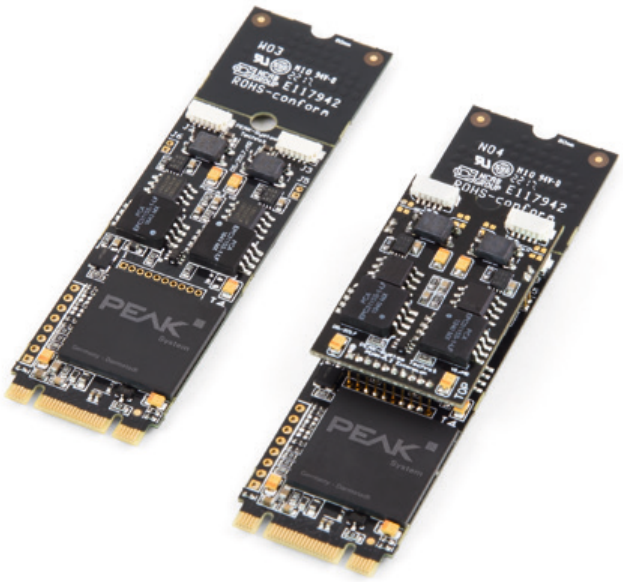
PCAN-M.2

CAN and CAN FD Interface for M.2 (PCIe)

The PCAN-M.2 allows the connection of CAN and CAN FD networks via the M.2 interface (PCIe) of modern computer boards. With its small format, the plug-in card is ideal for embedded PCs, single-board computers (SBC), and compact embedded applications. There is a galvanic isolation between the computer and the CAN side up to 300 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

- CAN interface for the M.2 slot (uses PCIe lane)
- 1, 2, or 4 High-speed CAN channels (ISO 11898-2)
- Form factor M.2 type: 2280/2260-B-M; Height: Single and Dual Channel 4.6 mm, Four Channel 10.2 mm; Component height of top side above form factor specification of 1.5 mm
- 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
- CAN bus connection via connection cable and D-Sub, 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 300 V, separate for each CAN channel
- CAN termination can be activated through solder jumpers, 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)

D-Sub	Pin	Pin assignment
	1	Not connected
	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-M.2 Single Channel	IPEH-004083
PCAN-M.2 Dual Channel	IPEH-004084
PCAN-M.2 Four Channel	IPEH-004085

Scope of supply

- PCAN-M.2 card
- Connection cables incl. D-Sub connector optionally 20 or 40 cm. Other lengths on request
- Device drivers for Windows 11 (x64), 10 (x64), and Linux
- CAN monitor PCAN-View for Windows (details on page 104)
- Programming interface PCAN-Basic for developing applications with CAN connection (details on page 90)
- Programming interfaces for standardized protocols from the automotive sector
- Manual in PDF format