



BM-LIN-L1

Portable Single-Channel USB LIN Analyzer

RELEASE - REV A

Product models	BM-LIN-L1
Document	English product datasheet
Revision	REV A - 2026-07-27
Technical source	L1 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

BM-LIN-L1 is a direct-plug single-channel LIN interface for master and slave simulation, signal analysis, scheduled transmission, and custom development.

Scope and limitation

L1 can store schedules and hardware tasks for operation without a PC, but it does not contain a TF card and is not intended for long-duration file logging.

Key capabilities

- LIN 1.3 to LIN 2.x protocol compatibility.
- Classic, enhanced, and custom checksum support.
- Transmit throughput above 50 frames per second.
- Controllable 1-kohm pull-up and 12 V / 5 V auxiliary supply.
- Master and slave modes with dynamic bit-rate measurement in slave mode.
- Receive operation at 100 percent bus load without frame loss in the stated test conditions.
- 64 hardware receive filters and 64 hardware-timed transmit tasks.
- Saved configuration and schedule operation after power-on.

Typical applications

- LIN ECU and node development
- LDF-based analysis
- Production-line validation
- Master and slave simulation
- Automated schedule testing
- Custom BMAPI applications

2. Technical specifications

Protocol	LIN 1.3 to LIN 2.x
Channel	1 x LIN
Bit rate	1,200 to 19,200 bps
Receive performance	No frame loss at 100 percent bus load in the specified test
Transmit throughput	> 50 fps
Node modes	Master and slave
Receive filters	64 hardware filters by LIN ID
Timed transmit	64 hardware tasks by LIN ID
Pull-up	Software-controlled 1 kohm / disabled
Auxiliary supply	12 V / 5 V, up to 100 mA for LIN PHY supply
USB	USB Full-Speed Type-A direct plug
Dimensions	53 x 23 x 14 mm, excluding terminal
Weight	< 50 g
Power	USB 5 V; < 1 W
Operating temperature	-40 to +85 deg C
Storage temperature	-40 to +105 deg C

3. Model selection and operating guidance

Model matrix

Model	LIN	Master/slave	Standalone tasks
BM-LIN-L1	1 channel	Supported	Supported

Performance and integration notes

- The auxiliary power pin supplies the LIN physical layer and is not an input for powering the analyzer itself.
- Master mode supports configurable schedules from 1,200 to 19,200 bps.
- Slave mode can measure the active bus bit rate dynamically.
- Use X2R/X4R or another logger when TF-card file recording is required.

Selection rule

L1 can store schedules and hardware tasks for operation without a PC, but it does not contain a TF card and is not intended for long-duration 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

USB	USB Full-Speed Type-A direct plug
Dimensions	53 x 23 x 14 mm, excluding terminal
Weight	< 50 g
Power	USB 5 V; < 1 W

Connector notes

- 3.81 mm 3-pin removable terminal: LIN, VBAT auxiliary supply, and GND.
- The pin order is marked on the enclosure.

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.