MGate W5108/W5208 Series
Quick Installation Guide

Version 2.1, November 2019

MOXA®

P/N: 1802051080012

Overview

The MGate W5108/W5208 series of gateways comes with one or two serial ports, making them an ideal choice for connecting Modbus/DNP3 serial devices to a wireless LAN. With IEEE 802.11a/b/g/n support, you can use fewer cables in difficult wiring environments, and for secure data transmission, the MGate W5108/W5208 series of gateways supports WEP/WPA/WPA2. The gateways' rugged design makes them suitable for industrial applications, including oil and gas, power plant, process automation, and factory automation.

Package Checklist

Before installing the MGate W5108/W5208 gateway, verify that the package contains the following items:

- 1 MGate W5108 or W5208 gateway
- 1 antenna
- Quick installation guide (printed)
- Warranty card

Optional Accessories

- **Mini DB9F-to-TB Adapter:** DB9-female-to-terminal-block adapter for RS-422/485 applications
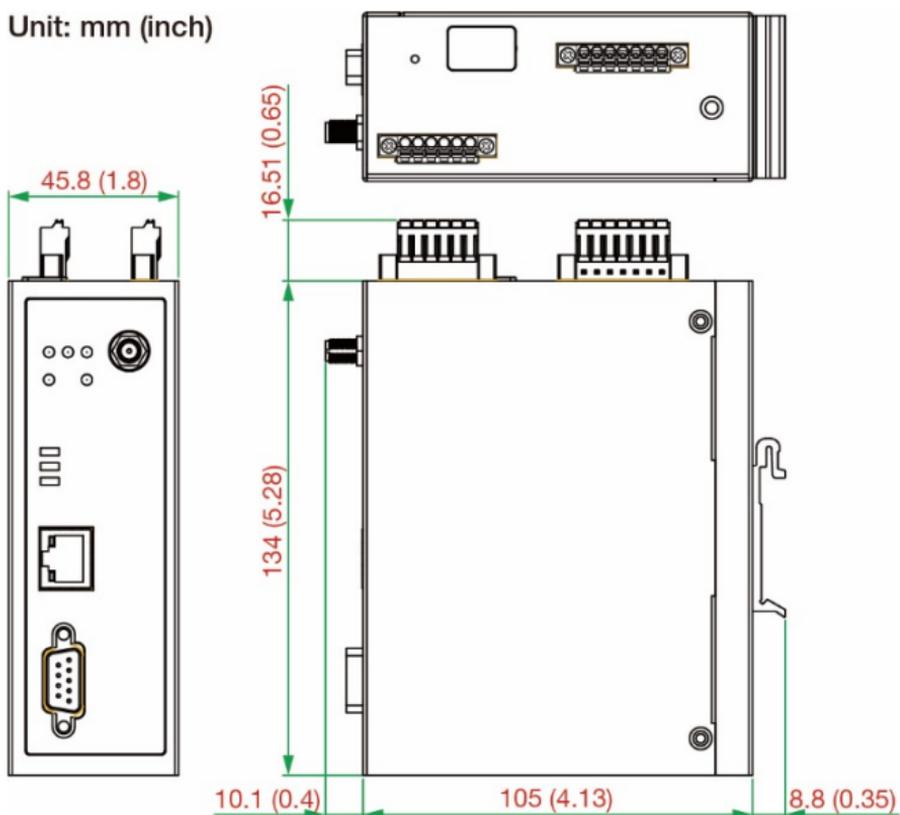- **WK-51-01:** Wall-mounting kit

Notify your sales representative if any of the above items are missing or damaged.

Hardware Introduction

As shown in the following figures, the MGate W5108 has one DB9 port for transmitting serial data, and the MGate W5208 has two DB9 ports for transmitting serial data. The MGate W5108/W5208 gateways come with 2 kV serial port isolation protection built in.
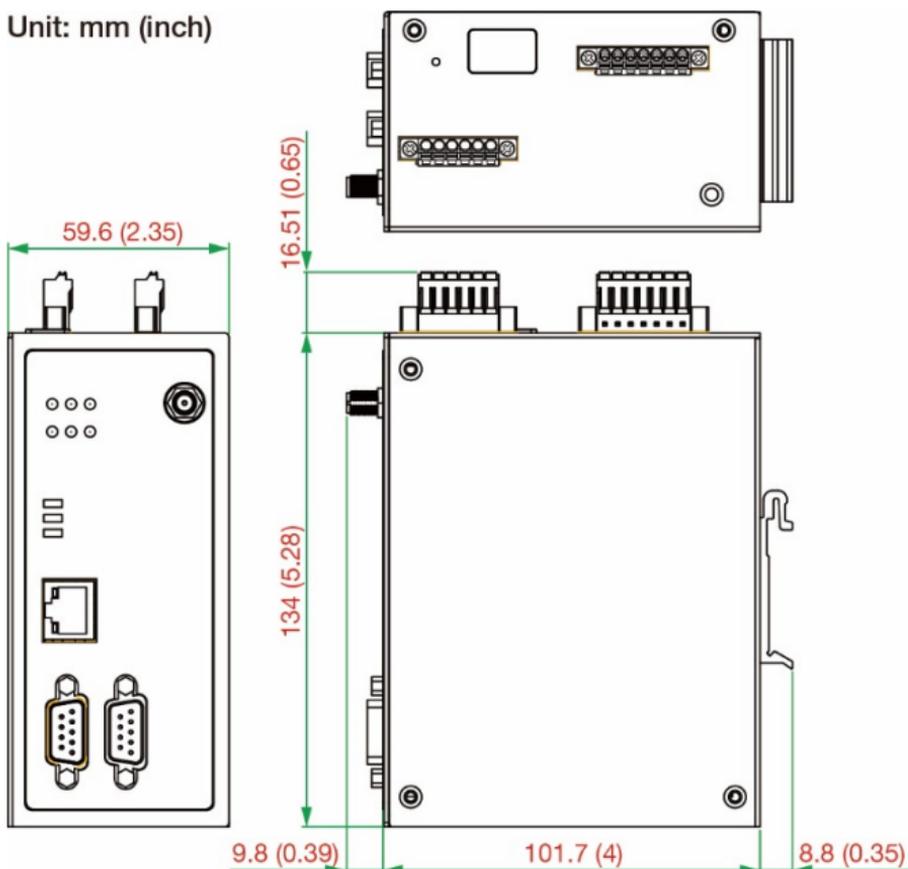
MGate W5108

Unit: mm (inch)

45.8 (1.8)

16.51 (0.65)

134 (5.28)

10.1 (0.4)   105 (4.13)   8.8 (0.35)

MGate W5208

Unit: mm (inch)

59.6 (2.35)

16.51 (0.65)

134 (5.28)

9.8 (0.39)   101.7 (4)   8.8 (0.35)

Reset Button—*Depress the **Reset** button continuously for 5 sec. to load factory defaults.*

The reset button is used to load factory defaults. Depress the reset button for five seconds using a pointed object, such as a straightened paper clip. Release the reset button when the Ready LED stops blinking.

LED Indicators

Name	Color	Function
PWR 1, PWR 2	Green	Power is being supplied to the power input.
	Off	The power cable is not connected.
Ready	Green	Steady on: Power is on and unit is functioning normally.
		Blinking: Unit is responding to DSU's locate function.
	Red	Steady on: Power is on and the unit is booting up.
		Blinking: IP conflict, DHCP, or BOOTP server did not respond properly, or a relay output occurred.
	Off	Power is off.
P1, P2	Green	Serial port is transmitting data.
	Amber	Serial port is receiving data.
	Off	Data is not being transmitted.
Ethernet	Green	Indicates a 100 Mbps Ethernet connection.
	Amber	Indicates a 10 Mbps Ethernet connection.
	Off	Ethernet cable is disconnected.
WLAN	Green	Steady On: Unit is properly connected with the AP.
		Blinking: Unit is trying to connect to the AP.
	Red	Indicates an IP conflict, or DHCP or BOOTP server is not responding properly.
RF	Green	3 LEDs = the signal strength is between 67% and 100%. 2 LEDs = the signal strength is between 34% and 66%. 1 LED = the signal strength is between 0% and 33%.

Hardware Installation Procedure

STEP 1: After unpacking the unit, connect the power supply to the unit. Make sure the adapter is connected to an earthed socket.

STEP 2: Use an Ethernet cable to connect the unit to the network.

STEP 3: Connect your device to the desired port on the unit.

STEP 4: Place or mount the unit. The unit may be placed on a horizontal surface such as a desktop, or mounted on the wall.

Wall or Cabinet Mounting

Two metal plates are provided for mounting the unit on a wall or inside a cabinet. Attach the plates to the unit's rear panel with screws. With the plates attached, use screws to mount the unit on a wall. The heads of the screws should be 5 to 7 mm in diameter, the shafts should be 3 to 4 mm in diameter, and the length of the screws should be more than 10.5 mm.
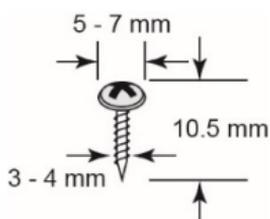
For each screw, the head should be 6 mm or less in diameter, and the shaft should be 3.5 mm or less in diameter.

Termination Resistor and Adjustable Pull High/Low Resistors

In some critical environments, you may need to add termination resistors to prevent the reflection of serial signals. When using termination resistors, it is important to set the pull high/low resistors correctly so that the electrical signal is not corrupted. The MGate W5108/W5208 uses DIP switches to set the pull high/low resistor values for each serial port.

To add a 120-ohm termination resistor, set switch 3 on the port's assigned DIP switch to ON; set switch 3 to OFF (the default setting) to disable the termination resistor.

To set the pull high/low resistors to 150 kilo-ohms, set switches 1 and 2 on the port's assigned DIP switch to OFF. This is the default setting.

To set the pull high/low resistors to 1 kilo-ohm, set switches 1 and 2 on the port's assigned DIP switch to ON.

Pull High/low Resistors for the RS-485 Port

	SW	1	2	3
		Pull High	Pull Low	Terminator
	ON	1 kilo-ohm	1 kilo-ohm	120 ohms
Default	OFF	150 kilo-ohms	150 kilo-ohms	–

Software Installation Information

To configure your MGate W5108/W5208, connect the gateway's Ethernet port directly to your computer's Ethernet port and then log in from a web browser.
Default IP address: **192.168.127.254**
Default account: **admin**
Default password: **moxa**

If you forget the modified IP address of the gateway or cannot log in to the gateway via a web browser for any reason, you can access the gateway via a direct Ethernet cable connection using the **Device Search Utility (DSU)** to search for the gateway.
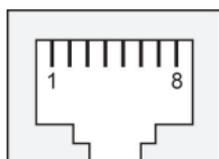
To install the DSU, download it from Moxa's website at http://www.moxa.com.

For detailed information about **DSU**, refer to the **MGate W5108/W5208 User's Manual**, which can be downloaded from Moxa's website at http://www.moxa.com.
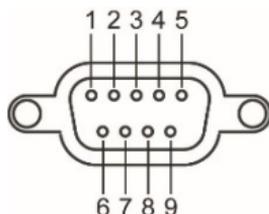
Pin Assignments

RJ45 (LAN)

Pin	LAN
1	Tx+
2	Tx-
3	Rx+
4	–
5	–
6	Rx-
7	–
8	–

DB9 Male (RS-232/422/485)

Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	–	–	–

Power Input and Relay Output Pinouts
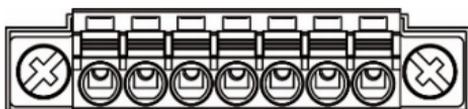
V2+	V2-	N.O.	Common	N.C.	V1+	V1-
DC Power Input 2	DC Power Input 2	N.O.	Common	N.C.	DC Power Input 1	DC Power Input 1

DI/DO Pinouts
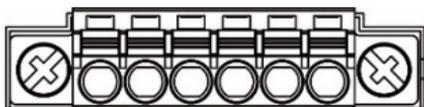
COM	DI0	DI1	GND	DO0	DO1
Common	Digital Input 0	Digital Input 1	Ground	Digital Output 0	Digital Output 1

Specifications

Power Input	9 to 60 VDC
Power Consumption	9 to 60 VDC, 500 mA (max.)
Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)

IECEx and ATEX Information

1. ATEX certificate number: DEMKO 16 ATEX 1641X
2. IECEx number: IECEx UL 16.0005X
3. Certification string: Ex nA nC IIC T4 Gc
   Ambient Range : -40°C ≤ Tamb ≤ 75°C
4. Standards covered:
   EN 60079-0:2012+A11:2013/IEC 60079-0:2011 Ed.6
   EN 60079-15:2010/IEC 60079-15:2010 Ed.4
5. The conditions for safe usage:
   • Equipment should be installed in an enclosure that provides a degree of protection not less than IP54 in accordance with EN 60079-15 and should be accessible only by the use of a tool.
   • These products are for use in an area of not more than pollution degree 2 in accordance with IEC 60664-1.

Address of manufacturer: Fl. 4, No. 135, Lane 235, Baoqiao Rd., Xindian Dist., New Taipei City, 23145, Taiwan, R.O.C.