

# EKI-1221R EKI-1222R EKI-1224R

INDUSTRIAL  
COMMS

1-port Modbus Gateway/Router

2-port Modbus Gateway/Router

4-port Modbus Gateway/Router



## Features

- Integrates Modbus TCP and Modbus RTU/ASCII networks
- Supports up to 921.6 kbps and any baud rate setting
- Supports up to 16 connections per serial port under 32 sessions Modbus slave mode
- Provides high secure access tunnel with VPN
- Software-selectable RS-232/422/485 communication
- Mountable via DIN rail and wall mount
- Built-in 15 kV ESD protection for all serial signals
- Automatic RS-485 data flow control
- Supports surge protection for DC power ports with line-to-line (2 kV) line-to-earth (4 kV) for signal ports with 4 kV

## Introduction

The EKI-1200R series Modbus Router are bi-directional gateways for integrating new and existing Modbus/RTU and Modbus/ASCII serial devices to newer TCP/IP networked-based devices. The EKI-1200R series Modbus Router can remote control and monitor local Modbus devices for Industrial IOT Applications. And it provides high secure access tunnel with VPN to protect domestic data.

## Specifications

### Ethernet Communications

- **Compatibility** IEEE 802.3, IEEE 802.3u
- **Speed** 10/100 Mbps
- **No. of Ports** 2
- **Port Connector** 8-pin RJ45
- **Protection** Built-in 2.25 kV<sub>DC</sub> magnetic isolation

### Serial Communications

- **Port Type** RS-232/422/485, softwareselectable
- **No. of Ports** EKI-1221R: 1  
EKI-1222R: 2  
EKI-1224R: 4
- **Port Connector** DB9 male
- **Data Bits** 5, 6, 7, 8
- **Stop Bits** 1, 2
- **Parity** None, Odd, Even, Space, Mark
- **Flow Control** XON/XOFF, RTS/CTS
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND  
RS-422: TxD+, TxD-, RxD+, RxD-, GND  
RS-485: Data+, Data-, GND
- **Protection** 15 KV ESD for all signals

### Software

- **OS Support** Windows XP/7/8.1/10, Windows Server 2003/2008/2012/2016/2019, and Linux
- **Utility Software** Advantech EKI Device Configuration Utility
- **Operation Modes** Modbus RTU Slave mode  
Modbus ASCII Slave mode
- **Configuration** Windows Utility, Telnet Console, Web Browser
- **Protocols** ICMP, IP, TCP, UDP, BOOTP, DHCP, Auto IP, SNMP, HTTP, DNS, SMTP, ARP, NTP

### General

- **LED Indicators** System: Power, System Status  
LAN: Speed, Link/Active  
Serial: Tx, Rx
- **Reboot Trigger** Built-in WDT (watchdog timer)

### Mechanics

- **Dimensions (W x H x D)** EKI-1221R/1222R: 30 x 140 x 95 mm (1.18" x 5.51" x 3.74")  
EKI-1224R: 42 x 140 x 95 mm (1.65" x 5.51" x 3.74")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** EKI-1221R: 0.432Kg  
EKI-1222R: 0.432Kg  
EKI-1224R: 0.537Kg

### Power Requirements

- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** EKI-1221R: 3.2W  
EKI-1222R: 3.2W  
EKI-1224R: 4.1W

### Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

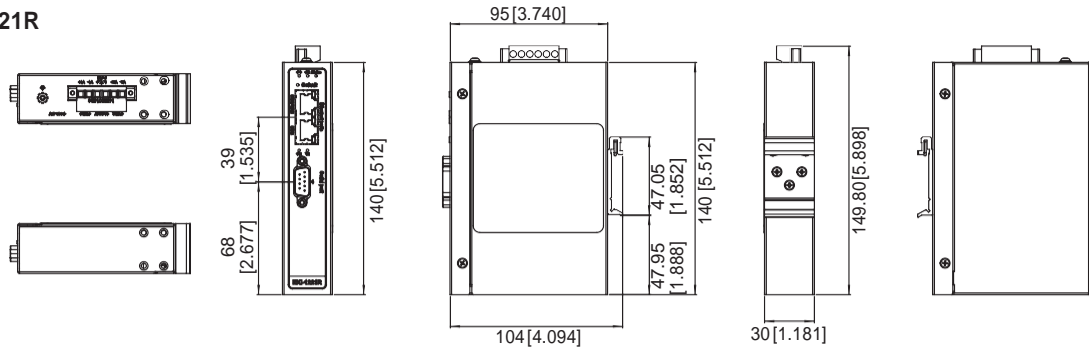
### Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)
- **Hazardous location** UL/cUL (Class I, Division 2, Groups A, B, C and D), ATEX (Zone 2 Ex nA nC IIC T4 Gc)

## Dimensions

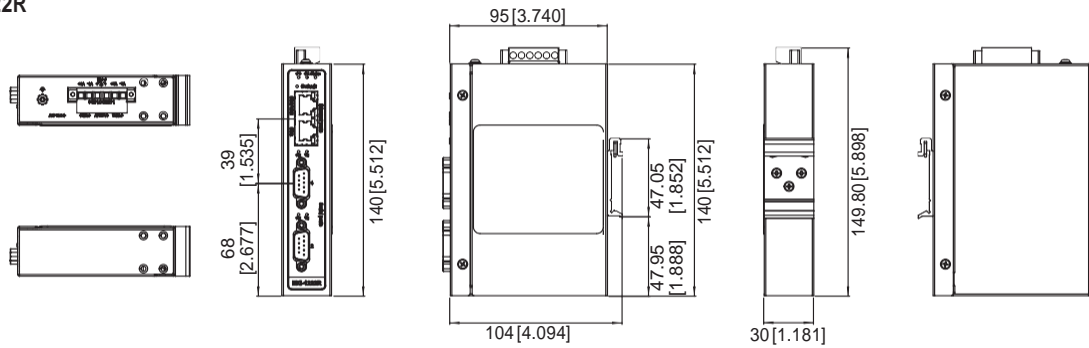
Unit: mm

### EKI-1221R



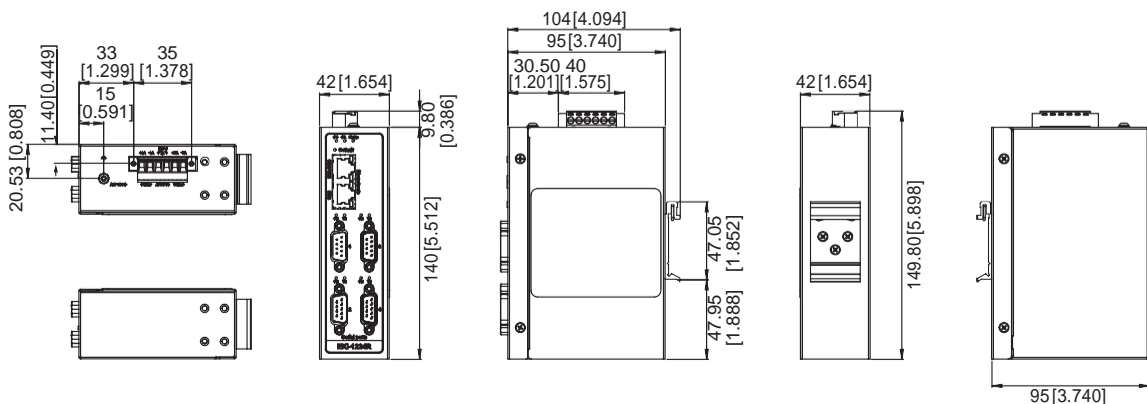
Panel Cut-out Dimensions: 95 x 140 x 30 mm (3.74" x 5.512" x 1.181")

### EKI-1222R



Panel Cut-out Dimensions: 95 x 140 x 30 mm (3.74" x 5.512" x 1.181")

### EKI-1224R



Panel Cut-out Dimensions: 95 x 140 x 42 mm (3.74" x 5.512" x 1.654")

## Ordering Information

- EKI-1221R 1-port Modbus Gateway/Router
- EKI-1222R 2-port Modbus Gateway/Router
- EKI-1224R 4-port Modbus Gateway/Router
- OPT1-DB9 D-Sub9 to Terminal Converter

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