



High-speed CAN Transceiver with Standby and Sleep Mode

TJA1043

Last Updated: Jun 8, 2022

The TJA1043 high-speed CAN transceiver provides an interface between a Controller Area Network (CAN) protocol controller and the physical two-wire CAN bus. The transceiver is designed for high-speed CAN applications in the automotive industry, providing differential transmit and receive capability to (a microcontroller with) a CAN protocol controller.

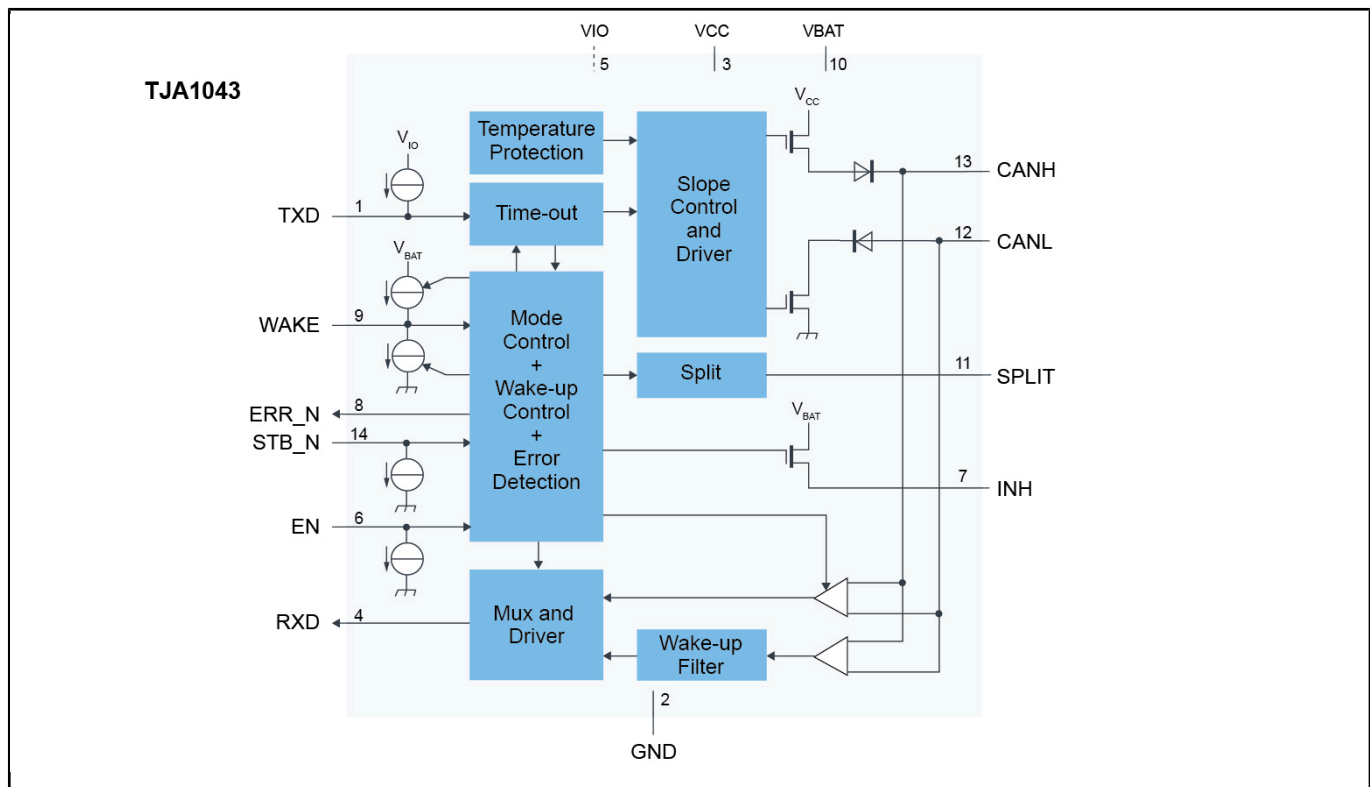
The TJA1043 belongs to the third generation of high-speed CAN transceivers from NXP Semiconductors, offering significant improvements over first- and second-generation devices such as the TJA1041A. It offers improved ElectroMagnetic Compatibility (EMC) and ElectroMagnetic Discharge (ESD) performance, very low power consumption, and passive behavior when the supply voltage is turned off. Advanced features include:

- Low-power management controls the power supply throughout the node while supporting local and remote wake-up with wake-up source recognition
- Several protection and diagnostic functions including bus line short-circuit detection and battery connection detection
- Can be interfaced directly to microcontrollers with supply voltages from 3 V to 5 V

The TJA1043 implements the CAN physical layer as defined in the current ISO11898 standard (ISO11898-2:2003, ISO11898-5:2007 and the pending updated version of ISO11898-2:2016). Pending the release of ISO11898-2:2016 including CAN FD and SAE-J2284-4/5, additional timing parameters defining loop delay symmetry are specified. This implementation enables reliable communication in the CAN FD fast phase at data rates up to 5 Mbit/s.

These features make the TJA1043 the ideal choice for high speed CAN networks containing nodes that need to be available all times, even when the internal VIO and VCC supplies are switched off.

TJA1043 Block Diagram Block Diagram



View additional information for [High-speed CAN Transceiver with Standby and Sleep Mode](#).

Note: The information on this document is subject to change without notice.

www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2022 NXP B.V.