

# 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 EDR-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

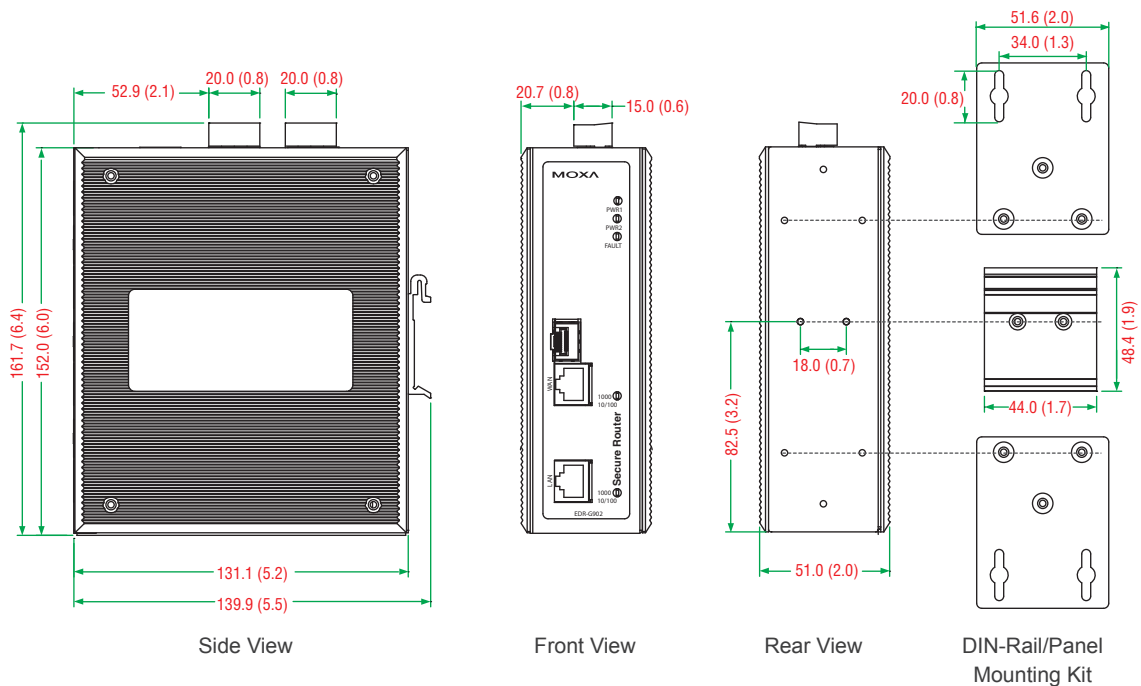
**Warranty**

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://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