

# MGate 5109 系列

## 1 埠 Modbus RTU/ASCII/TCP 轉 DNP3 串列埠/TCP/UDP 閘道器



### 特色與優點

- 支援 Modbus RTU/ASCII/TCP master/client and slave/server
- 支援 DNP3 串列埠/TCP/UDP master and outstation ( 層級 2 )
- DNP3 主控裝置模式最多支援 26600 個點
- 透過 DNP3 支援時間同步
- 透過網頁式設定精靈輕鬆配置
- 輕鬆佈線的內建乙太網路串接
- 嵌入式流量監控/診斷資訊，便於故障排除
- microSD 卡可用於備份/複製配置與儲存事件日誌
- 狀態監控和故障保護，可輕鬆維護
- 備援雙直流電源輸入和繼電器輸出
- 提供 -40 至 75°C 寬溫度型號可供選用
- 串列內建埠 2kV 隔離保護
- 基於 IEC 62443 的資安防護功能

### 認證



## 簡介

MGate 5109 是 Modbus RTU/ASCII/TCP 和 DNP3 串列/TCP/UDP 通訊協定轉換的工業乙太網路閘道器。所有型號均有強固的金屬外殼加以保護，可使用 DIN 軌道安裝，而且提供內建串列隔離。MGate 5109 支援 transparent mode，很容易就可以將 Modbus TCP 整合到 Modbus RTU/ASCII 網路或將 DNP3 TCP/UDP 整合到 DNP3 串列網路。MGate 5109 也支援 agent mode，能夠在 Modbus 和 DNP3 網路之間交換數據，也可做為多個 Modbus slaves 或多個 DNP3 外站的數據集中器。堅固設計適合電力、石油與天然氣以及水資源與廢水等工業應用。

### 透過 Web 主控台輕鬆配置

MGate 5109 系列隨附有插圖的快速安裝指南，配置更便利。透過快速安裝，只要幾個步驟即可輕鬆存取通訊協定轉換模式，並完成配置。MGate 5109 系列也支援 DNP3 串列外站的自動偵測，允許 MGate 5109 自動取得設定為 DNP3 主控裝置的所有外站物件。

### Modbus 和 DNP3 通訊協定流量監控

MGate 5109 閘道器支援 Modbus 和 DNP3 通訊協定流量監控，故障排除更容易，尤其在安裝階段。不正確的軟體參數（例如從屬裝置 ID 和暫存器位址）或不正確的命令配置會造成通訊問題。有了 Modbus/DNP3 通訊協定流量監控，您可以檢查所擷取的數據，並輕鬆判斷問題根本原因。

### 多種維護功能

MGate 5109 閘道器提供 Web 主控台和 Telnet 主控台，適用於遠端維護。支援加密通訊功能 (包括 HTTPS 和 SSH)，強化網路安全。另提供韌體記錄功能，可記錄連網事件和 Modbus 維護事件。使用者可以透過 Web 控制台遠端查看日誌資料。

## 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), Modbus TCP Server (Slave), DNP3 TCP Master, DNP3 TCP Outstation
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, SSH, UDP, NTP Client
MIB	RFC1213, RFC1317
Time Management	NTP Client

## 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	None, Even, Odd, Space, Mark
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

Configuration Options	Serial Console
Industrial Protocols	Modbus RTU/ASCII Master, Modbus RTU/ASCII Slave, DNP3 Serial Master, DNP3 Serial Outstation

## Modbus RTU/ASCII

Mode	Master, Slave
Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Max. No. of Commands	100

## Modbus TCP

Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Mode	Client (Master), Server (Slave)
Max. No. of Client Connections	16
Max. No. of Server Connections	32
Max. No. of Commands	100

## DNP3 (Transparent)

Max. No. of Master Connections	16
Max. No. of Outstation Connections	32

## DNP3 Serial

Mode	Master, Outstation
Max. No. of Master Connections	1
Max. No. of Outstation Connections	31
Internal Master Database (each Master)	Binary Inputs: 8192 points Analog Inputs: 2048 points Counters: 2048 points Binary Outputs: 8192 points Analog Outputs: 2048 points
Internal Outstation Database	Binary Inputs: 8192 points Analog Inputs: 2048 points Counters: 2048 points Binary Outputs: 8192 points Analog Outputs: 2048 points Binary Input Events: 1024 Analog Input Events: 1024 Counter Events: 1024

## DNP3 TCP/UDP

Mode	Master, Outstation
Max. No. of Master Connections	1
Max. No. of Outstation Connections	32
Internal Master Database (each Master)	Binary Inputs: 8192 points Analog Inputs: 2048 points Counters: 2048 points Binary Outputs: 8192 points Analog Outputs: 2048 points
Internal Outstation Database	Binary Inputs: 8192 points Analog Inputs: 2048 points Counters: 2048 points Binary Outputs: 8192 points Analog Outputs: 2048 points Binary Input Events: 1024 Analog Input Events: 1024 Counter Events: 1024

## Memory

microSD Slot	Up to 32 GB (SD 2.0 compatible)
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## 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
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## Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	36 x 105 x 140 mm (1.42 x 4.14 x 5.51 in)
Weight	507 g (1.12 lb)

## Environmental Limits

Operating Temperature	MGate 5109: 0 to 60°C (32 to 140°F) MGate 5109-T: -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, UL 508
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class B
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 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; Signal: 2 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 10 V/m; Signal: 10 V/m IEC 61000-4-8 PFMF
Hazardous Locations	ATEX, Class I Division 2, IECEx
Freefall	IEC 60068-2-32
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6, IEC 60068-2-64

## MTBF

Time	888,926 hrs
Standards	Telcordia SR332

## Warranty

Warranty Period	5 years
Details	See <a href="http://www.moxa.com/tw/warranty">www.moxa.com/tw/warranty</a>

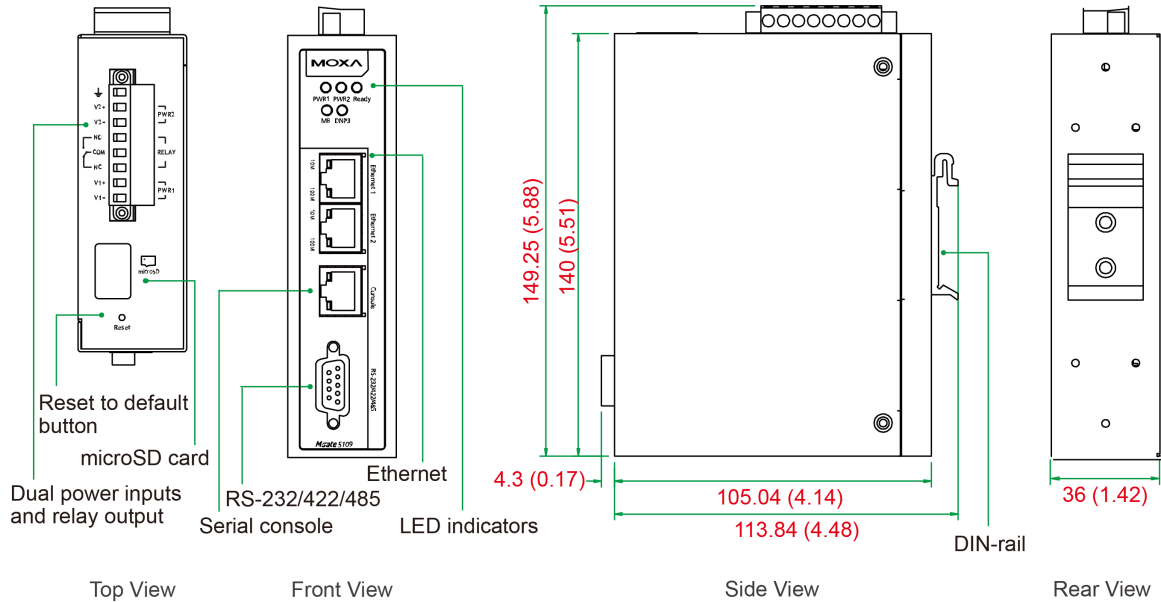
## Package Contents

Device	1 x MGate 5109 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 (英寸)



## 訂購資訊

Model Name	Operating Temp.
MGate 5109	0 to 60°C
MGate 5109-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	RJ45 to DB9 female serial cable, 1.5 m
CBL-RJ45SF9-150	RJ45 to DB9 female serial shielded cable, 1.5 m

### Connectors

Mini DB9F-to-TB	DB9 female to terminal block connector
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### DIN-Rail Mounting Kits

DK-25-01	DIN-rail mounting kit, 2 screws
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### Wall-Mounting Kits

WK-36-02	Wall-mounting kit, 2 plates, 6 screws, 36 x 67 x 2 mm
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### Power Cords

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