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

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 Commands 32 Max. No. of Commands MGate 52171-000-T: 000 BACneVIP Mode Memory Size MCate 52171-800-T: 600 points Memory Size MCate 52171-800-T: 1200 points Supported BACnet Object Binary Input Binary Input Binary John Binary Value Market 52171-1200-T: 1200 points Analog Output Analog Value Multi-state Output Multi-state Output Multi-state Output Multi-state Output Mini-state Value Multi-state Output Mini-state Value Multi-state Output Model State No. 150 mA 9 12 VDC Input Current 300 mA 52 NDC Power Connector Screw-fastened Euroblock terminal Relays Contact Current Rating Relays Power Connector Contact Current Rating Plastic IP Rating Plastic IP Rating IP Rating Dimensions (without ears) 29 x 89.2 x 118.5 mm (1.14 x 3.51 x 4.67 in) Dimensions (without ears) 29 x 89.2 x 12.5 mm (1.14 x 3.51 x 4.90 in)		
MGate 52171-1200-T: 1200 BACnet/IP	Max. No. of Server Connections	32
Mode Server (Slave) Memory Size MGate 52171-800-T: 600 points MGate 52171-1200-T: 1200 points MGGate 52171-1200 points MGGate 52171-1200-T: 1200 points MGGate 52171-1200-T: 1200 points MGGate 52171-1200-T: 1200 points MGGate 52171-1200 points MGGate 52	Max. No. of Commands	
Memory Size MGate 52171-800-T: 600 points MGate 52171-1200-T: 1200 points MGate 52171-1200-T: 1200 points MGate 52171-1200-T: 1200 points Binary Input Binary Value Analog Output Analog Output Multi-state Output Multi-state Value Integer Value Positive Integer Value Power Connector Screw-fastened Euroblock terminal Relays Contact Current Rating Pesistive 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 (without 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 155°F) Ambient Relative Humidity 5 to 95% (non-condensing) Standards and Certifications EMC EN 55032/36 EMI CISPR 32, FCC Part 15B Class A EGG 61000-42 ESD: Contact: 6 kV, Ain: 8 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-44 EFT: Power 4 kV; Signal: 2 kV Inc. 61000-	BACnet/IP	
Binary Input Binary Value Binary Value Analog Output Binary Value Analog Output Analog Output Analog Output Multi-state Output Multi-state Value Integer Value Positive Integer Value Power Connector Relays Contact Current Rating Resistive Ioad: 1 A @ 30 VDC Physical Characteristics Power Connector Physical Characteristics Physical C	Mode	Server (Slave)
### Binary Output ### Binary Output ### Analog Input Analog Value Analog Value Analog Value Multi-state Cutput Multi-state Input Multi-state Cutput Multi-state Value Integer Value Positive Integer Value Positive Integer Value Power Parameters	Memory Size	
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 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 EMI CISPR 32, FCC Part 15B Class A EMS IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Rive; Power: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8	Supported BACnet Object	Binary Output Binary Value Analog Input Analog Output Analog Value Multi-state Input Multi-state Output Multi-state Value Integer Value
Input Current 300 mA @ 24 VAC 510 mA @ 12 VDC	Power Parameters	
Stom A @ 12 VDC	Input Voltage	24 VAC, 12 to 48 VDC
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 61000-4-8 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-8 PFMF	Input Current	
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 ESI: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF	Power Connector	Screw-fastened Euroblock terminal
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 Operating Temperature (package included) -40 to 75°C (-40 to 185°F) Ambient Relative Humidity 5 to 95% (non-condensing) Standards and Certifications EMC 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 BY: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-8 ES: 80 Flower: 2 kV IEC 61000-4-8 ES: 10 V IEC 61000-4-8 ES: 10 V IEC 61000-4-8 PFMF	Relays	
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	Contact Current Rating	Resistive load: 1 A @ 30 VDC
IP Rating IP30	Physical Characteristics	
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 61000-4-8 PFMF	Housing	Plastic
Dimensions (with ears) 29 x 89.2 x 124.5 mm (1.14 x 3.51 x 4.90 in)	IP Rating	IP30
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	Dimensions (without ears)	29 x 89.2 x 118.5 mm (1.14 x 3.51 x 4.67 in)
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	Dimensions (with ears)	29 x 89.2 x 124.5 mm (1.14 x 3.51 x 4.90 in)
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 Stripe Power: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF	Weight	380 g (0.84 lb)
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 61000-4-5 Surge: Power: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF	Environmental Limits	
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	Operating Temperature	-40 to 75°C (-40 to 167°F)
Standards and Certifications	Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
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	Ambient Relative Humidity	5 to 95% (non-condensing)
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	Standards and Certifications	
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	EMC	EN 55032/35
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	ЕМІ	CISPR 32, FCC Part 15B Class A
	EMS	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



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

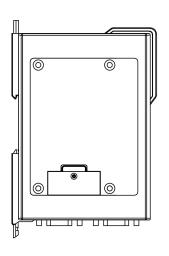
Warranty Period	5 years
Details	See www.moxa.com/warranty

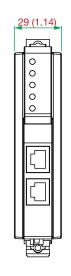
Package Contents

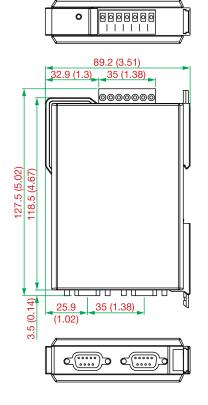
Device	1 x MGate 5217 Series gateway
Documentation	1 x quick installation guide 1 x warranty card

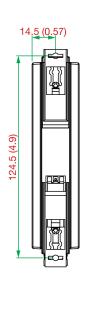
Dimensions

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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