

# RBM Express Gateway

## GW-1000-WE/GW-1000-NWE

### PRODUCT DATA

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## APPLICATION

GW-1000-WE and GW-1000-NWE Gateways are the advanced devices that integrate and aggregate data from field devices like Thermostats, Sensors, VRF, Energy Meters, and IO with the Remote Building Manager Express Dashboard cloud platform used for monitoring and control. It has provisions to integrate with field devices using various physical interfaces like Wi-Fi, Bluetooth, Modbus, and Ethernet. It also provides a secured physical connection to the Remote Building Manager Express Supervisor Dashboard cloud platform.

## Models

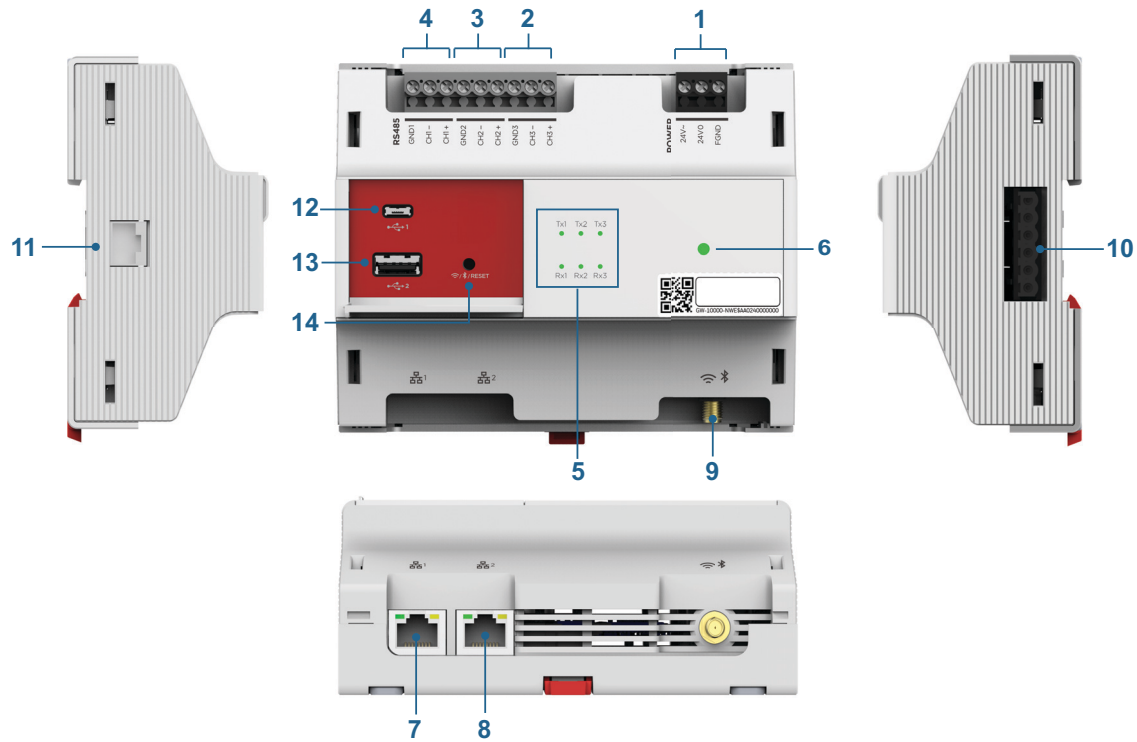
GW-1000-WE: Wireless Gateway with European and Latin American conformance.

GW-1000-NWE: Wireless Gateway with North American conformance.

## FEATURES

- **Integrated with Remote Building Manager Express Supervisor Dashboard (built on Honeywell Forge cloud platform).**
- **Configurable via the Honeywell Connect Mobile app.**
- **Integrated with Honeywell Thermostat (TC500A-N/TC500A-W) and Honeywell Smart IO (IO-10MIXR-NWE/IO-10MIXR-WE) via BACnet (secured).**
- **Compatible with MultiTech LoRaWAN hub.**
- **Compatible with R718A, R718CT, R718G, R718PE, and IAQ LoRA sensors.**
- **Supports remote, over-the-air upgrades.**
- **Supports BACnet (secured), HTTPS, MQTTS, and DHCP.**
- **Real-Time Clock with 72 hours retention using a gold capacitor.**
- **Supports Wi-Fi (Access Point Mode).**
- **Wi-Fi auto channel selection based on the signal strength.**
- **Two Ethernet ports with status LEDs.**
- **Supports remote diagnostics.**
- **Reset button to restore to factory default settings.**
- **External antenna for Wi-Fi and Bluetooth.**
- **Main LED to show the operational status of the Gateway.**
- **Supports DIN rail mounting and wall/panel mounting (four screws).**
- **The following will be enabled in future**
  - All RS485 Interfaces
  - Both USBs
  - RJ11 Interface
  - Bluetooth/BLE
  - Tx1, Tx2, Tx3, Rx1, Rx2, and Rx3 LEDs
  - Wi-Fi 5 GHz

# INTERFACES AND TERMINALS



NOTE: \*All RS485 interfaces, USB interfaces, RJ11 interface, Rx and Tx LEDs are for future use.

**Table 1. Gateway Terminals**

Type	Legend	Signal	Comment
Power Supply Terminals	1	FGND	Connect to earth ground in the field
		24V0	Power supply common
		24V~	Power supply (24 Vac/dc)
*RS485 Interface 3 Terminals	2	CH3+	(+) for RS485 interface 3
		CH3-	(-) for RS485 interface 3
		GND3	GND3 for RS485 interface 3
*RS485 Interface 2 Terminals	3	CH2+	(+) for RS485 interface 2
		CH2-	(-) for RS485 interface 2
		GND2	GND2 for RS485 interface 2
*RS485 Interface 1 Terminals	4	CH1+	(+) for RS485 interface 1
		CH1-	(-) for RS485 interface 1
		GND1	GND1 RS485 interface 1
LED	5	*Tx1 LED (green)	Transmit and receive indication for RS485 interfaces 1 to 3
		*Rx1 LED (green)	
		*Tx2 LED (green)	
		*Rx2 LED (green)	

**Table 1. Gateway Terminals (Continued)**

Type	Legend	Signal	Comment
LED	5	*Tx3 LED (green)	Transmit and receive indication for RS485 interfaces 1 to 3
		*Rx3 LED (green)	
	6	Main LED	Indicates the operational status of the Gateway
RJ45 Interface	7	Ethernet 1	Dedicated to Internet/Cloud connectivity (10/100/1000BASE-T)
	8	Ethernet 2	Dedicated to MultiTech LoRaWAN hub (10/100/1000BASE-T)
SMA Terminal	9	For Wi-Fi and Bluetooth antenna	Antenna for both Wi-Fi and Bluetooth 802.11a/b/g/n/ac + BT 4.2
*RS485 Interface 4 Terminals	10	~ (24V~)	Communication and power bus for expansion modules
		24V0	
		FGND	
		GND	
		(-) for RS485 interface 4	
		(+) for RS485 interface 4	
*RJ11 Interface	11	(+) for RS485 interface 5	
		(-) for RS485 interface 5	
		output 5Vdc	
		GND	
*USB Interface	12		Micro USB port to connect with laptops, mobile, and tablets
	13		USB Type A port
Reset Button	14		Reset button to reset the device to factory default

## Ethernet 1 and 2 Interfaces

Ethernet 1 is used for Cloud connectivity and Ethernet 2 is to connect with MultiTech LoRaWAN hub.

They are RJ45 female interfaces, each with a yellow activity status LED (located to the left) and a green activity LED (located to the right).

## Remote Building Manager Express Dashboard

For more information, refer to the Remote Building Manager Express Supervisor Dashboard user guide (31-00379M).

## Honeywell Connect Mobile App

For more information, refer to the Honeywell Remote Building Manager Express Setup Guide (Deploy App Setup Guide) (31-00451M).

# TECHNICAL DATA

## System Data

**Table 2. System Data**

Operating Voltage (AC)	19 to 29 Vac (50/60Hz)
Operating Voltage (DC)	19 to 29 Vdc
Overvoltage Protection	Protected against overvoltages of max. 29 Vac or 40 Vdc. Terminals are protected against short-circuiting.

## Power Consumption

**Table 3. Power Consumption**

Gateway	Power	
	24 Vac	24 Vdc
GW-1000-WE/GW-1000-NWE	Max. 35VA	Max. 15W

## Current Consumption

**Table 4. Current Consumption**

Gateway	Power	
	24 Vac	24 Vdc
GW-1000-WE/GW-1000-NWE	1430mA	620mA

## Standards

**Table 5. Standards**

Protection Class	IP20
Product Standards	CAN/CSA-E60730-1:02, Ethernet Protocol version IEEE 802.3
Testing Electrical Components	IEC68
Certification	<ul style="list-style-type: none"> <li>• UL60730-1</li> <li>• UL916</li> <li>• EN 60730-1</li> <li>• EN 60730-2-9</li> <li>• FCC Part15, Subpart B</li> <li>• CAN ICES-3 (B)/NMB-3(B)</li> <li>• BQB</li> <li>• RoHS II</li> <li>• REACH</li> </ul>

**Table 5. Standards**

System Transformer	The system transformer(s) must be safety isolating transformers according to IEC 61558-2-6. In the U.S.A. and Canada, NEC Class 2 transformers must be used.
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## Operating Environment

**Table 6. Operating Environment**

Ambient Operating Temperature	0 to 50 °C (32 to 122 °F)
Ambient Operating Humidity	5 to 95% relative humidity (non-condensing)
Storage Temperature	-28.9 to +70 °C (-20 to 158 °F)
Ambient Storage Humidity	5 to 95% relative humidity (non-condensing)
Vibration Under Operation	0.024" double amplitude (2 to 30 Hz), 0.6 g (30 to 300 Hz)
Dust, Vibration	According to EN60730-1
RFI, EMI	Residential, commercial, and light-industrial environments
MTBF (Mean Time Between Failure)	11.5 years

## Communication Baud Rates

**Table 7. Communication Baud Rates**

Ethernet	10/100/1000 Mbit/s, RJ45
BACnet MSTP	9.6, 19.2, 38.4, 76.8, 115.2 Kbps
Wi-Fi (Auto channel selection)	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 150Mbps
Bluetooth	BR: up to 1Mbps EDR: up to 3Mbps BLE: up to 1Mbps
Wi-Fi Range with unobstructed line of sight	100 ft
Supported type of Wi-Fi connections	Wi-Fi Access Point - Providing access point to IO-10MIXR-WE/IO-10MIXR-NWE Smart IO and TC500A-N Commercial Thermostat devices

NOTE: Wi-Fi 5 GHz is for future use.

## Gateway Parameters

**Table 8. Gateway Parameters**

Max number of points	3000
Max trend retention	2 days (1 min samples)
Max number of alarms retained	70000 Records
History push	Per Minute
GW OTA Upgrade check	Once in 4 hours
Devices OTA Upgrade check	Once in 24 hours
Max rumen of devices in Wifi interface	12

## Gateway Ordering Part Numbers


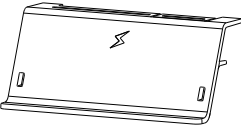
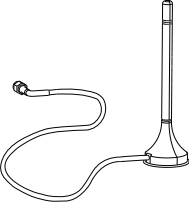

**Table 9. Gateway Part Numbers**

Part Number	Description
GW-1000-WE	Wireless Gateway with European and Latin American conformance
GW-1000-NWE	Wireless Gateway with North American conformance

## Accessories Part Numbers

These accessories are available by separate order.

**Table 10. Accessories**

	<b>Part Number</b>	<b>Description</b>
	GW-TCVR	Replacement Terminal Covers (Small) (Pack Quantity of 4)
	GW-EXT-TCVR	Extended Terminal Covers (Large) (Pack Quantity of 4)
	ANT-REM	Remote Antennas with adhesive magnetic foot for wireless communication. 1.5 meter (4.9 feet) cable length for remote mounting of the antenna. (Pack Quantity of 4) & Ferrite Ring Part Number: ZCAT3035-1330-BK Manufacture: TDK
	GW-ANT-LOC	Local Antennas (optional, not included in the kit) (MPN: ANT-DB1-LCD-SMA, Manufacturer: LINX Technologies) (Pack Quantity of 4)

## Antenna Part Numbers

**Table 11. Antenna Part Numbers**

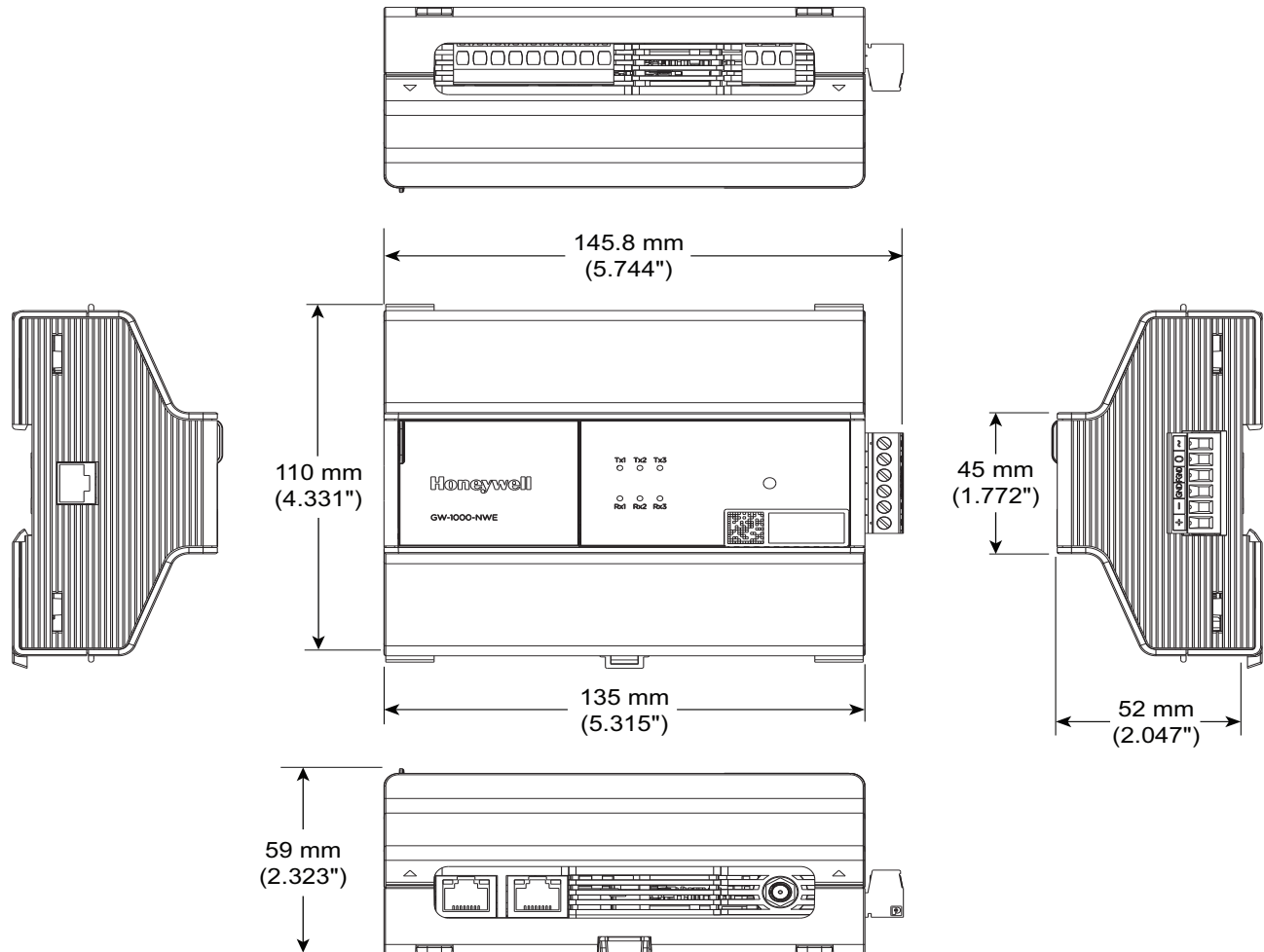
<b>Antenna Part Numbers</b>	<b>Vendor Name</b>	<b>Type</b>	<b>Gain</b>
ARY113-0012-004-00	WIESON	Remote	2.4 GHz: -0.31dbi
CA #ANTT935-4	ADAM	Remote	2.4 GHz: 2.9dbi
ANT-DB1-LCD-SMA	LINX	Local	2.4 GHz: 2.8dbi

## Hub and Sensors

- MultiTech LoRaWAN hub and IAQ LoRA are a products of Multi-Tech Systems, Inc.
- R718A, R718CT, R718G, and R718PE sensors are products of NETVOX TECHNOLOGY CO., LTD.

## DIMENSIONS

### GW-1000-WE/GW-1000-NWE



## GENERAL SAFETY INFORMATION

- When performing any work (installation, mounting, start-up), all manufacturer instructions and in particular the Installation and Commissioning Instructions (EN1B-0077IE10) are to be observed.
- GW-1000-WE/GW-1000-NWE Gateway must be installed and mounted only by authorized and trained personnel.
- Rules regarding electrostatic discharge should be followed.
- If the GW-1000-WE/GW-1000-NWE Gateway is modified in any way, except by the manufacturer, all warranties concerning operation and safety are invalidated.
- Make sure that the local standards and regulations are observed at all times. Examples of such regulations are VDE 0800 and VDE 0100 or EN 60204-1 for earth grounding.
- Use only accessory equipment that comes from or has been approved by Honeywell.
- It is recommended that devices be kept at room temperature for at least 24 hours before applying power. This is to allow any condensation resulting from low shipping/storage temperatures to evaporate.
- The GW-1000-WE/GW-1000-NWE Gateway must be installed in a manner (e.g., in a lockable cabinet) ensuring that unauthorized persons have no access to the terminals.
- Investigated according to United States Standard UL-60730-1, UL-916, and UL60730-2-9.
- Investigated according to Canadian National Standard(s) C22.2, No. 205-M1983 (CNL-listed).
- Do not open the GW-1000-WE/GW-1000-NWE, as it contains no user-serviceable parts inside!
- CE declarations according to LVD Directive 2014/35/EU and EMC Directive 2014/30/EU.
- Product standards are EN 60730-1 and EN 60730-2-9.

## Professional Installation

- This device must be professionally installed, this should be noted on grantee.
- To maintain compliance, only the antenna types that have been tested shall be used, which listed in “Antenna Part Numbers” on page 6. This device requires a significant technology engineering expertise towards understanding of the tools and relevant technology, not readily available to average consumer. Only a person professionally trained in the technology is competent.
- This device is not directly marketed or sold to general public.

## Safety Information as per EN60730-1

The GW-1000-WE/GW-1000-NWE Gateway is intended for residential, commercial, and light-industrial environments.

The GW-1000-WE/GW-1000-NWE Gateway is an independently mounted electronic control system with fixed wiring.

The GW-1000-WE/GW-1000-NWE is suitable for mounting in fuse boxes conforming with standard DIN43880, and having a slot height of max. 45 mm.

It is suitable for panel rail mounting on 35 mm standard panel rail (both horizontal and vertical rail mounting possible).

The GW-1000-WE/GW-1000-NWE is used for the purpose of building HVAC control and is suitable for use only in non-safety controls for installation on or in appliances.

**Table 12. Safety Information as per EN60730-1**

Electric Shock Protection	PELV
Pollution Degree	Pollution Degree 2, suitable for use in industrial environments.
Installation	Class 3
Overvoltage Category	24 V-powered controls: Category I

**Table 12. Safety Information as per EN60730-1**

Rated Impulse Voltage	330 Vac for Category I (SELV)
Automatic Action	Type1.Y
Software Class	Class A
Enclosure	IP20 according to EN-60529
Ball-pressure Test Temperature	>75 °C for all housing and plastic parts >125 °C in the case of devices applied with voltage-carrying parts, connectors, and terminals.
Electromagnetic Interference	Tested at 230 Vac, with the modules in normal condition.
System Transformer	Europe: safety isolating transformers according to IEC61558-2-6 U.S.A. and Canada: NEC Class-2 transformers

## WEEE



### WEEE Directive 2012/19/EC Waste Electrical and Electronic Equipment Directive

- At the end of the product life, dispose of the packaging and product in an appropriate recycling center.
- Do not dispose of the device with the usual domestic refuse.
- Do not burn the device.

## Honeywell Building Technologies

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