

EDR-G902 Series

Industrial VPN secure routers, 1 WAN, firewall/NAT, 10 VPN tunnels



- > VPN security with IPSec (Server & Client Mode), L2TP and PPTP functions
- > Firewall/NAT/VPN/Router all-in-one
- > High performance Gigabit copper/fiber combo port
- > Firewall with Quick Automation Profile for Fieldbus protocols
- > Network address translation (N-to-1, 1-to-1, and port forwarding)
- > Intelligent PolicyCheck and SettingCheck tools
- > -40 to 75°C operating temperature range (T model)
- > NERC CIP compliance



Introduction

The EDR-G902 series is a high performance, industrial VPN server with firewall/NAT all-in-one secure router. 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 stations, DCS, PLC systems on oil rigs, and water treatment systems. The EDS-G902 series includes the following cyber security features:

- Virtual Private Networking (VPN): VPNs are designed to provide users with secure communication links 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.

- Firewall: Controls network traffic between different trust zones. Network Address Translation (NAT), which shields the internal LAN from unauthorized activity from outside hosts, is included.

The EDR-G902's Quick Automation Profile function supports most common Fieldbus protocols, including EtherCAT, EtherNet/IP, FOUNDATION Fieldbus, Modbus/TCP, and PROFINET. Users can easily create a secure Ethernet Fieldbus network from a user-friendly web UI with a single click operation. In addition, wide temperature models are available that operate reliably in hazardous, -40 to 75°C environments.

Specifications

Technology

Standards:

IEEE 802.3 for 10BaseT
 IEEE 802.3u for 100BaseT(X) and 100BaseFX
 IEEE 802.3ab for 1000BaseT(X)
 IEEE 802.3z for 1000BaseX

Protocols: SNMPv1/v2c/v3, DHCP Server/Client, TFTP, NTP, HTTP, HTTPS, Telnet, SSH, Syslog, SMTP, LLDP, PPPoE, PPTP, Dynamic DNS, QoS (Quality of Service), VRRP

Routing: Static routing, RIP V1/V2

Flow Control: IEEE 802.3x flow control, back pressure flow control

Interface

WAN: 1 RJ45/fiber combo port

LAN: 1 RJ45 port

RJ45 Ports: 10/100/1000BaseT(X) auto negotiation speed

Fiber Ports: 100/1000BaseSFP slot

LED Indicators: PWR1, PWR2, FAULT, 10/100/1000M

Alarm Contact: One relay output with current carrying capacity of 1 A @ 24 VDC

Digital Inputs: 1 input

- +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
- Bridge mode firewall

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

Encryption: DES, 3DES, AES

Authentication: Pre-shared key (PSK), X.509v3 certificates, MD5, SHA

Data Throughput: 300 Mbps (large packets)

VPN Throughput: 60 Mbps (AES-256, SHA-256)

Power Requirements

Input Voltage: 12/24/48 VDC (9.6 to 60 VDC), redundant dual inputs

Input Current: 0.53 A @ 24 V

Overload Current Protection: Present
Connection: Removable terminal block
Reverse Polarity Protection: Present
Physical Characteristics
Housing: Metal, IP 30 protection
Dimensions: 51 x 152 x 131.1 mm (2.01 x 5.98 x 5.16 in)
Weight: 1250 g
Installation: DIN-Rail mounting, wall mounting (with optional kit)

Environmental Limits

Operating Temperature:
 Standard Models: 0 to 60°C (32 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 60950-1, 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

Marine: DNV (Pending), GL (Pending)

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: 530,000 hrs

Database: Telcordia (Bellcore), GB

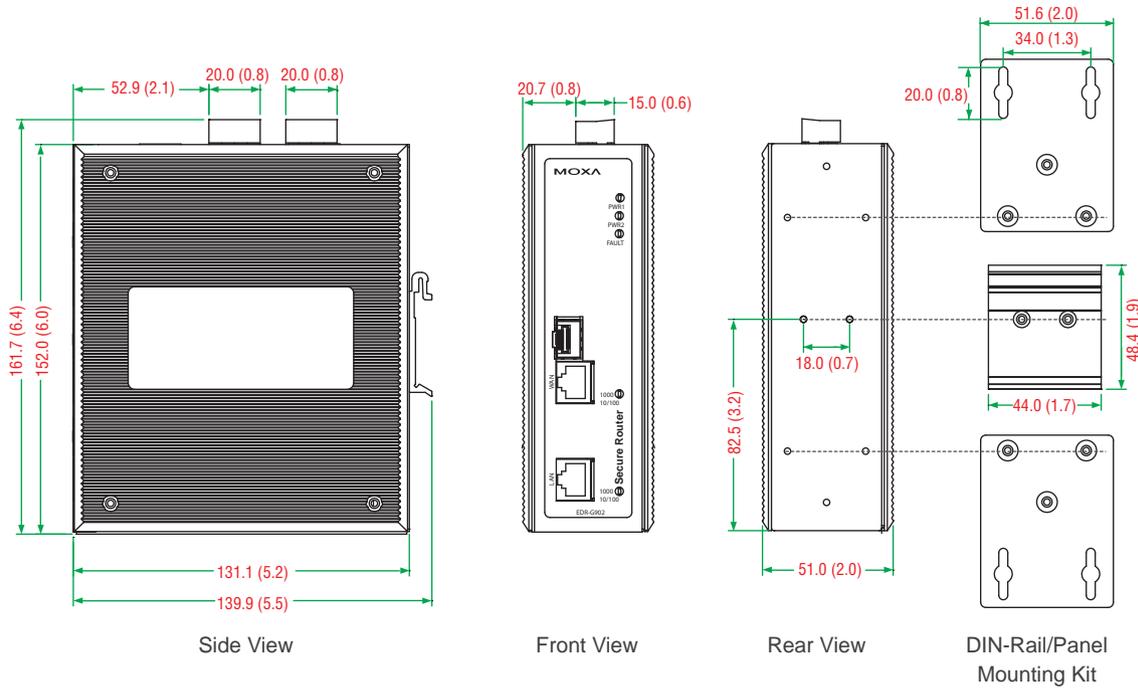
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Ordering Information

Available Models

EDR-G902: Industrial VPN secure routers with 1 WAN, Firewall/NAT, 10 VPN tunnels, 0 to 60°C operating temperature

EDR-G902-T: Industrial VPN secure routers with 1 WAN, Firewall/NAT, 10 VPN tunnels, -40 to 75°C operating temperature

Note: The EDR-G902 series secure routers support 100/1000BaseSFP slots. See pages 1-82 and 1-84 for information about SFP-1G/1FE series Gigabit/Fast Ethernet SFP modules.

Optional Accessories (can be purchased separately)

DR-4524/75-24/120-24: 45/75/120 W DIN-Rail 24 VDC power supplies

WK-51-01: Wall mounting kit

RK-4U: 4U-high 19" rack mounting kit

Package Checklist

- EDR-G902 secure router
- RJ45 to DB9 console port cable
- Documentation and software CD
- Hardware installation guide (printed)
- Warranty card