EDF-G1002-BP Series

2-port Gigabit industrial next-generation LAN firewalls

Features and Benefits

- Bump-in-the-wire installation without impacting the network
- Gen3 LAN Bypass for system fault tolerance
- Industrial-grade Intrusion Prevention/Detection System (IPS/IDS)
- Examine industrial protocol data with Deep Packet Inspection (DPI) technology
- Supports Secure Boot for checking system integrity
- Check firewall policy misconfiguration with just one click
- Supports MXstudio for easy, visualized industrial network management

Certifications

Introduction

The EDF-G1002-BP Series is an industrial-grade LAN firewall with IPS and DPI functionality to protect mission-critical assets and network zones. These industrial firewalls support software-configurable Gen3 LAN bypass to achieve bump-in-the-wire installation and minimize the installation impact for industrial applications such as ITS, pump-and-treat systems in water stations, distributed control systems in oil and gas, and PLC/SCADA systems in factory automation.

Dynamically Prevent Malicious Cyber Threat Activity With IPS/IDS

The EDF-G1002-BP Series is designed to protect mission-critical assets at the OT network edge with advanced intrusion prevention and detection systems (IPS/IDS). It analyzes network traffic in the background and enables behavior monitoring and awareness of cyber activities. These firewall devices support both a “Monitor” and “Protect” mode to facilitate different OT scenarios. “Monitor” mode gives administrators full visibility of cyberthreat activities on the network. If a threat is detected, administrators can easily switch to “Protect” mode to block and contain any malicious operations.

Industrial Deep Packet Inspection for Mission-critical Assets

The EDF-G1002-BP Series supports advanced Deep Packet Inspection (DPI) technology, providing awareness of industrial protocol data and allowing for granular command of control system traffic to critical controllers.

Virtual Patching and Intelligent Threat Protection

Frequent patching boosts protection against cyberthreats. However, patching continues to be a major challenge in OT environments because OT applications cannot afford to interrupt operations by shutting down systems to apply patches. Virtual patching technology can help complement existing patch management processes by shielding known and unknown vulnerabilities. Virtual patching acts as an agentless emergency security tool that OT administrators and operators can use to quickly address vulnerabilities on affected OT equipment. The EDF-G1002-BP Series provides advanced protection against threats with up-to-date threat information and guards your systems against undisclosed and zero-day threats.

Centralized Network Security and Policy Management

The EDF-G1002-BP Series helps administrators and operators understand the real-time status of OT systems. When connected to Moxa’s MXsecurity centralized security management platform, administrators can manage and monitor all the intrusion prevention systems from a single space. MXsecurity provides an efficient way to monitor security assets, and execute policy, firmware, configuration, and pattern updates.

Specifications

Input/Output Interface

Alarm Contact Channels	Resistive load: 1 A @ 24 VDC
Buttons	Reset button
Digital Input Channels	+13 to +30 V for state 1 -30 to +3 V for state 0 Max. input current: 8 mA

Ethernet Interface

10/100/1000BaseT(X) Ports (RJ45 connector)	3 (2 x LAN ports, 1 x MGMT port)
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3x for flow control

Ethernet Software Features

Management	DDNS Web Console (HTTP/HTTPS) LLDP SNMPv1/v2c/v3 Telnet TFTP SSH
Concurrent Connections	Max. 120K (based on RFC 3511)
Connections Per Second	Max. 6K (based on RFC 3511)
Security	Secure Boot RADIUS Trust access control TACACS+ SCP SFTP NTP authentication Syslog authentication
Time Management	NTP Server/Client SNTP

LED Interface

LED Indicators	PWR1, PWR2, STATE, BYPASS, USB

DoS and DDoS Protection

Technology	ARP-Flood FIN Scan ICMP Flood TCP Sessions Without SYN NMAP-ID Scan NMAP-Xmas Scan Null Scan SYN/FIN Scan SYN/RST Scan SYN-Flood Xmas Scan UDP Flood

Firewall

Throughput	Firewall: Max. 80K packets per second / 1000 Mbps (based on RFC 2544) IPS: Max. 40K packets per second / 500 Mbps (based on RFC 2544)
Filter	DDoS Ethernet protocols ICMP IP address MAC address Ports

Intrusion Prevention System	Enabled by default. IPS pattern update functionality requires an additional license.
Deep Packet Inspection	Modbus TCP Modbus UDP DNP3 IEC 60870-5-104 IEC 61850 MMS EtherNet/IP MELSEC Omron FINS OPC UA Siemens S7 Comm. Siemens S7 Comm. Plus Additional protocols will be supported through future firmware updates.

Real-time Firewall Event Log

Event Type	Firewall events Protocol DPI and IDS/IPS events
Media	Syslog server Local storage SNMP Trap

Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 3-pin (115200, n, 8, 1)
Connector	USB Type-C

Power Parameters

Connector	Removable terminal block
Operating Voltage	9.6 to 60 VDC
Input Voltage	12/24/48 VDC (DNV certified) Redundant dual inputs
Input Current	0.69 A (max)
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
Dimensions	35 x 125 x 100 mm (1,38 x 4.92 x 3.94 in)
Weight	385 g (0.85 lb)
Installation	DIN-rail mounting (DNV certified) Wall mounting (DNV certified)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 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	IEC 62368-1 UL 62368-1
EMC	EN 55032/35
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: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway	EN 50121-4
Traffic Control	NEMA TS2
Maritime	DNV
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Hazardous Locations	ATEX Class I Division 2 IECEx

MTBF

Time	2,929,641 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

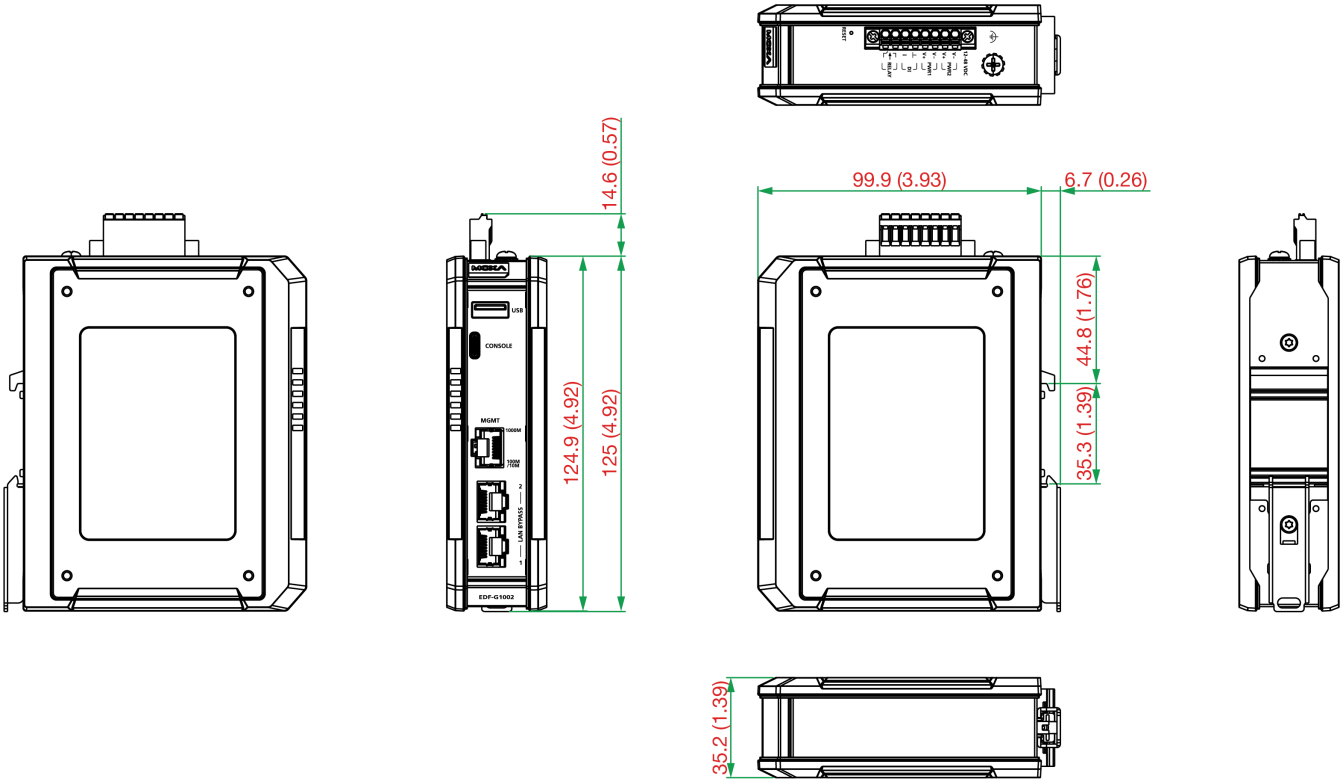
Package Contents

Device	1 x EDF-G1002-BP Series industrial LAN firewall
Cable	1 x DB9 female to USB Type-C
Installation Kit	1 x DIN-rail kit 1 x cap, plastic, for USB Type-A port
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

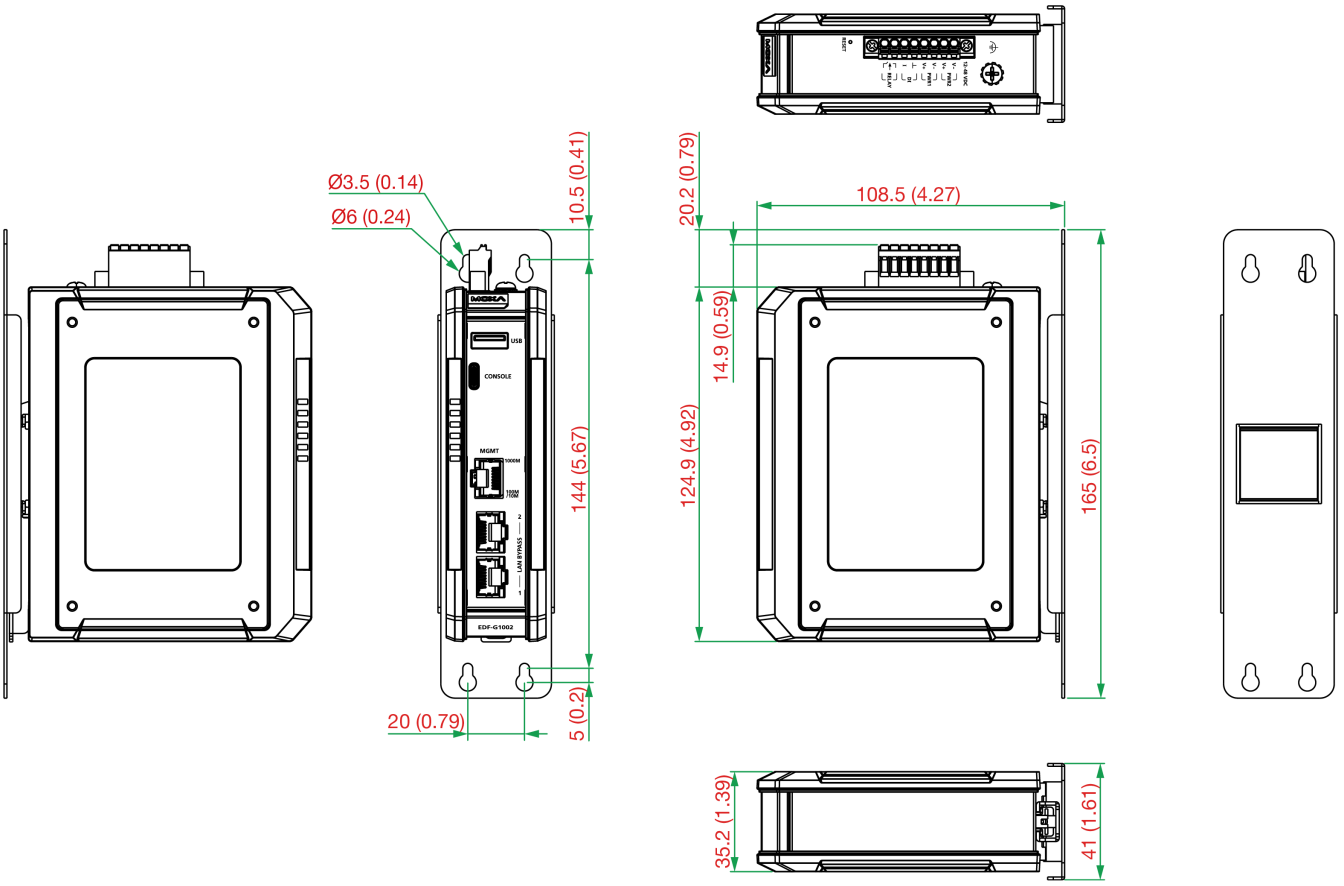
DIN-rail Mount

Unit: mm (inch)



Wall Mount

Unit: mm (inch)



Ordering Information

Model Name	10/100/1000BaseT(X) Ports (RJ45 Connector)	10/100/1000BaseT(X) MGMT Ports (RJ45 Connector)	MXsecurity Support	Conformal Coating	Operating Temperature
EDF-G1002-BP	2	1	✓	–	-10 to 60°C
EDF-G1002-BP-T	2	1	✓	–	-40 to 75°C
EDF-G1002-BP-CT	2	1	✓	✓	-10 to 60°C
EDF-G1002-BP-CT-T	2	1	✓	✓	-40 to 75°C

Accessories (sold separately)

Storage Kits

ABC-02-USB	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, 0 to 60°C operating temperature
ABC-02-USB-T	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, -40 to 75°C operating temperature

Mounting Kits

WK-40-01	Wall-mounting kit, 2 plates, 6 screws, 40 x 58 x 2 mm

Software

LIC-MXviewOne-NEW-XN-SR	MXview One node license with customizable node quantity (minimum 1 node)
LIC-MXviewOne-ADD-SECURITY-MR	MXview One add-on license to enable MXview Security module functionality
LIC-MXsecurity-NEW-XN-SR	MXsecurity perpetual node license with customizable node quantity (minimum 1 node)
LIC-IPS-MGMT-[X]Point-SR	IPS license for MXsecurity or MXview Security add-on management software with customizable point balance (minimum 365 points).
LIC-IPS-DEVICE-365Point(1Y)-MR	1-year (365 points) device-based IPS license for a single device without management software.
LIC-IPS-DEVICE-730Point(2Y)-MR	2-year (730 points) device-based IPS license for a single device without management software.
LIC-IPS-DEVICE-1095Point(3Y)-MR	3-year (1095 points) device-based IPS license for a single device without management software.
LIC-IPS-DEVICE-1460Point(4Y)-MR	4-year (1460 points) device-based IPS license for a single device without management software.
LIC-IPS-DEVICE-1825Point(5Y)-MR	5-year (1825 points) device-based IPS license for a single device without management software.