

MGate EIP3170/EIP3270 系列

1 和 2 埠 EtherNet/IP 轉 DF1 閘道器



特色與優點

- 支援 PCCC 物件，可與 Rockwell Automation 網路進行通訊
- 支援 ProCOM，透過 COM port mapping 來執行控制
- 同時支援 8 個 EtherNet/IP clients/server，每個可支援 16 個排序需求
- 當設備與乙太網路連線時，串列重新定向功能可以維持原有的串列 master 與 slave 的連線
- EtherNet/IP 和 DF1 流量監控，易於進行故障排除
- 雙DC備援電源輸入
- 內建乙太網路串聯，便於佈線
- 提供 -40 至 75°C 寬操作溫度型號可供選用

認證



簡介

MGate™ EIP3000 閘道器可為需要將 Allen Bradley PLC 連接至 EtherNet/IP 網路的使用者提供 Ethernet/IP 轉 DF1 通訊協定轉換。Mgate™ 系列擁有很多創新功能，克服傳統串列裝置與 SCADA 軟體之間進行連線時所遇到的困難。不管是 1 埠或是 2 埠的閘道器，皆可用於不同規模的網路控制。

DF1 和 EtherNet/IP 之間的通訊協定轉換

MGate™ EIP3000 透過支援 CIP 上的 PCCC 物件，可與 SCADA 軟體（例如 RSLinx）進行完美通訊。對於透過 EtherNet/IP 開發控制軟體的使用者來說，MGate EIP3000 提供標準介面以進行連線。

支援多個 EtherNet/IP 連線

MGate™ EIP3000 閘道最多可同時支援 16 個 EtherNet/IP client 和 server。每個 client 一次最多可以傳送 16 個要求，而多個連線功能則可協助為更複雜的控制系統建立備援。

Windows 公用程式提供簡易的設定與流量監測

Moxa 提供一款簡單易用的 Windows 公用程式，並支援多國語言。公用程式支援

EtherNet/IP 和 DF1 通訊協定的流量監測功能，不僅會記錄由閘道器所引發的事件，同時也會記錄通過閘道器的所有指令與回應。公用程式可幫助使用者確認發生故障以及出現效能瓶頸的根本原因。

No.	Time	Device & Direction	Type	Error	Data	Comment
1	0.000	IP 192.168.32.45->GPI	Command	0	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 04 ...	
2	0.045	GPI SerialPort 1-<C	ACK	0	10 02 00 00 0F 00 46 A3 FF 4D 04 FF 4E 04 ...	DF1 Transmission symbol
4	0.075	GPI SerialPort 1-<C	Reply	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
5	0.090	GPI SerialPort 1->C	ACK	0	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
6	0.110	IP 192.168.32.45->GPI	Reply	0	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
7	0.146	IP 192.168.32.45->GPI	Command	06	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
8	0.170	GPI SerialPort 1->C	Command	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
10	0.205	GPI SerialPort 1-<C	ACK	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
11	0.210	GPI SerialPort 1-<C	Reply	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
12	0.235	IP 192.168.32.45->GPI	Reply	46	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
13	0.260	IP 192.168.32.45->GPI	Command	0F	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
14	0.310	GPI SerialPort 1->C	Command	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
15	0.320	GPI SerialPort 1-<C	ACK	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
16	0.330	GPI SerialPort 1-<C	Reply	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
17	0.370	GPI SerialPort 1-<C	ACK	0	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	DF1 Transmission symbol
18	0.390	IP 192.168.32.45->GPI	Reply	0	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
19	0.410	IP 192.168.32.45->GPI	Command	06	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
20	0.465	GPI SerialPort 1-<C	Command	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
21	0.465	GPI SerialPort 1-<C	Reply	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
22	0.495	GPI SerialPort 1-<C	ACK	0	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	DF1 Transmission symbol
24	0.510	IP 192.168.32.45->GPI	Reply	46	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
25	0.550	IP 192.168.32.45->GPI	Command	0F	07 40 02 07 36 AA 01 0F 00 46 A3 FF 4D 00 00 ...	
26	0.595	GPI SerialPort 1-<C	Command	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
27	0.610	GPI SerialPort 1-<C	ACK	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
28	0.635	GPI SerialPort 1-<C	Reply	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol
29	0.655	GPI SerialPort 1-<C	ACK	0	10 02 00 00 0F 00 46 A3 FF 4D 00 00 00 00 ...	DF1 Transmission symbol

串列重新定向功能可維持初始 Master/Slave 連線

串列重新定向功能可允許將串列 master（指令啟動者）的指令重新導向至其他連接埠的串列 slave（指令執行者）。此外，串列 master 可與 EtherNet/IP master 同時操作，而無需變更 DF1 架構或是軟體。藉由串列重新定向功能的協助，MGate™ EIP3000 閘道器替原本設計用來控制單一串列 master 的傳統 slave 設備建立備援控制。

ProCOM 透過 COM port mapping 來執行控制

每個 MGate™ EIP3000 閘道器可支援遠端 PC 的虛擬串列埠。您可以利用 Moxa 的 Real COM 驅動程式與乙太網路進行實體連線，並透過 COM 連接埠連接至 MGate™。此系列閘道器可支援多達四個虛擬 COM 連接埠連線，並且在設計備援控制系統時給予更大彈性。

上拉/下拉電阻和終端電阻選擇

在使用終端電阻以避免串列訊號反射時，必須正確設定上拉/下拉電阻，如此才可確保電子訊號不會損壞。由於沒有一套電阻值可以與所有環境普遍相容，因此 EIP3000 在底部面板有 DIP 開關，可以設定終端電阻以及上拉/下拉電阻值。

內建光電隔離

一個大型的複雜網路中通常包含有許多高電流設備，容易因放電、電磁雜訊或共模瞬變而引發電信號失真現象。Mgate™ 系列產品藉由內建光電隔離，來解決這個問題。

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	Ethernet/IP (PCCC)
Configuration Options	MGate Manager, Telnet Console
Management	ARP, DHCP Client, SNMPv1, TCP/IP, Telnet, UDP
MIB	RFC1213, RFC1317

Serial Interface

No. of Ports	MGate EIP3170 Series: 1 MGate EIP3270 Series: 2
Connector	MGate EIP3170 Series: DB9 male for RS-232, Terminal block for RS-422/485 MGate EIP3270 Series: 2 x DB9 male
Serial Standards	RS-232, RS-422
Baudrate	1200 bps to 921.6 kbps
Data Bits	8
Parity	None, Even, Odd
Stop Bits	1, 2
Flow Control	RTS/CTS, DTR/DSR (RS-232 only)
Isolation	MGate EIP3170I: 2 kV (I models) MGate EIP3170I-T: 2 kV (I models) MGate EIP3270I: 2 kV (I models)

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND

Serial Software Features

Industrial Protocols	DF1
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DF1 (Transparent)

Mode	Full duplex
Max. No. of Client Connections	8

Power Parameters

Input Voltage	12 to 48 VDC
Input Current	MGate EIP3170/EIP3270/EIP3170-IEX/EIP3270-IEX Series: 435 mA @ 12 VDC MGate EIP3170I/EIP3170I-IEX Series: 555 mA @ 12 VDC MGate EIP3270I/EIP3270I-IEX: 510 mA @ 12 VDC

Relays

Contact Current Rating	Resistive load: 1 A @ 30 VDC
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Physical Characteristics

Housing	Plastic top cover, metal bottom plate
IP Rating	IP30
Dimensions (with ears)	29 x 89.2 x 124.5 mm (1.14 x 3.51 x 4.90 in)
Dimensions (without ears)	29 x 89.2 x 118.5 mm (1.14 x 3.51 x 4.67 in)
Weight	MGate EIP3170 Series: 360 g (0.79 lb) MGate EIP3270 Series: 380 g (0.84 lb)

Environmental Limits

Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -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 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: 4 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs
Hazardous Locations	ATEX, Class I Division 2, IECEx ¹
Maritime	MGate EIP3170: DNV-GL, MGate EIP3170-T: DNV-GL, MGate EIP3170I: DNV-GL, MGate EIP3170I-T: DNV-GL
Freefall	IEC 60068-2-32
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6, IEC 60068-2-64

1. 如果您需要本產品的 IECEx 認證，請聯絡 Moxa 業務。

MTBF

Time	MGate EIP3170: 1,344,456 hrs MGate EIP3170-T: 1,344,456 hrs MGate EIP3170-IEX: 1,344,456 hrs MGate EIP3170-T-IEX: 1,344,456 hrs MGate EIP3170I: 1,344,456 hrs MGate EIP3170I-T: 1,344,456 hrs MGate EIP3170I-IEX: 1,344,456 hrs MGate EIP3170I-T-IEX: 1,344,456 hrs MGate EIP3270: 1,204,573 hrs MGate EIP3270-T: 1,204,573 hrs MGate EIP3270-IEX: 1,204,573 hrs MGate EIP3270-T-IEX: 1,204,573 hrs MGate EIP3270I: 1,204,573 hrs MGate EIP3270I-IEX: 1,204,573 hrs
Standards	Telcordia SR332

Warranty

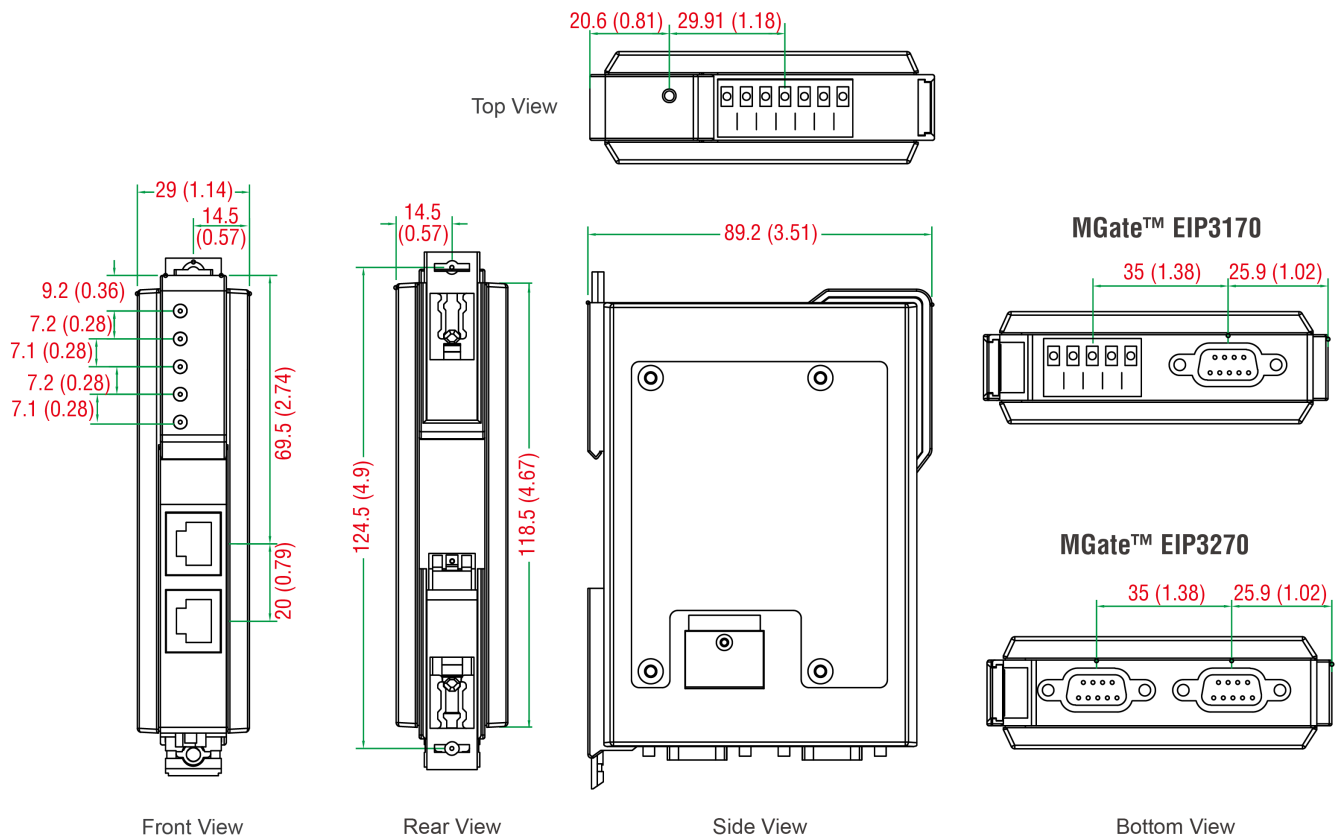
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x MGate EIP3170/EIP3270 Series gateway
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	No. of Serial Ports	Serial Connector	Serial Isolation	Operating Temp.
MGate EIP3170	1	RS-232: DB9 male RS-422/485: Terminal block	-	0 to 60°C
MGate EIP3170I	1	RS-232: DB9 male RS-422/485: Terminal block	2 kV	0 to 60°C
MGate EIP3270	2	DB9 male	-	0 to 60°C
MGate EIP3270I	2	DB9 male	2 kV	0 to 60°C
MGate EIP3170-T	1	RS-232: DB9 male RS-422/485: Terminal block	-	-40 to 75°C
MGate EIP3170I-T	1	RS-232: DB9 male RS-422/485: Terminal block	2 kV	-40 to 75°C
MGate EIP3270-T	2	DB9 male	-	-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

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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