# MGate 5123 Series

# 1-port CANopen/J1939-to-PROFINET gateways



#### **Features and Benefits**

- Simultaneous protocol conversions from CANopen and J1939 to PROFINET and SNMP
- Supports PROFINET I/O device and SNMP agent
- Supports CANopen master and J1939
- Flexible deployment with Ethernet cascading and dual subnet
- Embedded traffic monitoring/diagnostic information for easy troubleshooting
- · Easy device configuration via a web-based console
- microSD card for configuration backup/duplication
- · Supports dual redundant DC power inputs and 1 relay output
- CAN port with 2-kV isolation protection
- -40 to 75°C wide operating temperature models available
- Developed according to IEC 62443-4-2 with Secure Boot

## Certifications



## Introduction

The MGate 5123 is an industrial Ethernet gateway for converting CANopen or J1939 to PROFINET network communications. To integrate existing CANopen or J1939 devices onto a PROFINET network, use the MGate 5123 as a CANopen or J1939 master to collect data and exchange data with the PROFINET IO controller. All models are protected by a rugged and compact metal housing and are DIN-rail mountable. The rugged design is suitable for industrial applications such as factory automation and other process automation industries.

#### **Easy Configuration**

The MGate 5123 gateways are provided with a web console to make configuration easy without having to install an extra utility. In addition, HTTPS encryption of communication ensures higher network security.

In most data-acquisition applications, configuration of CANopen devices can be time-consuming and increase costs. The MGate 5123 gateways provide EDS file import function and user can auto scan the CANopen devices to help complete the settings quickly. The MGate gateways provide software-configurable termination resistor settings for CANbus to reduce efforts by eliminating the need to open the chassis.

#### **Easy Troubleshooting**

The MGate 5123 gateways provide a variety of maintenance functions to reduce troubleshooting time and cost, including LED indicators, protocol diagnostics, traffic monitor, and tag view. These tools help you capture and check data to easily identify the root cause of issues, especially during the installation stage. The MGate gateways also come with status monitoring and fault protection functions. The status monitoring function notifies a PLC/DCS/SCADA system when a CAN device gets disconnected or does not respond, in which case the process PLC/DCS gets the status of each end device and then issues alarms to notify operators. The fault protection function executes actions pre-defined by the user when a host gets disconnected to prevent the end devices from going offline for long periods of time.

#### **Specifications** . . . .

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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	
Configuration Options	Web Console (HTTPS) Device Search Utility (DSU)	
Management	ARP DHCP Client DNS HTTP HTTPS SMTP SNMP Trap SNMPv1/v2c/v3 TCP/IP UDP	
МІВ	RFC1213	
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)	
CAN Interface		
No. of Ports	1	
Connector	Spring-type Euroblock terminal	
Standards	ISO 11898-2	
Baudrate	CANopen: 10 kbps, 20 kbps, 50 kbps, 125 kbps, 250 kbps, 500 kbps, 800 kbps, 1 Mbps J1939: 250 kbps, 500 kbps, 1 Mbps	
Terminator	120 ohms software configurable	
Signals	CAN_H, CAN_L, GND, Ext_CAN_H, Ext_CAN_L, CAN_Shield	
CAN Software Features		
Industrial Protocols	CANopen master, J1939	
CANopen		
Mode	Master	
Max No. of Nodes	64	
Max No. of Receive PDOs	256	
Max No. of Transmit PDOs	256	
SDOs	Supported	
Input Data Size	2048 bytes	
Output Data Size	2048 bytes	



### J1939

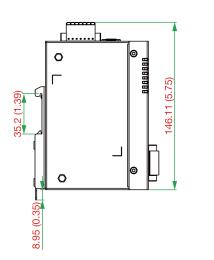
J1939			
Max. No. of Commands	256		
Input Data Size	2048 bytes		
Output Data Size	2048 bytes		
PROFINET			
Mode	IO Device class B		
Max. No. of Master Connections	2 IO controllers (shared devices)		
Input Data Size	1440 bytes (bytes per IO Controller, total: 2880 bytes)		
Output Data Size	1440 bytes (bytes per IO Controller, total: 2880 bytes)		
Memory			
microSD Slot	Up to 32 GB (SD 2.0 compatible)		
Power Parameters			
Input Voltage	12 to 48 VDC		
Input Current	455 mA (max)		
Power Connector	Spring-type Euroblock terminal		
Relays			
Contact Current Rating	Resistive load: 2 A @ 30 VDC		
Physical Characteristics			
Housing	Metal		
IP Rating	IP30		
Dimensions	25 x 90 x 129.6 mm (0.98 x 3.54 x 5.1 in)		
Weight	294 g (0.65 lb)		
Environmental Limits			
Operating Temperature	MGate 5123: -10 to 60°C (14 to 140°F) MGate 5123-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 61010-2-201 UL 61010-2-201		
EMC	EN 61000-6-2/-6-4		
EMI	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: 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		

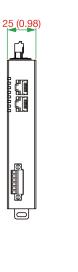


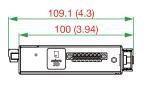
Freefall	IEC 60068-2-31
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6 IEC 60068-2-64
MTBF	
Time	1,408,984 hrs hrs
Standards	Telcordia SR332
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x MGate 5123 Series gateway
Documentation	1 x quick installation guide 1 x warranty card

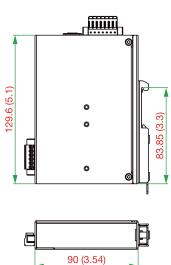
## **Dimensions**

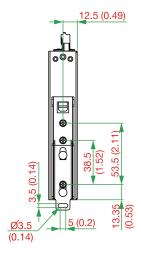
Unit: mm (inch)











# **Ordering Information**

Model Name	No. of Serial Ports	Operating Temperature
MGate 5123	1	-10 to 60°C
MGate 5123-T	1	-40 to 75°C

# Accessories (sold separately)

Wall-Mounting Kits

WK-25

Wall-mounting kit, 2 plates, 4 screws, 25 x 43 x 2 mm



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