

MGate 5119 系列

1 埠 DNP3/IEC 101/IEC 104/Modbus 轉 IEC 61850 閘道器



特色與優點

- 支援 IEC 61850 MMS 伺服器
- 支援 DNP3 串列/TCP 主控裝置
- 支援 IEC 60870-5-101 主控裝置 (平衡/非平衡)
- 支援 IEC 60870-5-104 用戶端
- 支援 Modbus RTU/ASCII/TCP 主控裝置/用戶端
- 嵌入式流量監控/診斷資訊，便於故障排除
- 輕鬆佈線的內建乙太網路串接
- -40°C 至 75°C 操作溫度範圍
- 串列內建埠 2kV 隔離保護
- 支援 IEC 61850 MMS 和 DNP3 TCP 通訊協定加密
- 基於 IEC 62443/NERC CIP 的安全功能
- 符合 IEC 61850-3 和 IEEE 1613
- 內建 SCL 檔案產生器，便於配置

認證



簡介

MGate 5119 是工業乙太網路閘道器，具有 2 個乙太網路連接埠和 1 個 RS-232/422/485 串列埠。若要將 Modbus、IEC 60870-5-101 和 IEC 60870-5-104 裝置與 IEC 61850 MMS 網路相整合，請將 MGate 5119 做為 Modbus 主控裝置/用戶端、IEC 60870-5-101/104 主控裝置和 DNP3 串列/TCP 主控裝置，藉以收集資料並與 IEC 61850 MMS 系統交換資料。

透過 SCL 產生器輕鬆配置

MGate 5119 做為 IEC 61850 MMS 伺服器，通常需要匯入由第 3 方工具產生的 SCL 檔案。這可能很耗時，而且會增加成本。為了克服這個難處，MGate 5119 內建 SCL 產生器，可以透過 Web 主控台輕鬆產生 SCL 檔案並幾乎立即可用，因此節省配置時間和成本。

透過流量監視器輕鬆進行故障排除

MGate 5119 系列閘道器支援 Modbus RTU/ASCII/TCP、IEC 60870-5-101、IEC 60870-5-104 和 IEC 61850 MMS 通訊協定流量監控，故障排除更容易，特別在安裝階段。值得一提的是，可以在常用的故障排除工具 Wireshark 中查看流量日誌。使用此項功能可以輕鬆分析流量以確定問題的根本原因。

規格

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), IEC 60870-5-104 Client, IEC 61850 MMS Server, DNP3 TCP Master
Configuration Options	Web Console (HTTP/HTTPS), Device Search Utility (DSU)

Management	ARP, DHCP Client, DNS, HTTP, HTTPS, SMTP, SNMP Trap, SNMPv1/v2c/v3, TCP/IP, Telnet, SSH, UDP, NTP Client
MIB	RFC1213, RFC1317
Time Management	NTP Client

Security Functions

Authentication	Local database
Encryption	HTTPS, AES-128, AES-256, SHA-256
Security Protocols	SNMPv3 SNMPv2c Trap HTTPS (TLS 1.3)

Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
No. of Ports	1
Connector	DB9 male
Serial Standards	RS-232/422/485
Baudrate	50 bps to 921.6 kbps
Data Bits	7, 8
Parity	Even, Mark, None, Odd, Space
Stop Bits	1, 2
Flow Control	RTS Toggle (RS-232 only), RTS/CTS
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, IEC 60870-5-101 Master (Balanced/Unbalanced), DNP3 Serial Master
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Modbus RTU/ASCII

Mode	Master
Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Max. No. of Commands	128

Modbus TCP

Mode	Client (Master)
Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Max. No. of Server Connections	32
Max. No. of Commands	128

IEC 60870-5-104

Mode	Client
Objects Supported	Single point Double point Step position Bit string of 32 bit Measured value (normalized) Measured value (scaled) Measured value (floating) Integrated totals
Max. No. of Server Connections	32
Max. No. of Information Objects	1200 points

IEC 60870-5-101

Mode	Master (Balanced/Unbalanced)
Objects Supported	Single point Double point Step position Bit string of 32 bit Measured value (normalized) Measured value (scaled) Measured value (floating) Integrated totals
Max. No. of Slave Connections	1 (Balanced), 31 (Unbalanced)
Max. No. of Information Objects	1200 points

DNP3 Serial

Mode	Master
Objects Supported	Binary inputs Analog inputs Counters Frozen counters Binary outputs Analog outputs
Max. No. of Outstation Connections	16
Max. No. of Objects	1200 points

DNP3 TCP

Mode	Master
Objects Supported	Binary inputs Analog inputs Counters Frozen counters Binary outputs Analog outputs

Max. No. of Outstation Connections	16
Max. No. of Objects	1200 points
IEC 61850	
Mode	MMS Server
Max. No. of Client Connections	16
Max. No. of Datasets	99
Max. No. of Reports	99
Max. No. of Data Objects	1200 points
Memory	
No. of Data Points Supported	1,200 points
microSD Slot	Up to 32 GB (SD 2.0 compatible)
Power Parameters	
Input Voltage	12 to 48 VDC
Input Current	455 mA @ 12 VDC
Power Connector	Screw-fastened Euroblock terminal
Relays	
Contact Current Rating	Resistive load: 2 A @ 30 VDC
Physical Characteristics	
Housing	Metal
IP Rating	IP30
Dimensions	36 x 120 x 150 mm (1.42 x 4.72 x 5.91 in)
Weight	517 g (1.14 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	
Safety	EN 60950-1, IEC 60950-1, IEC 62368-1, UL 60950-1, EN 62368-1, UL 62368-1
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 4 kV IEC 61000-4-6 CS: 10 V/m IEC 61000-4-8 PFMF: 100 A/m
Freefall	IEC 60068-2-32
Shock	IEC 60068-2-27

	IEC 61850-3 Edition 2.0
Power Substation	IEEE 1613, IEC 61850-3
Vibration	IEC 60068-2-6, IEC 60068-2-64, IEC 61850-3 Edition 2.0

MTBF

Time	1,180,203 hrs
Standards	Telcordia SR332

Warranty

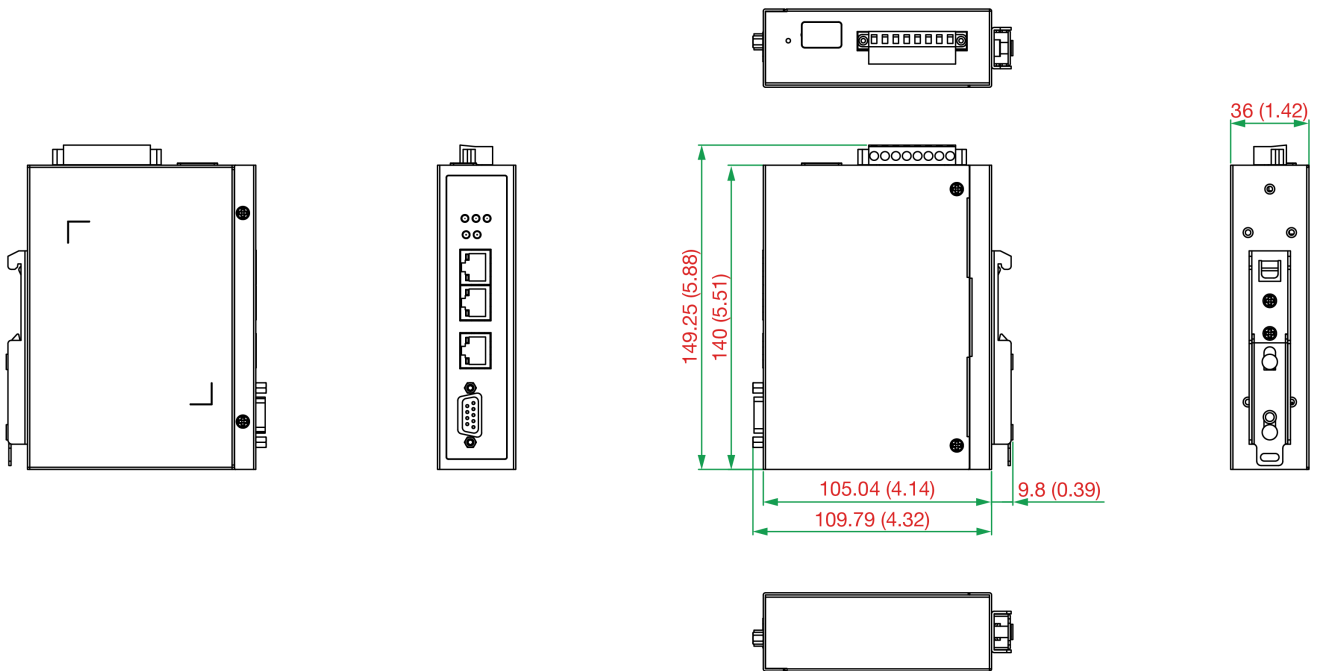
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x MGate 5119 Series gateway
Cable	1 x RJ45-to-DB9 console cable
Installation Kit	1 x DIN-rail kit
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	Operating Temperature
MGate 5119-T	-40 to 75°C

配件 (選購)

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
CBL-RJ45F9-150	8-pin RJ45 to DB9 female serial cable, 1.5m
CBL-RJ45SF9-150	8-pin RJ45 to DB9 female serial cable with shielding, 1.5m

Connectors

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

CBL-PJTB-10	Non-locking barrel plug to bare-wire cable
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Mounting Kits

WK-36-02	DIN-rail/wall-mounting kit, 2 plates, 6 screws
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