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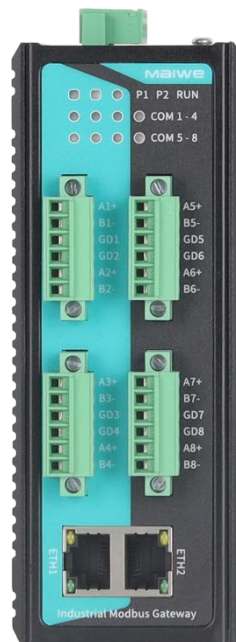
Mgate3208 Series

8*RS232/RS485 to 2*Ethernet Port Modbus Industrial Gateway

- Support 8 * RS232 or RS485 serial port to 2 * 10/100Base-T(X) auto-sensing Ethernet ports
- Support conversion between Modbus RTU/ASCII and Modbus TCP protocols, and support Modbus RTU/ASCII Over TCP transparent transmission
- Support Modbus slave pre-reading, single port automatically learns up to 256 RTU or 128 ASCII instructions, and pre-reads data to achieve fast response
- Support Modbus address mapping, mapping a single read/write instruction with read/write instructions of multiple addresses, realizing batch read/write with a single instruction
- Support serial port forwarding, realizes transparent transmission of data between the serial port and other serial ports, and provides one-way forwarding/receiving and two-way forwarding control
- Support JSON function, which can convert the collected Modbus slave device data into JSON format and send it to the server
- Support DC 12~48V dual power supply redundant input, support no polarity
- High-strength aluminum alloy casing, IP40 protection level, fanless casing for heat dissipation, the equipment can reliably work in harsh industrial environments of -40℃~+85℃

⬙ Product Description

The Mgate3208 is a din-rail industrial Modbus gateway with 8*serial ports. It supports serial port conversion to UDP, TCP, Modbus, HTTPD, WebSocket, MQTT and other protocols, and can realize communication between Modbus RTU/ASCII and Modbus TCP protocols. This product provides 2*100M copper ports and 8*RS232 or RS485 serial ports to choose from. It supports DC12~48V dual power supply redundant input. The power supply connection has no polarity.

The product supports WEB configuration of various network management functions, such as serial port/network working mode, serial port forwarding, network card mode, DNS, access control, IP/MAC filtering, log management, email alarms, SNMP alarms, serial port restart, system management, etc; it supports Modbus RTU Master/Slave, Modbus ASCII Master/Slave, UDP, TCP Client/Server, UDP Multicast, RealCOM_MCP/CCP/MW, Pair Connection Master/Slave, HTTPD Client, WebSocket Client, MQTT and other conversion modes to realize serial port to Ethernet network or Modbus TCP protocol. The Modbus gateway supports one-click restart or factory reset. The hardware adopts high-standard industrial protection design, with industrial-grade components and high-strength aluminum alloy casing, which is sturdy and durable; it is featured with low power consumption, wide temperature and wide voltage design, fanless casing for heat dissipation, and supports -40℃~+85℃ operating temperature, passed strict safety regulations and EMC tests to meet the application needs of harsh industrial environments. The Mgate3208 series can be widely used in industrial automation, integrated energy, smart cities, smart transportation, smart mines, smart factories and other fields.

Features and Benefits

- High-performance CPU processing power, Cortex-A7 core, running frequency up to 800MHz
- Dual network ports can be configured as two independent network segments or cascade ports
- Serial port supports 300bps-460800bps baud rate optional
- Support UDP and UDP Multicast mode. Point-to-point, point-to-multipoint or multipoint-to-multipoint communication can be achieved through UDP protocol.
- Support TCP Client/Server mode, establishing session connections through TCP protocol. TCP Client supports up to 16 session connections, TCP Server supports up to 32 session connections, and supports RFC2217 instructions to dynamically modify communication parameters such as serial port baud rate
- Support Pair Connection Master/Slave mode, devices can be used in pairs
- Support Modbus RTU/ASCII Master/Slave mode to realize Modbus TCP and Modbus RTU/ASCII protocol conversion
- Support RealCOM_MCP/CCP/MW mode, maps the network to local COM, and seamlessly connects
- Support HTTPD Client mode and can perform GET or POST operations with HTTPD server
- Support WebSocket Client mode, enabling two-way communication with the WebSocket server
- Support multiple sub-packaging mechanisms, converts serial port data into Ethernet data packets according to data length or time, to meet the real-time needs of different networks
- Support frame header and tail mode. The serial port can filter data frames based on the start byte and end byte of the frame
- Support registration package and heartbeat package to realize connection verification and connection status detection
- Support Modbus virtual ID, mapping the real ID of the Modbus slave to a virtual ID for data communication to avoid duplication of slave IDs
- Support DES/3DES/AES/RC2/RC4/RC5/BlowFish and other data encryption algorithms to ensure data security
- Support SSL (TLS1.0/1.1/1.2) connection encryption, one-way/two-way certificate verification, ensuring connection security
- Support HTTP/ HTTPS/ SSH/ TELNET access control, and IP/ MAC address filtering
- Support event alarms such as device restart, login events, configuration changes, password changes, etc., and supports email and SNMP alarm methods
- Support serial port communication parameters, working mode, statistics of sent and received frames
- Support log local storage, network storage and serial port log output
- Support serial port/device restart, factory settings restoration, device upgrade and NTP client

Specification

Software	
Network Protocol	IP, TCP, UDP, DNS, ARP, SNMP Trap, SSH, ICMP, HTTP, HTTPS, DHCP Client, RFC2217, NTP, SMTP, TELENT
IP Obtaining Method	Static IP/DHCP
DNS Resolution	Support
Configuration	Web page configuration/CONSOLE port simple network parameter configuration
Simple Transparent Transmission	UDP/ UDP Multicast/TCP Client/TCP Server/RealCOM/ Pair Connection
Modbus	Modbus RTU /ASCII to Modbus TCP
Serial Port Data Package	Time and length can be set; the maximum pack length is 1460 bytes
Data Encryption	DES/3DES/AES/RC2/RC4/RC5/BlowFish
SSL Encryption	TLS1.0/TLS1.1/TLS1.2
TCP Server Connection	The single serial port supports up to 32 * TCP Client connections
TCP Client Connection	Single serial port supports up to 16 * TCP Server connections
Network Cache	Send: 16 Kbyte; receive: 16 Kbyte
Serial Port Cache	Send: 16 Kbyte; receive: 16 Kbyte
Heartbeat Package	Support TCP Keepalive, custom heartbeat package content
Registration Package	Customize the registration package content
RFC2217	Support
Serial to Serial Data Forwarding	Users can select the data forwarding rules between the current serial port and other serial ports
Modbus Address Mapping	This feature is only effective in Modbus RTU Slave and Modbus ASCII Slave modes and is mutually exclusive to the Modbus slave pre-read and Modbus slave address mapping features
HTTPD Client	Support
WebSocket Client	Support

☑ Specification

MQTT	Support
JSON	The JSON function is supported in the HTTPD Client, WebSocket Client, and MQTT mode
RealCOM	Support Maiwe, Moxa, CanHigher and other working modes
Transmission Delay (Average)	<10ms
Supporting Software	Network management configuration tool, virtual serial port software, MixView, MaxView

Interface

100M Ethernet	2 * 10/100Base-T(X) auto-sensing RJ45 port, supporting full / half duplex, auto MDI/MDI-X, and 1.5kV electromagnetic isolation protection
Serial Port	Serial port type: 8 * RS232 or RS485 is optional Connection: 6-position 3.81mm pitch locking terminal blocks
CONSOLE Port	1 * CONSOLE port, in accordance with USB2.0 specification, using Micro-B USB2.0 socket
Button	One-click restart or factory reset
Status LED	Power indicator, operation indicator, Ethernet interface SPEED / LINK indicator, serial port indicator

Power Supply

Input Voltage	Dual DC12~48V redundancy power input
Power Consumption (full load)	＜2.6W@DC24V(RS232), ＜2W@DC24V(RS485)
Connection	5-position 5.08mm pitch lock terminal block
Protection	Non-polarity

Physical Characteristics

Dimensions	140×54×110 mm (DIN rail mounting clips excluded)
Installations	Easy installation on 35mm DIN-Rails
IP Code	IP40
Weight	About 0.6kg

☑ Specification

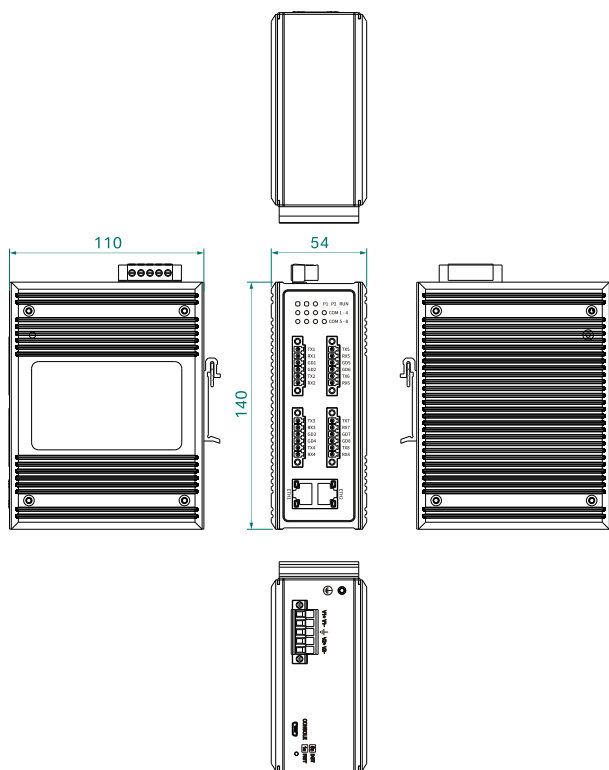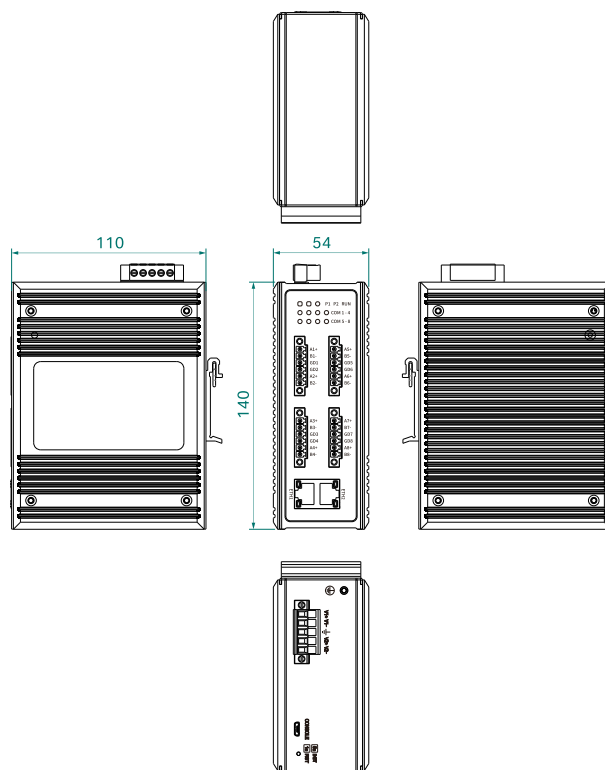| Working Environment	
Operating Temp	-40℃~+85℃
Storage Temp	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)
Industry Standard	
EMC	IEC 61000-4-2 (ESD): contact discharge ± 8kV, air discharge ± 15kV IEC 61000-4-5 (Surge): Power supply: common-mode ± 4kV, differential-mode ±
Certification	CE, FCC, RoHS

↓ Installation Dimension

Unit: mm

Mgate3208-8D232

Mgate3208-8D485

Ordering Information

Standard Model	100M Copper Port	RS232	RS485	Input Voltage
Mgate3208-8D232	2	8	/	Dual DC12~48V
Mgate3208-8D485	2	/	8	

Contact Us

Wuhan Maiwe Communication Co., Ltd

Address: No.52 Liufang Avenue, East lake High-tech Development Zone, Wuhan, China.

Tel: 027-87170217

Mail: enquiry@maiwe.com

Official site: www.maiwe.com