EDR-810 Series

8+2G-port industrial multiport secure router with Firewall/NAT/VPN

- 8+2G SFP all-in-one Firewall/NAT/VPN/router/switch
- Firewall with quick automation profile for industrial protocols
- Deep Modbus TCP packet inspection for firewall filtering
- NAT supports N-to-1, 1-to-1, and port-forwarding deployment
- Flexible configuration of multiple WAN and LAN ports
- 10 VPN connections for secure remote management (VPN model)
- -40 to 75°C operating temperature range (T model)
- NERC CIP compliance

EN 50121

Introduction

The EDR-810 is a highly integrated industrial multiport secure router with Firewall/NAT/VPN and managed Layer 2 switch functions. It is designed for Ethernet security applications in sensitive remote control or monitoring networks, and provides an electronic security perimeter for the protection of critical cyber assets such as pumping/treatment systems in water stations, DCS systems in oil and gas applications, and PLC/SCADA systems in factory automation. The EDS-810 series includes the following cyber security features:

- Firewall/NAT: Firewall policies control network traffic between different trust zones, and Network Address Translation (NAT) shields the internal LAN from unauthorized activity from outside hosts.
- VPN: Virtual Private Networking (VPN) is designed to provide users with secure communication tunnels when accessing a private network from the public Internet. Uses IPSec (IP Security) server or client mode for encryption and authentication of all IP packets at the network layer to ensure confidentiality and sender authentication.

The EDR-810's "WAN Routing Quick Setting" provides an easy way for users to set up WAN and LAN ports to create a routing function automatically. In addition, the EDR-810's "Quick Automation Profile" gives engineers a simple way to configure the firewall filtering function with general automation protocols, including EtherNet/IP, Modbus TCP, EtherCAT, FOUNDATION Fieldbus, and PROFINET. Users can easily create a secure Ethernet network from a user-friendly web UI with a single click, and the EDR-810 is capable of performing deep Modbus TCP packet inspection. Wide temperature models that operate reliably in hazardous, -40 to 75°C environments, are also available.

Specifications

Technology

Standards:
IEEE 802.3 for 10BaseT
IEEE 802.3u for 100BaseT(X)
IEEE 802.3ab for 1000BaseT(X)
IEEE 802.3z for 1000BaseX
IEEE 802.1Q for VLAN tagging
IEEE 802.3ad for port trunk
Protocols: SNMP v1/v2c/v3, DHCP server/client, TFTP, NTP server/client, HTTP, HTTPS, Telnet, SSH, GVRP, IPSec, L2TP, IGMP v1/v2/v3*, QoS/CoS/ToS*, Radius*, TACACS+*, LACP**, GMRP**, 802.1X**, RSTP/STP**, Turbo Ring**
Routing: Static routing, RIP V1/V2, Multicast routing, DVMRP**, PIM-DM**, VRRP
*Available in Q3, 2013
**Available in Q4, 2013
Redundancy: STP/RSTP, Turbo Ring
Flow Control: IEEE 802.3x flow control, back pressure flow control

Interface

RJ45 Ports: 10/100BaseT(X) auto negotiation speed
Fiber Ports: 1000BaseSFP slot
LED Indicators: STATE, PWR1, PWR2, FAULT, 10/100/1000M
Alarm Contact: One relay output with current carrying capacity of 1 A @ 24 VDC
Digital Inputs: 1 2-contact terminal block
• +13 to +30 V for state "1"
• -30 to +3 V for state "0"
• Max. input current: 8 mA

Security Function

Firewall:
• Stateful inspection
• Filter: IP and MAC address, ports, protocol
Industrial protocol inspection: Modbus TCP
Quick Automation Profile: EtherCAT, EtherNet/IP, FOUNDATION Fieldbus, LonWorks, Modbus/TCP, PROFINET, IEC 60870-104, DNP, FTP, SSH, Telnet, HTTP, IPSec, L2TP, PPTP, RADIUS
NAT: N-to-1, 1-to-1, and port forwarding
VPN: IPSec, L2TP, PPTP (VPN model)
Encryption: DES, 3DES, AES (VPN model)
Authentication: Pre-shared key (PSK), X.509v3 certificates, MD5, SHA

Power Requirements

Input Voltage: 12/24/48 VDC (9.6 to 60 VDC), redundant dual inputs
Input Current: 0.37 A @ 24 V
Overload Current Protection: Present
Connection: Removable terminal block
Reverse Polarity Protection: Present

Physical Characteristics

Housing: Metal
Dimensions: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight: 830 g
Installation: DIN-Rail mounting, 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)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95 % (non-condensing)

Standards and Certifications

Safety: UL 508 (pending)
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 3, EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 3, EN 61000-4-5 (Surge) Level 3,
EN 61000-4-6 (CS) Level 3
Rail Traffic: EN 50121-4
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6
Note: Please check Moxa's website for the most up-to-date certification status.

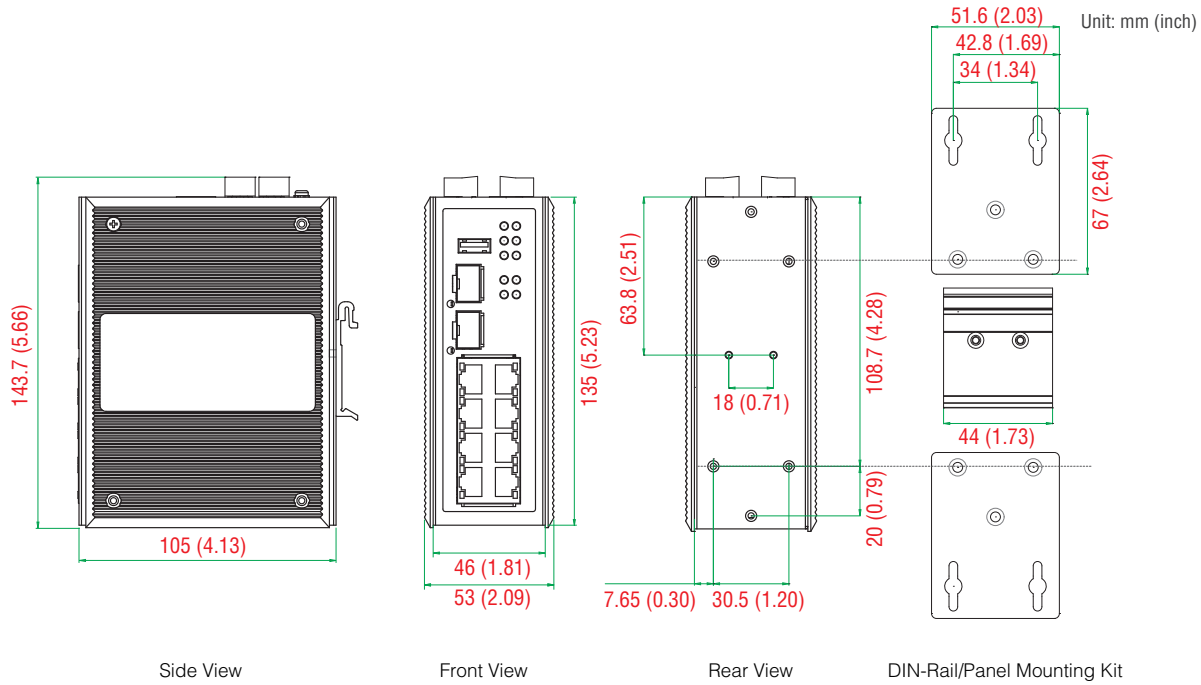
MTBF (mean time between failures)

Time: TBD
Database: Telcordia (Bellcore), GB

Warranty

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

Dimensions



Ordering Information

Available Models

EDR-810-2GSFP: 8+2G-port industrial multiport secure router with Firewall/NAT, -10 to 60°C operating temperature
EDR-810-2GSFP-T: 8+2G-port industrial multiport secure router with Firewall/NAT, -40 to 75°C operating temperature
EDR-810-VPN-2GSFP: 8+2G-port industrial multiport secure router with Firewall/NAT/VPN, -10 to 60°C operating temperature
EDR-810-VPN-2GSFP-T: 8+2G-port industrial multiport secure router with Firewall/NAT/VPN, -40 to 75°C operating temperature
Note: The EDR-810 series supports 1000BaseSFP slots. See the SFP-1G series Gigabit Ethernet SFP module product datasheet for more information.

Optional Accessories (can be purchased separately)

DR-4524/75-24/120-24: 45/75/120 W DIN-Rail 24 VDC power supplies
MDR-40-24/60-24: 40/60 W DIN-Rail 24 VDC power supplies, -20 to 70°C operating temperature
WK-51-01: Wall mounting kit
RK-4U: 4U-high 19" rack mounting kit

Package Checklist

- EDR-810 industrial secure router
- RJ45 to DB9 console port cable
- Documentation and software CD
- Hardware installation guide (printed)
- Warranty card