

5-MBIT/S CAN FD CHIP

Stand-alone controller with on-chip transceiver

Texas Instruments (TI) has launched the TCAN 4550 stand-alone CAN FD protocol controller. On-chip is also a 5-Mbit/s qualified transceiver.



The CAN FD stand-alone controller with integrated transceiver is designed for body electronics, lighting, and commercial vehicles (Photo: Fotolia)

A dream becomes true: CAN FD protocol controller and transceiver in one piece. This helps all those, who do not need the powerful host controllers with multiple integrated CAN FD modules. Those chips are suitable for the big ECUs required for autonomous driving. The introduced stand-alone CAN FD chip can be connected via the 20-MHz SPI port to nearly any micro-controller. The integrated CAN transceiver complies with ISO 11898-2:2016 and supports data bit rates up to 5 Mbit/s. The CAN controller is based on Bosch's MCAN core (revision 3.2.1.1), which complies with ISO 11898-1:2015. It is designed for simple automotive applications, commercial vehicles, and the broad range of non-automotive applications.

The ACE Q100-qualified chip features a temperature range from -40 °C to +125 °C. The common mode range is ± 12 V, and the bus fault protection is specified for ± 42 V. If the chip is not powered, bus and logic terminals are high-impedance. The chip includes several protection features, which increases robustness on device and system level.

The TCAN 4550 supports also a low-power stand-by mode as well as sleep mode. It can also wake up via remote wake-up using Wake Up Pattern (WUP) as defined by ISO 11898-2. Samples are available as well as an evaluation board. Next dream is a host-controller featuring a CAN FD module plus transceiver.



The TCAN 4550 is the first CAN FD controller integrating a transceiver chip (Photo: Texas Instruments)

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