# MGate<sup>™</sup> EIP3000 DF1 to EtherNet/IP Gateway User's Manual

Edition 2.0, June 2017

www.moxa.com/product



# MGate<sup>™</sup> EIP3000 DF1 to EtherNet/IP Gateway User's Manual

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### **Technical Support Contact Information**

#### www.moxa.com/support

#### Moxa Americas

Toll-free:1-888-669-2872Tel:+1-714-528-6777Fax:+1-714-528-6778

#### <u>Moxa Europe</u>

Tel: +49-89-3 70 03 99-0 Fax: +49-89-3 70 03 99-99

#### <u>Moxa India</u>

Tel: +91-80-4172-9088 Fax: +91-80-4132-1045

#### Moxa China (Shanghai office)

Toll-free:	800-820-5036
Tel:	+86-21-5258-9955
Fax:	+86-21-5258-5505

#### Moxa Asia-Pacific

Tel:	+886-2-8919-1230
Fax:	+886-2-8919-1231

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# Introduction

Welcome to the MGate EIP3000 line of DF1 to EtherNet/IP gateways. All models feature easy protocol conversion from DF1 to EtherNet/IP, and RS-232/422 ports for DF1 communication. One-port and two-port models are available.

The following topics are covered in this chapter:

- Overview
- Package Checklist
- Product Features

## **Overview**

The MGate EIP3000 is a line of protocol gateways that provides users with

- protocol conversion between DF1 and EtherNet/IP
- virtual serial port for multiple DF1 and EtherNet/IP device communications
- Windows utilities for easy setup and traffic monitoring.

### Protocol conversion between DF1 and EtherNet/IP

MGate<sup>™</sup> EIP3000 series products can be used to connect DF1 devices and EtherNet/IP devices to provide Allen Bradley PLCs with remote maintenance capability. By supporting PCCC objects on CIP, the MGate<sup>™</sup> EIP3000 can communicate seamlessly with Rockwell Ethernet devices. The EIP3000 protocol gateways come with either 1 or 2 serial ports to allow users to select a suitable gateway depending on the size of the network.

### **ProCOM function for multiple DF1 and EtherNet/IP device**

### communications

Each MGate<sup>™</sup> EIP3000 gateway supports a virtual serial port. A remote PC uses a Moxa-provided ProCOM function to connect to the EIP3000's virtual serial port. RSLinx and SCADA systems can use the virtual COM port to communicate with an EIP3000 gateway. The virtual serial port function gives RSLinx or some SCADA systems the capability to connect to multiple DF1 and EtherNet/IP devices through a protocol gateway.

### Web console and Windows utilities for easy setup and traffic

### monitoring

A Windows utility is provided to make configuration and operation of the MGate EIP3000 as easy as possible. The utility automatically connects to all available MGate EIP3000 units on the LAN for you. Traffic monitoring functions help you troubleshoot the communication problems between DF1 and EtherNet/IP protocols by tracking items such as connection status and address translation errors.

## **Package Checklist**

All models in the MGate EIP3000 line are shipped with the following items:

#### **Standard Accessories**

- 1 MGate EIP3000 DF1 to EtherNet/IP gateway.
- Document & software CD.
- Quick Installation Guide.
- Product warranty statement.

#### **Optional Accessories**

- DR-4524: 45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC input.
- DR-75-24: 75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC input.
- DR-120-24: 120W/5A DIN-rail 24 VDC power supply with 88 to 132 VAC/176 to 264 VAC input by switch.

#### NOTE: Notify your sales representative if any of the above items is missing or damaged.

## **Product Features**

- PCCC objects for Rockwell Automation networks supported.
- 8 simultaneous EtherNet/IP clients with up to 16 simultaneous requests per client.
- Serial redirector function provided.
- ProCOM function provides virtual serial port for multiple DF1 and EtherNet/IP device communication.
- Embedded EtherNet/IP and DF1 traffic monitor.
- Redundant dual DC power inputs.
- Built-in Ethernet cascading for easy wiring.
- Configuration over Ethernet with easy-to-use Windows utility.
- Software-selectable RS-232/422 communication.
- Support SNMP v1.
- Compatible for SLC5, CompactLogix and ControlLogix PLC series, and other DF1 Full-Duplex-compliant products

# **Getting Started**

This chapter provides basic instructions for installing the MGate EIP3000.

The following topics are covered in this chapter:

- **Connection Power**
- Connecting Serial Devices
- Connecting to a Host or the Network
- □ Installing the Software
- Mounting the Unit
- □ MXStudio

## **Connection Power**

The unit can be powered using the AC adaptor or by connecting a power source to the terminal block, depending on the model. The following instructions are for the AC adaptor:

- 1. Plug the connector of the power adapter into the DC-IN jack on the back of the unit.
- 2. Plug the power adapter into an electrical outlet.
- 3. Follow these instructions to connect a power source to the terminal block:
- 4. Loosen or remove the screws on the terminal block.
- 5. Connect the 12–48 VDC power line to the terminal block.
- 6. Tighten the connections using the screws on the terminal block.

Note that the unit does not have an on/off switch. It automatically turns on when it receives power. The PWR LED on the top panel will glow to indicate that the unit is receiving power.

For power terminal block pin assignments, please refer to the hardware reference chapter for your model.

## **Connecting Serial Devices**

The unit's serial port(s) are located on the back panel. There are two options for connecting serial devices, depending on the serial interface:

- You may use a DB9-to-DB9 cable to connect a serial device to the unit. Plug one end of the cable into the port on the unit's back panel and plug the other end of the cable into the device's serial port.
- You may make your own customized serial cable to connect a serial device to the unit. For the pin assignments of the unit's serial port, please refer to Chapter 6. This information can then be used to construct your own serial cable.

For serial port pin assignments, please refer to the hardware reference chapter for your model.

## Connecting to a Host or the Network

A 10/100BaseT Ethernet port is located on the unit's front panel. This port is used for the unit's connection to a host or Ethernet network, as follows:

- For normal operation, use a standard straight-through Ethernet cable to connect the unit to your EtherNet/IP network.
- For initial configuration or for troubleshooting purposes, you may connect the unit directly to a PC. In this case, use a crossover Ethernet cable to connect the unit to your PC's Ethernet connector.

The unit's Link LED will light up to indicate a live Ethernet connection.

One Ethernet port can be used to connect to the network, and the other port can be used to connect to another Ethernet device.

## Installing the Software

The Windows management utility is installed from the Document and Software CD. Follow the onscreen instructions after inserting the CD.

# **Mounting the Unit**

The unit can be mounted on the wall or mounted on a DIN-Rail.

## **MXStudio**

Moxa MXStudio is a network management suite that includes MXview, MXconfig, and N-Snap. MXstudio network management software gives you a convenient graphical representation of your Ethernet network, and allows you to configure, monitor, and diagnose Moxa networking devices. MXview provides an integrated management platform that can manage Moxa's MGate 5000 series as well as Ethernet switches and wireless APs, and SNMP-enabled and ICMP-enabled devices installed on subnets. MXview includes an integrated MIB complier that supports any third-party MIB. It also allows you to monitor third-party OIDs and Traps. Network and Trap components that have been located by MXview can be managed via web browsers from both local and remote sites—anytime, anywhere. For more detailed information regarding MXview, download the MXview user's manual from Moxa's website at <a href="http://www.moxa.com">http://www.moxa.com</a>.

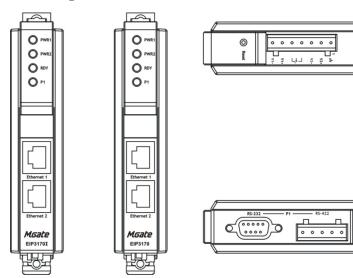
# Hardware: EIP3170, EIP3170I

This chapter provides hardware information for the MGate EIP3170 and EIP3170I.

The following topics are covered in this chapter:

- Panel Layout
- LED Indicators
- Dimensions
- Jumpers
- Pin Assignments
  - > DB9 (Male)
  - ➢ Terminal Block (RS-422)
  - > Power Input, Relay Output
- DIN-Rail, Wall Mounting
- Specifications

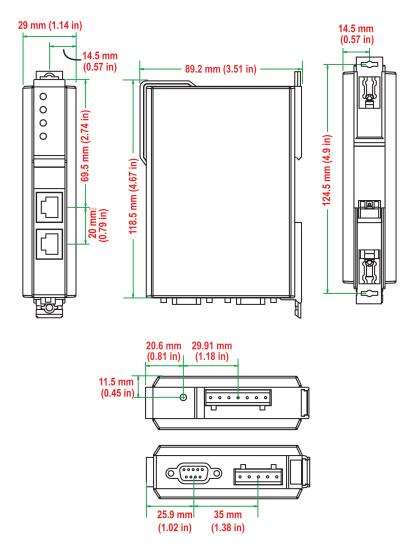
# **Panel Layout**



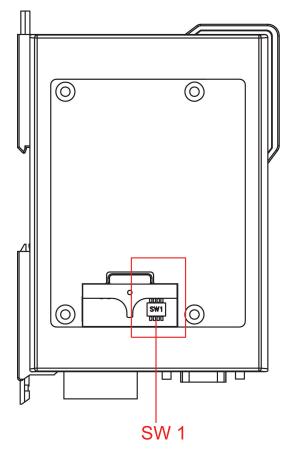
# **LED Indicators**

Name	Color	Function	
PWR1	Red	Power is being supplied to the power input.	
PWR2	Red	Power is being supplied to the power input.	
		Steady on: Power is on and unit is booting up.	
	Red	Blinking: Indicates an IP conflict, or DHCP or BOOTP server is not responding properly.	
RDY		Steady on: Power is on and unit is functioning normally.	
Green Off		Blinking: Unit is responding to software Locate function.	
		Power is off, or power error condition exists.	
	Orange	10 Mbps Ethernet connection.	
Ethernet	Green	100 Mbps Ethernet connection.	
Off		Ethernet cable is disconnected, or has a short.	
Orange		Serial port is receiving data.	
P1	Green	Serial port is transmitting data.	
	Off	No data is being transmitted or received through the serial port.	

## Dimensions



## Jumpers



The DIP switches are located beneath the DIP switch panel on the side of the unit.

To add a 120  $\Omega$  termination resistor, set switch 3 to ON; set switch 3 to OFF (the default setting) to disable the termination resistor.

To set the pull high/low resistors to 150 K $\Omega$ , set switches 1 and 2 to OFF. This is the default setting.

To set the pull high/low resistors to 1 K $\Omega$ , set switches 1 and 2 to ON.

Switch 4 on the port's assigned DIP switch is reserved.



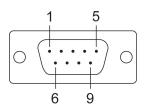
### ATTENTION

Do not use the 1 K $\Omega$  pull high/low setting on the MGate EIP3000 when using the RS-232 interface. Doing so will degrade the RS-232 signals and reduce the effective communication distance.

# **Pin Assignments**

## DB9 (Male)

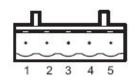
The MGate EIP3170 and EIP3170I use a DB9 (male) serial port for RS-232 connections to DF1 devices.



Pin	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS

## **Terminal Block (RS-422)**

The MGate EIP3170 and EIP3170I use a terminal block connector for RS-422 connections to DF1 devices.



Pin	RS-422
1	TxD+
2	TxD-
3	RxD+
4	RxD-
5	GND

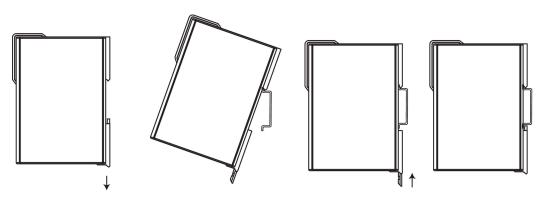
## **Power Input, Relay Output**

<i>h</i>	V2+	V2-	Г	t h	V1+	V1-
Shielded	DC Power	DC Power	Relay Output	Relay Output	DC Power	DC Power
Ground	Input 1	Input 1	Keiay Output	Relay Output	Input 2	Input 2

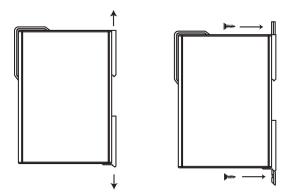
# **DIN-Rail, Wall Mounting**

There are two sliders on the back of the unit for DIN-Rail and wall mounting.

**Mounting on a DIN-Rail:** Pull out the bottom slider; latch the unit onto the DIN-Rail, and push the slider back in.



Mounting on the wall: Pull out both the top and bottom sliders and align the screws accordingly.



# Specifications

LAN			
Ethernet	10/100 Mbps, RJ45, Auto MDI/MDIX		
Protection	Built-in 1.5 KV magnetic isolation		
Serial Interface			
Interface	RS-232/422		
No. of Ports	1 port		
Connector Type	DB9 (male) for RS-232, terminal block for RS-422		
Signals	RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND		
5	RS-422: Tx+, Tx-, Rx+, Rx-, GND		
Serial Line Protection	15 KV ESD for all signals		
Serial Communication paran	neters		
Parity	None, Even, Odd		
Data Bits	8		
Stop Bits	1, 2		
Flow Control	RTS/CTS, DTR/DSR		
Transmission Speed	1200 bps to 921.6 Kbps		
Software Features			
Utilities	MGate Manager		
Multi-Request	8 simultaneous EtherNet/IP clients with up to 16 simultaneous requests per		
	client		
Protocol	Ethernet: CIP (PCCC) on EtherNet/IP		
	Serial: DF1, Full-duplex		
Power Requirements			
Power Input	12 to 48 VDC		
Power Socket	Terminal block		
Power Consumption	EIP3170: 435 mA@12 VDC, 130 mA@48 VDC		
	EIP3170I: 555 mA@12 VDC, 140 mA@48 VDC		
Relay Output	1 Digital relay output to alarm (normal close)		
	Current-carrying capacity 1 A @ 30 VDC		
Environment			
Operating Temperature	0 to 60°C (32 to 140°F), 5 to 95%RH		
	-40 to 75°C (-40 to 167°F), 5 to 95%RH for ``-T" models		
Storage Temperature	-40 to 85°C (-40 to 185°F), 5 to 95% RH		
Ambient Relative Humidity	5 to 95% (non-condensing)		
Altitude	Up to 2000 m (795 hPa), higher altitudes on demand.		
Note: Please contact Moxa if yo	ou require products guaranteed to function properly at higher altitudes		
Standards and Certifications	5		
Safety	UL 508, EN 60950-1		
Hazardous Location	UL/cUL Class 1 Division 2 Groups A/B/C/D,		
	ATEX Zone 2 Ex nA IIC T3 Gc,		
	IECEx		
EMC	CE, FCC		
EMI	EN 55032 Class A,		
	FCC Part 15 Subpart B Class A		
EMS	EN 55024,		
	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: 150 kHz to 80 MHz: 10 V/m		
	IEC 61000-4-8 PFMF		
	EN 61000-4-11		

Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Reliability	
MTBF	MGate EIP3170: 210,794 hrs
(mean time between failures)	
Warranty	5 years

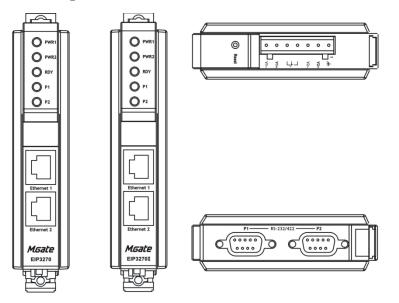
# Hardware: EIP3270, EIP3270I

This chapter provides hardware information for the MGate EIP3270 and EIP3270I.

The following topics are covered in this chapter:

- Panel Layout
- LED Indicators
- Dimensions
- Jumpers
- Pin Assignments
  - > DB9 (Male)
  - Power Input, Relay Output
- DIN-Rail, Wall Mounting
- Specifications

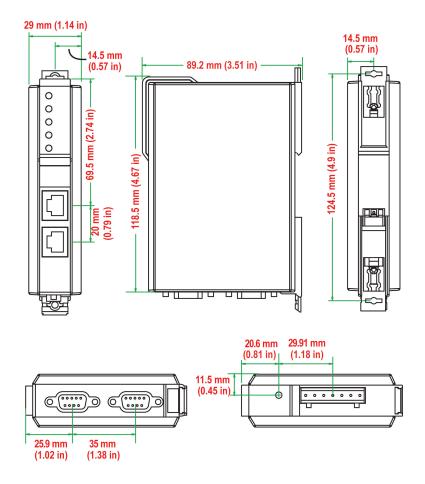
# **Panel Layout**



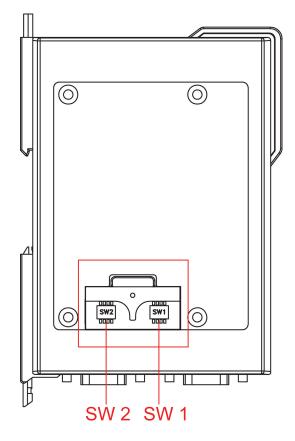
# **LED Indicators**

Name	Color	Function	
PWR1	Red	Power is being supplied to the power input.	
PWR2	Red	Power is being supplied to the power input.	
RDY Green		Steady on: Power is on and unit is booting up.	
		Blinking: Indicates an IP conflict, or DHCP or BOOTP server is not responding properly.	
		Steady on: Power is on and unit is functioning normally.	
		Blinking: Unit is responding to software Locate function.	
		Power is off, or power error condition exists.	
Orange		10 Mbps Ethernet connection.	
Ethernet	Green	100 Mbps Ethernet connection.	
Off		Ethernet cable is disconnected, or has a short.	
Orange Seria		Serial port is receiving data.	
P1, P2	Green	Serial port is transmitting data.	
	Off	No data is being transmitted or received through the serial port.	

# Dimensions



## Jumpers



The DIP switches are located beneath the DIP switch panel on the side of the unit.

**To add a 120**  $\Omega$  **termination resistor,** set switch 3 on the port's assigned DIP switch to ON; set switch 3 to OFF (the default setting) to disable the termination resistor.

To set the pull high/low resistors to 150 K $\Omega$ , set switches 1 and 2 on the port's assigned DIP switch to OFF. This is the default setting.

To set the pull high/low resistors to 1 K $\Omega$ , set switches 1 and 2 on the port's assigned DIP switch to ON.

Switch 4 on the port's assigned DIP switch is reserved.



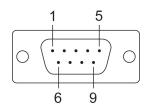
### ATTENTION

Do not use the 1 K $\Omega$  pull high/low setting on the MGate EIP3000 when using the RS-232 interface. Doing so will degrade the RS-232 signals and reduce the effective communication distance.

# **Pin Assignments**

## DB9 (Male)

The MGate EIP3000 uses DB9 (male) serial ports to connect Modbus RTU or ASCII devices. Each port supports two serial interfaces: RS-232 and RS-422.



Pin	RS-232	RS-422
1	DCD	TxD-
2	RxD	TxD+
3	TxD	RxD+
4	DTR	RxD-
5	GND	GND
6	DSR	
7	RTS	
8	CTS	

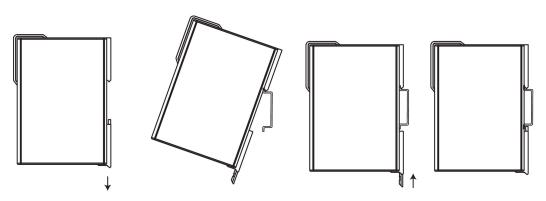
## Power Input, Relay Output

<i>h</i>	V2+	V2-	Г	t \	V1+	V1-
Shielded	DC Power	DC Power	Relay Output	Relay Output	DC Power	DC Power
Ground	Input 1	Input 1	Keiay Output	Keiay Output	Input 2	Input 2

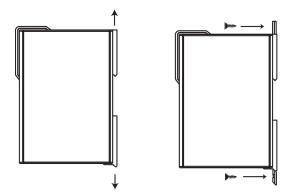
# **DIN-Rail, Wall Mounting**

There are two sliders on the back of the unit for DIN-Rail and wall mounting.

**Mounting on a DIN-Rail:** Pull out the bottom slider; latch the unit onto the DIN-Rail, and push the slider back in.



Mounting on the wall: Pull out both the top and bottom sliders and align the screws accordingly.



# Specifications

LAN	
Ethernet	10/100 Mbps, RJ45, Auto MDI/MDIX
Protection	Built-in 1.5 KV magnetic isolation
Serial Interface	
Interface	RS-232/422
No. of Ports	2 ports
Connector Type	DB9 (male)
Signals	RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
	RS-422: Tx+, Tx-, Rx+, Rx-, GND
Serial Line Protection	15 KV ESD for all signals
Serial Communication Para	meters
Parity	None, Even, Odd
Data Bits	8
Stop Bits	1, 2
Flow Control	RTS/CTS, DTR/DSR
Transmission Speed	1200 bps to 921.6 Kbps
Software Features	
Utilities	MGate Manager
Multi-Request	8 simultaneous EtherNet/IP clients with up to 16 simultaneous requests per
	client

Protocol	Ethernet: CIP (PCCC) on EtherNet/IP		
	Serial: DF1, Full-duplex		
Power Requirements			
Power Input	12 to 48 VDC		
Power Socket	Terminal block		
Power Consumption	EIP3270: 435 mA@12 VDC, 145 mA@48 VDC		
	EIP3270I: 510 mA@12 VDC, 150 mA@48 VDC		
Relay Output	1 Digital relay output to alarm (normal close)		
	Current-carrying capacity 1 A @ 30 VDC		
Environment			
Operating Temperature	0 to 60°C (32 to 140°F), 5 to 95%RH		
	-40 to 75°C (-40 to 167°F), 5 to 95%RH for advanced models with "-T" option		
Storage Temperature	-40 to 85°C (-40 to 185°F), 5 to 95% RH		
Ambient Relative Humidity	5 to 95% (non-condensing)		
Altitude	Up to 2000 m (795 hPa), higher altitudes on demand.		
Note: Please contact Moxa if y	ou require products guaranteed to function properly at higher altitudes		
Standards and Certification	S		
Safety	UL 508, EN 60950-1		
Hazardous Location	lease contact Moxa if you require products guaranteed to function properly at higher altitudes and Certifications UL 508, EN 60950-1 UL/cUL Class 1 Division 2 Groups A/B/C/D, ATEX Zone 2 Ex nA IIC T3 Gc, IECEx		
	ATEX Zone 2 Ex nA IIC T3 Gc,		
	IECEx		
EMC	CE, FCC		
EMI	EN 55032 Class A,		
	FCC Part 15 Subpart B Class A		
EMS	EN 55024,		
	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: 150 kHz to 80 MHz: 10 V/m		
	IEC 61000-4-8 PFMF		
	EN 61000-4-11		
Shock	IEC 60068-2-27		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
Reliability			
MTBF	MGate EIP3270: 125,234 hrs		
(mean time between failures)			
Warranty	5 years		

# **Configuring the EtherNet/IP Gateway**

The following topics are covered in this chapter:

- Installing the Software
- Starting MGate Manager
  - Change Language Setting
- Connecting to the Unit
  - Broadcast Search
  - Specify IP Address

#### Modifying the Configuration

- > Configure IP Address and Other Network Settings
- > Configure Serial Communication Parameters
- > Set up Routing and ProCOM function
- > Set up Protocol
- Set Up Miscellaneous
- Verifying Location of Unit

#### Monitoring EtherNet/IP Activity

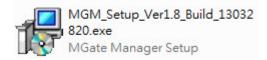
- > Open Traffic Monitor Window
- > Filter Traffic Information
- Save Log to File
- Upgrading Firmware

## **Installing the Software**

The following instructions explain how to install MGate Manager, a utility for configuring and monitoring MGate EIP3000 units over the network.

1. To install MGate Manager, insert the MGate Documentation and Software CD into your PC's CD-ROM drive, and then run the following setup program to begin the installation process from the "Software" directory:

MGM\_Setup\_[Version]\_Build\_[DateTime].exe The filename of the latest version may have the following format: MGM\_Setup\_Verx.x.x\_Build\_xxxxxxx.exe, for example:



2. You will be greeted by the Welcome window. Click Next to continue.

🔁 Setup - MGate Manager	
	Welcome to the MGate Manager Setup Wizard
	This will install MGate Manager 1.8 on your computer.
	It is recommended that you close all other applications before continuing.
	Click Next to continue, or Cancel to exit Setup.
	Next > Cancel

3. When the **Select Destination Location** window appears, click **Next** to continue. You may change the destination directory by first clicking on **Browse...** 

🔀 Setup - MGate Manager	
Select Destination Location Where should MGate Manager be installed?	
Setup will install MGate Manager into the following folder. To continue, dick Next. If you would like to select a different folder, d	ick Browce
C:\Program Files\Moxa\MGate Manager	Browse
At least 1.0 MB of free disk space is required.	
< Back Next	> Cancel

4. When the **Select Additional Tasks** window appears, click **Next** to continue. You may select **Create a desktop icon** if you would like a shortcut to MGate Manager on your desktop.

🔁 Setup - MGate Manager	
Select Additional Tasks Which additional tasks should be performed?	
Select the additional tasks you would like Setup to perform while installin Manager, then click Next.	ig MGate
Additional icons :	
Create a desktop icon	
< Back Next >	Cancel

5. Click **Install** to start copying the software files.

🕲 Setup - MGate Manager 📃	
Ready to Install Setup is now ready to begin installing MGate Manager on your computer.	
Click Install to continue with the installation, or click Back if you want to review or change any settings.	
Destination location: C:\Program Files\Moxa\MGate Manager Additional tasks: Additional icons : Create a desktop icon	*
4	•
< Back Install (	Cancel

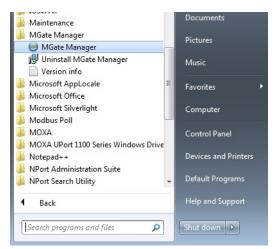
6. A progress bar will appear. The procedure should take only a few seconds to complete.

🔁 Setup - MGate Manager	- • •
Installing Please wait while Setup installs MGate Manager on your computer.	
Extracting files C:\Program Files\Moxa\MGate Manager\VERSION.TXT	
and a state of the second state of the state	
	Cancel

7. A message will indicate that MGate Manager is successfully installed. You may choose to run it immediately by selecting **Launch MGate Manager.** 

🔁 Setup - MGate Manager	
	Completing the MGate Manager Setup Wizard Setup has finished installing MGate Manager on your computer. The application may be launched by selecting the installed icons. Click Finish to exit Setup. I Launch MGate Manager
	Einish

8. You may also open MGate Manager through **Start** → **Programs** → **MGate Manager** → **MGate Manager**, as shown below.



## **Starting MGate Manager**

MGate Manager is a Windows-based utility that is used to configure the MGate EIP3000.

Before running MGate Manager, make sure that your PC and the MGate EIP3000 are connected to the same network. Alternatively, the MGate EIP3000 may be connected directly to the PC for configuration purposes. Please refer to Chapter 2 for more details.

You may open MGate Manager from the Windows Start menu by clicking **Start**  $\rightarrow$  **Programs**  $\rightarrow$  **MGate Manager**  $\rightarrow$  **MGate Manager**. The MGate Manager window should appear as shown below.

	Name	Model		MAC Address	IP/COM	Status	Firmware Versio	0
	- Addine	i locici		The Address	1,0011	Status		
Dev	vice Identification		Device Fu	nction				
	Search		Cor	figuration	Load Monitor Log	ProCOM Mappi	ng	Import
-								
-	Locate		Loa	ad Default	Diagnose	Upgrade Firmwa	are	Export
_	Language			lanagement	Off-Line Configuratio			

## **Change Language Setting**

If you wish to run MGate Manager in a different language, you may click **Language** to change the language setting. A dialog box showing the available languages should appear as shown below.

Language	×
Chinese_Simplified.Ing	
Chinese_Traditional.lng English.lng French.lng German.lng	E
Japanese.Ing Korean.Ing Polish.Ing	-
Default Language OK	Cancel

When you click OK, MGate Manager will immediately reflect your chosen language.



#### ATTENTION

Use "Default Language" before contacting Moxa Technical Support.

With support for multiple languages, MGate Manager is more user-friendly and accessible. However, if you need assistance from Moxa Technical Support, please change the language to "Default Language". This will prevent any misunderstandings or confusion about MGate Manager menu items and commands as our engineers assist you.

The default language is English and will only be active for the current MGate Manager session. When you open MGate Manager again, the language will revert to your original setting.

## **Connecting to the Unit**

MGate Manager needs to connect to the unit before the unit can be configured. There are two methods to connect to the unit. **Broadcast Search** is used to find every MGate EIP3000 on the LAN. **Search by IP** attempts to connect to a specific unit by IP address, which is useful if the unit is located outside the LAN or can only be accessed by going through a router.

### **Broadcast Search**

Click Search and a new Search window will pop up.

No.	Name	Model		MAC Address	IP/COM	Status	Firmware Version	
								-
De	vice Identification		Device Func	tion				
	Search	)	Config	juration	Load Monitor Log	ProCOM Mapping	Import	
	Locate		Load	Default	Diagnose	Upgrade Firmwar	e Export	
						_		

Select **Broadcast Search** and click **OK** to begin searching the LAN for all MGate EIP3000 units.

Search	<b>—</b>
Broadcast Search	
Specify IP Search	0.0.0.0
Connect through COM Port	COM1 v
	OK Cancel
Searching	<b>×</b>
Searching	
	Cancel

D.	Name	Model	MAC Address		IP/COM	Status	Firmware	Version
1	MG-EIP3170_2206	MGate EIP3170	00:90:E8:24:	70:32	192.168.127.254		Ver.1.1 E	Build 09061619
De	evice Identification	Device Fu	unction					
	Search	Cor	nfiguration	Loa	ad Monitor Log	ProCOM Map	ping	Import
	Locate	Los	ad Default		Diagnose	Upgrade Firm	ware	Export
	Language		Management	Offi	ine Configuration			Exit

When the search is complete, every MGate EIP3000 that is found on the LAN will appear in the window with MAC address and IP address. Simply select the one that you wish to configure.

## **Specify IP Address**

Click Specify IP Search Address if you know the IP address of the unit and wish to connect to it directly.

Enter the unit's IP address and click **OK**.

Search	<b>X</b>
🔘 Broadcast Search	
Specify IP Search	192 . 168 . 35 . 194
Connect through COM Port	COM1 -
	OK Cancel

If the search is successful, the unit will be listed in MGate Manager. Right click the unit to begin configuration.

🛢 MGate Manager						
Broadcast Search	No.	Name	Model	MAC Address	IP Address	Sta
Specify by IP Address	01	MG-EIP3270_9156	MGate EIP3270	00:90:E8:18:A5:55	192.168.35.189	
Locate						
Configuration						
Upgrade Firmware						
ProCOM Mapping						
Monitor	<					>
Language	Expo	rt Import			Exit	>



#### **ATTENTION**

If Search by IP Address fails to locate the MGate EIP3000, the IP address that you entered might be incorrect. Try doing the search again and re-entering the IP address carefully.

Another possibility is that the MGate EIP3000 is located on the same LAN as your PC, but on a different subnet. In this case, you can modify your PC's IP address and or netmask so that it is on the same subnet as the MGate EIP3000. After your PC and the MGate EIP3000 are on the same subnet, MGate Manager should be able to find the unit.

# **Modifying the Configuration**

Once your unit is displayed in MGate Manager, select it by clicking on it. The **Configuration** button will become available. Click **Configuration** to open the configuration window.

6	MGate Manager						
	Broadcast Search Specify by IP Address	No. 01	Name MG-EIP3270_9156	Model MGate EIP3270	MAC Address 00:90:E8:18:A5:55	IP Address 192.168.35.189	Sta
	Locate						
	Configuration Upgrade Firmware	 					
	ProCOM Mapping Monitor						
	Language	Expor	t Import			Exit	

## **Configure IP Address and Other Network Settings**

The **Network** tab is where the unit's network settings are configured. You can modify the **Name, Network Configuration, IP1 Address, IP2 Address (only for 2-port model)** and the default IP1 address is 192.168.127.254, IP2 address is 192.168.127.253, **Netmask** and **Default Gateway**. You may also select a **Password** to protect the unit from unauthorized access.

Configuration			<b>X</b>
123456770 123456770 123456770 123 123456770 1234570 1235700 12357000000000000000000000000000000000000	I SIGNAL RXD+ RXD- TXD+ X X X X		OK Cancel
Network       Serial       Routing         Name       Network Configure         IP1 Address       IP2 Address         IV1 IP2 Address       Netmask         Gateway       IVA	Miscellaneous         MG-EIP3270_9156         Static         192 . 168 . 127 . 254         192 . 168 . 127 . 253         255 . 255 . 255 . 0         255 . 255 . 255 . 255	Password Confirm Password	

Parameter	Value	Notes
Name	(an alphanumeric string)	You can enter a name to help you identify the unit, such as the location, function, etc.
Network Configuration	Static IP, DHCP, BootP, or DHCP/BootP	Select "Static IP" if you are using a fixed IP address. Select one of the other options if the IP address is set dynamically.
IP1 Address	192.168.127.254 (or other 32-bit number)	The IP (Internet Protocol) address identifies the server on the TCP/IP network.
IP2 Address	192.168.127.253 (or other 32-bit number)	The IP2 (Internet Protocol) address identifies the server on the TCP/IP network.
Netmask	255.255.255.0 (or other 32-bit number)	This identifies the server as belonging to a Class A, B, or C network.
Gateway	255.255.255.255 (or other 32-bit number)	This is the IP address of the router that provides network access outside the server's LAN.
Password	(an alphanumeric string)	You can set a password to prevent unauthorized users from configuring the unit. The password will be required when anyone attempts to configure the unit over the network. Modbus operation is not affected by the password.
Confirm password	(an alphanumeric string)	Re-type the password again for confirmation.



#### **ATTENTION**

Both IP1 and IP2 all can be set manually. Since IP1 is the main IP address, please assign the IP2 address to the same network subnet as IP1. If IP2 is assigned a different network subnet from IP1, an error message will appear. To continue, click **OK** and set a valid IP address for IP2.

Image: Signal Signa	onfiguration	
Name MG-EIP3270_9156   Password   Network Configure   Static   IP1 Address   192 . 168 . 35 . 179   IP2 Address   192 . 168 . 25 . 180   Error: IP2 mismatch Netmask.     Netmask   255 . 255 . 255   0     Gateway   255 . 255 . 255     Warning: Gateway IP mismatch Netmask.     Netmask     Confern Password     Static     Cateway     255 . 255 . 255     Warning: Gateway IP mismatch Netmask.     Netmask     Pinsmatch Netmask.     Pinsmatch Netmask.     Network     Pinsmatch Netmask.	1 2 3 4 5 6 7	Image: Signal RxD+     Image: Signal RxD-       RxD-     Image: Signal RxD-       TxD+     Image: Signal RxD-       X     X       X     X       TXD-     Image: Signal RxD-       X     Image: Signal RxD- <tr< td=""></tr<>
Network Configure Static   IP1 Address 192 . 168 . 35 . 179   IP2 Address 192 . 168 . 25 . 180   Fror: IP2 Address 192 . 168 . 25 . 255 . 0   Gateway 255 . 255 . 255 . 0   Gateway 255 . 255 . 255   Warning: Gateway IP mismatch Netmask.	Network Serial Routing	Protocol Miscellaneous
IP1 Address       192 . 168 . 35 . 179         IP2 Address       192 . 168 . 25 . 180         IP2 Address       192 . 168 . 25 . 180         Betway       255 . 255 . 255 . 0         Gateway       255 . 255 . 255         Warning: Gateway IP mismatch Netmask.	Name	MG-EIP3270_9156 Password
✓ IP2 Address       192 , 168 , 25 , 180       Error: IP2 mismatch Netmask.         Netmask       255 , 255 , 255       0         Gateway       255 , 255 , 255       Warning: Gateway IP mismatch Netmask.	Network Configure	Static Confirm Password
Netmask 255.255.255.0 Gateway 255.255.255 Warning: Gateway IP mismatch Netmask.	IP1 Address	192.168.35.179
GateManager	✓ IP2 Address	192 . 168 . 25 . 180 Error: IP2 mismatch Netmask.
GateManager Error: IP2 mismatch Netmask.	Netmask	255.255.255.0
Error: IP2 mismatch Netmask.	Gateway	255 . 255 . 255 Warning: Gateway IP mismatch Netmask.
Error: IP2 mismatch Netmask.		
Error: IP2 mismatch Netmask.		
Error: IP2 mismatch Netmask.		
	\GateManager	
ОК	L Error: 1	P2 mismatch Netmask.
OK		
		OK
e Gateway will only display a warning message if the Gateway IP address is invalid. However, you can	<b></b>	

click **OK** to continue.



### ATTENTION

To erase an existing password, leave both the **New Password** and **Confirm Password** text input boxes blank. The password will be erased when you click **OK** in the bottom right corner.

## **Configure Serial Communication Parameters**

The **Serial** tab is where each serial port's communication parameters are configured. You can configure **Baud Rate, Parity, Stop Bit, Flow Control, FIFO,** and **Interface Mode.** 

	200 14-1-		Γ	PIN RS-232	RS-422			ОК	
	DB9 Male		-	_				Cano	el
	123	4 5	-	1 DCD 2 RiD	TxD=				
				3 TxD	RxD+				
	0	• • •		4 DTR	RiD-				
				5 GND	GND				
6789				6 DGR					
	67		7 RTS						
			Į	8 CTS					
Port 1 Baudrate	B Routing P	rotocol Miscel Port 2 Baudrate	llaneous Flow Control	Port 3 Baudrate	Flow C	iontrol	Port 4 Baudrate	Flow Cor	trol
Port 1	reduing r	Port 2			Flow G	iontrol		Flow Cor	trol
Port 1	reduing r	Port 2 Baudrate		Baudrate	Flow C	iontrol ~			itrol
Port 1 Baudrate	Flow Control	Port 2 Baudrate	Flow Control	Baudrate			Baudrate		
Port 1 Baudrate	Flow Control	Port 2 Baudrate 19200 V Parity	Flow Control	Baudrate Parity	•		Baudrate		
Port 1 Baudrate 19200 V Parity	Flow Control None	Port 2 Baudrate 19200 V Parity None V	Flow Control None	Baudrate Parity	•	~	Baudrate	FIFO	~
Port 1 Baudrate 19200 V Parity None V	Flow Control None FIFO Enable	Port 2 Baudrate 19200 V Parity None V Stop bit	Flow Control None FIFO Enable	Baudrate Parity Stop bit	FIFO	~	Baudrate Parity	FIFO	~

Parameter	Value
	RS-232
Interface Mode	RS-422
Baud Rate	1200 bps to 921600 bps
Parity	None, Odd, Even
Stop Bits	1, 2
Flow Control	None, DTR/DSR, RTS/CTS
UART FIFO	Enable, Disable

## Set up Routing and ProCOM function

The definitions of the **Routing** tab determine how requests will be routed by the unit.

			A	NY				ОК
				DST	1 DST = 2	DST=1 PL		
		ST = 1 DS	T = 2			1 Solution		ancel
200						39		
Viting	(investant)					DST=2 PL	c	
			By	DST	DST = 1	8.0		
			_	-		DST=1 PL	c	
	0	ST = 1 DS	T = 2					
1	Contra de la contr				DST = 2	5		
10000	Source and			-		DST=2 PL	C	
Vidence	server and a server a serve							
		20						
work 9	ierial Routin	9 Protocol	Miscellar	neous				
		9 Protocol	Miscellar	neous				
	formation Req. From	9 Protocol		neous of Req.	То	-1		
No.	formation Req. From PORT1	9 Protocol			PORT2		Source Type	
No.	formation Req. From PORT1 PORT2	- [	DST ANY ANY		PORT2 PORT1		Source Type	
No.	formation Req. From PORT1 PORT2 PORT3 (Pro	COM)	DST ANY ANY ANY		PORT2 PORT1 PORT1	[	Serial Port	
01 02 03 04	Formation Req. From PORT1 PORT2 PORT3 (Pro PORT4 (Pro	COM)	ANY ANY ANY ANY ANY		PORT2 PORT1 PORT1 PORT2	[	Sector Contraction	] No.
01 01 02 03 04 05	formation Req. From PORT1 PORT2 PORT3 (Pro PORT4 (Pro PORT5 (Pro	COM) COM) COM)	ANY ANY ANY ANY ANY ANY		PORT2 PORT1 PORT1 PORT2 PORT2 PORT1		Serial Port Farget Node	No.
No. 01 02 03 04 05 06	Formation Req. From PORT1 PORT2 PORT3 (Pro PORT4 (Pro PORT5 (Pro PORT6 (Pro	COM) COM) COM) COM)	ANY ANY ANY ANY ANY ANY ANY		PORT2 PORT1 PORT1 PORT2 PORT2 PORT1 PORT2		Serial Port	No.
No. 01 02 03 04 05 06 07	formation Req. From PORT1 PORT2 PORT3 (Pro PORT4 (Pro PORT5 (Pro PORT6 (Pro All EIP Node	COM) COM) COM) COM) S (via IP1)	ANY ANY ANY ANY ANY ANY ANY ANY		PORT2 PORT1 PORT1 PORT2 PORT2 PORT2 PORT1		Serial Port Farget Node By DST	No.
No.           01           02           03           04           05           06           07           08	formation Req. From PORT1 PORT2 PORT3 (Proi PORT6 (Proi PORT6 (Proi All EIP Node All EIP Node	COM) COM) COM) COM) s (via IP1) s (via IP2)	ANY ANY ANY ANY ANY ANY ANY		PORT2 PORT1 PORT1 PORT2 PORT2 PORT1 PORT2		Serial Port Farget Node	No.
No.           01           02           03           04           05           06           07           08           arget No	formation Req. From PORT1 PORT2 PORT3 (Proi PORT4 (Proi PORT5 (Proi PORT5 (Proi PORT5 (Proi All EIP Node All EIP Node de Information	COM) COM) COM) COM) s (via IP1) s (via IP2)	DST ANY ANY ANY ANY ANY ANY ANY ANY	of Req.	PORT2 PORT1 PORT1 PORT2 PORT2 PORT1 PORT2 PORT1 PORT2		Serial Port Farget Node By DST Modify	No.
No.           01           02           03           04           05           06           07           08           arget No           Target	formation Req. From PORT1 PORT2 PORT4 (Pro PORT4 (Pro PORT5 (Pro PORT5 (Pro All EIP Node All EIP Node Information Node IP	COM) COM) COM) COM) s (via IP1) s (via IP2)	DST ANY ANY ANY ANY ANY ANY ANY ANY No.	of Req.	PORT2 PORT1 PORT1 PORT2 PORT1 PORT2 PORT1 PORT2 PORT1 PORT2 Node Location	Node DST	Serial Port Farget Node By DST Modify Slot No.	
No.           01           02           03           04           05           06           07           08           arget No           Target	formation Req. From PORT1 PORT2 PORT3 (Proi PORT4 (Proi PORT5 (Proi PORT5 (Proi PORT5 (Proi All EIP Node All EIP Node de Information	COM) COM) COM) COM) s (via IP1) s (via IP2)	DST ANY ANY ANY ANY ANY ANY ANY ANY No. 01	of Req. Type DF1	PORT2 PORT1 PORT1 PORT2 PORT2 PORT2 PORT1 PORT2 PORT1 Node Location PORT1	Node DST 001	Serial Port Farget Node By DST Modify	
No.           01           02           03           04           05           06           07           08           arget No           Target	formation Req. From PORT1 PORT2 PORT3 (Pro) PORT4 (Pro) PORT5 (Pro) PORT5 (Pro) PORT6 (Pro) PORT6 (Pro) All EIP Node All EIP Node de Information Node IP	COM) COM) COM) COM) s (via IP1) s (via IP2) . 0	DST ANY ANY ANY ANY ANY ANY ANY ANY ANY ANY	of Req. Type DF1 DF1	PORT2 PORT1 PORT1 PORT2 PORT2 PORT2 PORT1 PORT2 Node Location PORT1 PORT1 PORT2	Node DST 001 002	Serial Port Farget Node By DST Modify Slot No	
No.         No.           01         02           03         04           05         06           07         08           arget No         Target           0         TCP Port	formation Req. From PORT1 PORT2 PORT3 (Pro PORT3 (Pro PORT5 (Pro PORT6 (Pro PORT6 (Pro PORT6 (Pro All EIP Node All EIP Node All EIP Node IFP Node IP 0 0 0 t Node DST	COM) COM) COM) COM) S (via IP1) S (via IP2) . 0 Slot No.	DST           ANY           ANY	of Req. Type DF1 DF1 DF1	PORT2 PORT1 PORT1 PORT2 PORT2 PORT2 PORT2 PORT2 PORT2 PORT2 PORT1 PORT2 PORT2 PORT3 (ProCOM)	Node DST 001 002 003	Serial Port Farget Node By DST Modify Slot No.	
No. 01 02 03 04 05 06 07 08 arget No Target 0	formation Req. From PORT1 PORT2 PORT3 (Pro) PORT4 (Pro) PORT5 (Pro) PORT5 (Pro) PORT6 (Pro) PORT6 (Pro) All EIP Node All EIP Node de Information Node IP	COM) COM) COM) COM) s (via IP1) s (via IP2) . 0	DST ANY ANY ANY ANY ANY ANY ANY ANY ANY ANY	of Req. Type DF1 DF1	PORT2 PORT1 PORT1 PORT2 PORT2 PORT2 PORT1 PORT2 Node Location PORT1 PORT1 PORT2	Node DST 001 002	Serial Port Farget Node By DST Modify Slot No	

### How to set Routing on the MGate EIP3000

The MGate EIP3000 decides where to forward the received requests according to its internal routing rules. The internal routing rules are set on the **Routing** page. Two kinds of routing rules can be used. The first one is forwarding each received request according to its DST. DST is the destination address of each request in PCCC protocol (DF1 application protocol). You must set up the DST of each target device first, so that the EIP3000 knows which target device to forward the request to. On the **Routing** page, this information is shown in the table on the bottom half of the page. In this table, the DF1 devices connected to EIP3000 (via serial port or ProCOM) are added automatically and assigned a default DST (EIP3170:PORT1=1, ProCOM =2, 3, 4, 5; EIP3270:PORT1=1, PORT2=2, ProCOM =3, 4, 5, 6). If you would like to connect to an EIP interface (EtherNet/IP) device, you must configure the relationship between "Node DST" and "Target Node IP" of the EIP interface device manually. For CompactLogix and ControlLogix PLCs, a slot number (Slot No.) is needed, which is the slot number of the processor in the rack; 0 is common.Use a value of -1 for SLC5 PLCs since its device does not have a slot parameter.

Another routing rule is static link, which ignores the DST and directly forwards all the requests sent from a specified source device to the defined target device. You can set the source device and target device mapping on the upper half of the page.

The complete routing table is shown on the upper half of the page. This table shows which rule (by DST or static link) is used on the requests from a specified source. The default setting for EIP3270 is static link of PORT1 to PORT2, PORT2 to PORT1, PORT3(ProCOM) to PORT1, PORT4(ProCOM) to PORT2, PORT5(ProCOM) to PORT1, PORT6(ProCOM) to PORT2 and all EIP devices connect from IP1 and forward to PORT1, and all EIP devices connect from IP2 and forward to PORT2. Of course, you could use the DST rule instead of the static link rule by changing the setting manually. Notice that the EIP device can only use the static link rule since there is no DST in the EIP requests.

### What is ProCOM?

ProCOM is Moxa's proprietary function which provides a virtual COM port for flexible DF1 and EtherNet/IP communication. This is an intelligent function of the Fieldbus gateway that translates the data to the correct destination through DF1 protocol.

### How to set ProCOM on the MGate EIP3000

ProCOM is your best solution if your system requires using a remote PC that only supports DF1 protocol to control remote DF1 devices. It requires that your PC have a virtual COM port that supports DF1 protocol to connect to the EIP3000 via the network. With ProCOM, the EIP3000 will treat the COM port on your PC as if it were an additional serial port on the EIP3000. Before using this powerful function, you must complete ProCOM mapping.

MGate Manager						
Broadcast Search	No.	Name	Model	MAC Address	IP Address	Sta
Specify by IP Address	01	MG-EIP3270_9156	MGate EIP3270	00:90:E8:18:A5:55	192.168.35.189	
Locate						
Configuration						
Upgrade Firmware						
ProCOM Mapping						
Monitor	<					>
Language	Expor	t Import			Exit	

Remote	IP Address 192	. 168 . 35 . 1	89 COM 9 (in use) 🔽 [	Add/Modify	Remove
	Model EIP32	70 🖌	Protocol DF1		
No.	Model	Protocol	IP Address	СОМ	]
1	EIP3270	DF1	192.168.35.189 Port 3 (ProCOM	) 6	
2	EIP3270	DF1	192.168.35.189 Port 4 (ProCOM	) 7	
3	EIP3270	DF1	192.168.35.189 Port 5 (ProCOM	) 8	
4	EIP3270	DF1	192.168.35.189 Port 6 (ProCOM	) 9	

After finding the EIP3000 with the search function, select the EIP3000 device for which you want to set ProCOM for and then click **ProCOM Mapping** to enter the mapping page. Please refer to the above figures.

On the ProCOM mapping page, you can map up to 4 ProCOM functions to your PC's COM port. The driver will generate a virtual COM port on your PC and connect to the selected EIP3000 over the network. This means that when you send a DF1 request to ProCOM, the driver will forward your request to the EIP3000. Then the EIP3000 will forward your request to the target DF1 device according to the pre-set routing table. Similarly, when the EIP3000 receives the response from the target DF1 device, it will forward the response to ProCOM and then the application running on your PC will receive the response.

### Set up Protocol

	EtherNet/IP		DF1		OK Cancel
-	(1)	(2)		00	Cancer
	Response time	(3) (4) (5)	ACK time		
Vitronititik	(6)		1.0		
PC	MG	ate EIP3000		PLC	
Response Time-out Node Location Response Time-out			ProCOM 💿 I Default: 3000 ms)	Ethernet	
DF1 Settings					
ACK Time-out		30000 ms) (Del commended vali	fault: 500 ms) ue: Response Time	e-out / 4)	
Frame Errorr Detection	🔘 CRC16 🛛 🔘 E	ICC			
EIP Settings					

You can configure the options for DF1, EtherNet/IP, and CIP protocol. Response Time-out defines how much time the EIP3000 needs to wait for a response after sending a PCCC command to a DF1/EIP device. We strongly suggest that the value should be greater than ACK timeout, since it requires at least double the timeout values of DF1 ACK after the EIP3000 forwards a PCCC command and before it gets a response.

ACK timeout for DF1 settings defines how much time the EIP3000 needs to wait for an ACK after sending a DF1 message to a DF1 device. DF1 messaging supports CRC16 and BCC as the method of frame error checking.

The EIP settings define how to send a CIP message as the EIP3000 is an EIP client. The EIP3000 uses connected CIP messages as default. If your EIP device only supports unconnected messages, you can change this setting accordingly.

## Set Up Miscellaneous

This page defines all other options that can not be classified. Currently, this page defines "**Auto Relay Warning**", "**Reset Button Protect**" and "**Telnet Console**". The auto relay warning includes power failure, Ethernet 1 or 2 links down to trigger relay warning. If any checked trigger condition occurs, the EIP3000 will open the circuit of the relay output and trigger the Fault LED to start blinking. Otherwise, the EIP3000 will short circuit the relay output.

Configuration				
0	Relay Output		Relay Output	ОК
Normal	Close	Normal	Close	Cancel
Power Fail	Open	Ethernet Fail	Open	
Network Serial Routing	Protocol Miscellaneous			
Auto Relay Warning				
Power Failure	Enable			
Ethernet 1 Link Down	Enable			
Ethernet 2 Link Down	Enable			
Reset Button Protect	Enable			
Telnet Console	Enable			
	_			

# **Verifying Location of Unit**

If you are managing multiple MGate units, you may wonder if you are configuring the correct unit in MGate Manager. You can select a unit in MGate Manager and click Locate to make that unit's "**Ready**" LED blink for a few seconds. This will tell you which physical unit corresponds with the unit that you selected.

Broadcast Search	No.	Name	Model	MAC Address	IP Address	St
ecify by IP Address	01	MG-EIP3270_9156	MGate EIP3270	00:90:E8:18:A5:55	192.168.35.189	
Locate						
Configuration						
Upgrade Firmware						
ProCOM Mapping						
Monitor	<					>

## **Monitoring EtherNet/IP Activity**

For troubleshooting or management purposes, you can monitor the data passing through any MGate EIP3000 on the network. Data events will be logged as they pass through the gateway. Rather than simply echoing the data, MGate Manager presents the data in an intelligent, easily-understood format, with clearly designated fields including source, type, destination, contents, and more. Events can be filtered in different ways, and the complete log can be saved to a file for later analysis.

smission sy
smission sy
smission sy
smission sy
smission sy
smission sy
smission sy
smission sy
smission sy

## **Open Traffic Monitor Window**

Select the unit that you wish to monitor and click **Monitor** to open the Traffic Monitor window.

MGate Manager						
Broadcast Search	No.	Name	Model	MAC Address	IP Address	Sta
Specify by IP Address	01	MG-EIP3170I_6093	MGate EIP3170I	00:90:E8:18:88:76	192.168.35.189	
Locate						
Configuration						
Upgrade Firmware						
Virtual COM Mapping						
Monitor	<					>
Language	Expo	rt Import			Exit	

In the Traffic Monitor window, click **Start** to begin live monitoring of the data passing through the selected MGate EIP3000 unit.

		otion only OMessage On						Start Stop
No.	Time	Node & Direction	Protocol	Туре	DST	CMD	Data	Comment

To stop capturing the log, press the  $\ensuremath{\textbf{Stop}}$  button.

o.	Time	Node & Direction	Type	Type	DST	CMD	Data	Comment
	0.000	192.168.35.169>MG(Po	DF1	Command	1	06	10 02 01 04 06 00 01 40 03 10 03 C4 B3	
	0.000	MG Port 2>	DF1	Command	2	06	10 02 02 04 06 00 01 40 03 10 03 84 A6	
	0.010	MG Port 2<	DF1	ACK				DF1 Transmission sy
	0.010	192.168.35.169 <mg(po< td=""><td>DF1</td><td>ACK</td><td></td><td></td><td></td><td>DF1 Transmission sy</td></mg(po<>	DF1	ACK				DF1 Transmission sy
	0.040	MG Port 2<	DF1	Reply	4	46	10 02 04 02 46 00 01 40 00 FE 34 49 88	
	0.045	192.168.35.169 <mg(po< td=""><td>DF1</td><td>Reply</td><td>4</td><td>46</td><td>10 02 04 02 46 00 01 40 00 EE 34 49 88</td><td></td></mg(po<>	DF1	Reply	4	46	10 02 04 02 46 00 01 40 00 EE 34 49 88	
	0.060	192.168.35.169>MG(Po	DF1	ACK				DF1 Transmission sy
	0.065	MG Port 2>	DF1	ACK				DF1 Transmission sy
	0.065	192.168.35.169>MG(Po	DF1	Command	1	0F	10 02 01 04 0F 00 01 44 A1 10 10 00 00	
0	0.065	MG Port 2>	DF1	Command	2	OF	10 02 02 04 0F 00 01 44 A1 10 10 00 00	
1	0.080	MG Port 2<	DF1	ACK	2	OI .	10 02 02 04 01 00 01 44 MI 10 10 00 00	DF1 Transmission sy
2	0.080	192.168.35.169 <mg(po< td=""><td></td><td>ACK</td><td></td><td></td><td></td><td>DF1 Transmission sy</td></mg(po<>		ACK				DF1 Transmission sy
3	0.100	MG Port 2<	DF1	Reply	4	4F	10 02 04 02 4F 00 01 44 55 4E 54 49 54	Di 1 mansinission synn
4	0.100	192.168.35.169 <mg(po< td=""><td></td><td>Reply</td><td>4</td><td>4F</td><td>10 02 04 02 4F 00 01 44 55 4E 54 49 54</td><td></td></mg(po<>		Reply	4	4F	10 02 04 02 4F 00 01 44 55 4E 54 49 54	
5	0.125	192.168.35.169>MG(Po	DF1	ACK	7	71	10 02 04 02 41 00 01 44 33 45 34 49 34	DF1 Transmission sy
5 6	0.125	MG Port 2>	DF1 DF1	ACK				DF1 Transmission sy
.0	2.115	192.168.35.169>MG(Po		Command	1	06	10 02 01 04 06 00 01 4C 03 10 03 04 B0	DP1 Transmission sy
							Previou	IS page Next page

## **Filter Traffic Information**

By default, all events are displayed in the traffic monitor window. MGate Manager also allows the data to be filtered so only the relevant information is displayed. The filter is selected using the radio buttons and customized using the **``Filter info**'' field, as follows:

Filter	Description
All	Show all traffic
Exception only	Show only exceptions
Message only	Show only traffic of PCCC communication

### Save Log to File

To save the data log to a file, click **Save**. You may retrieve a saved log by clicking **Load**.

o.	Time	Node & Direction	Туре	Туре	DST	CMD	Data	Comment
	0.000	192,168.35,169>MG(Po		Command	1	06	10 02 01 04 06 00 01 40 03 10 03 C4 B3	Commons
	0.000	MG Port 2>	DF1	Command	2	06	10 02 02 04 06 00 01 40 03 10 03 84 A6	
	0.010	MG Port 2<	DF1	ACK	6	00	10 02 02 04 00 00 01 40 03 10 03 04 Mo	DF1 Transmission sy
	0.010	192.168.35.169 <mg(po< td=""><td></td><td>ACK</td><td></td><td></td><td></td><td>DF1 Transmission sy</td></mg(po<>		ACK				DF1 Transmission sy
	0.010	MG Port 2<	DF1	Reply	4	46	10 02 04 02 46 00 01 40 00 EE 34 49 88	Dr 1 Hansinission syst
	0.045	192.168.35.169 <mg(po< td=""><td></td><td>Reply</td><td>4</td><td>46</td><td>10 02 04 02 46 00 01 40 00 EE 34 49 88</td><td></td></mg(po<>		Reply	4	46	10 02 04 02 46 00 01 40 00 EE 34 49 88	
	0.060	192.168.35.169>MG(Po		ACK	4	40	10 02 04 02 40 00 01 40 00 22 34 49 00	DF1 Transmission sy
	0.065	MG Port 2>	DF1	ACK				DF1 Transmission sy
	0.065	192.168.35.169>MG(Po		Command	1	OF	10 02 01 04 0F 00 01 44 A1 10 10 00 00	Di 1 Hanshission synn
	0.065	MG Port 2>	DF1 DF1	Command	2	OF	10 02 02 04 0F 00 01 44 A1 10 10 00 00	
	0.065	MG Port 2<>	DF1 DF1	ACK	4	or-	10 02 02 07 0F 00 01 77 A1 10 10 00 00	DF1 Transmission sy
	0.080	192.168.35.169 <mg(po< td=""><td></td><td>ACK</td><td></td><td></td><td></td><td>DF1 Transmission sy</td></mg(po<>		ACK				DF1 Transmission sy
	0.100	MG Port 2<	DF1	Reply	4	4F	10 02 04 02 4F 00 01 44 55 4E 54 49 54	DF1 IT di ISINISSION SY
	0.100	192.168.35.169 <mg(po< td=""><td></td><td>Reply</td><td>4</td><td>4F</td><td>10 02 04 02 4F 00 01 44 55 4E 54 49 54</td><td></td></mg(po<>		Reply	4	4F	10 02 04 02 4F 00 01 44 55 4E 54 49 54	
	0.100	192.168.35.169 <mg(p0< td=""><td></td><td>ACK</td><td>4</td><td>46</td><td>10 02 04 02 4F 00 01 44 55 4E 54 49 54</td><td>DF1 Transmission sy</td></mg(p0<>		ACK	4	46	10 02 04 02 4F 00 01 44 55 4E 54 49 54	DF1 Transmission sy
	0.125	MG Port 2>	DF1 DF1	ACK				DF1 Transmission sy
	2.115	192.168.35.169>MG(Po		Command	1	06	10 02 01 04 06 00 01 4C 03 10 03 04 B0	DF1 Transmission sy
	2.115	192.100.33.109>Hd(F0	DII	Commania		00	10 02 01 04 00 00 01 40 03 10 03 04 00	
							Previou	s page Next page

# **Upgrading Firmware**

Firmware updates for the MGate EIP3000 are located at <u>www.moxa.com.</u> After you have downloaded the new firmware onto your PC, you can use MGate Manager to write it onto your MGate EIP3000. Select the desired unit from the list in MGate Manager and click **Upgrade Firmware** to begin the process.

🛢 MGate Manager						
Broadcast Search Specify by IP Address	No. 01	Name MG-EIP3270_9156	Model MGate EIP3270	MAC Address 00:90:E8:18:A5:55	IP Address 192.168.35.189	Sta
Locate Configuration						
Upgrade Firmware ProCOM Mapping						
Monitor	<					>
Language	Export	t Import			Exit	

The dialog boxes will guide you through the process. You will need to browse your PC for the firmware file. Make sure that it matches your model.

Upgrade Firmware	×
Firmware for EIP3270/3270I	Browse
OK Cancel	

As the firmware is written to the unit, progress is displayed in the window.

No.	Model	MAC Address	IP Address	Status
)1	MGate EIP3270	00:90:E8:18:A5:55	192.168.35.189	Transmit 15%

Once the firmware has been successfully written onto the unit, click **Exit** to close the Upgrade Firmware window. MGate Manager will automatically execute a **Broadcast Search** for all MGate EIP3000 units on the LAN. Your MGate should reappear in the list of units