

PCAN-PCI/104-Express FD

CAN and CAN FD Interface for PCI/104-Express

The PCAN-PCI/104-Express FD allows the connection of PCI/104-Express systems to CAN and CAN FD buses. The PCI/104-Express specification establishes PCI Express for the PC/104 form factor wherewith up to four cards can be stacked. Based on this, standardized modular embedded systems such as industrial PCs can be realized. The CAN bus is connected via 9-pin D-Sub connectors to the supplied slot brackets. There is a galvanic isolation between the computer and the CAN side up to 500 Volts. The card is available as a single, dual, or four-channel version.

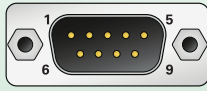
The monitor software PCAN-View and the programming interface PCAN-Basic for the development of applications with CAN connection are included in the scope of supply and support the standard CAN FD.

CAN FD is primarily characterized by higher bandwidth for data transfer. Further information about CAN FD can be found on page 10.



Specifications

- ☐ PCI/104-Express card, 1 lane (x1)
- ☐ Form factor PC/104
- ☐ Up to four cards can be used in one system
- ☐ 1, 2, or 4 High-speed CAN channels (ISO 11898-2)
- ☐ 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 20 kbit/s up to 12 Mbit/s
- ☐ CAN bit rates from 20 kbit/s up to 1 Mbit/s
- ☐ Connection to CAN bus through D-Sub slot bracket, 9-pin (in accordance with CiA® 106)
- ☐ FPGA implementation of the CAN FD controller
- ☐ Microchip CAN transceiver MCP2558FD
- ☐ Galvanic isolation on the CAN connection up to 500 V, separate for each CAN channel
- ☐ CAN termination can be activated through solder jumpers, separately for each CAN channel
- ☐ 5-Volt supply to the CAN connection can be connected through a solder jumper, e.g., for external bus converter
- ☐ 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
- ☐ Optionally available: PCI-104 stack-through connector
- ☐ Extended operating temperature range from -40 to +85 °C (-40 to +185 °F)

D-Sub	Pin	Pin assignment
	1	Not connected / optional +5V
	2	CAN-L
	3	GND
	4	Not connected
	5	Not connected
	6	GND
	7	CAN-H
	8	Not connected
	9	Not connected

Ordering information

Designation	Part No.
PCAN-PCI/104-Express FD Single Channel	IPEH-004080
PCAN-PCI/104-Express FD Dual Channel	IPEH-004081
PCAN-PCI/104-Express FD Four Channel	IPEH-004082

Scope of supply

- ☐ PCAN-PCI/104-Express FD card
- ☐ Slot bracket with D-Sub connector(s) for the CAN bus (two for the four-channel version)
- ☐ Device drivers for Windows 11 (x64), 10 (x64), and Linux
- ☐ CAN monitor PCAN-View for Windows (details on page 94)
- ☐ Programming interface PCAN-Basic for developing applications with CAN connection (details on page 80)
- ☐ Programming interfaces for standardized protocols from the automotive sector
- ☐ Manual in PDF format