

EKI-1521/CI/I

EKI-1522/CI/I

EKI-1524/CI/I

1-Port RS-232/422/485 Serial Device Server

2-Port RS-232/422/485 Serial Device Server

4-Port RS-232/422/485 Serial Device Server



Features

- Security functions refer to the IEC 62443-4-2 standard
- 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- Provides secure operation in COM port redirection (Virtual COM), TCP modes
- Supports up to 921.6 kbps and any baud rate setting
- Allows a maximum of 5 hosts to access one serial port
- Allows a maximum of 16 hosts to be accessed in TCP client mode
- Provides rich configuration methods including Windows utility, Telnet console, and web browser
- Automatic RS-485 direction control
- "I" models support a wide operating temperature
- "CI" models support isolation and a wide operating temperature; support line-to-line (1 kV) and line-to-ground (2 kV) surge protection

Introduction

The EKI-1521, EKI-1522, and EKI-1524 feature two independent Ethernet ports and MAC addresses to provide a redundant network mechanism that guarantees Ethernet network reliability. These serial device servers are designed to connect RS-232/422/485 serial devices such as PLC, meters, sensors, and barcode readers to an IP-based Ethernet LAN. They allow nearly any device with serial ports to connect and share an Ethernet network, while also providing various operations such as COM port redirection (Virtual COMport), TCP server, TCP client, and UDP mode. With COM port redirection mode, standard serial operation calls are transparently redirected to the servers, guaranteeing compatibility with legacy serial devices and enabling backward-compatibility with existing software. With TCP server, TCP client, and UDP modes, the EKI-1521, EKI-1522, and EKI-1524 ensure compatibility in network software using a standard network API. Moreover, serial devices can be made communicate with other devices via peer-to-peer, thus eliminating the need for an intermediate host PC and software programming.

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 kVdc magnetic isolation

Serial Communications

- Port Type: RS-232/422/485-2w/4w/485-4w, software selectable (EKI-1524CI-CE supports RS-422/485 only)
- No. of Ports: EKI-1521: 1/EKI-1522: 2/EKI-1524: 4
- Port Connector: DB9 male
- Data Bits: EKI-1521CI-DE; EKI-1522CI-DE also provide Terminal Block
- Stop Bits: 5, 6, 7, 8
- Parity: 1, 1.5, 2
- Flow Control: None, Odd, Even, Space, Mark
- Baud Rate: XON/XOFF, RTS/CTS
- Serial Signals: 50 bps ~ 921.6 kbps, any baud rate setting
- [CE Version] RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND, DTR, DSR
- [DE Version] RS-422: TxD+, TxD-, RxD+, RxD-, GND
- [DE Version] RS-485 2-wire: Data+, Data-, GND
- DB9: RS-232 isolation: TxD, RxD, CTS, RTS, GND
- RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND, DTR, DSR
- Terminal Block (From top to bottom): RS-422: GND, RxD-, RxD+, TxD+, TxD-
- RS-485 2-wire: GND, NC, NC, TxD+, TxD-
- RS-485 4-wire: GND, RxD-, RxD+, TxD+, TxD-

Software

- Driver Support: Windows 7/8/8.1/10/11, Windows Server 2008/2012/2016/2019, and Linux
- Secure Operation Modes: COM port redirection (Virtual COM) TCP server (polling) mode TCP client (event handling) mode Pair Connection (peer to peer) mode SSH console mode
- Standard Operation Modes: COM port redirection (Virtual COM) TCP/UDP server (polling) mode TCP/UDP client (event handling) mode Pair Connection (peer to peer) mode RFC2217 mode

- Configuration: Windows utility, Telnet console, Web Browser (HTTP/HTTPS)
- Management: SNMP MIB-II
- Protocols: ARP, ICMP, IPv6, TCP, UDP, BOOTP/DHCP Client, Auto IP, Telnet, SNMPv3, HTTP, HTTPS, DNS, SMTP, NTP, SSDP
- Authentication: User Management, LDAP, RADIUS

Mechanics

- Dimensions (W x H x D): EKI-1521/I-CE; EKI-1521CI-DE; EKI-1522/I-CE; EKI-1522CI-DE: 30 x 140 x 95 mm (1.18" x 5.51" x 3.74") EKI-1524/CI/I-CE: 42 x 140 x 95 mm (1.65" x 5.51" x 3.74") Metal with solid mounting hardware
- Enclosure: DIN-rail, Wall
- Mounting: DIN-rail, Wall
- Weight: EKI-1521/I-CE; EKI-1522/I-CE: 0.432Kg EKI-1521CI-DE; EKI-1522CI-DE: 0.45kg EKI-1524/CI/I-CE: 0.537Kg
- IP Rating: IP30

General

- LED Indicators: System: Power, System Status/LAN: Speed, Link/Active Serial: Tx, Rx

Power Requirements

- Input: 12 ~ 48 Vdc, redundant dual inputs
- Connector: Terminal block
- Consumption: EKI-1521: 3.2 W EKI-1522: 3.2 W EKI-1524: 4.1 W

Environment

- Operating Temperature: EKI-1521/EKI-1522/EKI-1524: -10 ~ 60 °C (14 ~ 140 °F) 'CI & I' models: -40 ~ 80 °C (-40 ~ 176 °F)
- Storage Temperature: -40 ~ 85 °C (-40 ~ 185 °F)
- Operating Humidity: 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)

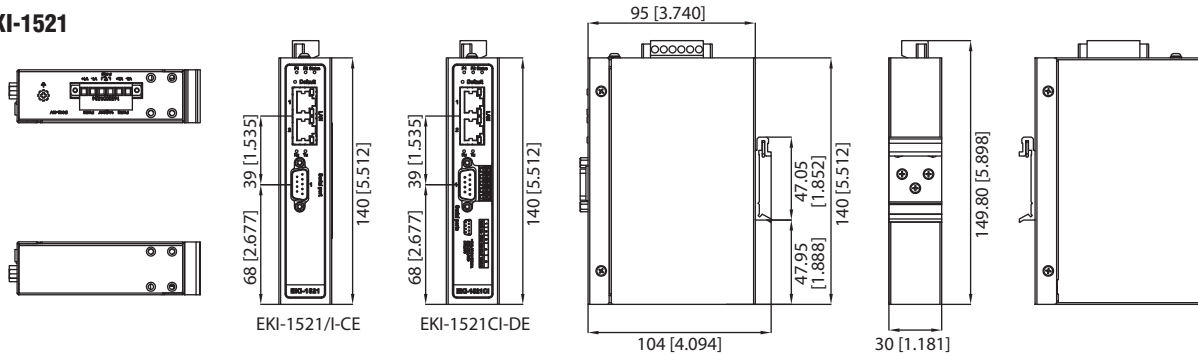
Port to Port Isolation ('CI' models)

- Serial to Ethernet: 2 kV
- Serial to Power: 2 kV
- Ethernet to Power: 1.5 kV

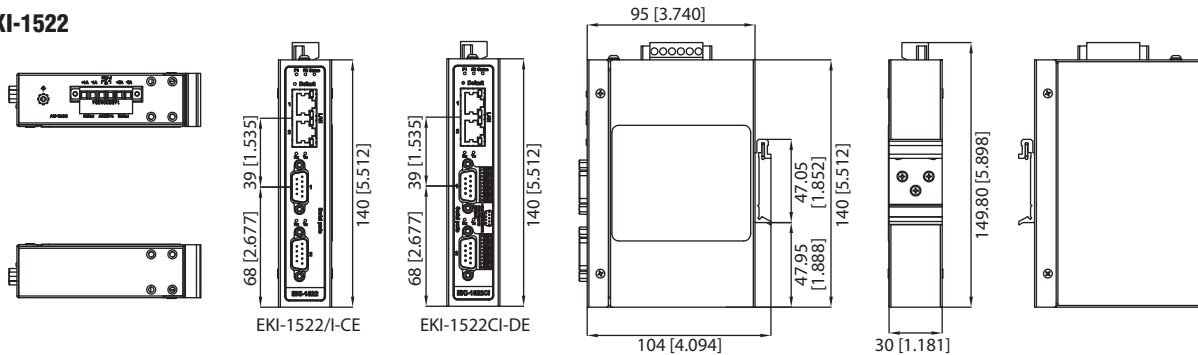
Dimensions

Unit: mm [inch]

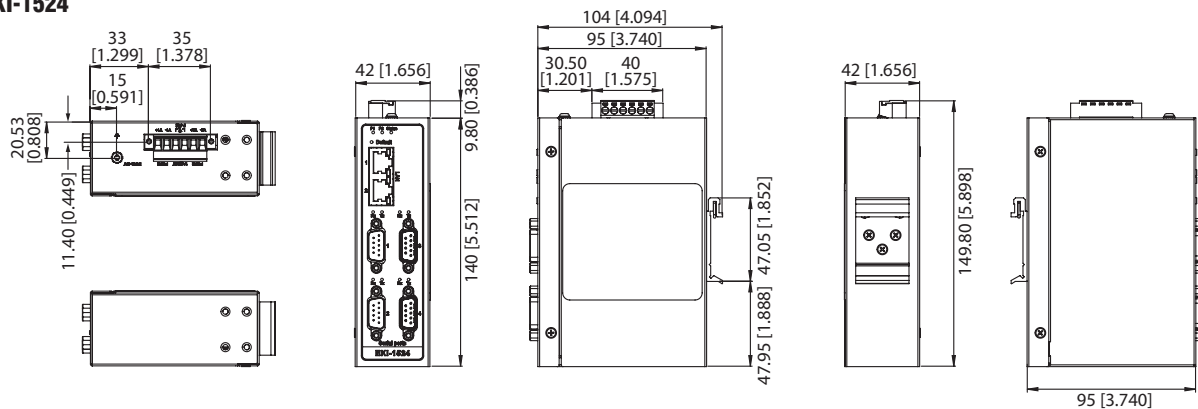
EKI-1521



EKI-1522



EKI-1524



Ordering Information

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|-----------------------|--|------------------------|--|
| ▪ EKI-1521-CE | 1-port RS-232/422/485-2w/485-4w Serial Device Server | ▪ EKI-1524I-CE | 4-port RS-232/422/485-2w/485-4w Serial Device Server with wide operating temperature |
| ▪ EKI-1522-CE | 2-port RS-232/422/485-2w/485-4w Serial Device Server | ▪ EKI-1521CI-DE | 1-port RS-232/422/485-2w/485-4w Serial Device Server with wide operation temperature and isolation |
| ▪ EKI-1524-CE | 4-port RS-232/422/485-2w/485-4w Serial Device Server | ▪ EKI-1522CI-DE | 2-port RS-232/422/485-2w/485-4w Serial Device Server with wide operation temperature and isolation |
| ▪ EKI-1521I-CE | 1-port RS-232/422/485-2w/485-4w Serial Device Server with wide operating temperature | ▪ EKI-1524CI-CE | 4-port RS-422/485 Serial Device Server with wide operation temperature and isolation |
| ▪ EKI-1522I-CE | 2-port RS-232/422/485-2w/485-4w Serial Device Server with wide operating temperature | ▪ OPT1-DB9 | D-Sub9 to Terminal Converter |