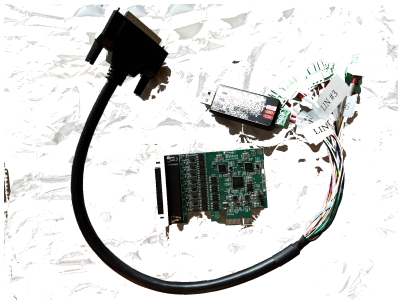
BUSMUST

BM-PCIE-X4 / X4L2 / X8 / X8L4

Multi-Channel PCIe CAN FD and LIN Interface Cards

RELEASE - REV A

Product models	BM-PCIE-X4, BM-PCIE-X4L2, BM-PCIE-X8, BM-PCIE-X8L4
Document	English product datasheet
Revision	REV A - 2026-07-27
Technical source	PCIe CAN FD/LIN series Chinese product specification



Document purpose

Technical product information for evaluation, integration, and purchasing. Specifications are based on the approved Chinese product document identified above.

1. Product overview

The BM-PCIE family brings four or eight CAN/CAN FD channels, with optional LIN, to industrial PCs and automated test systems through a PCIe 2.1 x1 interface.

Scope and limitation

The PCIe cards are non-isolated and require a host computer. They do not support standalone routing, standalone transmission, or standalone file logging.

Key capabilities

- Four or eight CAN/CAN FD channels; L models add two or four LIN channels.
- CAN receive and transmit throughput above 26,000 fps per channel.
- Up to 64 hardware-timed transmit tasks per channel.
- Hardware-accelerated ISO-TP flow-control handling.
- CAN FD data-phase bit rate up to 12 Mbps.
- One-microsecond hardware timestamps.
- Software-controlled CAN termination and LIN pull-up.
- PCIe 2.1 x1 power and communication with no external supply.

Typical applications

- Industrial PC bus interfaces
- Multi-channel ECU validation
- CAN FD and LIN data acquisition
- Automated production testing
- HIL and laboratory benches
- Custom Windows and Linux applications

2. Technical specifications

Host interface	PCIe 2.1 x1
CAN protocols	CAN 2.0 and CAN FD (ISO and Bosch modes)
CAN FD bit rate	5 kbps to 12 Mbps
CAN receive throughput	> 26,000 fps per channel
CAN transmit throughput	> 26,000 fps per channel
LIN protocols	LIN 1.3 to LIN 2.x on L models
LIN bit rate	1,200 to 19,200 bps
Timestamp resolution	1 us hardware timestamp
Timed transmit	Up to 64 tasks per channel
Termination	CAN: 120 ohms / disabled; LIN: 1 kohm / disabled
Isolation	Not isolated
External connector	DB25 female
Dimensions	78.2 x 59.6 x 20 mm, including bracket and edge connector
Weight	< 100 g
Power	From PCIe slot; < 1.5 W
Operating temperature	-40 to +85 deg C

3. Model selection and operating guidance

Model matrix

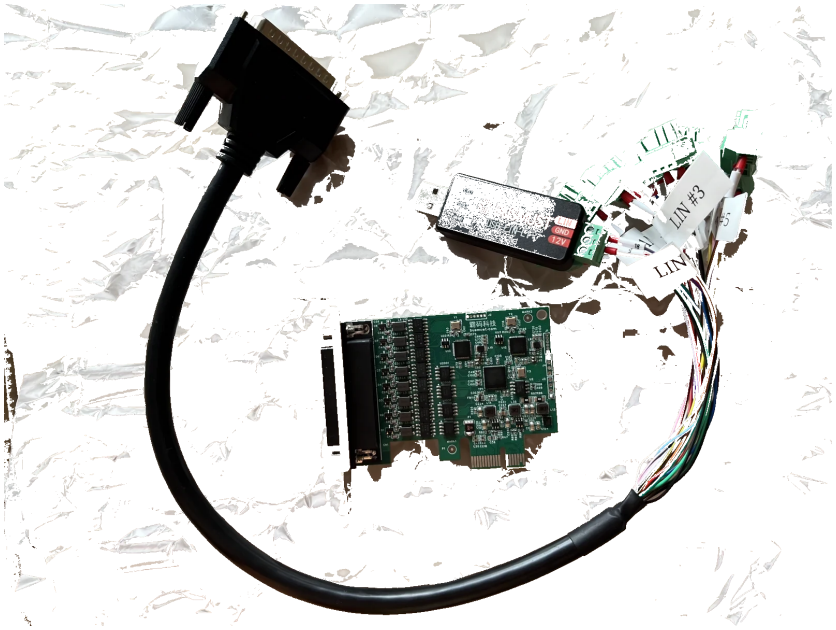
Model	CAN FD	LIN	External connector
BM-PCIE-X4	4	0	DB25 female
BM-PCIE-X4L2	4	2	DB25 female
BM-PCIE-X8	8	0	DB25 female
BM-PCIE-X8L4	8	4	DB25 female

Performance and integration notes

- All installed channels can operate concurrently; actual system throughput also depends on host and bus conditions.
- The source test reaches more than 26,000 fps with 8-byte frames at a 1 Mbps arbitration phase and 12 Mbps data phase.
- LIN supports master/slave operation, checksum options, receive filtering, and scheduled transmission.
- Standalone functions are not supported because the card depends on the host PC.

Selection rule
The PCIe cards are non-isolated and require a host computer. They do not support standalone routing, standalone transmission, or standalone file logging.

4. Mechanical and connector information



Product configuration shown for identification. Exact appearance and fitted options depend on the ordered model.

Mechanical and host interface summary

Host interface	PCIe 2.1 x1
External connector	DB25 female
Dimensions	78.2 x 59.6 x 20 mm, including bracket and edge connector
Weight	< 100 g
Power	From PCIe slot; < 1.5 W

Connector notes

- A DB25 female connector carries up to eight CAN FD and four LIN channels through the supplied breakout harness.
- Channel population depends on the ordered model; unused optional positions are not fitted on X4 models.

5. Software and engineering workflow

BUSMASTER

Use the graphical application to select the device, configure channels, observe frames and signals, record or replay traffic where supported, and run diagnostic workflows.

BMCLI

Use command-line and AI-assisted workflows for repeatable configuration, data inspection, diagnostics, test automation, and auditable engineering tasks.

BMAPI SDK

Build custom Windows or Linux applications through the shared BUSMUST programming interface. Availability of a specific function still depends on the hardware capabilities stated in this datasheet.

Important

Do not infer an unsupported function from software availability. Isolation, standalone operation, storage, routing, replay, and channel count are hardware-specific and are controlled by the model and configuration.

6. Ordering and support

Confirm the exact model, channel count, isolation requirement, connector or harness, operating environment, and any optional expansion before ordering.

Sales	sales@busmust.com
Technical support	support@busmust.com
Website	https://busmust.com/
Documentation	https://busmust.com/en/docs/

Specifications may change as the design evolves. Formal quotations, ordered configurations, approved samples, and project agreements govern delivered products.