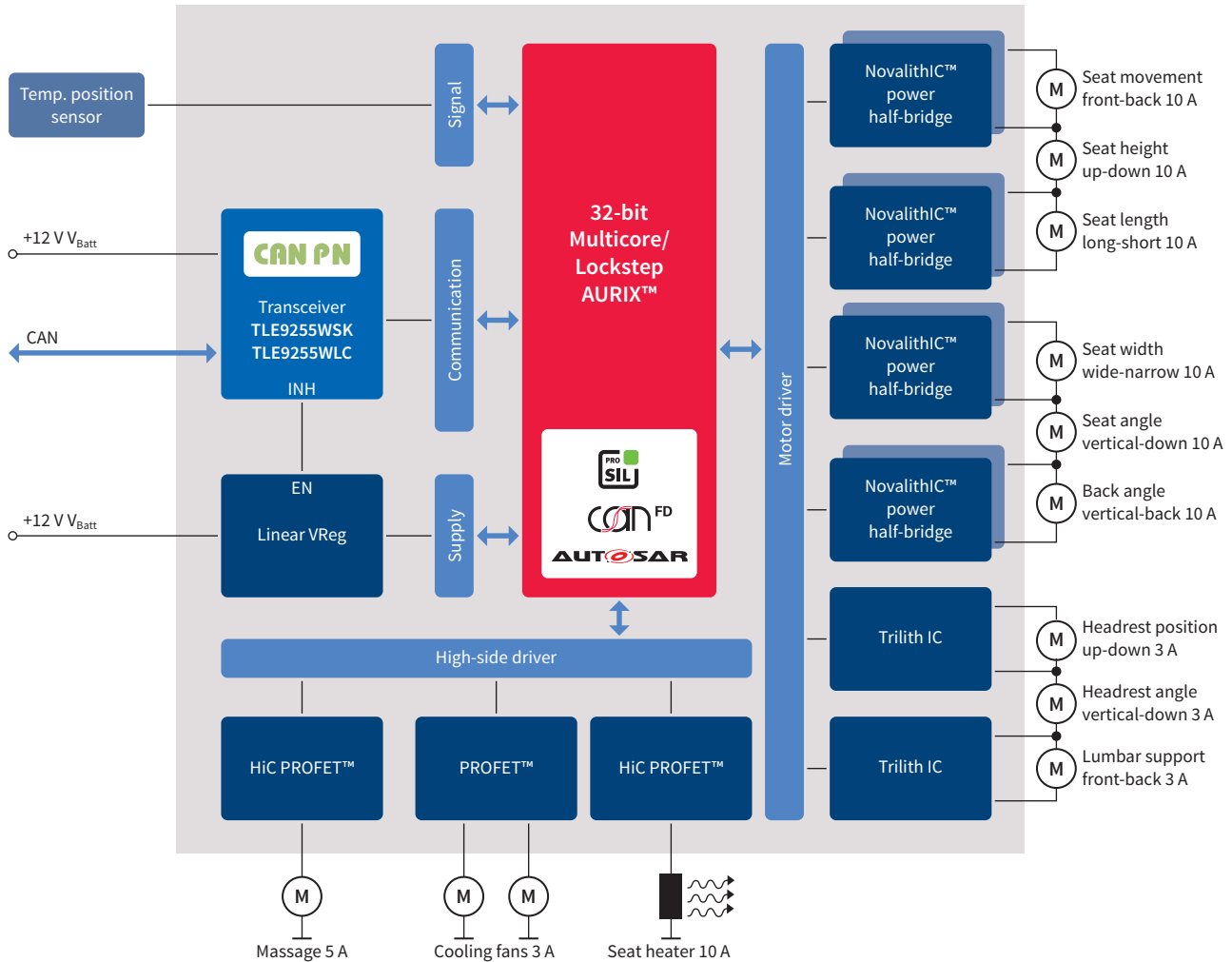


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Application example: seat control module



Product summary

Type	Description	SP number/orderable part number
TLE9255WSK	CAN FD 5 Mbit/s transceiver with partial networking in DSO-14	SP001593528/TLE9255WSKXUMA2
TLE9255WLC	CAN FD 5 Mbit/s transceiver with partial networking in TSON-14	SP001373598/TLE9255WLCXUMA1

Published by
Infineon Technologies AG
81726 Munich, Germany

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