



PCAN_miniPCIe FD

The PCAN-miniPCIe FD is a CAN interface for the PCI Express Mini slot. With its space-saving format, the plug-in card is a suitable solution for connecting embedded systems to up to four CAN FD and CAN networks. There is galvanic isolation of up to 300 Volts between the computer and CAN sides. The card is available as a single, dual, or four-channel version.



The new CAN FD standard (CAN with Flexible Data rate) is primarily characterized by higher bandwidth for data transfer. The maximum of 64 data bytes per CAN FD frame (instead of 8 so far) can be transmitted with bit rates up to 12 Mbit/s. CAN FD is downward-compatible to the CAN 2.0 A/B standard, thus CAN FD nodes can be used in existing CAN networks. However, in this case the CAN FD extensions are not applicable.

Technical Specifications

- CAN interface for the PCI Express Mini slot (uses PCIe lane)
- 1, 2, or 4 High-speed CAN channels (ISO 11898-2)
- Form factor PCI Express Mini (only for single and dual channel versions due to the height of the four-channel version)
- Complies with CAN specifications 2.0 A/B and FD
- CAN FD support for ISO and Non-ISO standards switchable
- CAN FD bit rates for the data field (64 bytes max.) from 25 kbit/s up to 12 Mbit/s
- CAN bit rates from 25 kbit/s up to 1 Mbit/s
- CAN bus connection via connection cable and D-Sub, 9-pin (in accordance with CiA[®] 303-1)
- FPGA implementation of the CAN FD controller
- NXP TJA1044GT CAN transceiver
- Galvanic isolation on the CAN connection up to 300 V, separate for each CAN channel
- CAN termination can be activated through a solder jumper, separately for each CAN channel
- PCIe data transfer via bus master DMA
- DMA memory access operations with 32- and 64-bit addresses
- Measurement of bus load including error frames and overload frames on the physical bus
- Induced error generation for incoming and outgoing CAN messages
- Extended operating temperature range from -40 to 85 °C (-40 to 185 °F)