MGate MB3480 Series
Quick Installation Guide

Version 7.2, January 2021

Technical Support Contact Information
www.moxa.com/support

P/N: 1802034800017

Overview

The MGate MB3480 is a 4-port Modbus gateway that converts between Modbus TCP and Modbus RTU/ASCII protocols. It can be used to allow Ethernet masters to control serial slaves, or to allow serial masters to control Ethernet slaves. Up to 16 TCP masters and 124 serial slaves can be connected simultaneously.

Package Checklist

Before installing the MGate MB3480 Modbus gateway, verify that the package contains the following items:

- 1 MGate MB3480 Modbus gateway
- Power adapter
- 4 Stick-on pads
- Quick installation guide (printed)
- Warranty card

Optional Accessory

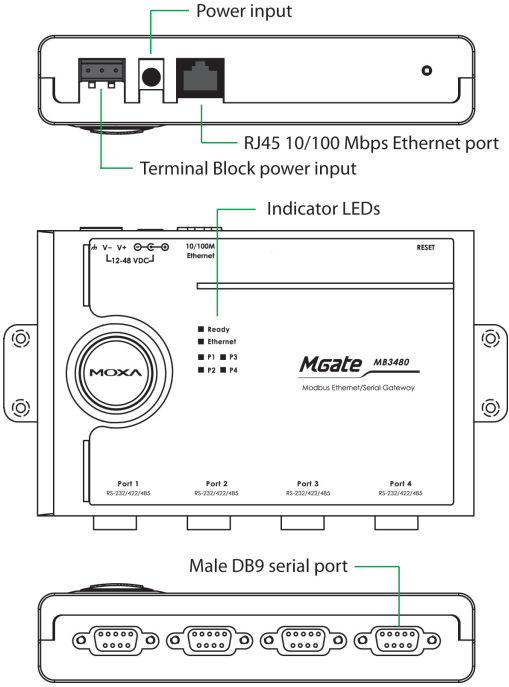
- **DK-35A:** DIN-rail mounting kit (35 mm)
- **Mini DB9F-to-TB Adapter:** DB9 female to terminal block adapter

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

NOTE This product is designed to be powered by a listed power source marked "LPS" and is rated 12 to 48 VDC and 0.25 A minimum. The device's operating temperature when using the power adapter is 0 to 40°C (32 to 104°F), and 0 to 60°C (32 to 140°F) when using an alternative DC power source. If you need additional assistance purchasing a power source, please contact Moxa for more information.

Hardware Introduction

As shown in the following figures, the MGate MB3480 has 4 DB9 male ports for transmitting serial data.



Reset Button—The reset button is used to load factory defaults. Hold the reset button down for five seconds using a pointed object such as a straightened paper clip. Release the reset button when the Ready LED stops blinking in order to load the factory defaults.

LED Indicators—Six LED indicators are located on the top panel:

Name	Color	Function
Ready	Red	Steady on: Power is on and the unit is booting up.
		Blinking: IP conflict exists, or DHCP or BOOTP server did not respond properly.
	Green	Steady on: Power is on and the unit is functioning normally.
		Blinking: Unit has found by the Location command in MGate Manager.
	Off	Power is off or power error condition exists.
Link	Orange	10 Mbps Ethernet connection.
	Green	100 Mbps Ethernet connection.
	Off	Ethernet cable is disconnected or has a short.
P1/P2/ P3/P4	Orange	Unit is receiving data from device.
	Green	Unit is transmitting data to device.
	Off	No data is being exchanged with device.

Hardware Installation Procedure

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

STEP 2: Use a standard straight-through Ethernet cable to connect the unit to a network hub or switch. Use a cross-over Ethernet cable if you are connecting the gateway directly to a PC.

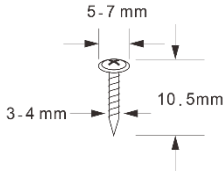
STEP 3: Connect your device to the desired port on the unit.

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

Wall or Cabinet Mounting

Two metal plates are provided for mounting the unit onto a wall or inside a cabinet. Attach the plates to the unit's rear panel with the provided screws. With the plates attached, use screws to mount the unit on a wall.

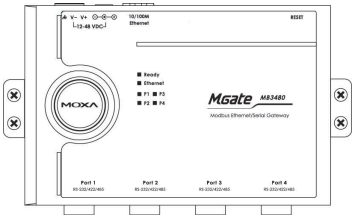
Mounting the MGate MB3480 onto a wall requires two screws. The head of the screws should be 5.0 to 7.0 mm in diameter, the shaft should be 3.0 to 4.0 mm in diameter, and the length of the screws should be at least 10.5 mm.



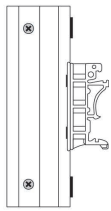
DIN-rail Mounting

DIN rail attachments can be purchased separately to mount the MGate MB3480 on a DIN rail. When mounting the unit on a DIN rail, make sure that it is oriented with the metal springs on top.

Wall Mounting



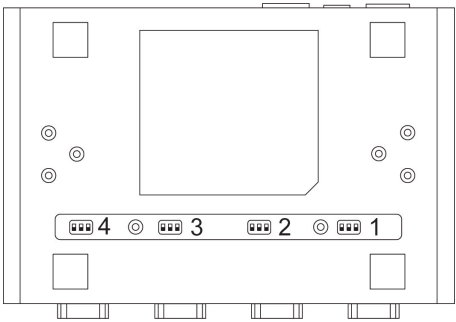
DIN-rail Mounting



Termination Resistor and Adjustable Pull High/Low Resistors

For some RS-485 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. For each serial port, DIP switches are used for termination resistor and pull high/low resistor settings. To enable the 120 Ω termination resistor, set switch 3 on the assigned DIP switch to ON; set it to OFF (the default setting) to disable the termination resistor. To set the pull high/low resistors to 150 KΩ (the default setting), set switches 1 and 2 on the assigned DIP switch to the OFF position; set them both to ON for 1 KΩ.

MGate MB3480 DIP Switches



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

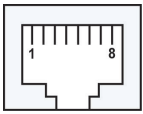
You can download the MGate Manager, User's Manual, and Device Search Utility (DSU) from Moxa's website: www.moxa.com. Please refer to the User's Manual for additional details on using the MGate Manager and DSU.

The MGate MB3480 also supports login via a web browser.

Default IP address: **192.168.127.254**
Default account: **admin**
Default password: **moxa**

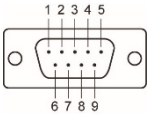
Pin Assignments

Ethernet Port (RJ45)



Pin	Signals
1	Tx+
2	Tx-
3	Rx+
6	Rx-

Serial Port (Male DB9)



Pin	RS-232	RS-422/485 (4-Wire)	RS-485 (2-Wire)
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	–	–	–

Environmental Specifications

Power Requirements	
Power Input	12 to 48 VDC
Power Consumption	385 mA @ 12 VDC, 110 mA @ 48 VDC
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Humidity	5 to 95% RH
Dimensions	
With ears:	35.5 x 102.7 x 181.3 mm (1.40 x 4.04 x 7.14 inch)
Without ears:	35.5 x 102.7 x 157.2 mm (1.40 x 4.04 x 6.19 inch)