

# EDF-G1002-BP 系列

## 2 埠 Gigabit 工業級次世代 LAN 防火牆



### 特色與優點

- 線路串接 ( Bump-in-the-wire ) 無感部署，不影響網路正常運作
- 第 3 代 LAN Bypass 技術，可用於系統容錯
- 工業級入侵防禦/偵測系統 (IPS/IDS)
- 利用深度封包檢測 (DPI) 技術檢查工業協定資料
- 支援安全啟動 (Secure Boot) 以檢查系統完整性
- 具備一鍵式防火牆安全性規則防錯檢查
- 支援 MXstudio，輕鬆實現可視化的工業網路管理

### 認證



EN 50121-4

### 簡介

EDF-G1002-BP 系列是具備 IPS 與 DPI 功能的工業級 LAN 防火牆，用於保護關鍵資產與網路區域。這些工業防火牆支援可透過軟體設定的第 3 代 LAN Bypass 技術，可實現可嵌入式安裝，並將 ITS、抽水處理系統、石油和天然氣的分散式控制系統，以及工廠自動化中的 PLC/SCADA 系統等工業應用的影響降至最低。

#### 透過 IPS/IDS 動態預防網路惡意威脅活動

EDF-G1002-BP 系列專為保護 OT 網路邊緣的關鍵任務資產而設計，具備進階入侵防禦與偵測系統 (IPS/IDS)。其可於背景分析網路流量，並針對各種網路活動進行縝密的行為監控。這些防火牆裝置同時支援「監控」和「保護」模式，以因應不同的 OT 情境。「監控」模式讓網管人員能對網路上的網路威脅活動擁有完整的能見度。如果偵測到威脅，網管人員可輕易切換至「保護」模式，以阻擋並抑制任何的惡意活動。

#### 工業級深度封包檢測技術，可用於關鍵資產

EDF-G1002-BP 系列支援進階深度封包檢測 (DPI) 技術，可提供對工業協定資料的感知能力，並對流向關鍵控制器的控制系統流量進行精細指令控管。

#### 虛擬修補智慧型資安威脅防護功能

頻繁修補可增強對網路威脅的防護。然而，這在 OT 環境中是一項重大挑戰，因為 OT 應用無法承受關閉系統來中斷應用以進行修補的代價。虛擬修補技術可屏蔽已知和未知的安全漏洞，進而彌補現有修補管理程序的不足。虛擬修補是無代理程式的緊急安全工具，讓 OT 網管人員和操作人員能夠在發現網路攻擊事件後，迅速修補 OT 裝置的安全漏洞。EDF-G1002-BP 系列運用最新的威脅資訊提供進階威脅防護，為您的系統提供專屬防護，免受未公開漏洞 (Undisclosed) 與零日漏洞 (Zero-day) 威脅。

#### 集中式網路安全與政策管理

EDF-G1002-BP 系列可協助管理員與操作員瞭解 OT 系統的即時狀態。在連接到 Moxa 的 MXsecurity 集中式安全管理平台後，管理員可透過同一管理平台，以絕佳的效率管理並監控所有入侵防禦系統。MXsecurity 提供了一種高效的方式來監控安全性資產，並執行政策、韌體、配置和模式更新。

### 規格

#### 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<br>-30 to +3 V for state 0<br>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<br>IEEE 802.3u for 100BaseT(X)<br>IEEE 802.3ab for 1000BaseT(X)<br>IEEE 802.3x for flow control |

## Ethernet Software Features

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

## LED Interface

|                |                                |
|----------------|--------------------------------|
| LED Indicators | PWR1, PWR2, STATE, BYPASS, USB |
|----------------|--------------------------------|

## DoS and DDoS Protection

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

## Firewall

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

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

### Real-time Firewall Event Log

|            |                                                    |
|------------|----------------------------------------------------|
| Event Type | Firewall events<br>Protocol DPI and IDS/IPS events |
| Media      | Syslog server<br>Local storage<br>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)<br>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)<br>Wall mounting (DNV certified) |

### Environmental Limits

|                                        |                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------|
| Operating Temperature                  | Standard Models: -10 to 60°C (14 to 140°F)<br>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<br>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<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-6 CS: 10 V<br>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<br>Class I Division 2<br>IECEx                                                                                                                                                                                                        |

#### MTBF

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

#### Warranty

|                 |                                                                            |
|-----------------|----------------------------------------------------------------------------|
| Warranty Period | 5 years                                                                    |
| Details         | See <a href="http://www.moxa.com/tw/warranty">www.moxa.com/tw/warranty</a> |

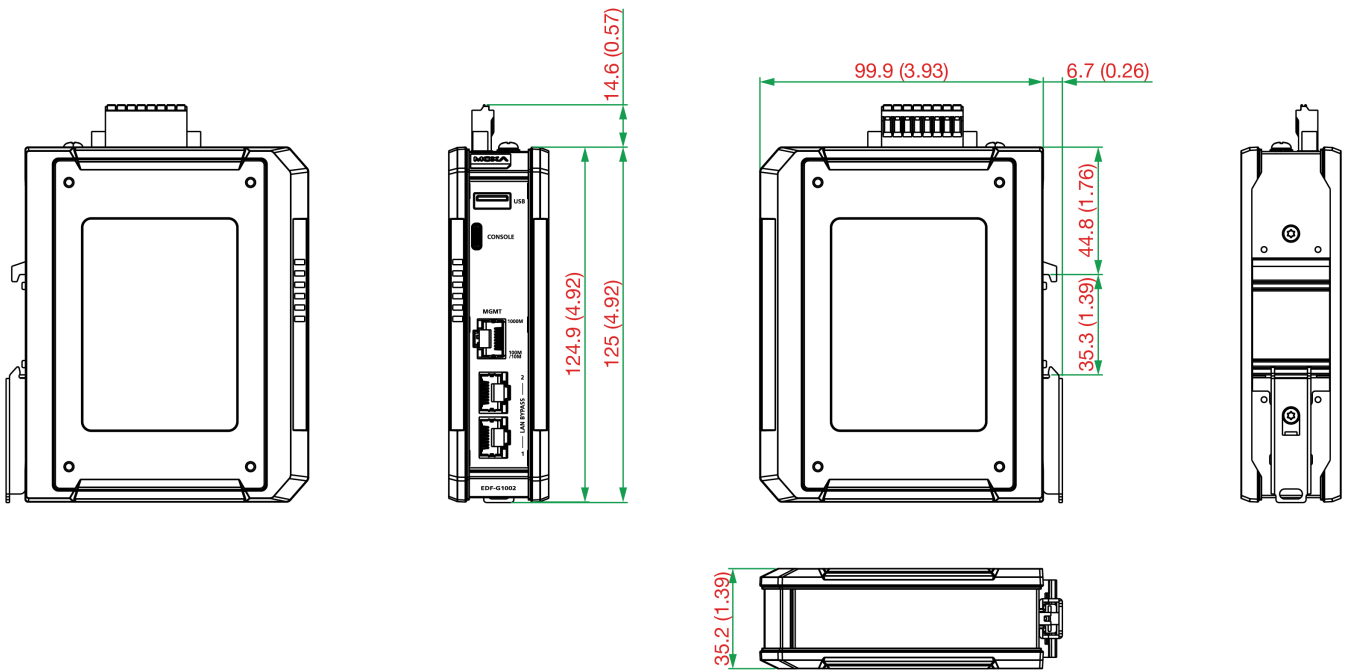
#### Package Contents

|                  |                                                           |
|------------------|-----------------------------------------------------------|
| 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<br>1 x cap, plastic, for USB Type-A port |
| Documentation    | 1 x quick installation guide<br>1 x warranty card         |

## 尺寸

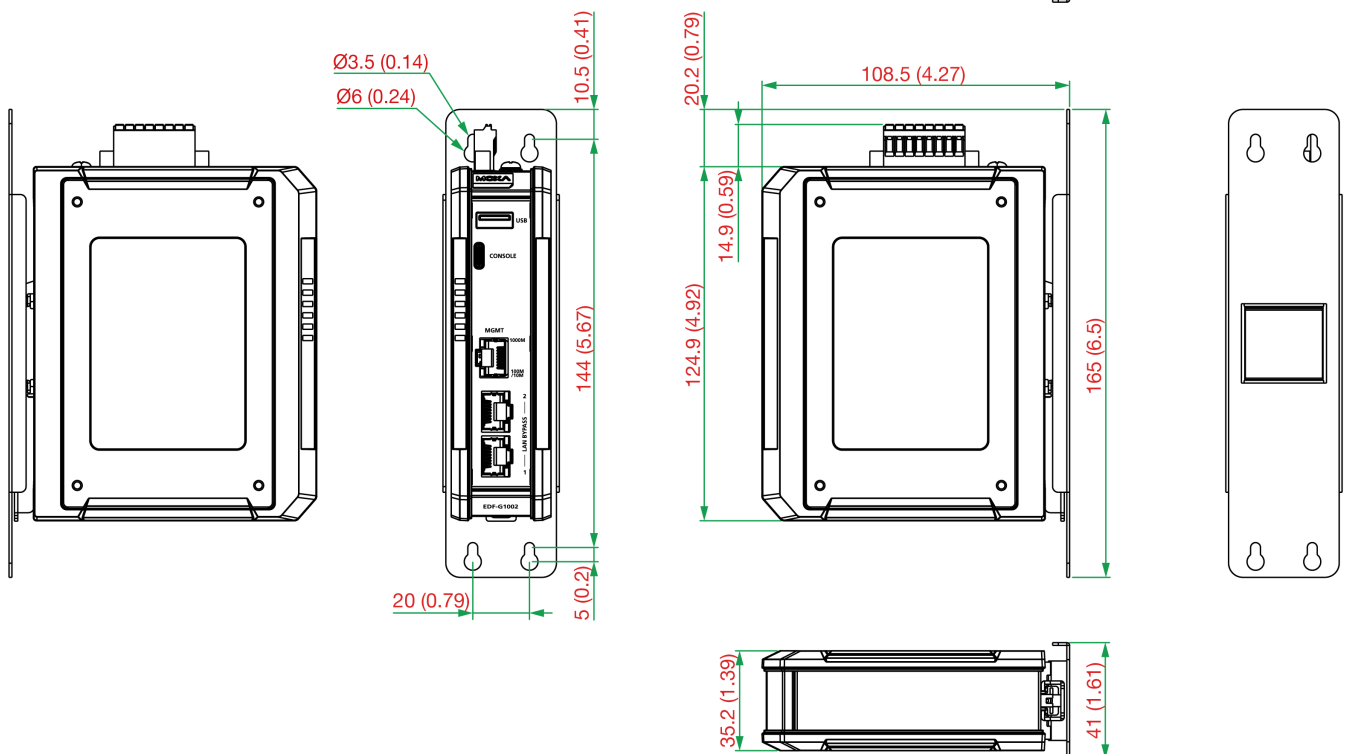
### DIN 軌道安裝

單位：公釐（英吋）



### 壁掛安裝

單位：公釐（英吋）



訂購資訊

| Model Name        | 10/100/1000BaseT(X)<br>Ports (RJ45 Connector) | 10/100/1000BaseT(X)<br>MGMT Ports (RJ45<br>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           |

配件（選購）

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.                                 |

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