MGate 5217 Series

2-port Modbus RTU/ASCII/TCP-to-BACnet/IP gateways

Features and Benefits

- Supports Modbus RTU/ASCII/TCP master/client
- Supports BACnet/IP slave/server
- Supports 600 points and 1200 points models
- Supports COV for fast data communication
- Supports virtual nodes designed to make each Modbus device as a separate BACnet/IP device
- Configures Modbus commands quickly by editing an Excel spreadsheet
- Embedded traffic and diagnostic information for easy troubleshooting
- Built-in Ethernet cascading for easy wiring
- Industrial design with -40 to 75°C operating temperature range
- Serial port with 2 kV isolation protection
- Dual AC/DC power supply
- 5-year warranty
- Security features based on IEC 62443

Certifications

Introduction

The MGate 5217I Series comprise 2-port BACnet gateways that can convert Modbus RTU/ACSII/TCP to BACnet/IP protocol. Depending on the size and the scale of the network, the gateways provide 600-point and 1200-point models. All models are rugged, DIN-rail mountable, operate in wide temperatures, and offer built-in 2kV isolation for serial signals.

Easy Configuration Via Web Console and Excel Spreadsheet

The MGate 5217I Series comes with an intuitive UI design to make configuration easy. With that, you can easily access protocol conversion modes and finish the configuration in a few steps instead of installing an additional engineering utility in your computer. Besides, the MGate can generate Modbus commands by importing an Excel spreadsheet, which makes it easy to edit Modbus commands.

Modbus and BACnet/IP Protocol Traffic Monitor and Diagnostics

The MGate 5217I gateways support Modbus and BACnet/IP Protocol Traffic Monitor and Diagnostics for easy troubleshooting, especially during the installation stage. Communication issues could be caused by incorrect software parameters, such as the wrong slave ID and register address, or an incorrect command configuration. With Diagnostics, you can check the communication status and view values at a glance. With Modbus/BACnet Protocol Traffic Monitor, you can check the captured data and easily identify the root cause.

Security Features Based on IEC 62443

Using network devices that are IEC 62443-4-2 compliant and equipped with basic security capabilities is an effective precautionary measure to ward off cyberattacks. The MGate 5217I Series is capable of several basic security capabilities, including password cracking defense, sniffer and data breach prevention, whitelisting, and the account management.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	2 Auto MDI/MDI-X connection
Magnetic Isolation Protection	1.5 kV (built-in)

Ethernet Software Features

Industrial Protocols	Modbus TCP Client (Master), BACnet/IP Server (Slave)
Configuration Options	Web Console (HTTP/HTTPS), Device Search Utility (DSU), Telnet Console
Management	ARP, DHCP Client, DNS, HTTP, HTTPS, SMTP, SNMP Trap, SNMPv1/v2c/v3, TCP/IP, Telnet, UDP, NTP Client
MIB	RFC1213, RFC1317
Time Management	NTP Client

Serial Interface

No. of Ports	2
Connector	DB9 male
Serial Standards	RS-232/422/485
Baudrate	50 bps to 921.6 kbps
Data Bits	7, 8
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 2
Flow Control	RTS Toggle (RS-232 only), RTS/CTS, DTR/DSR
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Terminator for RS-485	120 ohms
Isolation	2 kV (built-in)

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Serial Software Features

Industrial Protocols	Modbus RTU/ASCII Master

Modbus RTU/ASCII

Mode	Master
Functions Supported	1, 2, 3, 4, 5, 6, 16
Max. No. of Commands	MGate 5217I-600-T: 600 (up to 300 commands/per serial port) MGate 5217I-1200-T: 1200 (up to 600 commands/per serial port)

Modbus TCP

Mode	Client (Master)
Functions Supported	1, 2, 3, 4, 5, 6, 16

Max. No. of Server Connections	32
Max. No. of Commands	MGate 5217I-600-T: 600 MGate 5217I-1200-T: 1200

BACnet/IP

Mode	Server (Slave)
Memory Size	MGate 5217I-600-T: 600 points MGate 5217I-1200-T: 1200 points
Supported BACnet Object	Binary Input Binary Output Binary Value Analog Input Analog Output Analog Value Multi-state Input Multi-state Output Multi-state Value Integer Value Positive Integer Value

Power Parameters

Input Voltage	24 VAC, 12 to 48 VDC
Input Current	300 mA @ 24 VAC 510 mA @ 12 VDC
Power Connector	Screw-fastened Euroblock terminal

Relays

Contact Current Rating	Resistive load: 1 A @ 30 VDC

Physical Characteristics

Housing	Plastic
IP Rating	IP30
Dimensions (without ears)	29 x 89.2 x 118.5 mm (1.14 x 3.51 x 4.67 in)
Dimensions (with ears)	29 x 89.2 x 124.5 mm (1.14 x 3.51 x 4.90 in)
Weight	380 g (0.84 lb)

Environmental Limits

Operating Temperature	-40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs

Safety	UL 62368-1, IEC 62368-1
Freefall	IEC 60068-2-32
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6, IEC 60068-2-64

MTBF

Time	1,277,500 hrs
Standards	Telcordia SR332

Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x MGate 5217 Series gateway
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)
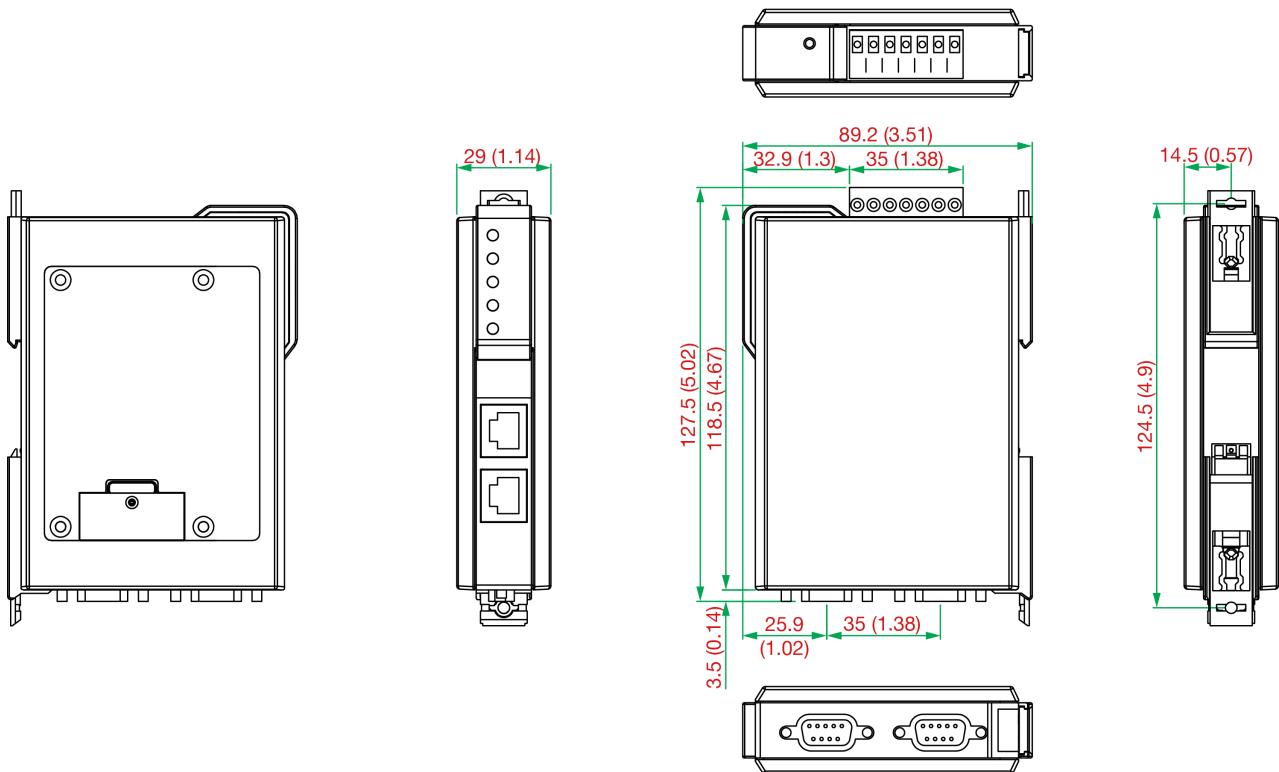
Ordering Information

Model Name	Data Points
MGate 5217I-600-T	600
MGate 5217I-1200-T	1200

Accessories (sold separately)

Cables

CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m
CBL-F9M9-20	DB9 female to DB9 male serial cable, 20 cm

Connectors

Mini DB9F-to-TB	DB9 female to terminal block connector

Power Cords

CBL-PJTB-10	Nonlocking barrel plug to bare-wire cable

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