

EDR-8010 系列

8 FE 銅纜和 2 GbE SFP 多埠工業安全路由器



特色與優點

- 8 FE + 2 Gigabit 多合一防火牆/NAT/VPN/路由器/轉換器
- 使用 MXsecurity 管理軟體視覺化 OT (營運技術) 安全
- 使用 VPN 保護遠端存取通道
- 使用深度封包檢測 (DPI) 技術檢驗工業協議資料
- 透過網路位址轉譯 (NAT) 輕鬆設定網路
- RSTP (快速生成樹協定) /Turbo Ring備援協定強化網路備援
- 基於 IEC 62443/NERC CIP 的安全功能
- 支援安全啟動以檢查系統完整性
- -40 至 75°C 操作溫度範圍 (-T 型號)

認證



簡介

EDR-8010 系列是高度整合工業多埠安全路由器，備防火牆/NAT/VPN 和網管型 Layer 2 交換器功能。這些裝置專為機密的遠端控制或監控網路中所需的乙太網路安全應用而設計。這些安全路由器提供電子安全邊界，以保護至關重要的網路資產，包括電力應用中的變電站、水站中的泵浦處理系統、石油與天然氣應用中的分散式控制系統，以及工廠自動化作業的 PLC/SCADA 系統。

使用先進的網路安全功能防禦惡意威脅

EDR-8010 系列的嵌入式防火牆使用策略規則來控制受信任區域之間的網路流量，同時網路位址轉譯 (Network Address Translation, NAT) 保護內部網路免受外部主機未經授權的存取。虛擬私人網路 (Virtual Private Networking, VPN) 功能進一步為使用者於公共互聯網存取私人網路時提供安全通訊通道。為協助保護您的 OT 資產免受網路攻擊，EDR-8010 系列支援深度封包檢測 (Deep Packet Inspection, DPI)，以檢驗各種特定 OT 協定的網路封包的資料部分。

透過友善使用者介面和快速設定簡化配置

EDR-8010 系列的設定精靈提供使用者簡易設定 WAN、LAN 和橋接埠，只需要四個步驟即可建立路由功能。此外，工程師可以透過基於物件的防火牆管理功能簡單設定防火牆過濾的配置和維護，包括 IP 位址和子網路、網路服務、工業應用服務和使用者定義服務。

工業級設計，確保網路連接不間斷

EDR-8010 系列堅固耐用的硬體使這些安全路由器成為惡劣工業環境的理想選擇，提供在危險的 -40 至 75°C 極端環境中可靠運作的寬溫度範圍型號。此外，EDR-8010 系列支援全面性 Layer 2 和 Layer 3 備援機制，以確保您的網路始終連線不間斷。

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 -30 to +3 V for state 0 Max. input current: 8 mA |

Ethernet Interface

| | |
|---------------------------------------|--|
| 10/100BaseT(X) Ports (RJ45 connector) | 8 |
| 1000BaseSFP Slots | 2 |
| Standards | IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.3x for flow control IEEE 802.1Q for VLAN Tagging IEEE 802.1X for authentication Static Port Trunk |

Ethernet Software Features

| | |
|------------------------|--|
| Broadcast Forwarding | IP directed broadcast, broadcast forwarding |
| Management | Back Pressure Flow Control DDNS DHCP Server/Client Web Console (HTTP/HTTPS) LLDP QoS/CoS/ToS SNMPv1/v2c/v3 Telnet TFTP HTTPS SSH |
| Redundancy Protocols | RSTP STP Turbo Ring v2 |
| Routing | Throughput: 50K packets per second (max. 500 Mbps) |
| Routing Table | Max. 4K routing rules |
| Concurrent Connections | Max. 120K |
| Connections Per Second | Max. 6K |
| Routing Redundancy | VRRP |
| Security | Secure Boot IPsec L2TP (server) RADIUS Trust access control |
| Time Management | NTP Server/Client SNTP |
| Unicast Routing | OSPF RIPV1/V2 Static Route |
| Multicast Routing | Static Route |
| Filter | IGMP v1/v2/v3 |

Switch Properties

| | |
|-------------------|---------------|
| VLAN ID Range | VID 1 to 4094 |
| IGMP Groups | 256 |
| Max. No. of VLANs | 16 |

LED Interface

| | |
|----------------|--|
| LED Indicators | PWR1, PWR2, STATE, MSTR/H.TC, CPLR/T.TC, VRRP/HA, VPN, USB |
|----------------|--|

DoS and DDoS Protection

| | |
|------------|---|
| Technology | ARP-Flood FIN Scan ICMP-Death NEWWithout-SYN Scan NMAP-ID Scan NMAP-Xmas Scan Null Scan SYN/FIN Scan SYN/RST Scan SYN-Flood Xmas Scan |
|------------|---|

Firewall

| | |
|------------------------|---|
| Filter | DDoS Ethernet protocols ICMP IP address MAC address Ports |
| Stateful Inspection | Router firewall Transparent (bridge) firewall |
| Deep Packet Inspection | Modbus TCP Modbus UDP DNP3 IEC 60870-5-104 IEC 61850 MMS Additional protocols will be supported through future firmware updates. |
| Throughput | Max. 50K packets per second (max. 500 Mbps) |

IPsec VPN

| | |
|------------------------|---|
| Authentication | MD5 and SHA (SHA-256) RSA (key size: 1024-bit, 2048-bit) X.509 v3 certificate |
| Concurrent VPN Tunnels | Max. 50 IPsec VPN tunnels |
| Encryption | DES 3DES AES-128 AES-192 AES-256 |
| Protocols | IPsec L2TP (server) PPTP (client) |
| Throughput | Max. 200 Mbps (Conditions: AES-256, SHA-256) |

NAT

| | |
|----------|---|
| Features | 1-to-1 N-to-1 Port forwarding NAT loopback |
|----------|---|

Real-Time Firewall / VPN Event Log

| | |
|------------|---|
| Event Type | Firewall event VPN event |
| Media | Local storage SNMP Trap Syslog server |

Serial Interface

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

Power Parameters

| | |
|-----------------------------|---|
| Connection | Removable terminal block |
| Operating Voltage | 9.6 to 60 VDC |
| Input Voltage | 12/24/48 VDC |
| Input Current | 0.53 A @ 12 VDC 0.26 A @ 24 VDC 0.14 A @ 48 VDC |
| Reverse Polarity Protection | Supported |

Physical Characteristics

| | |
|--------------|--|
| Housing | Metal |
| Dimensions | 45 x 135 x 105 mm (1.77 x 5.31 x 4.13 in) |
| Weight | 520 g (1.15 lb) |
| Installation | DIN-rail mounting (DNV-certified) Wall mounting (with optional kit) |

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) All Models: DNV-certified for -25 to 70°C (-13 to 158°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: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 4 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF |
| Railway | EN 50121-4 |
| Traffic Control | NEMA TS2 |
| Maritime | IEC 60945 |

| | |
|-----------|----------------|
| | DNV |
| Shock | IEC 60068-2-27 |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |

MTBF

| | |
|-----------|--------------------------|
| Time | 1,347,225 hrs |
| Standards | Telcordia (Bellcore), GB |

Warranty

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

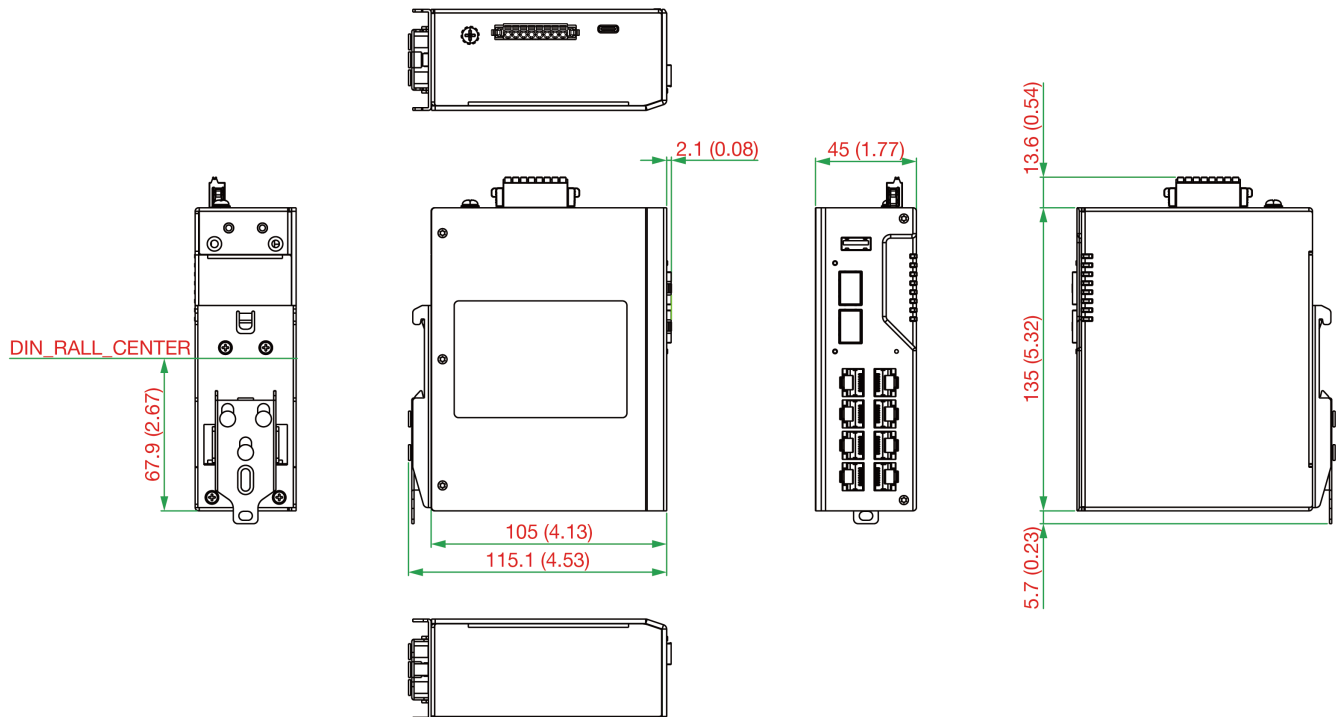
Package Contents

| | |
|------------------|--|
| Device | 1 x EDR-8010 Series secure router |
| Cable | 1 x DB9 female to USB Type-C |
| Installation Kit | 4 x cap, plastic, for RJ45 port 2 x cap, plastic, for SFP slot |
| Documentation | 1 x quick installation guide 1 x warranty card |
| Note | SFP modules need to be purchased separately for use with this product. |

尺寸

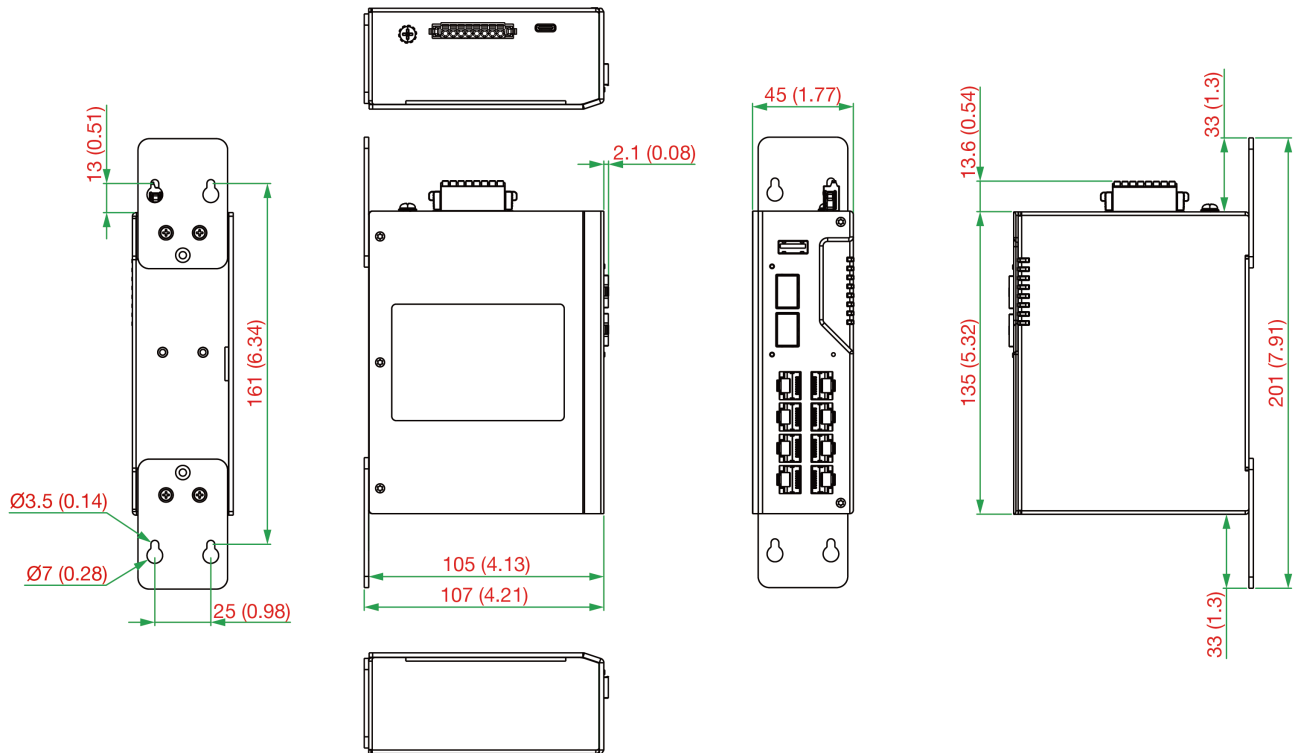
軌道式固態繼電器 (DIN Rail Mount)

單位：公釐 (英吋)



壁裝式繼電器 (Wall Mount)

單位：公釐 (英吋)



訂購資訊

| Model Name | 10/100BaseT(X) Ports (RJ45 Connector) | 1000 BaseBaseSF P Slots | Firewall | NAT | VPN | Input Voltage | Conformal Coating | Operating Temp. |
|-------------------------|---------------------------------------|-------------------------|----------|-----|-----|---------------|-------------------|-----------------|
| EDR-8010-2GSFP | 8 | 2 | P | P | - | 12/24/48 VDC | - | -10 to 60°C |
| EDR-8010-2GSFP-T | 8 | 2 | P | P | - | 12/24/48 VDC | - | -40 to 75°C |
| EDR-8010-2GSFP-CT | 8 | 2 | P | P | - | 12/24/48 VDC | P | -10 to 60°C |
| EDR-8010-2GSFP-CT-T | 8 | 2 | P | P | - | 12/24/48 VDC | P | -40 to 75°C |
| EDR-8010-VPN-2GSFP | 8 | 2 | P | P | P | 12/24/48 VDC | - | -10 to 60°C |
| EDR-8010-VPN-2GSFP-T | 8 | 2 | P | P | P | 12/24/48 VDC | - | -40 to 75°C |
| EDR-8010-VPN-2GSFP-CT | 8 | 2 | P | P | P | 12/24/48 VDC | P | -10 to 60°C |
| EDR-8010-VPN-2GSFP-CT-T | 8 | 2 | P | P | P | 12/24/48 VDC | P | -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 |

SFP Modules

| | |
|-----------------|--|
| SFP-1G10ALC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature |
| SFP-1G10ALC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature |
| SFP-1G10BLC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature |
| SFP-1G10BLC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature |
| SFP-1G20ALC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature |
| SFP-1G20ALC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature |
| SFP-1G20BLC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature |
| SFP-1G20BLC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature |
| SFP-1G40ALC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature |
| SFP-1G40ALC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature |
| SFP-1G40BLC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature |
| SFP-1G40BLC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature |
| SFP-1GEZSLC | SFP module with 1 1000BaseEZ port with LC connector for 110 km transmission, 0 to 60°C operating temperature |
| SFP-1GEZSLC-120 | SFP module with 1 1000BaseEZ port with LC connector for 120 km transmission, 0 to 60°C operating temperature |
| SFP-1GLHLC | SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature |
| SFP-1GLHLC-T | SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature |
| SFP-1GLHSLC | SFP module with 1 1000BaseLH port with LC connector for 40 km transmission, 0 to 60°C operating temperature |
| SFP-1GLHSLC-T | SFP module with 1 1000BaseLH port with LC connector for 40 km transmission, -40 to 85°C operating temperature |
| SFP-1GLSLC | SFP module with 1 1000BaseLS port with LC connector for 1km/2km transmission, 0 to 60°C operating temperature |
| SFP-1GLSLC-T | SFP module with 1 1000BaseLS port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature |
| SFP-1GLXLC | SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature |
| SFP-1GLXLC-T | SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature |
| SFP-1GSXLC | SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature |
| SFP-1GSXLC-T | SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°C operating temperature |
| SFP-1GZXLC | SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature |
| SFP-1GZXLC-T | SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature |
| SFP-1GTXRJ45-T | SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature |

Mounting Kits

| | |
|----------|---|
| WK-35-01 | Wall-mounting kit with 2 plates (35 x 44 x 2.5 mm) and 6 screws |
|----------|---|

Software

| | |
|--------------------------------|---|
| LIC-MXsecurity-NEW-1Y-XN-SR | 1-year MXsecurity license with customizable node quantity (minimum 1 node) |
| LIC-MXsecurity-NEW-XM-XN-DMR | MXsecurity license with customizable duration and node quantity (minimum 1 month, minimum 1 node) |
| LIC-MXsecurity-RENEW-1Y-XN-SR | 1-year MXsecurity renewal license with customizable node quantity (minimum 1 node) |
| LIC-MXsecurity-RENEW-XM-XN-DMR | MXsecurity renewal license with customizable duration and node quantity (minimum 1 month, minimum 1 node) |
| LIC-MXsecurity-ADD-1Q-XN-SR | 3-month MXsecurity add-on license with customizable node quantity (minimum 1 node) |
| LIC-MXsecurity-ADD-2Q-XN-SR | 6-month MXsecurity add-on license with customizable node quantity (minimum 1 node) |
| LIC-MXsecurity-ADD-3Q-XN-SR | 9-month MXsecurity add-on license with customizable node quantity (minimum 1 node) |
| LIC-MXsecurity-ADD-4Q-XN-SR | 1-year MXsecurity add-on license with customizable node quantity (minimum 1 node) |
| LIC-MXsecurity-ADD-XM-XN-DMR | MXsecurity add-on license with customizable duration and node quantity (minimum 1 month, minimum 1 node) |

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