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

| EKI-1521 | EKI-1521C1-DE | EKI-1522 | EKI-1522CI-DE | EKI-1524 |

Features

- 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- Provides COM port redirection (Virtual COM), TCP, and UDP operation 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
- Built-in 15-kV ESD protection for all serial signals
- Provides rich configuration methods including Windows utility, Telnet console, and web browser
- Supports Windows XP/7/8.1/10, Windows Server 2003/2008/2012/2016/2019, and Linux
- Automatic RS-485 direction control
- Supports line-to-line (2 kV) and line-to-ground (4 kV) surge protection
- "I" models support a wide operating temperature
- "CI" models support isolation and a wide operating temperature

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 k V_{DC} magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485-2w/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
  EKI-1521CI-DE; EKI-1522CI-DE also provide Terminal Block
- **Data Bits** 5, 6, 7, 8
- **Stop Bits** 1, 1.5, 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** **[CE Version]**
  RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND, DTR, DSR
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485 2-wire: Data+, Data-, GND
  [DE Version]
  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-
- **Protection** Built-in 15 KV ESD for all signals

Software

- **Driver Support** Windows XP/7/8.1/10, Windows Server 2003/2008/2012/2016/2019, and Linux
- **Operation Modes** COM port redirection mode (Virtual COM)
  TCP/UDP server (polling) mode
  TCP/UDP client (event handling) mode
  Pair connection (peer to peer) mode
- **Configuration** Windows utility, Telnet console, Web Browser
- **Management** SNMP MIB-II
- **Protocols** ICMP, IP, TCP, UDP, BOOTP, DHCP, Auto IP, SNMP, HTTP, DNS, SMTP, ARP, NTP

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")
- **Enclosure** Metal with solid mounting hardware
- **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 V_{DC}, 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** 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)
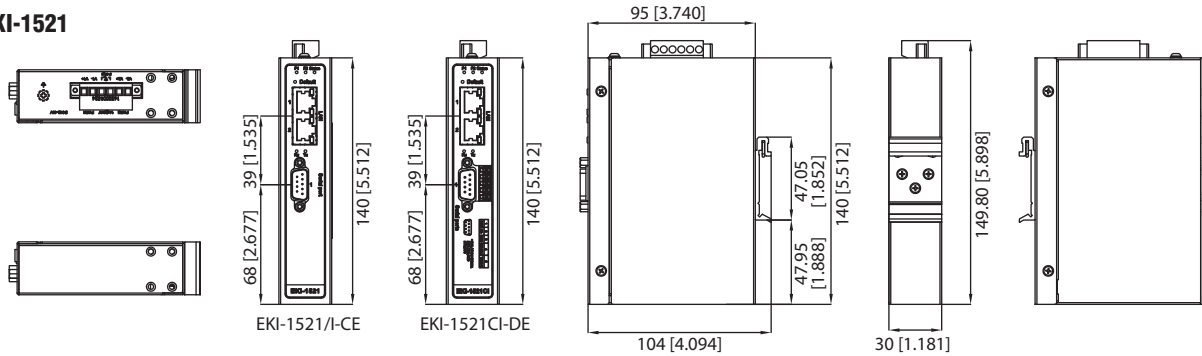
Port to Port Isolation ('CI' models)

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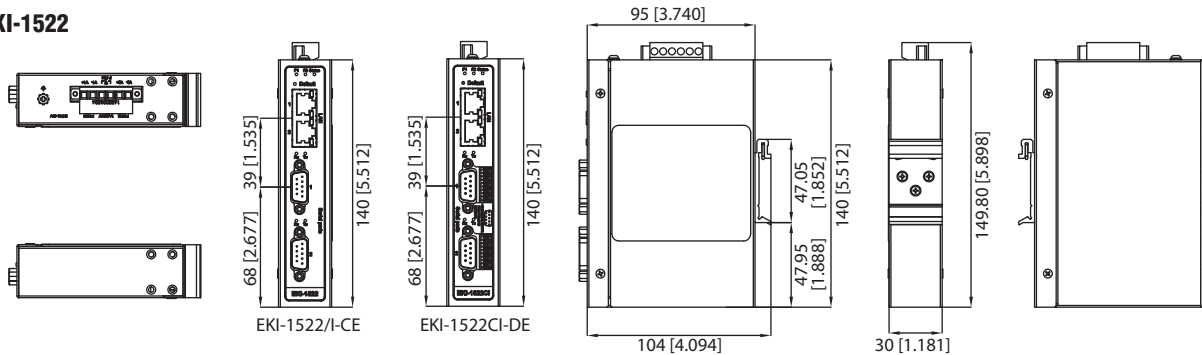- **Serial to Power** 2 kV
- **Ethernet to Power** 1.5 kV

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All product specifications are subject to change without notice.

Last updated: 8-Jun-2022

Dimensions

Unit: mm [inch]

EKI-1521

EKI-1521/I-CE   EKI-1521CI-DE
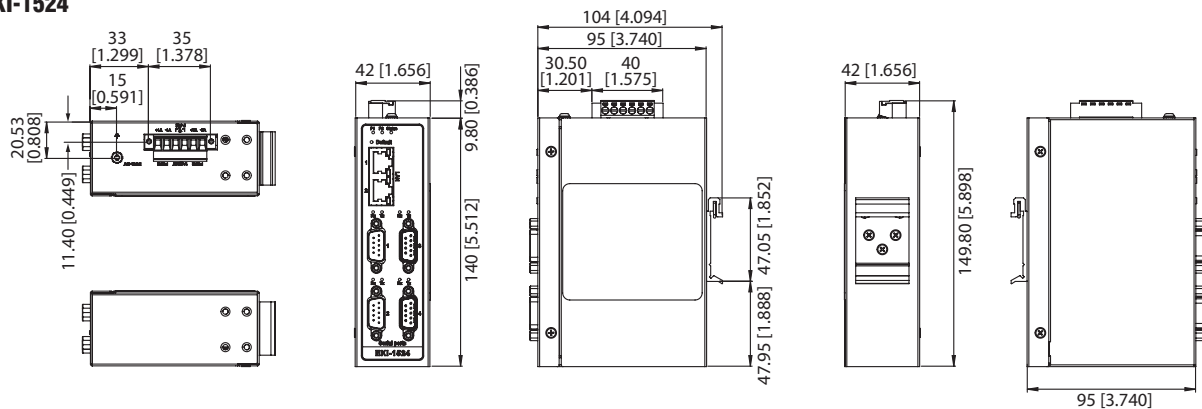
EKI-1522

EKI-1522/I-CE   EKI-1522CI-DE

EKI-1524

Ordering Information

- **EKI-1521-CE**   1-port RS-232/422/485-2w/485-4w Serial Device Server
- **EKI-1522-CE**   2-port RS-232/422/485-2w/485-4w Serial Device Server
- **EKI-1524-CE**   4-port RS-232/422/485-2w/485-4w Serial Device Server
- **EKI-1521I-CE**   1-port RS-232/422/485-2w/485-4w Serial Device Server with wide operating temperature
- **EKI-1522I-CE**   2-port RS-232/422/485-2w/485-4w Serial Device Server with wide operating temperature

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