

BMG800 Industrial Edge Computing Gateway

7-inch integrated HMI, multi-protocol field I/O, local edge processing, and wired/wireless remote connectivity



Product Overview

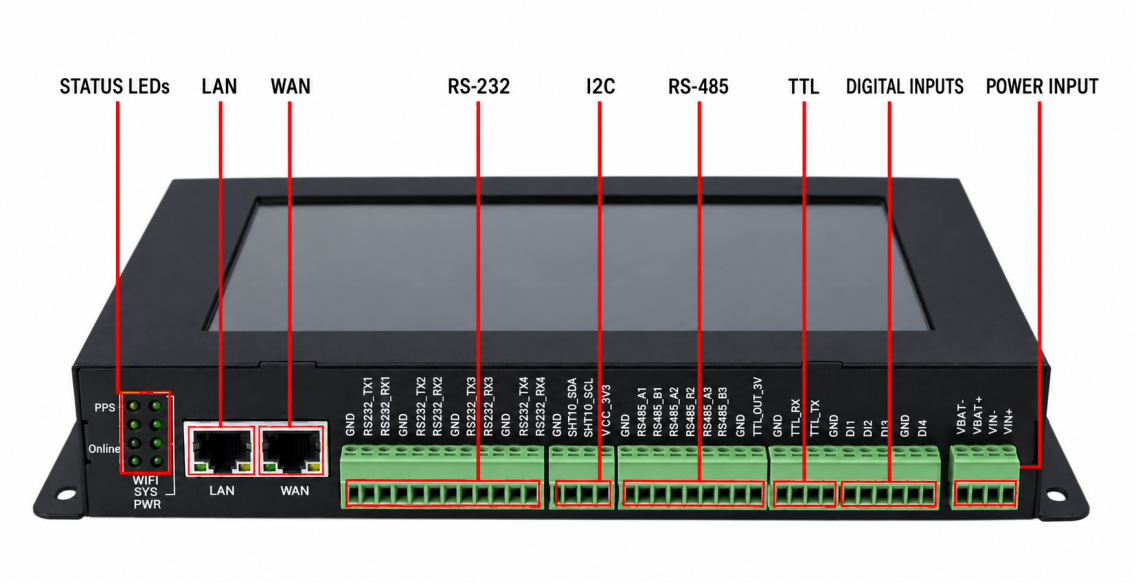
The BMG800 is an industrial edge-computing gateway with an integrated 7-inch display, field I/O terminals, local storage, Ethernet, cellular, and optional positioning/Wi-Fi functions. It is designed to collect equipment and environmental data, process it locally, and forward selected information to local or remote management platforms.

ITEM	DESCRIPTION
Display	Integrated 7-inch display / HMI
Networking	LAN and WAN Ethernet; cellular and NB-IoT options
Field interfaces	RS-232, I2C, RS-485, TTL, digital inputs, analog inputs, relay outputs, and power outputs
Storage	Local flash plus USB and TF-card expansion
Management	Local and remote monitoring, configuration, upgrade, and diagnostics

Source basis

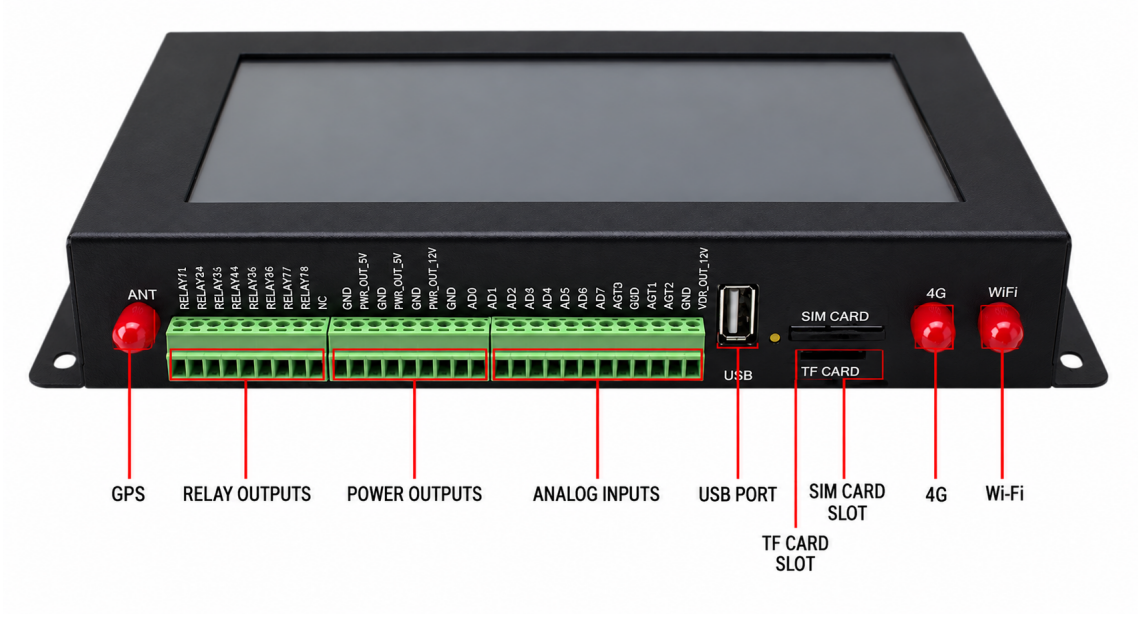
All specifications in this document were extracted and translated from the supplied product images. Values not visible in those images are intentionally left unspecified.

Communication-Side Interfaces



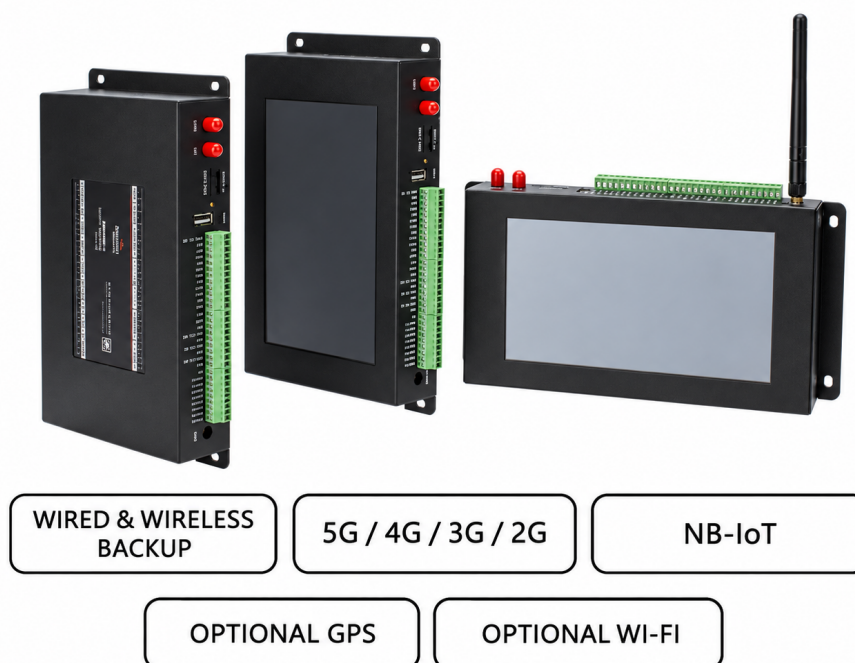
ITEM	DESCRIPTION
Status indicators	PPS, Online, Wi-Fi, System, and Power indicators shown on the product panel
LAN / WAN	Two RJ45 Ethernet ports identified as LAN and WAN
RS-232	Multiple RS-232 terminal connections shown
I2C	SDA and SCL terminal interface
RS-485	Multiple RS-485 terminal connections shown
TTL	TTL receive/transmit terminal interface
Digital inputs	DI terminal group
Power input	VIN and battery-related input terminals shown on the product panel

I/O and Expansion Interfaces



ITEM	DESCRIPTION
GPS	Dedicated antenna connector
Relay outputs	Multi-channel relay-output terminal group
Power outputs	Multiple auxiliary power-output terminals
Analog inputs	Multi-channel analog-input terminal group
Removable storage	USB host port and TF-card slot
Cellular	SIM-card slot and 4G antenna connector
Wi-Fi	Dedicated Wi-Fi antenna connector

Connectivity Options



ITEM	DESCRIPTION
Link redundancy	Wired and wireless backup capability
Cellular networks	5G / 4G / 3G / 2G configurations shown in the source material
IoT network	NB-IoT option
Positioning	GPS optional
Wireless LAN	Wi-Fi optional

Data Transmission and Management

ITEM	DESCRIPTION
Multi-center transmission	Embedded standard TCP/IP stack; project data can be transmitted simultaneously to as many as 12 management centers.
Management hierarchy	Data may be reported to provincial, municipal, county, local, remote, and external partner platforms for coordinated access.
Local / remote operation	Supports both local and remote monitoring, configuration, software upgrade, and diagnostics.
Central management	The supplied material describes centralized management software without a stated limit on the number of managed gateways.
Cloud path	4G/5G and MQTT are shown as links to cloud databases, mobile clients, and PC clients.
Security options	Optional software/hardware dual-layer encryption, network firewall, and multiple communication modes are described.

Local Storage

ITEM	DESCRIPTION
On-board / expanded flash	256 MB / 1 GB optional, as stated in the source image
USB storage	External storage through the USB host interface
TF card	Removable TF-card storage

Mechanical Dimensions

Dimensions below are reproduced from the supplied mechanical drawing. All values are in millimeters.

ITEM	DESCRIPTION
Overall flange width	228 mm
Mounting reference width	216 mm
Enclosure body width reference	204 mm
Overall height	122.5 mm
Panel-face height reference	100 mm
Enclosure depth	38.2 mm
Display opening	153 x 86 mm
Mounting-slot width	4.2 mm
Edge reference	6.7 mm

Typical Application: Power-Distribution Room Monitoring

The source material presents the BMG800 for remote monitoring of power-distribution rooms. The gateway can aggregate equipment-status data, video/image data, environmental monitoring, personnel access-control information, audio intercom, and security video. Local edge processing and 4G/5G transmission can then support centralized storage, analysis, alarm handling, mobile access, and PC-based management.

ITEM	DESCRIPTION
Data acquisition layer	Power-distribution equipment, room environment, access control, and multimedia sources
Data transport layer	BMG800 edge-computing gateway using Ethernet and/or cellular links
Data processing layer	Cloud database, mobile client, and PC management platform
Illustrated protocol path	4G/5G with MQTT

Installation and Commissioning

Engineering checks before deployment

Confirm the ordered communication options, I/O channel assignment, terminal polarity, supply requirements, cellular bands, antenna type, and mechanical mounting against the delivered unit. The supplied images do not provide complete electrical input ranges, relay ratings, analog scaling, environmental ratings, or compliance approvals; these items must be verified before production use.

Mount the gateway to a rigid panel using the flange slots. Provide clearance for connectors, antenna cables, SIM/TF access, and heat dissipation. Use shielded or twisted-pair cabling where appropriate, separate field wiring from high-energy conductors, and establish a documented grounding strategy. During first power-up, use current limiting and verify each interface before connecting field equipment.