



BM-GWR

Configurable Industrial Gateway and Data Logger

RELEASE - REV A

Product models	BM-GWR
Document	English product datasheet
Revision	REV A - 2026-07-27
Technical source	BM-GWR Chinese product specification dated 2025-03-26



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-GWR is a Linux industrial gateway and recorder for multi-bus data acquisition, standalone logging, routing, replay, and edge applications. Its low-speed interface boards and high-speed expansion are configured per project.

Scope and limitation

CAN FD, LIN, RS485, analog, digital, wireless, GPS, and storage capabilities depend on the ordered expansion configuration. Expansion cards are factory installed and are not hot-swappable.

Key capabilities

- Industrial Rockchip RK3568J with four Cortex-A55 cores up to 2.0 GHz.
- Gigabit Ethernet and 100BASE-T1 automotive Ethernet.
- Optional mSATA SSD and mini-PCIe expansion for Wi-Fi, Bluetooth, 4G, GPS, or video.
- Automatic logging, timed transmission, routing, and replay after power-on.
- 9 to 36 V DC input and operation from -40 to +85 deg C.
- TF card up to 128 GB with cyclic recording.
- Four factory-configured low-speed expansion slots for CAN FD, LIN, RS485, analog, digital, or temperature I/O.
- Linux application deployment, BMAPI remote control, and customer-specific development.

Typical applications

- Vehicle and industrial black-box recording
- Remote fleet data acquisition
- HIL replay and automated testing
- Multi-bus gateway and routing
- Edge analytics and custom Linux services
- Customer-specific protocol and I/O integration

2. Technical specifications

Processor	Industrial RK3568J; 4 x Cortex-A55 up to 2.0 GHz
Input power	9 to 36 V DC, 3 A connector rating
Typical power	< 12 W with a typical 16-channel CAN FD expansion
Maximum stated power	< 20 W depending on configuration
Operating temperature	-40 to +85 deg C
Storage temperature	-40 to +105 deg C
Dimensions	235 x 155 x 35 mm, including mounting ears
Weight	< 1.5 kg with typical expansion cards
Ethernet	1 x 10/100/1000BASE-TX RJ45
Automotive Ethernet	1 x 100BASE-T1 master/slave
USB	1 x USB 3.0 host, 1 x USB 2.0 host, 1 x USB 2.0 OTG service port
Display	HDMI 2.0
Storage	TF up to 128 GB; optional mSATA SSD
CAN FD option	5 kbps to 8 Mbps; RX >16,000 fps; TX >4,000 fps
LIN option	1,200 to 19,200 bps; expansion V1.1 or later
File system	FAT16 / FAT32; 4 GB maximum individual file

3. Model selection and operating guidance

Model matrix

Expansion class	Examples	Interface	Availability
Low-speed slots	CAN FD, LIN, RS485, analog, digital, temperature	4 x 12-pin terminals	Factory configured
High-speed	Wi-Fi, Bluetooth, 4G, GPS, video	Mini-PCle / SMA	Optional
Storage	TF and mSATA SSD	Internal slots	TF standard; SSD optional

Performance and integration notes

- The channel count and protocol mix are project-specific; verify the ordered configuration before integration.
- CAN FD expansion performance is up to 8 Mbps, RX >16,000 fps, and TX >4,000 fps per channel under the source conditions.
- Standalone tasks can be loaded from BUSMASTER and executed automatically after power-on.
- Use wide-temperature storage media when operation or storage at the environmental limits is required.

Selection rule

CAN FD, LIN, RS485, analog, digital, wireless, GPS, and storage capabilities depend on the ordered expansion configuration. Expansion cards are factory installed and are not hot-swappable.

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

Input power	9 to 36 V DC, 3 A connector rating
Dimensions	235 x 155 x 35 mm, including mounting ears
Weight	< 1.5 kg with typical expansion cards
USB	1 x USB 3.0 host, 1 x USB 2.0 host, 1 x USB 2.0 OTG service port

Connector notes

- Four 12-pin 3.5 mm pluggable terminals carry the configured low-speed expansion signals.
- Three SMA positions are available for selected high-speed expansion options; pin functions depend on configuration.

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.