

PCAN-USB X6 – Detailed Data Sheet



Overview

The PCAN-USB X6 is a CAN FD interface that connects up to six CAN FD or CAN buses to a PC via High-Speed USB 2.0. It is ideal for use with multiple CAN networks in applications such as test benches, hardware-in-the-loop (HIL) simulations, and production line testing of CAN-based systems. Available with D-Sub or M12 circular connectors, and optional galvanic isolation for robust, industrial environments.

Technical Specifications

USB Interface:

- High-Speed USB 2.0 (compatible with USB 1.1 and 3.0)
- Downstream USB port (IPEH-004062 and IPEH-004064 only)

CAN Interface:

- 6 High-speed CAN channels (ISO 11898-2)
- Complies with CAN 2.0 A/B and CAN FD (ISO & non-ISO switchable)

- Bit Rate (CAN): 25 kbit/s to 1 Mbit/s
- Bit Rate (CAN FD): 25 kbit/s to 12 Mbit/s (64 bytes max per data field)
- Transceiver: NXP TJA1044GT (alternative modules available)
- Galvanic isolation up to 300 V (IPEH-004063 and IPEH-004064 only)
- Termination: Configurable via solder jumpers (per channel)
- FPGA-based CAN FD controller
- Bus Load Measurement: Includes error and overload frames
- Error Generation: Induced for incoming/outgoing CAN messages

General Hardware:

- Time stamp resolution: 1 μ s
- LED indicators: CAN channel status, USB, and power
- Voltage supply: 8 to 30 V (not via USB)
- Operating temperature: -40 °C to +85 °C (-40 °F to +185 °F)
- Aluminum casing (IP64 protection for IPEH-004063)

Connector Pin Assignments

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

- 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):

- 1: Shield
- 2: Not connected
- 3: GND
- 4: CAN-H
- 5: CAN-L

Product Variants

- PCAN-USB X6 with D-Sub connectors: IPEH-004062
- PCAN-USB X6 with D-Sub connectors (galvanic isolation): IPEH-004064
- PCAN-USB X6 with M12 connectors (galvanic isolation, IP64): IPEH-004063

Scope of Supply

- PCAN-USB X6 in aluminum casing with 4 mounting brackets
- IPEH-004062/004064: Mating connector for power supply
- IPEH-004063: Power and USB cables
- Drivers for Windows 11 (x64/ARM64), 10 (x64), and Linux
- PCAN-View monitoring software for Windows
- PCAN-Basic programming API for CAN
- APIs for standardized automotive protocols
- PDF user manual

Note: No power supply unit included. The device is not powered via USB.