

## Product Brief

# TLE7251VSJ and TLE7251VLE



## CAN transceiver for Flexible Data-rate up to 2 Mbit/s

The TLE7251V transceiver is designed for CAN networks in automotive applications and is available in two different packages. One package option is the TLE7251VSJ in standard DSO-8 package, being pin- and footprint compatible to existing ECU designs using the predecessor TLE6251D and therefore enabling easy drop in transition to CAN FD. The second option is the TLE7251VLE in tiny TSON-8 leadless package with Lead Tip Inspection (LTI) feature providing Automated Optical Inspection (AOI) capability. This makes the TLE7251VLE perfectly suited for applications where tight space restrictions mandate the use of the smallest package possible.

As an interface between the physical bus layer and the CAN protocol controller, the TLE7251V drives the signals to the bus and protects the microcontroller against transients generated from the network. Based on the excellent symmetry of the CANH and CANL signals, the TLE7251V transceiver has very low levels of Electromagnetic Emission (EME) over a wide frequency range. The TLE7251V is RoHS compliant and fulfills or exceeds the requirements of the ISO 11898-2/-5 standards.

The TLE7251V draws very low quiescent current in stand-by mode with  $V_{CC}$  being switched off, while still being able to wake-up by signals on the CAN bus. Based on the very low leakage currents on the CAN bus interface, the TLE7251V transceiver provides excellent passive behavior in power-down state. With the  $V_{IO}$  input the TLE7251V can interface either with 3.3 V or 5 V microcontrollers. These and other features make the TLE7251V very well suited for mixed supply CAN networks.

Two different operation modes, additional fail-safe features like a TxD time-out, and the optimized output slew rates on the CANH and CANL signals make the TLE7251V the ideal choice for large CAN networks with high data transmission rates as required in automotive CAN FD networks.

### Key features

- > Compliant to ISO11898-2: 2003 and ISO11898-5: 2007
- > Guaranteed loop delay symmetry to support CAN FD up to 2 Mbit/s
- >  $V_{IO}$  input for voltage adaption to 3.3 V and 5 V microcontrollers
- > CMOS level switching thresholds on RxD and TxD for best CAN FD signal symmetry
- > Transmitter supply  $V_{CC}$  can be switched off in stand-by mode
- > Minimized  $V_{IO}$  quiescent current of only 14  $\mu$ A (max)
- > Extended supply range on  $V_{CC}$  and  $V_{IO}$  supply
- > TxD time-out safety feature
- > Available in DSO-8 and tiny leadless TSON-8 package
- > High Electromagnetic Immunity (EMI) and low Electromagnetic Emissions (EME).
- > Excellent ESD robustness of  $\pm 9$  kV at HBM and  $\pm 8$  kV according to IEC 61000-4-2
- > Protected against automotive transients
- > Overtemperature protection
- > Green product (RoHS compliant).
- > AEC-qualified



Lead-Free



Halogen-Free



Green



CAN  
2 Mbits/s

FD



$V_{IO}$



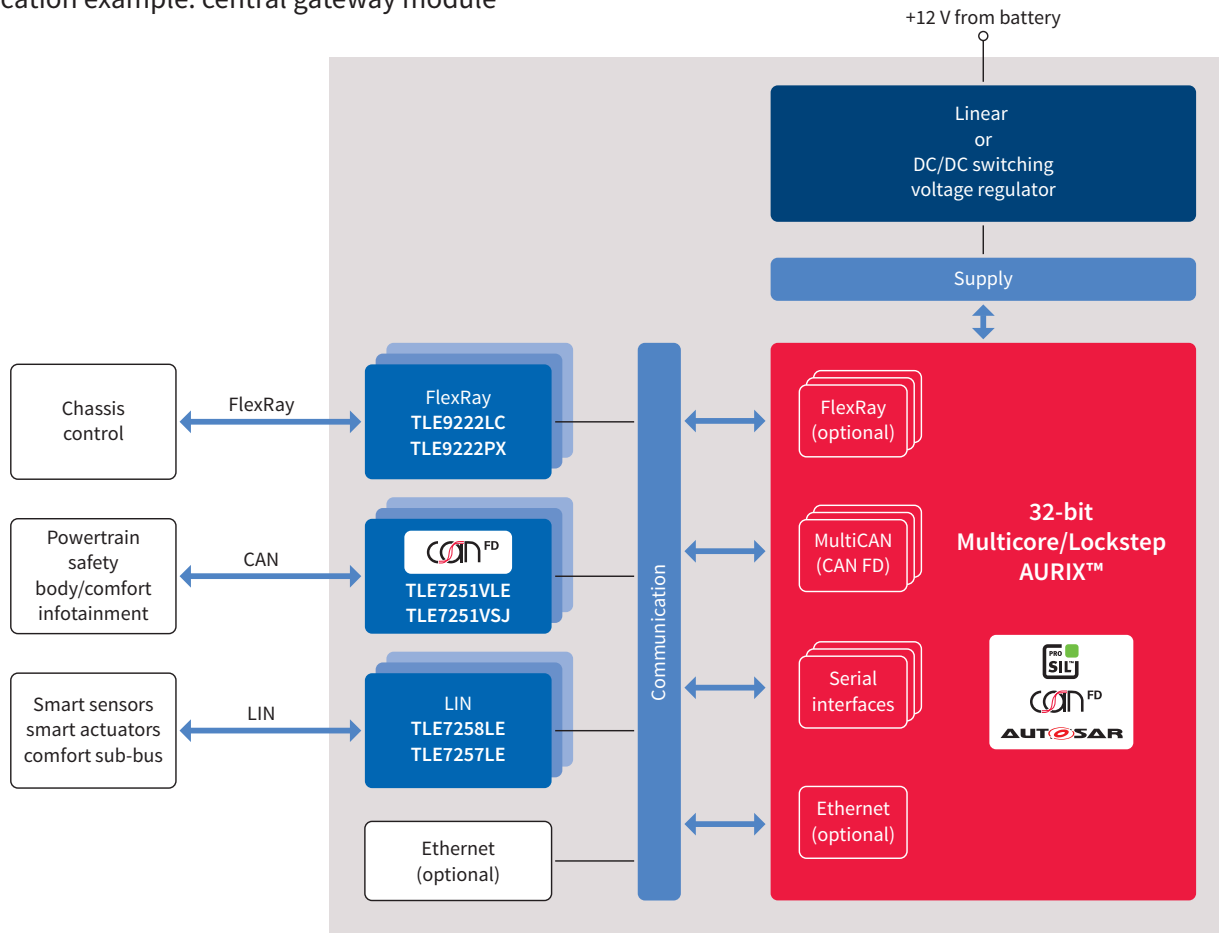
AEC  
Qualified

# TLE7251VSJ and TLE7251VLE



CAN transceiver for Flexible Data-rate up to 2 Mbit/s

Application example: central gateway module



## Product summary

Type	Description	SP number/orderable part number
TLE7251VSJ	CAN FD 2 Mbit/s transceiver with bus wake capability in DSO-8	SP001243718/TLE7251VSJXUMA1
TLE7251VLE	CAN FD 2 Mbit/s transceiver with bus wake capability in TSON-8	SP001092016/TLE7251VLEXUMA1

Published by  
Infineon Technologies AG  
81726 Munich, Germany

© 2016 Infineon Technologies AG.  
All Rights Reserved.

### Please note!

THIS DOCUMENT IS FOR INFORMATION PURPOSES ONLY AND ANY INFORMATION GIVEN HEREIN SHALL IN NO EVENT BE REGARDED AS A WARRANTY, GUARANTEE OR DESCRIPTION OF ANY FUNCTIONALITY, CONDITIONS AND/OR QUALITY OF OUR PRODUCTS OR ANY SUITABILITY FOR A PARTICULAR PURPOSE. WITH REGARD TO THE TECHNICAL SPECIFICATIONS OF OUR PRODUCTS, WE KINDLY ASK YOU TO REFER TO THE RELEVANT PRODUCT DATA SHEETS PROVIDED BY US. OUR CUSTOMERS AND THEIR TECHNICAL DEPARTMENTS ARE REQUIRED TO EVALUATE THE SUITABILITY OF OUR PRODUCTS FOR THE INTENDED APPLICATION.

WE RESERVE THE RIGHT TO CHANGE THIS DOCUMENT AND/OR THE INFORMATION GIVEN HEREIN AT ANY TIME.

### Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office ([www.infineon.com](http://www.infineon.com)).

### Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.