

Product brief

TLE925x



CAN flexible data-rate transceiver family for up to 5 MBit/s

The TLE925x transceiver family is designed for CAN FD networks in Automotive applications. As CAN FD networks will increase and replace classical CAN networks in future, the TLE925x transceiver family is providing the perfect match for future OEM requirements.

The whole TLE925x family is fully compliant to the new ISO11898-2:2016 and the wake-up capable variants are fulfilling the worldwide OEM t-wake filter time requirement of 1.8 μ sec as well as 0.5 μ sec. As the new CAN FD family is also fulfilling the older ISO standards, it is backwards compatible and can also be used in classical CAN networks.

It is offered with 5 different pinout options and each is available in two different packages. One package option is the standard DSO-8 package (SJ-suffix) and the second one is the tiny TSON-8 leadless package (LE-suffix) with Lead Tip Inspection (LTI) feature, providing automated optical inspection (AOI) capability. This makes the LE variants perfectly suited for applications where tight space restrictions mandate the use of the smallest package possible.

The 5 different pinouts on offer do support 1to1, easy drop in replacement for existing market pinouts, enabling the use of the highest robustness and best EMC behavior Infineon CAN FD transceivers even in existing designs and PCB assemblies.

The 3 variants without bus wake up capability named TLE9250, while the devices with bus wake-up capability start with TLE9251. These draw very low quiescent current in stand-by mode and on the TLE9251V (with V_{IO} pin), V_{CC} can even be switched off, while still being able to wake-up by signals on the CAN bus. Additionally all TLE925x variants with V_{IO} input pin can interface either with 3.3 V or 5 V micro controllers.

Based on the excellent symmetry of the CANH and CANL signals, the TLE925x transceivers have very low levels of electromagnetic emission (EME) over a wide frequency range. The TLE925x family is RoHS compliant and fulfills or exceeds the requirements of the ISO11898-2 (2016) standard.

The different operation modes, additional fail-safe features like TxD time-out, and the optimized output slew rates on the CANH and CANL signals make the TLE925x family the perfect choice for large CAN networks with high data transmission rates as required in Automotive CAN FD networks.

Key features

- > Fully compliant to ISO11898-2:2016
- > Guaranteed loop delay symmetry to support CAN FD up to 5 MBit/s
- > Variants with V_{IO} input for voltage adaption to 3.3 V and 5 V MCUs
- > Bus wake-up capability on the V_{IO} variants (12 μ A (max)) remain active even with the V_{CC} supply switched off
- > Bus wake-up capability fulfills t-wake filter time requirement of 1.8 μ sec as well as 0.5 μ sec
- > TxD time-out safety feature
- > High electromagnetic immunity (EMI) and low electromagnetic emissions (EME)
- > Excellent ESD robustness of ± 9 kV at HBM and ± 8 kV according to IEC61000-4-2
- > Available in DSO-8 and tiny leadless TSON-8 package
- > AEC Qualified

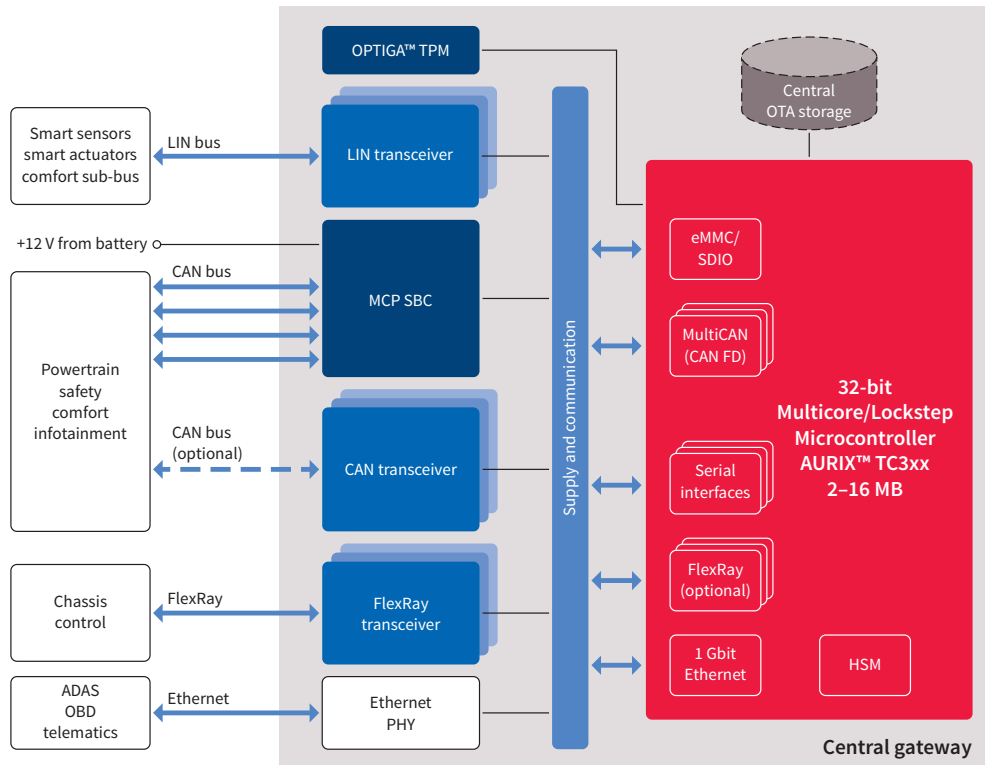


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Application Example: Central Gateway Module



Product summary

Type	Description	SP number/Orderable part number
TLE9250SJ	CAN FD 5 MBit/s transceiver without bus wake capability in DSO-8	SP001358154/TLE9250SJXUMA1
TLE9250LE	CAN FD 5 MBit/s transceiver without bus wake capability in TSON-8	SP001631572/TLE9250LEXUMA1
TLE9250VSJ	CAN FD 5 MBit/s transceiver without bus wake capability in DSO-8	SP001358156/TLE9250VSJXUMA1
TLE9250VLE	CAN FD 5 MBit/s transceiver without bus wake capability in TSON-8	SP001631590/TLE9250VLEXUMA1
TLE9250XSJ	CAN FD 5 MBit/s transceiver without bus wake capability in DSO-8	SP001358158/TLE9250XSJXUMA1
TLE9250XLE	CAN FD 5 MBit/s transceiver without bus wake capability in TSON-8	SP001631594/TLE9250XLEXUMA1
TLE9251SJ	CAN FD 5 MBit/s transceiver with bus wake capability in DSO-8	SP001825552/TLE9251SJXUMA1
TLE9251VSJ	CAN FD 5 MBit/s transceiver with bus wake capability in TSON-8	SP001358162/TLE9251VSJXUMA1
TLE9251VLE	CAN FD 5 MBit/s transceiver with bus wake capability in DSO-8	SP001631598/TLE9251VLEXUMA1
TLE9251LE	CAN FD 5 MBit/s transceiver with bus wake capability in TSON-8	SP001987446/TLE9251LEXUMA1

Published by
Infineon Technologies AG
81726 Munich, Germany

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