

# PCAN-USB X6

6-Channel CAN and CAN FD Interface for High-Speed USB 2.0



The PCAN-USB X6 is a CAN FD interface for the USB port which allows the connection of up to 6 CAN FD or CAN buses. The device is therefore best suited for working with multiple CAN networks like the use in test benches with hardware-in-the-loop (HIL) simulations for motor vehicles or in the product line testing of CAN-based products.

The PCAN-USB X6 is installed in an aluminum profile casing and is shipped in versions with D-Sub connectors or M12 circular connectors. Especially the M12 version is suitable for use in harsh environments. In addition, a galvanic isolation of up to 300 Volts between the PC and the CAN side is guaranteed for the decoupled versions.

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 FD interface for High-speed USB 2.0 (compatible to USB 1.1 and USB 3.0)
- 6 High-speed CAN channels (ISO 11898-2)
  - Comply 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
  - FPGA implementation of the CAN FD controller
  - NXP TJA1044GT CAN transceiver
  - Alternative pluggable transceiver modules on request (details on page 9)
- Galvanic isolation on the CAN connection up to 300 V (only for IPEH-004063 and IPEH-004064)
- Time stamp resolution 1  $\mu$ s
- Status LEDs for CAN channels, USB upstream, and power supply
- CAN connection via D-Sub, 9-pin or M12 circular connectors, 5-pin (pin assignment of both connectors in accordance with CiA<sup>®</sup> 106)
- Aluminum casing with increased Ingress Protection IP64 (only for IPEH-004063)



- High-speed USB 2.0 downstream port (only for IPEH-004062 and IPEH-004064)
- CAN termination can be activated through solder jumpers, separately for each CAN channel
- Measurement of bus load including error frames and overload frames on the physical bus
- Induced error generation for incoming and outgoing CAN messages
- Voltage supply from 8 to 30 V
- Extended operating temperature range from -40 to +85 °C (-40 to +185 °F)

D-Sub (IPEH-004062 & IPEH-004064)	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

  

M12 (IPEH-004063)	Pin	Pin assignment
	1	Shield
	2	Not connected
	3	GND
	4	CAN-H
	5	CAN-L

### Ordering information

Designation	Part No.
PCAN-USB X6 with D-Sub connectors	IPEH-004062
PCAN-USB X6 with D-Sub connectors galv. isolated	IPEH-004064
PCAN-USB X6 with M12 circular connectors galv. isolated	IPEH-004063

### Scope of supply

- PCAN-USB X6 in aluminum casing including 4 mounting brackets
- IPEH-004062 and IPEH-004064: Mating connector for power supply
- IPEH-004063: Cables for power supply and USB connection
- Device drivers for Windows 11 (x64/ARM64), 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

**Please note:** The scope of supply does not contain a power supply unit for the device. There is no supply via the USB connection to the PC.