

MGate™ 5105-MB-EIP Series

1-port Modbus RTU/ASCII/TCP-to-EtherNet/IP gateways



- > Support for both EtherNet/IP adapter and scanner
- > Effortless configuration via web or Windows utility
- > Complete packet analysis and diagnosis information for maintenance
- > Easy I/O data maintenance via web interface
- > microSD card for configuration and system log backup
- > -40 to 75°C wide operating temperature models available
- > Modbus port with 2 kV built-in isolation protection
- > Built-in Ethernet cascading for easy wiring

EtherNet/IP™
conformance tested



: Overview

The MGate 5105-MB-EIP is an industrial Ethernet gateway for Modbus RTU/ASCII/TCP and EtherNet/IP network communication. To integrate existing Modbus devices onto an EtherNet/IP network, use the MGate 5105-MB-EIP as a Modbus master or slave to collect data and

exchange data with EtherNet/IP devices. The latest exchange data will be stored in the gateway as well. The gateway converts stored Modbus data into EtherNet/IP packets so the EtherNet/IP scanner can control or monitor Modbus devices.

: Configuration Backup via microSD Card

The MGate 5105-MB-EIP is equipped with a microSD card slot. A microSD card can be used to back up both the system configuration and system log, and can be used to conveniently copy the same

configuration to several MGate 5105-MP-EIP units. The configuration file stored in the microSD card will be copied to the MGate itself when the system is rebooted.

: Effortless Configuration and Troubleshooting via Web Console

The MGate 5105-MB-EIP also provides a web console to make configuration easy without having to install an extra utility. Simply log in as an administrator to access all settings, or as a general user with read-only permission. Besides configuring basic protocol settings, you can use the web console to monitor I/O data values and transfers. In

particular, I/O Data Mapping shows data addresses for both protocols in the gateway's memory and I/O Data View allows you to track data values for online nodes. Moreover, diagnostics and communication analysis for each protocol can also provide helpful information for troubleshooting.

: Redundant Power Inputs

The MGate 5105-MB-EIP has dual power inputs for greater reliability. The power inputs allow simultaneous connections to two live DC power sources, so that continuous operation is provided even if one

power source fails. The higher level of reliability makes these advanced Modbus-to-EtherNet/IP gateways ideal for demanding industrial applications.

: Specifications

Ethernet Interface

Protocol: EtherNet/IP, Modbus TCP

Number of Ports: 2 (1 IP, Ethernet cascade)

Speed: 10/100 Mbps, Auto MDI/MDIX

Connector: 8-pin RJ45

Magnetic Isolation Protection: 1.5 kV (built-in)

EtherNet/IP

• Class: Adapter, Scanner

• CIP Objects Supported: Identity, Message Router, Assembly, Connection Manager, TCP/IP interface, Ethernet link, Port

• Max. Number of Connections:

MGate as Adapter: 16 connections for read-only, 1 connection for read/write

MGate as Scanner: 100 connections

• Max. Total I/O Data Size:

Input: 2048 bytes (496 bytes per connection)

Output: 2048 bytes (496 bytes per connection)

Modbus

• Functions Supported: 1, 2, 3, 4, 5, 6, 15, 16, 23

• Max. Number of Commands: 100

• Max. Number of Connections:

MGate as Modbus TCP Master: 32 connections

MGate as Modbus TCP Slave: 16 connections

• Max. Total I/O Data Size:

Input: 2048 bytes

Output: 2048 bytes

Serial Interface

Protocol: Modbus RTU/ASCII

Number of Ports: 1

Serial Standards: RS-232/422/485, software selectable

Connectors: DB9 male

Isolation: 2 kV (built-in)

RS-485 Data Direction Control: ADDC® (automatic data direction control)

Pull High/Low Resistor for RS-485: 1 kΩ, 150 kΩ

Terminator for RS-485: 120 Ω

Data Bits: 5, 6, 7, 8

Stop Bits: 1, 1.5, 2

Parity: None, Even, Odd, Space, Mark

Flow Control: RTS/CTS, RTS Toggle

Baudrate: 50 bps to 921.6 kbps

Serial Signals

RS-232: Tx+, Rx+, RTS, CTS, DTR, DSR, DCD, GND

RS-422: Tx+, Tx-, Rx+, Rx-, GND

RS-485-4w: Tx+, Tx-, Rx+, Rx-, GND

RS-485-2w: Data+, Data-, GND

Software

Operation Modes: EtherNet/IP Adaptor/Scanner, Modbus RTU/ASCII/TCP Master/Slave

Configuration Options: Web Console, Windows Utility, Serial Console

Utilities: MGate Manager for Windows 2000/XP/2003/Vista/Server 2008/7/8 (x86/x64), Windows Server 2008 R2/2012 (x64)

Support: MXview, SNMP (v1, v2, v3), Private MIB

Physical Characteristics

Housing: Metal, IP30 protection

Weight: 507 g

Dimensions: 36 x 105 x 140 mm (1.42 x 4.14 x 5.51 in)

Storage Card Slot: 1 microSD (SDHC) card slot supports up to 32 GB

Environmental Limits

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)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Altitude: Up to 2000 m (795 hPa), higher altitudes on demand

Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

Power Requirements

Input Voltage: 12 to 48 VDC

Power Connector: Terminal block

Power Consumption:

455 mA @ 12 VDC, 125 mA @ 48 VDC

Standards and Certifications

Safety: UL 508, EN 60950-1

Hazardous Location:

UL/cUL Class 1 Division 2 Groups A/B/C/D,

ATEX Zone 2 Ex nA nC IIC T3 Gc,

IECEx (Pending)

EMC: CE, FCC

EMI: EN 55022 Class A, FCC Part 15 Subpart B Class A

EMS:

EN 55024,

EN 61000-4-2 (ESD) Level 4,

EN 61000-4-3 (RS) Level 3,

EN 61000-4-4 (EFT) Level 4,

EN 61000-4-5 (Surge) Level 3,

EN 61000-4-6 (CS) Level 3,

EN 61000-4-8 (PFMF) Level 3

Shock: IEC 60068-2-27

Freefall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Reliability

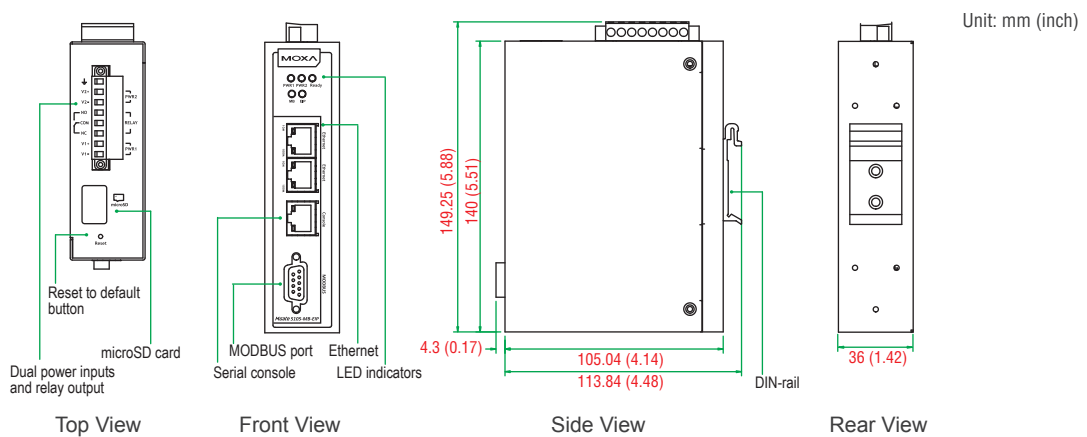
MTBF (mean time between failures): 513,139 hrs

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



Ordering Information

Available Models

MGate 5105-MB-EIP: 1-port Modbus-to-EtherNet/IP gateway, 0 to 60°C operating temperature

MGate 5105-MB-EIP-T: 1-port Modbus-to-EtherNet/IP gateway, -40 to 75°C operating temperature

Optional Accessories (can be purchased separately)

MXview: Moxa industrial network management software with 50, 100, 250, 500, 1000, or 2000 nodes

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/176 to 264 VAC input by switch

WK-36-02: Wall mounting kit

Mini DB9F-to-TB Adapter: DB9 female to terminal block adapter

Package Checklist

- 1 MGate 5105-MB-EIP Modbus-to-EtherNet/IP gateway
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card
- RJ45 to DB9 cable (for console use)

Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

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eshop.autocont-ipc.cz



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PRODLOUŽENÁ ZÁRUKA

Záruka 2 roky na vyráběné počítače s možností jejího prodloužení až na 5 let.



ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.