

MGate 5103 系列

1 埠 Modbus RTU/ASCII/TCP/EtherNet/IP 轉 PROFINET 閘道器



特色與優點

- 將 Modbus 或 EtherNet/IP 轉換為 PROFINET
- 支援 PROFINET IO 裝置
- 支援 Modbus RTU/ASCII/TCP master/client and slave/server
- 支援 EtherNet/IP 接頭
- 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
- 內建流量監控/診斷資訊，便於故障排除以及雲端數據傳輸的分析和成本評估
- 用於配置備份/複製和事件日誌的 microSD 卡，以及雲端連網中斷時的數據緩衝
- 狀態監控和故障保護，可輕鬆維護
- 串列埠內建 2kV 隔離保護
- 提供 -40 至 75°C 寬溫度運作型號可供選用
- 支援備援 DC 電源輸入與 1 點 relay 輸出

認證



簡介

MGate 5103 是將 Modbus RTU/ASCII/TCP 或 EtherNet/IP 轉換為基於 PROFINET 的網路通訊的工業乙太網路閘道器。若要將現有的 Modbus 裝置整合於 PROFINET 網路，可使用 MGate 5103 做為 Modbus 主控裝置/從屬裝置或 EtherNet/IP 轉接頭，藉以收集並交換 PROFINET 裝置的數據。最新的交換數據將儲存於閘道器。該閘道器會將儲存的 Modbus 或 EtherNet/IP 數據轉換為 PROFINET 封包，以便 PROFINET IO 控制器控制或監控現場裝置。

透過 Web 主控台輕鬆配置

MGate 5103 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 5103 系列也支援 GSDML 匯出功能。GSDML 檔案可匯入至 PROFINET PLC，節省 PLC 配置的時間。

Modbus RTU/ASCII/TCP 通訊協定流量監控

MGate 5103 閘道器支援 Modbus RTU/ASCII/TCP 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（例如並未正確輸入的從屬裝置 ID 和暫存器位址）或不正確的命令配置會造成通訊問題，藉由 Modbus RTU/ASCII/TCP 通訊協定流量監控，即可檢查獲取的數據，並輕鬆查明根本原因。

維護功能

MGate 5103 閘道器支援系統記錄功能，可記錄 MGate 中的連網事件；使用者可以透過 Web 主控台從遠端輕鬆檢閱數據。閘道器也支援狀態監控和失效防護功能。Modbus 設備中斷連線或無回應時，狀態監控功能會通知 PLC/DCS/SCADA 系統，程序 PLC/DCS 取得每台終端設備的狀態，並發出警報通知操作員。

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	PROFINET IO Device Modbus TCP Client (Master) Modbus TCP Server (Slave) EtherNet/IP Adapter
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

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	None Even Odd Space Mark
Stop Bits	1, 2
Flow Control	RTS Toggle (RS-232 only) RTS/CTS
RS-485 Data Direction Control	Automatic Data Direction Control (ADDC)
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

Modbus RTU/ASCII

Mode	Master, Slave
Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Max. No. of Commands	128
Input Data Size	512 bytes
Output Data Size	512 bytes

Modbus TCP

Mode	Client (Master), Server (Slave) Client (Master), Server (Slave)
Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Max. No. of Client Connections	16
Max. No. of Server Connections	32
Max. No. of Commands	128
Input Data Size	512 bytes
Output Data Size	512 bytes

PROFINET

Mode	IO Device IO Device
Max. No. of IO Controller Connections	1 (for read/write)
Input Data Size	512 bytes
Output Data Size	512 bytes

EtherNet/IP

Mode	Adapter
CIP Objects Supported	Identity Message Router Assembly Connection Manager TCP/IP interface

	Ethernet link Port
Max. No. of Scanner Connections	1 (for read-only), 1 (for read/write)
Input Data Size	496 bytes
Output Data Size	496 bytes

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 5103: 0 to 60°C (32 to 140°F) MGate 5103-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

EMC	EN 55032/35
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
Safety	EN 62368-1 UL 508
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	859,422 hrs
Standards	Telcordia SR332

Warranty

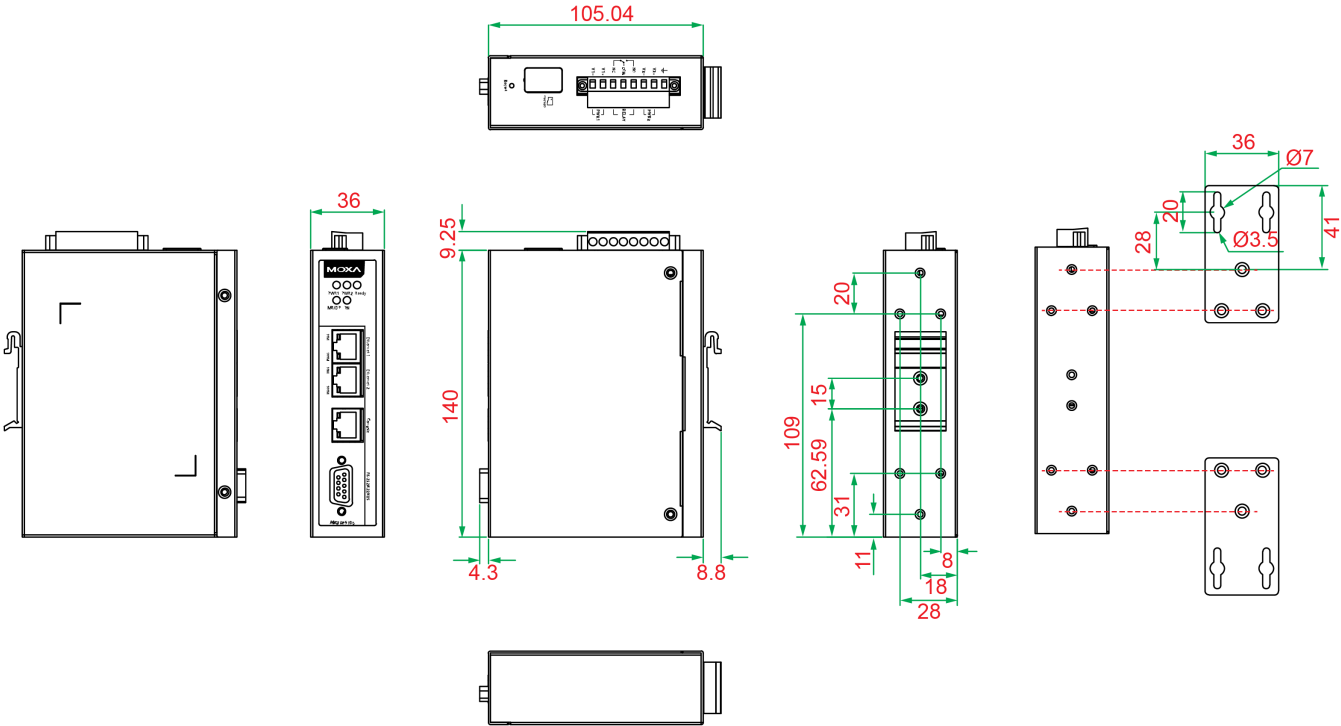
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x MGate 5103 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



訂購資訊

Model Name	Operating Temp.
MGate 5103	0 to 60°C
MGate 5103-T	-40 to 75°C

配件（選購）

Cables

CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m
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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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DIN-Rail Mounting Kits

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

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

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