

MGate W5108/W5208 Series Quick Installation Guide

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Overview

The MGate W5108/W5208 series of gateways come with 1 or 2 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 gateways support WEP/WPA/WPA2. The gateways' rugged design makes them suitable for industrial applications, including oil & 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
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

Optional Accessories

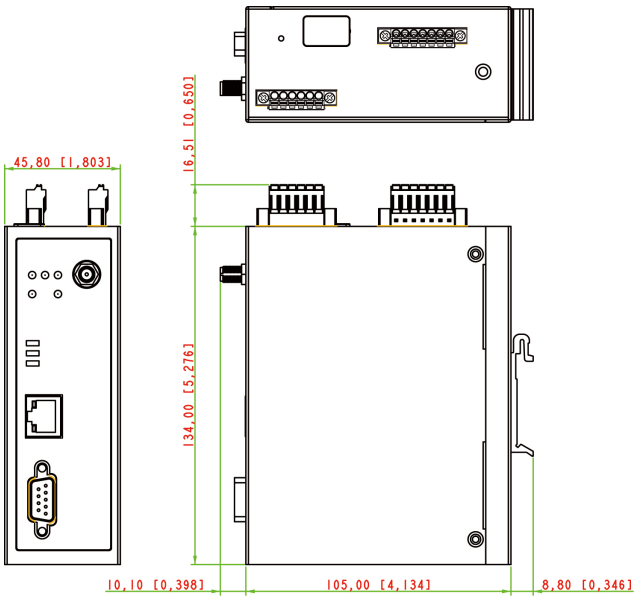
- **Mini DB9F-to-TB Adapter:** DB9 female to terminal block adapter for RS-422/485 applications
- **WK-51-01:** Wall mounting kit
- **DR-4524:** 45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC input
- **DR-75-24:** 75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC input
- **DR-120-24:** 120W/5A DIN-rail 24 VDC power supply with 88 to 132 VAC or 176 to 264 VAC input, selected by DIP switch

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

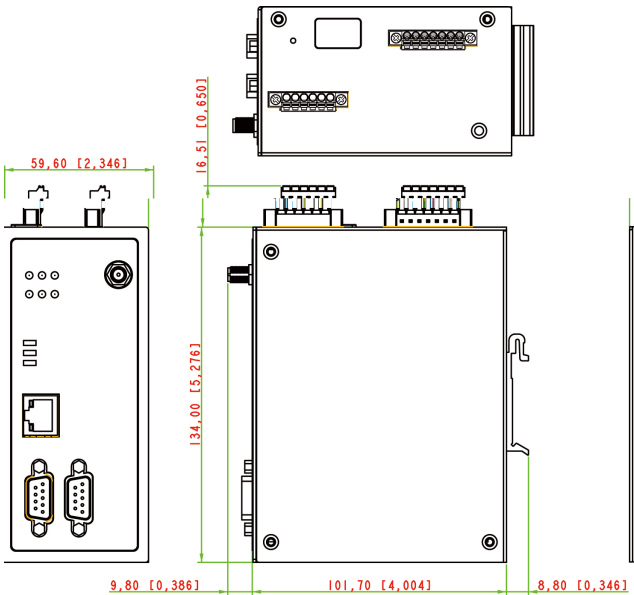
Hardware Introduction

As shown in the following figures, the MGate W5108 has 1 DB9 port for transmitting serial data, and the MGate W5208 has 2 DB9 ports for transmitting serial data. The MGate W5108/W5208 gateways come with 2 kV serial port isolation protection built in.

MGate W5108



MGate W5208



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	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 = signal strength is between 67% and 100%. 2 LEDs = signal strength is between 34% and 66%. 1 LED = signal strength is between 0% and 33%.

Hardware Installation Procedure

STEP 1: After unpacking the unit, connect the power supply to the unit.

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

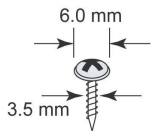
STEP 3: Connect your device to the desired port on the unit.

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.

For each screw, the head should be 6.0 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 Ω 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 KΩ, 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 KΩ, 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 KΩ	1 KΩ	120 Ω
Default OFF	150 KΩ	150 KΩ	-

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. The default IP address is 192.168.127.254. The MGate supports two types of accounts: **admin** and **user**. The **admin** account can modify all settings, whereas the **user** accounts can only view settings. The default password for the **admin** account is "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** to search for the gateway.

To install **Device Search Utility (DSU)**, insert the **MGate Documentation and Software CD** into your PC's CD-ROM drive, and then run the following setup program to begin the installation process from the "Software" directory:

dsu_setup_[Version]_Build_[DateTime].exe

The filename of the latest version may have the following format:

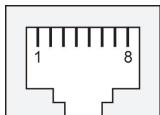
dsu_setup_Verx.x.x_Build_xxxxxxxx.exe.

For detailed information about **DSU**, refer to the **MGate W5108/W5208 User's Manual**, which can be found in the "Document" directory.

Pin Assignments

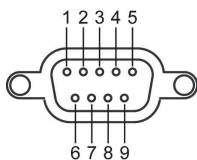
RJ45 (LAN)

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

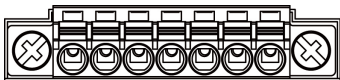


DB9 Male (RS-232/422/485)

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	-	-	-

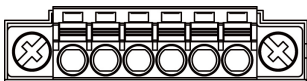


Power Input and Relay Output Pinouts



V2+	V2-				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	495 mA @ 9 V, 202 mA @ 24 V, 114 mA @ 48 V, 99 mA @ 60 V
Operating Temperature	Standard models: 0 to 60°C (32 to 140°F) Wide temp. models: -40 to 75°C (-40 to 167°F) for -T models
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Humidity	5 to 95% RH
Dimensions (W x D x H)	MGate W5108: 45.8 x 105 x 134 mm (1.8 x 4.13 x 5.28 in) MGate W5208: 59.6 x 101.7 x 134 mm (2.35 x 4.0 x 5.28 in)
Magnetic Isolation	1.5 kV for Ethernet, 2 kV for serial port
Regulatory Approvals	FCC Class A, CE Class A, EN 60950-1, UL61010-2-201
Hazard Location	Class 1 Division 2, ATEX, IECEx
Fault Relay Circuit	3-pin circuit with current carrying capacity of 2 A @ 30 VDC

ATEX Information



1. Certificate number: DEMKO 16 ATEX 1641X
2. Certification string: Ex nA nC IIC T4 Gc
3. Standards covered:
EN 60079-0:2012+A11:2013, EN 60079-15:2010
4. The equipment shall be installed in an enclosure that provides a degree of protection not less than IP54 in accordance with EN 60079-15 and accessible only by the use of a tool.
5. These products are for use in an area of not more than pollution degree 2 in accordance with IEC 60664-1.