EKI-1221/CI/I
EKI-1222/CI/I
EKI-1224/CI/I

1-Port Modbus Gateway

2-Port Modbus Gateway

4-Port Modbus Gateway

EKI-1221 | EKI-1221CI-DE | EKI-1222 | EKI-1222CI-DE | EKI-1224

Features

- 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- 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 Modbus master mode and 32 sessions under Modbus slave mode
- Software-selectable RS-232/422/485-2w/485-4w 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 (1 kV) and line-to-earth (2 kV) for signal ports with 2 kV
- "I" models support a wide operating temperature
- "CI" models support isolation and a wide operating temperature

Introduction

The EKI-1200 series Modbus gateways 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-1221/1222/1224 feature two independent Ethernet ports and MAC addresses to provide redundancy and reliability. They provide a simple and cost-effective way to bring remote management and data accessibility to thousands of devices that cannot otherwise connect to a network. The EKI-1221/1222/1224 allow users to select master or slave operation mode for each serial port. In addition to allowing an Ethernet master to control serial slaves, they also allow serial masters to control Ethernet slaves.

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-1224CI-CE supports RS-422/485 only)
No. of Ports	EKI-1221: 1 EKI-1222: 2 EKI-1224: 4
Port Connector	DB9 male EKI-1221CI-DE; EKI-1222CI-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+, TxDRS- 485 2-wire: GND, NC, NC, TxD+, TxDRS- 485 4-wire: GND, RxD-, RxD+, TxD+, TxD-
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 Master/Slave mode Modbus ASCII Master/Slave mode
Configuration	Windows Utility, Telnet Console, Web Browser
Protocols	ICMP, IP, TCP, UDP, BOOTP, DHCP, Auto IP, 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-1221/I-CE; EKI-1221CI-DE; EKI-1222/I-CE; EKI-1222CI-DE: 30 x 140 x 95 mm (1.18" x 5.51" x 3.74") EKI-1224/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-1221: 0.472 Kg EKI-1222: 0.48 Kg EKI-1224: 0.555 Kg
IP Rating	IP30

Power Requirements

Power Input	12 ~ 48 V_{DC}, redundant dual inputs
Power Connector	Terminal block
Power Consumption	EKI-1221: 3.2 W EKI-1222: 3.2 W EKI-1224: 4.1 W

Environment

Operating Temperature	EKI-1221/EKI-1222/EKI-1224: -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)

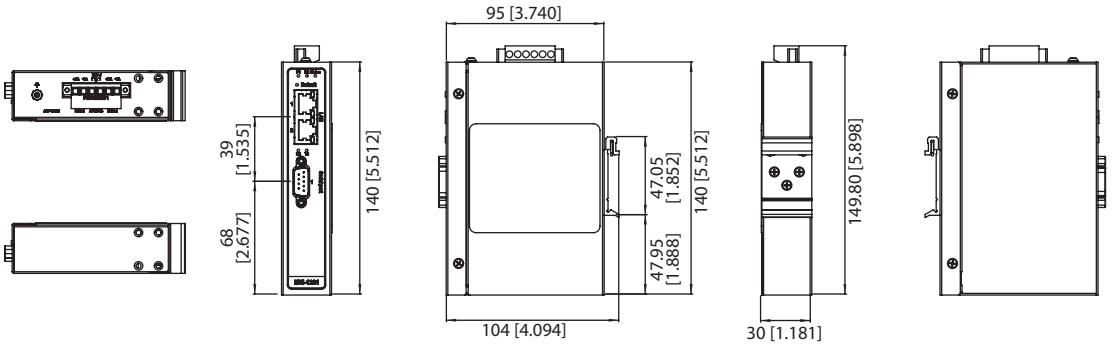
Serial to Ethernet	2 kV
Serial to Power	2 kV
Ethernet to Power	1.5 kV

Last updated: 27-Jul-2022

Dimensions

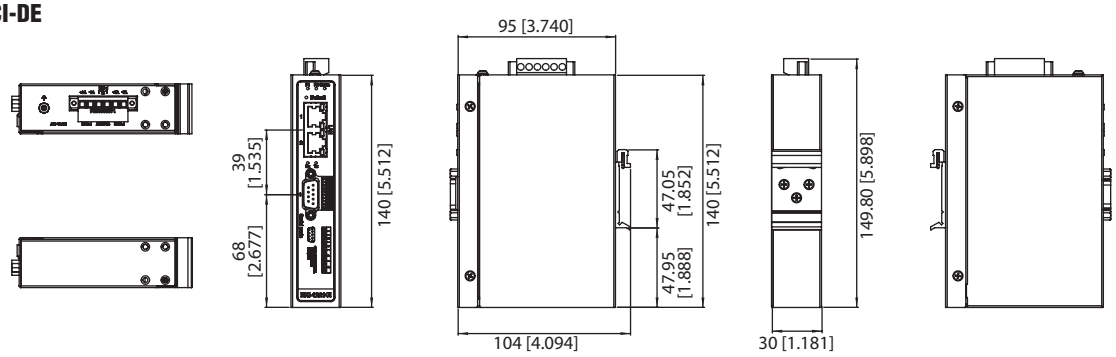
Unit: mm

EKI-1221



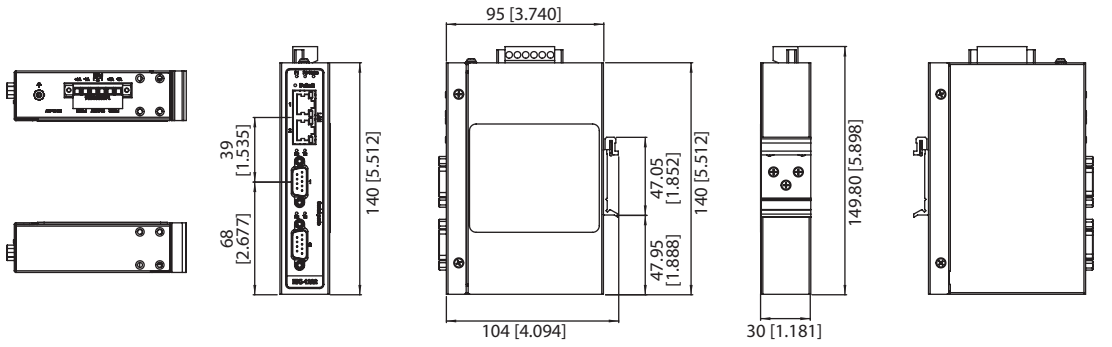
Panel Cut-out Dimensions: 95 x 140 x 30 mm (3.74" x 5.512" x 1.181")

EKI-1221CI-DE



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

EKI-1222

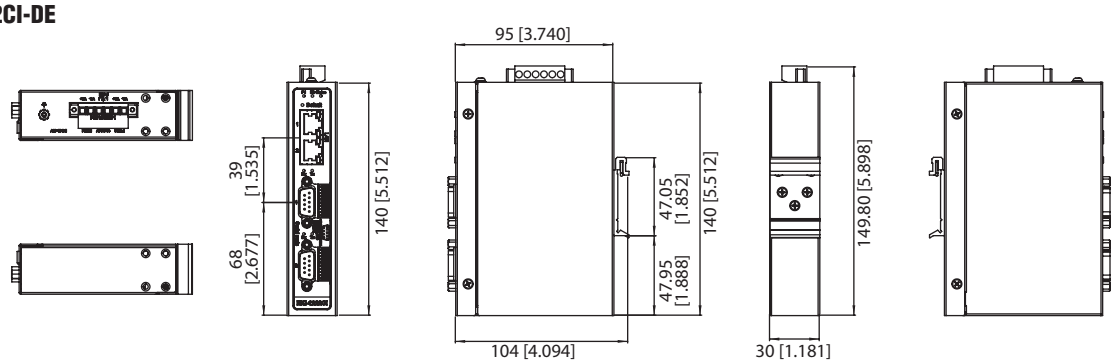


Panel Cut-out Dimensions: 95 x 140 x 30 mm (3.74" x 5.512" x 1.181")

Dimensions

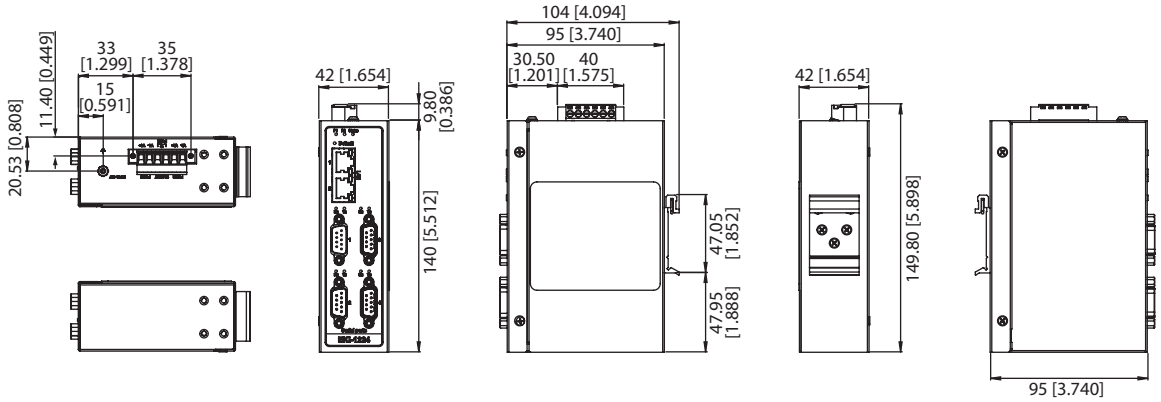
Unit: mm

EKI-1222CI-DE



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

EKI-1224



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

Ordering Information

- **EKI-1221-CE** 1-port RS-232/422/485 Modbus Gateway
- **EKI-1222-CE** 2-port RS-232/422/485 Modbus Gateway
- **EKI-1224-CE** 4-port RS-232/422/485 Modbus Gateway
- **EKI-1221I-CE** 1-port RS-232/422/485 Modbus Gateway with Wide Operating Temperature
- **EKI-1222I-CE** 2-port RS-232/422/485 Modbus Gateway with Wide Operating Temperature
- **EKI-1224I-CE** 4-port RS-232/422/485 Modbus Gateway with Wide Operating Temperature
- **EKI-1221CI-DE** 1-port RS-232/422/485-2w/485-4w Modbus Gateway with Wide operation temperature and isolation
- **EKI-1222CI-DE** 2-port RS-232/422/485-2w/485-4w Modbus Gateway with Wide operation temperature and isolation
- **EKI-1224CI-CE** 4-port RS-422/485 Modbus Gateway with Wide Operation Temperature and Isolation
- **OPT1-DB9** D-Sub9 to Terminal Converter

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)

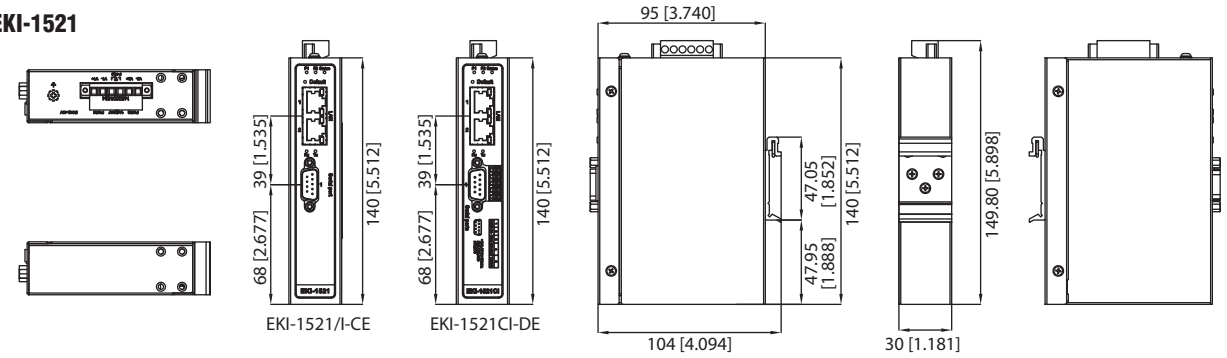
Serial to Ethernet	2 kV
Serial to Power	2 kV
Ethernet to Power	1.5 kV

Last updated: 8-Jun-2022

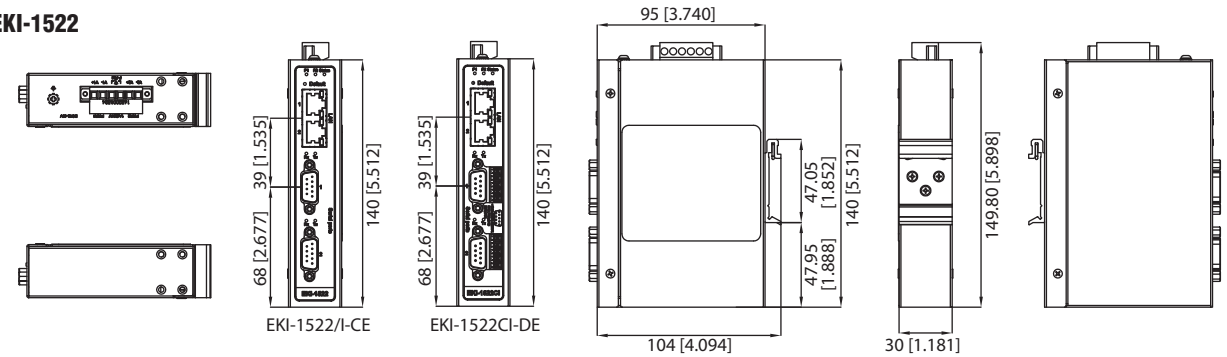
Dimensions

Unit: mm [inch]

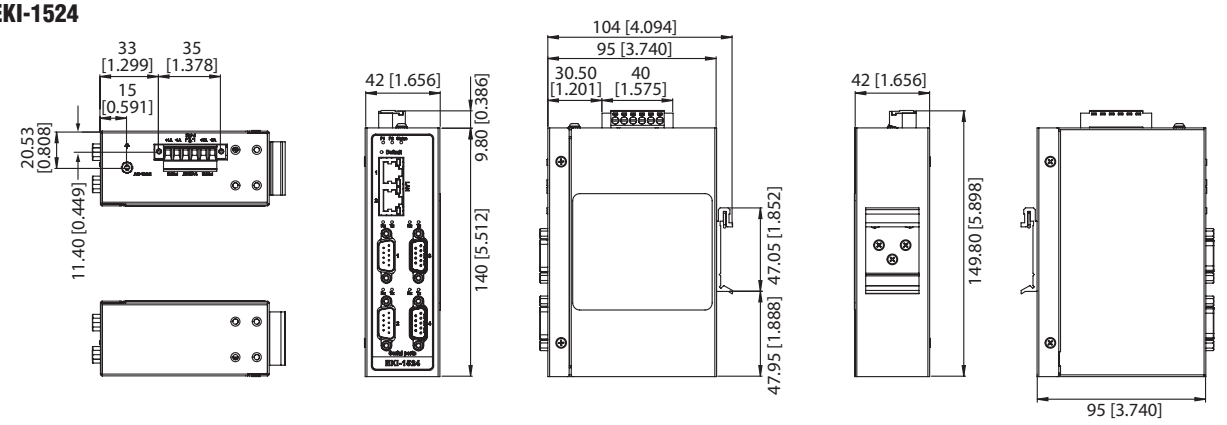
EKI-1521



EKI-1522



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

EKI-1211

1-Port RS-232/422/485 Modbus Gateway

Features

- 1 x 10/100 Mbps Ethernet port
- Integrates Modbus TCP and Modbus RTU/ASCII networks
- Baud rate: supports up to 230.4 Kbps
- Supports up to 16 connections per serial port under Modbus master mode and 32 sessions under Modbus slave mode
- Built-in 8-kV ESD protection for all serial signals
- Software-selectable RS-232/422/485-2w/485-4w communication
- Supports 32/64-bit Windows 2000/XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2012, and Linux
- "I" models support a wide operating temperature

Introduction

The EKI-1200 series Modbus gateways 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-1211 feature one independent Ethernet ports and MAC address. It provides a simple and cost-effective way to bring remote management and data accessibility to thousands of devices that cannot otherwise connect to a network. The EKI-1200 series allow users to select master or slave operation mode for each serial port. In addition to allowing an Ethernet master to control serial slaves, they also allow serial masters to control Ethernet slaves.

Specifications

Ethernet Communications

- **Compatibility** IEEE 802.3, IEEE 802.3u
- **Speed** 10/100 Mbps
- **No. of Ports** 1
- **Port Connector** 8-pin RJ45
- **Protection** Built-in 2.25 k V_{DC} magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485
- **No. of Ports** 1
- **Port Connector** DB9 male
- **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** 300 bps ~ 230.4 kbps
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, GND
RS-422: TxD+, TxD-, RxD+, RxD-, GND
RS-485 2-wire: Data+, Data-, GND
RS-485 4-wire: TxD+, TxD-, RxD+, RxD- GND
- **Protection** Built-in 8 KV ESD for all signals

Software

- **Driver Support** 32-bit/64-bit Windows 2000/XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2012, and Linux
- **Operation Modes** Modbus ASCII Master/Slave mode
Modbus RTU Master/Slave mode
- **Configuration** Windows utility
- **Protocols** ICMP, IP, TCP, UDP, BOOTP, DHCP, Auto IP, HTTP, DNS, SMTP, ARP, NTP

Mechanics

- **Dimensions (W x H x D)** 46 x 85.1 x 21.2 mm (1.81" x 3.35' x 0.83')
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.127 kg

General

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

Power Requirements

- **Input** 9 ~ 36 V_{DC}
- **Connector** Terminal block
- **Consumption** 1 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
I' models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

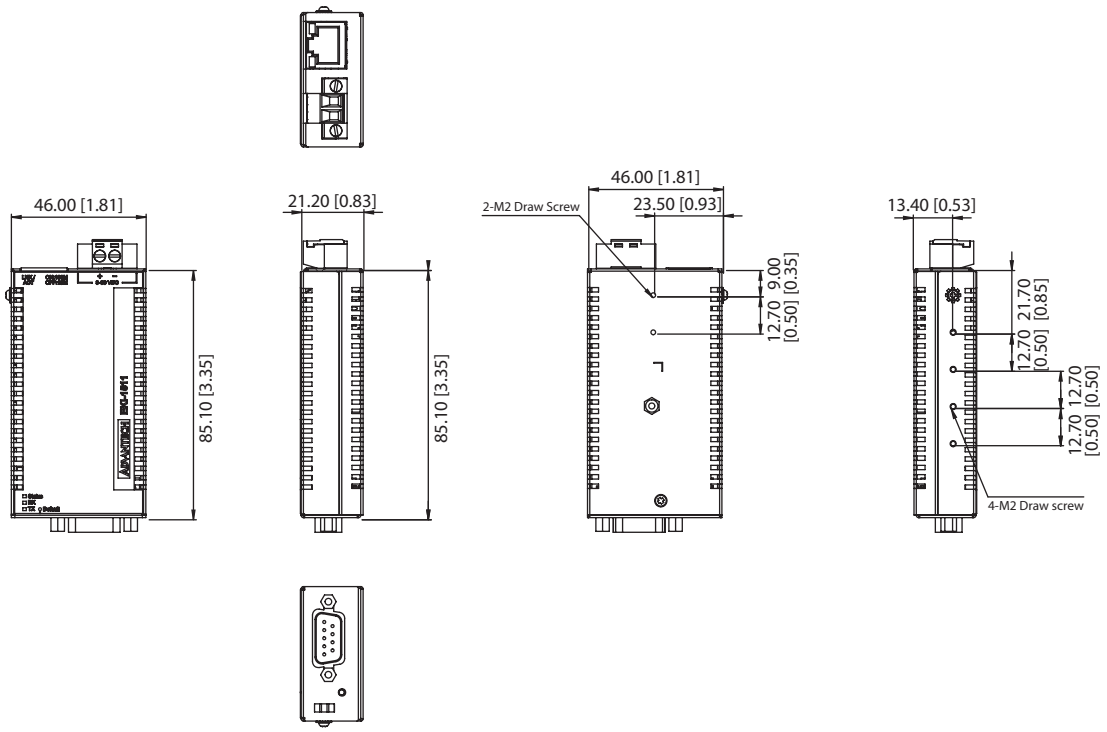
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)
- **Hazardous location** UL/cUL

Last updated: 19-Aug-2022

Dimensions

Unit: mm [inch]



Panel Cut-Out Dimensions: 46 x 85.1 x 21.2 (1.81 x 3.35 x 0.83)

Ordering Information

- **EKI-1211** 1-Port RS-232/422/485 Modbus Gateway
- **BB-RPS-v2-WR2-US** Power Adapter 12v 0.5A US
- **BB-RPS-v2-WR2-EU** Power Adapter 12v 0.5A Europe
- **BB-RPS-v2-WR2-UK** Power Adapter 12v 0.5A UK

EKI-1228/CI/I-DR

8-port Modbus Gateway

Features

- Provides 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- Integration of Modbus TCP and Modbus RTU/ASCII networks
- Supports up to 921.6 kbps, and any baud rate setting
- Support up to 16 connections on each serial port under Modbus Master mode and 128 sessions under Modbus Slave mode.
- Software selectable RS-232/422/485 communication (RS-422/485 for "CI" model)
- Mounts on 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 D.C. power ports with line to line 2 KV, and line to earth 4 KV; for signal ports with 4 KV.
- 'I' models support a wide operating temperature
- 'CI' models support isolation and wide operating temperature

Introduction

The EKI-1200 series Modbus gateways 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-1228 has two independent Ethernet ports and MAC addresses to provide redundancy and reliability. They provide a simple and cost-effective way to bring remote management and data accessibility to thousands of devices that cannot connect to a network. EKI-1228 provides a feature that can allow users to select master or slave operation mode for each serial port. They not only allow an Ethernet master to control serial slaves, but also allow serial masters to control Ethernet slaves.

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 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable ("CI" mode supports RS-422/485)
- **No. of Ports** 8
- **Port Connector** DB9 male
- **Data Bits** 5, 6, 7, 8
- **Stop Bits** 1, 1.5, 2
- **Parity** None, Odd, Even, Space, Mark
- **Flow Control** XON/XOFF, RTS/CTS, DTR/DSR
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND
- **Protection** Built-in 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 Master/Slave mode
  Modbus ASCII Master/Slave mode
- **Configuration** Windows Utility, Web Browser
- **Protocols** ICMP, IP, TCP, UDP, BOOTP, DHCP, Auto IP, HTTP, DNS, SMTP, ARP, NTP

Mechanics

- **Dimensions (W x H x D)** 86.6 x 140 x 95 mm (3.41" x 5.51" x 3.74")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** EKI-1228/I: 900g, EKI-1228CI: 1000g

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-1228/I: 5W
  EKI-1228CI: 6W

Environment

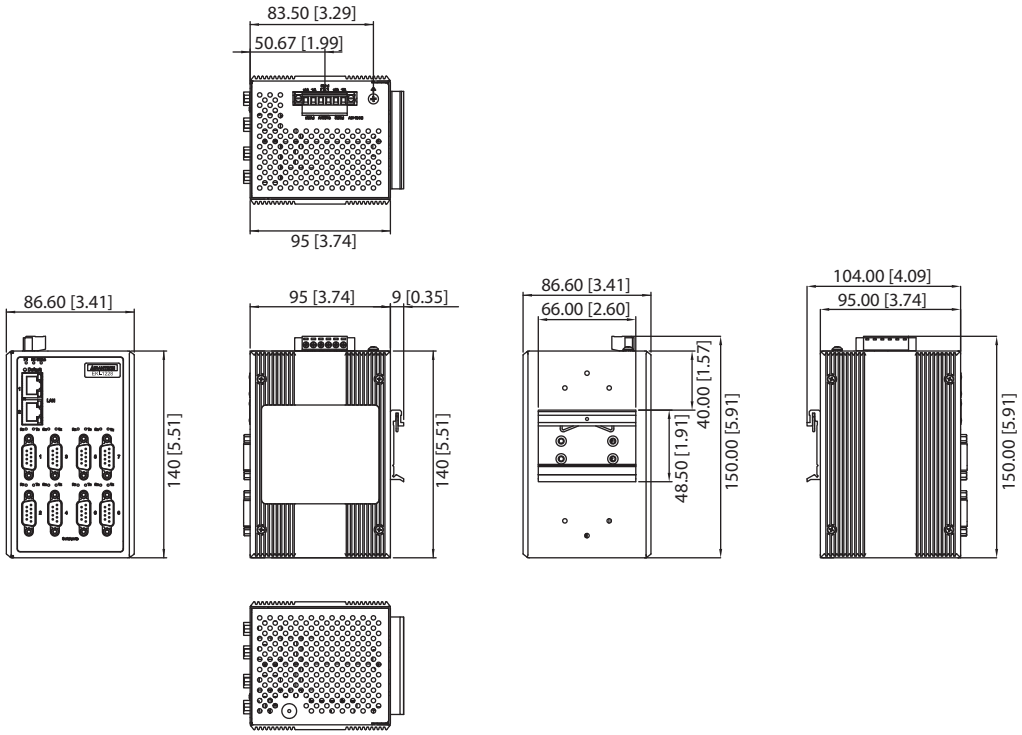
- **Operating Temperature** EKI-1228-DR: -10 ~ 60°C (14 ~ 140°F)
  "CI" & "I" mode: -40 ~ 70°C (-40 ~ 158°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 10 ~ 95% RH
- **Regulatory Approvals**
- **EMC** CE, FCC Part 15 Subpart B (Class A)

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]



Outline Dimensions : 86.6 x 140 x 95mm (3.41" x 5.51" x 3.74")

Ordering Information

- **EKI-1228-DR** 8-port Modbus Gateway
- **EKI-1228I-DR** 8-port Modbus Gateway with Wide Temp.
- **EKI-1228CI-DR** 8-port Modbus Gateway with Wide Temp. & Isolation

EKI-1242BNMS
EKI-1242IBNMS

Modbus RTU/TCP to BACnet IP/MSTP Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Seamless integrate Modbus RTU/TCP and BACnet IP/MSTP communication
- Modbus Client mode supports 64 connections
- Mounts on DIN-rail and Wall mount
- Designed for protocol extensibility and adaption
- Built-in real time diagnostic to increase highly efficiency of device management
- 'I' models support a wide operating temperature

Introduction

The EKI-1242BNMS Industrial Fieldbus gateway provides seamless communication between Fieldbus and Industrial Ethernet and supports different protocol devices integrating new and existing Modbus RTU/TCP devices with BACnet IP/MSTP networks. EKI-1242BNMS is a simple and cost-effective way to bring the advantage of fast I/O data transfers between devices.

Specifications

Ethernet Communication

- **Protocols** BACnet IP, Modbus TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** 2
- **Protocol** BACnet MSTP, Modbus RTU
- **Port Connector** DB9 male
- **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
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  Mode: Client
  Functions Support: 1, 2, 3, 4, 5, 6, 15, 16
  Max. Number of Connections: 64 connections
- **BACnet IP/MSTP**
  Class: BACnet IP/Slave, BACnet MSTP/Master
  Support objects: AI, AO, BI, BO
  Max object instance: 200 objects each type

General

- **LED Indicators** System: Power, System Status, Protocol status
  LAN: Speed, Link/Active, Error
- **Reboot Trigger** Built-in WDT (watchdog timer)
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.497 Kg

Power Requirements

- **Power Input** 24 V_{AC}/V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 7.2W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  ' I' models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

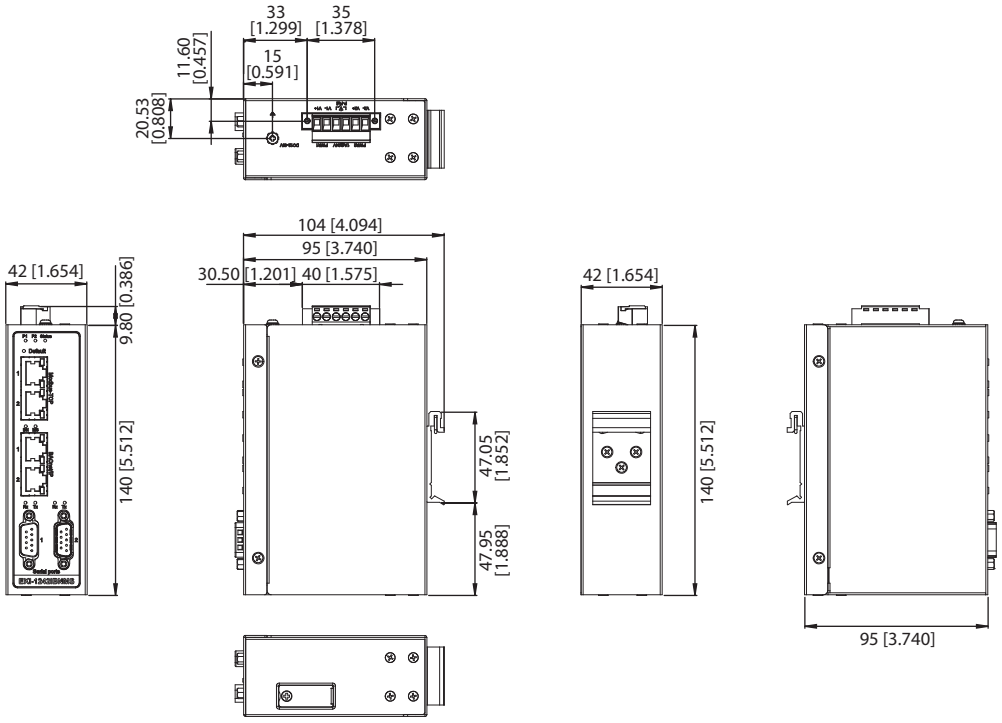
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Last updated: 14-Oct-2022

Dimensions

Unit: mm [inch]



Outline Dimensions: 95 x 140 x 42 mm (3.74 x 5.512 x 1.654 in)

Ordering Information

- **EKI-1242BNMS** Modbus RTU/TCP to BACnet Fieldbus Gateway
- **EKI-1242IBNMS** Modbus RTU/TCP to BACnet Fieldbus Gateway with wide operating temperature

EKI-1242ECMS
EKI-1242IECMS

Modbus RTU/TCP to EtherCAT Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Seamlessly integrate Modbus RTU/TCP and EtherCAT communication protocols
- Modbus master mode supports up to 64 connections
- Mountable via DIN rail and wall mount
- Designed for protocol extensibility and adaption
- Built-in real-time diagnostics to enhance device management efficiency
- "I" models support a wide operating temperature

Introduction

The EKI-1242ECMS industrial fieldbus gateway provides seamless communication between Fieldbus and Ethernet devices with its support for different protocol devices, thereby being capable of integrating new and existing Modbus RTU/TCP devices into EtherCAT networks. The EKI-1242ECMS is a simple and cost-effective way to bring the advantage of fast I/O data transfer between devices.

Specifications

Ethernet Communication

- **Protocols** EtherCAT, Modbus TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 kV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software-selectable
- **No. of Ports** 2
- **Protocol** Modbus RTU
- **Port Connector** DB9 male
- **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
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  - Mode: Master
  - Functions Support: 1, 2, 3, 4, 5, 6, 15, 16, 23
  - Max. Number of Connections: 64
- **EtherCAT**
  - Type: Slave
- **Max. Total I/O Data Size (SDO&PDO objects)**
  - Input: 512 bytes
  - Output: 512 bytes
  - FFMMU Channels: 4

General

- **LED Indicators** System: power, system status, protocol status
  LAN: speed, link/active, error
- **Reboot Trigger** Built-in WDT
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN rail, wall
- **Weight** 0.497 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  "I" models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

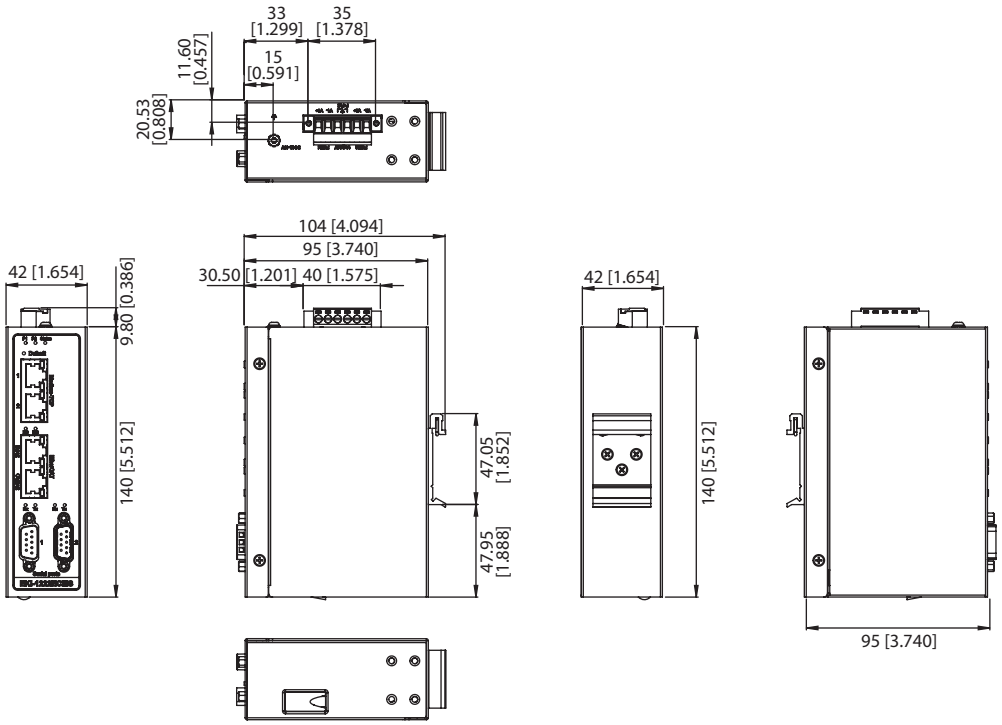
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Last updated: 17-Jan-2019

Dimensions

Unit: mm [in.]



Ordering Information

- **EKI-1242ECMS** Modbus RTU/TCP to EtherCAT Fieldbus Gateway
- **EKI-1242IECMS** Modbus RTU/TCP to EtherCAT Fieldbus Gateway with Wide Operating Temperature

EKI-1242EIMS
EKI-1242IEIMS

Modbus RTU/TCP to Ethernet/IP Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Seamlessly integrate Modbus RTU/TCP and Ethernet/IP communication protocols
- Modbus master mode supports up to 64 connections
- Mountable via DIN rail and wall mount
- Designed for protocol extensibility and adaption
- Built-in real-time diagnostics to increase device management efficiency
- "I" models support a wide operating temperature

Introduction

The EKI-1242EIMS industrial protocol gateway provides seamless communication between Fieldbus and Ethernet devices, supporting a range of protocols. Integrating new and existing Modbus TCP devices to EtherNet/IP networks, this gateway can collect data and perform data exchange between Modbus TCP to EtherNet/IP. Simple and cost-effective, the EKI-1242EIMS brings the advantage of fast I/O data transfer between devices while delivering high performance with protocol extensibility and adaptation.

Specifications

Ethernet Communication

- **Protocols** EtherNet/IP, Modbus TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 kV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software-selectable
- **No. of Ports** 2
- **Protocol** Modbus RTU
- **Port Connector** DB9 male
- **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
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  - Mode: Master
  - Functions Support: 1, 2, 3, 4, 5, 6, 15, 16, 23
  - Max. Number of Connections: 64 connections
- **EtherNet/IP**
  - Class: Adapter
  - Max. Number of Connections: 32 explicit messaging, 5 implicit messaging
  - Max. Total I/O Data Size: Input: 496 bytes
    Output: 496 bytes

General

- **LED Indicators** System: power, system status, protocol status
  LAN: speed, link/active, error
- **Reboot Trigger** Built-in WDT
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN rail, wall
- **Weight** 0.497 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  "I" models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

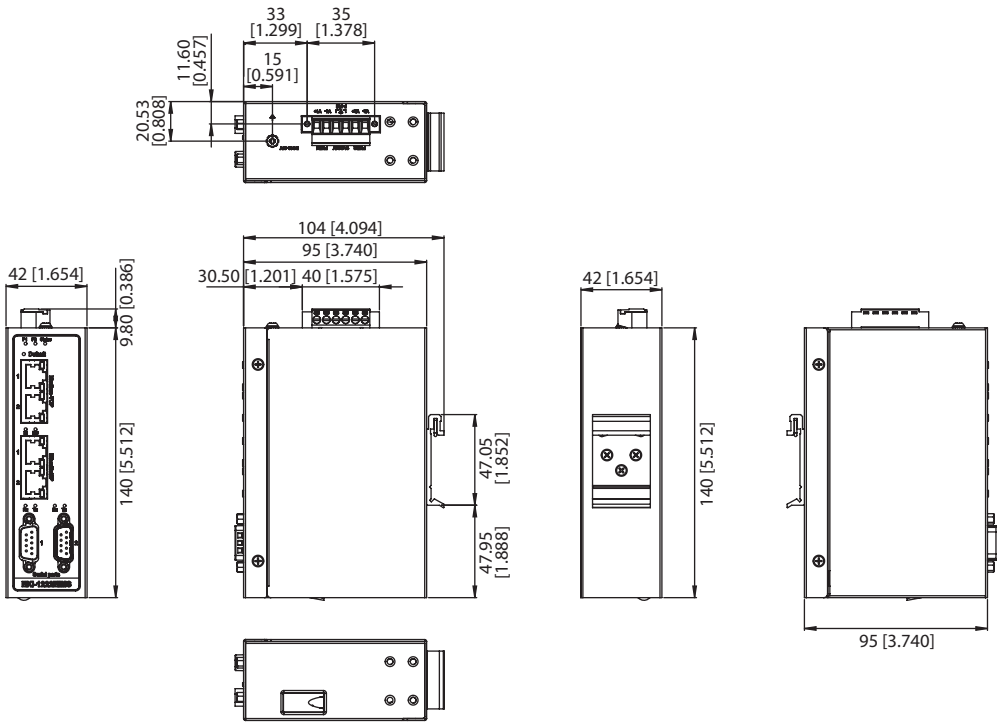
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Last updated: 17-Jan-2019

Dimensions

Unit: mm [in.]



Ordering Information

- **EKI-1242EIMS** Modbus RTU/TCP to EtherNet/IP Fieldbus Gateway
- **EKI-1242IEIMS** Modbus RTU/TCP to EtherNet/IP Fieldbus Gateway with Wide Operating Temperature

EKI-1242NR-A
EKI-1242INR-A

Node-RED Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Node-RED flow editor to wire together hardware devices and various IoT services
- Mountable via DIN rail and wall mount
- Designed for protocol extensibility and adaption
- "I" models support a wide operating temperature

Introduction

The EKI-1242NR provides graphical, browser-based, drag-and-drop Node-RED flow editor to wire together hardware devices and various IoT services.

Specifications

Ethernet Communication

- **Protocols** Node-RED
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** 2
- **Port Connector** DB9 male
- **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
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND
RS-422: TxD+, TxD-, RxD+, RxD-, GND
RS-485: Data+, Data-, GND

Software

- **Support Node-RED version: v0.17.5**
- **Easy to manage customized node modules**
- **Support export function for node modules and flows**

General

- **LED Indicators** System: Power, System Status, Protocol status
LAN: Speed, Link/Active, Error
- **Reboot Trigger** Built-in WDT (watchdog timer)
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.497 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
' I' models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

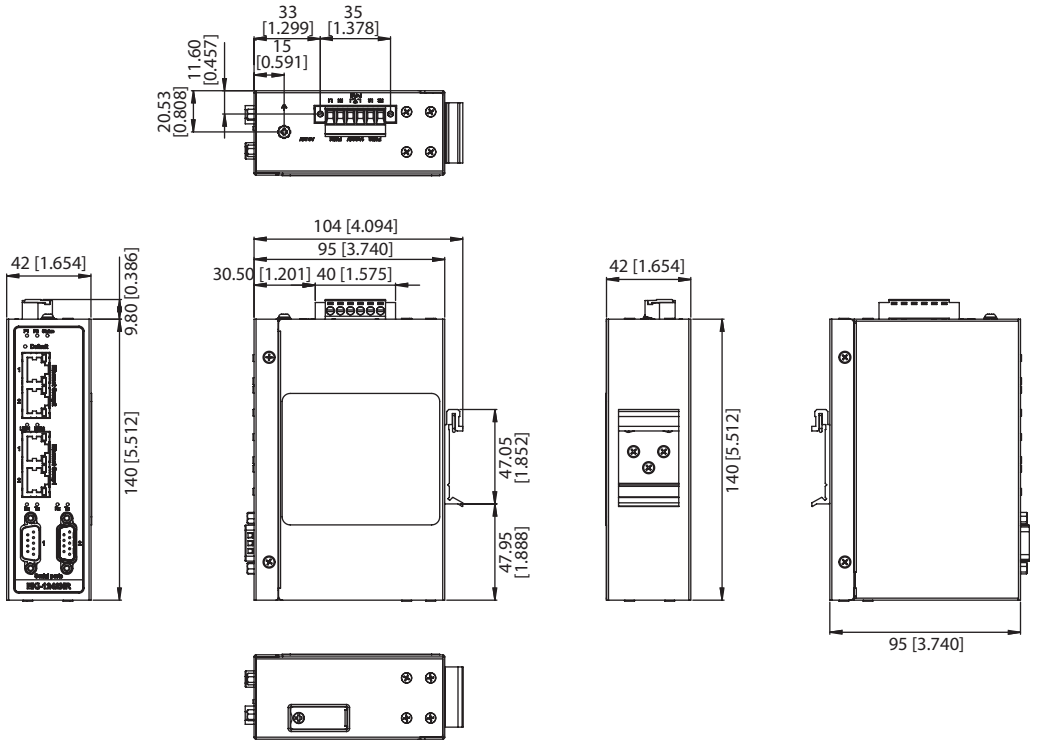
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Last updated: 26-Sep-2018

Dimensions

Unit: mm [inch]



Ordering Information

- **EKI-1242NR-A** Node-RED Fieldbus Gateway
- **EKI-1242INR-A** Node-RED Fieldbus Gateway with wide operating temperature

EKI-1242OUMS-A
EKI-1242IOUMS-A

Modbus TCP/RTU to OPC UA Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Seamless integrate Modbus RTU/TCP and OPC UA communication
- Modbus Master mode supports 64 connections
- Mounts on DIN-rail and Wall mount
- Designed for protocol extensibility and adaption
- Built-in real time diagnostic to increase highly efficiency of device management
- 'I' models support a wide operating temperature

Introduction

The EKI-1242OUMS provides seamless communication between fieldbus and industrial automation developed and supports different protocol devices integrating new and existing Modbus RTU/TCP devices with OPC-UA networks.

Specifications

Ethernet Communication

- **Protocols** OPC UA, Modbus TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** 2
- **Protocol Modbus** RTU
- **Port Connector** DB9 male
- **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
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  - Mode: Master
  - Functions Support: 1, 2, 3, 4, 5, 6, 15, 16, 23
  - Max. Number of Connections: 64 connections
- **OPC UA**
  - Type: Server
  - Max. Number of Connections: 128 connections

General

- **LED Indicators** System: Power, System Status, Protocol status
  LAN: Speed, Link/Active, Error
- **Reboot Trigger** Built-in WDT (watchdog timer)
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.497 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

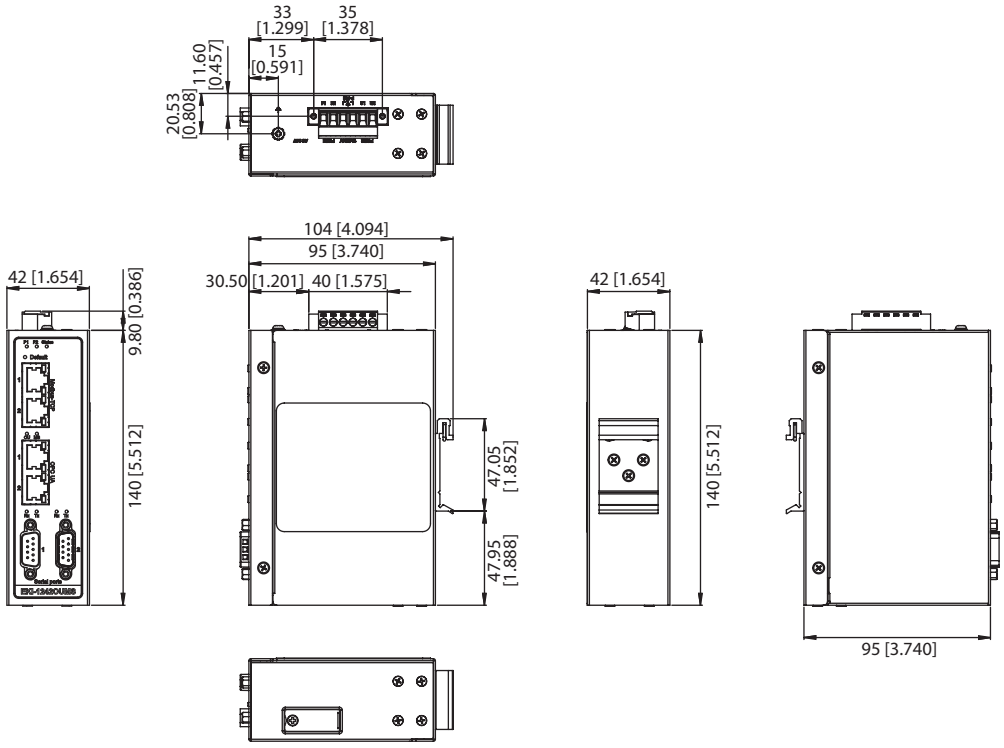
- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  ' I' models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Dimensions

Unit: mm [inch]



Ordering Information

- **EKI-1242OUMS** Modbus TCP/RTU to OPC UA Fieldbus Gateway
- **EKI-1242IOUMS** Modbus TCP/RTU to OPC UA Fieldbus Gateway with wide operating temperature

EKI-1242PNMS
EKI-1242IPNMS

Modbus RTU/TCP to PROFINET Fieldbus Gateway

Features

- Supports dual power input for power redundancy
- Seamlessly integrate Modbus RTU/TCP and PROFINET communication protocols
- Modbus master mode supports up to 64 connections
- Mountable via DIN rail and wall mount
- Designed for protocol extensibility and adaption
- Built-in real-time diagnostics to enhance device management efficiency
- "I" models support a wide operating temperature

Introduction

The EKI-1242PNMS industrial protocol gateway provides seamless communication between Fieldbus and Ethernet devices, supporting a range of protocols. Integrating new and existing Modbus TCP devices to PROFINET networks, the EKI-1242PNMS is a cost-effective and simple way to bring the advantage of fast I/O data transfer between devices while delivering high performance with protocol extensibility and adaptation.

Specifications

Ethernet Communication

- **Protocols** PROFINET, Modbus TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** 2
- **Protocol** Modbus RTU
- **Port Connector** DB9 male
- **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
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  Mode: Master
  Functions Support: 1, 2, 3, 4, 5, 6, 15, 16, 23
  Max. Number of Connections: 64 connections
- **PROFINET**
  Type: Slave
  Slot: 64
  Cyclic data exchange: 8 ms cycle time

General

- **LED Indicators** System: Power, System Status, Protocol status
  LAN: Speed, Link/Active, Error
- **Reboot Trigger** Built-in WDT (watchdog timer)
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.497 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  ' I' models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

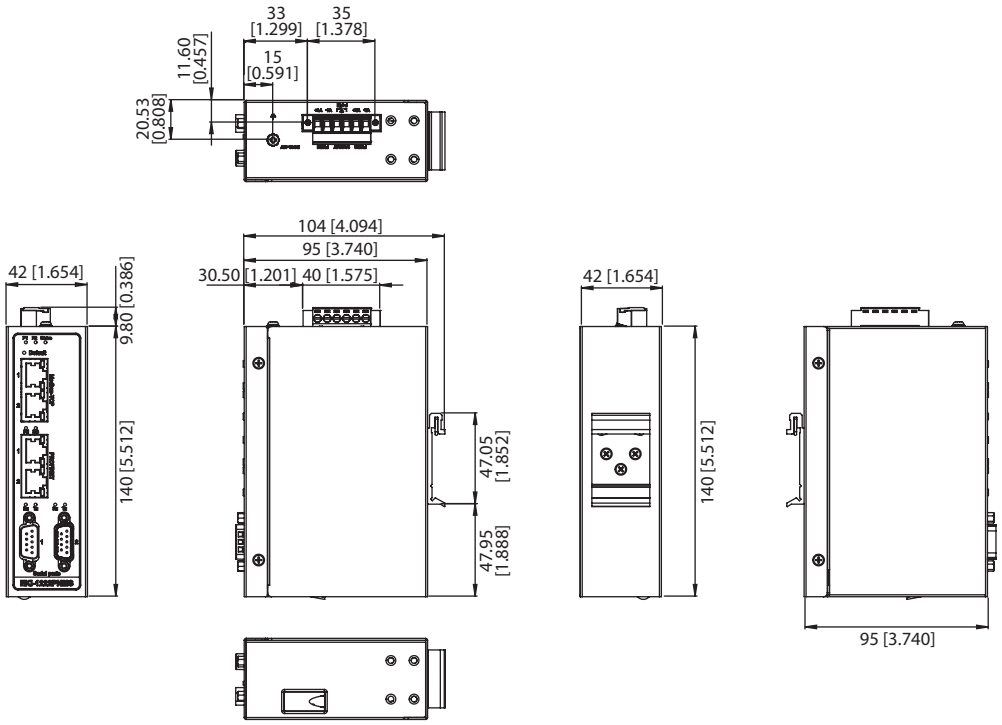
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Last updated: 26-Sep-2018

Dimensions

Unit: mm [inch]



Ordering Information

- **EKI-1242PNMS** Modbus RTU/TCP to PROFINET Fieldbus Gateway
- **EKI-1242IPNMS** Modbus RTU/TCP to PROFINET Fieldbus Gateway with wide operating temperature

EKI-1361
EKI-1362

1-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server

2-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server

Features

- Link any serial device to an IEEE 802.11a/b/g/n network
- Support 802.11n MIMO 2T2R
- WLAN transmision rate up to 300 Mbps
- Support secure access with WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise
- Provide COM port redirection, TCP, UDP, and pair connection modes
- Support up to 921.6 kbps, and any baud rate setting
- Provide Web-based configuration and Windows utility
- Allow a max. of 5 hosts to access one serial port
- Support Modbus TCP and Modbus RTU
- Support Dual band 2.4/5GHz selective

Introduction

EKI-1361 and EKI-1362 wireless serial device servers bring RS-232/422/485 to wireless LAN or LAN. They allow nearly any device with serial ports to connect and share an WLAN network. EKI-1361 and EKI-1362 provide a quick, simple and cost-effective way to bring the advantages of remote management and data accessibility to thousands of devices that cannot connect to a network.

With EKI-1361 and EKI-1362, your existing serial devices can be used with the most popular operating systems on the market. There is no need to write special drivers for specific operating systems. Moreover, you can make serial devices communicate with other devices peer-to-peer, without any intermediate host PCs and software programming. That saves a lot of cost and effort. In addition, you can actively request data or issue commands from the RS-232/422/485 side or wireless LAN side. This data can be sent bilaterally. Thus, the EKI-1361 and EKI-1362 are especially suitable for remote monitoring environments such as security systems, factory automaton, SCADA, transportation and more.

Specifications

Ethernet Communications

- **Port Type** RJ45
- **No. of Ports** 1
- **Speed** 10/100 Mbps

Wireless LAN Communications

- **Compatibility** IEEE 802.11a/b/g/n
- **Speed** Up to 300Mbps
- **Network Mode** Infrastructure
- **Antenna Connector** Reverse SMA
- **No. of Antenna** 2 (supports 2T2R)
- **Free Space Range** Open space 100 m
- **Wireless Security** WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise

Serial Communications

- **Port Type** RS-232/422/485-2w/485-4w, software selectable
- **No. of Ports** EKI-1361: 1
EKI-1362: 2
- **Port Connector** DB9 male
- **Data Bits** 5, 6, 7, 8
- **Stop Bits** 1, 1.5, 2
- **Parity** None, Odd, Even, Space, Mark
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND
RS-422: TxD+, TxD-, RxD+, RxD-, GND
RS-485 2-wire: Data+, Data-, GND
RS-485 4-wire: GND, RxD-, RxD+, TxD+, TxD

Software

- **OS Support** 32-bit/64-bit Windows XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2008 R2/2012/2012 R2 and Linux
- **Utility Software** Advantech EKI Device Configuration Utility
- **Operation Modes** **EKI-1361/2**
COM port redirection mode (Virtual COM)
TCP/UDP server (polling) mode
TCP/UDP client (event handling) mode
- **Configuration** Windows utility, Telnet console, Web Browser
- **Protocol** ARP, ICMP, IPv4, IPv6, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, DNS, SNMP, HTTP, SMTP, SNTP

Mechanics

- **Enclosure** Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall
- **Dimensions (W x H x D)** 25 x 103 x 95mm (0.98" x 4.06" x 3.74")
- **Weight** 315g
- **IP rating** IP30

General

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

Power Requirements

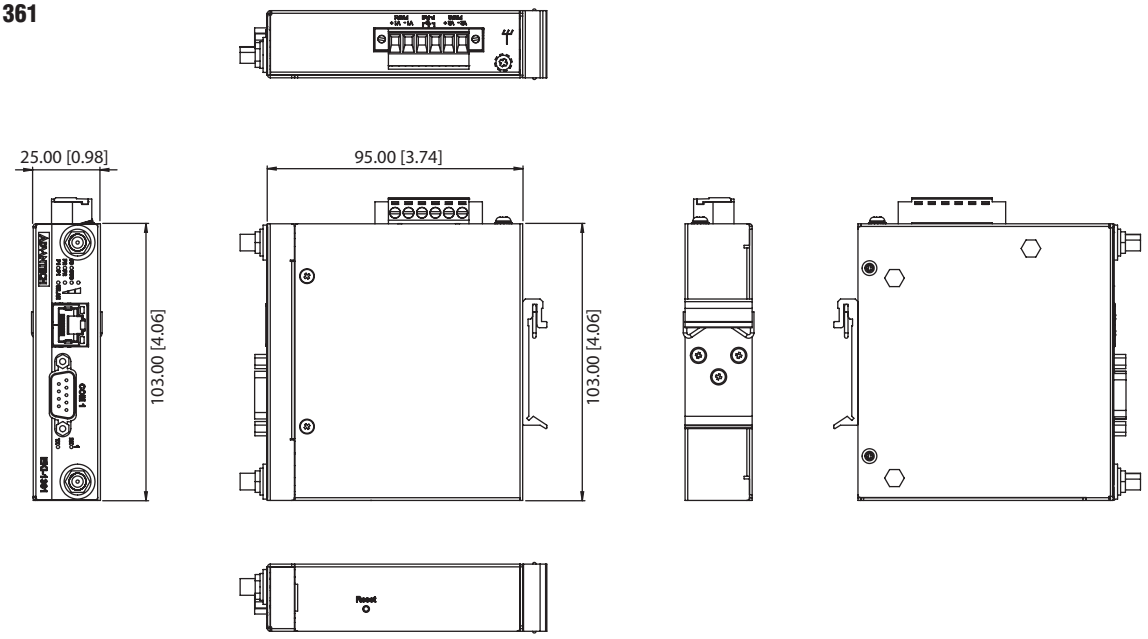
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 2 W maximum

Last updated: 25-Jan-2022

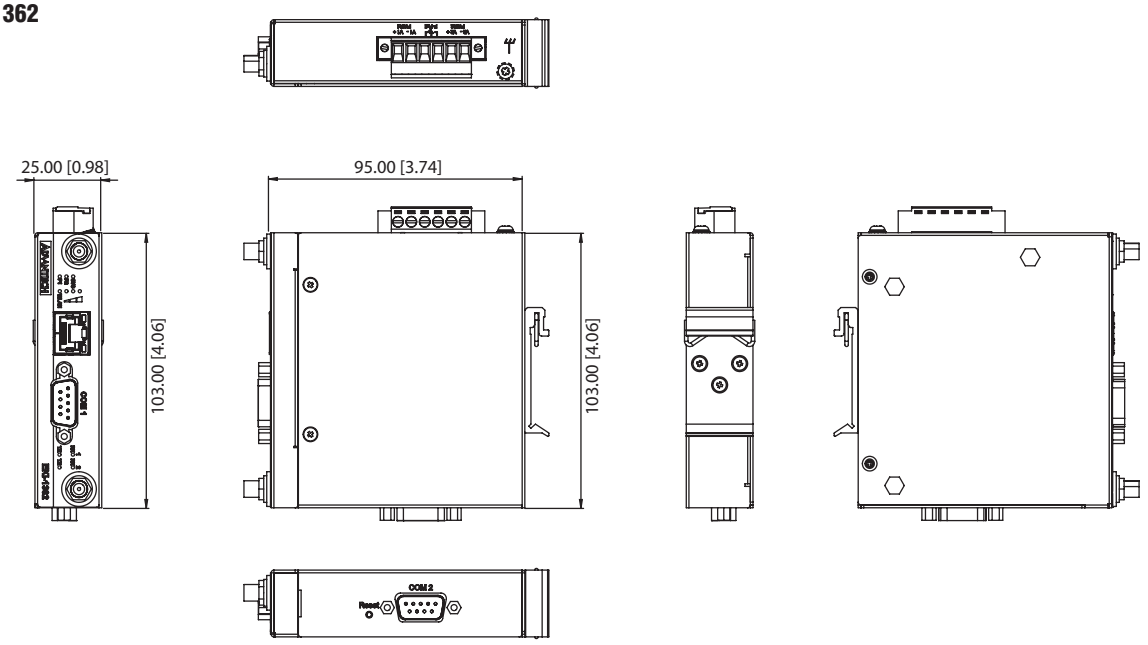
Dimensions

Unit: mm [inch]

EKI-1361



EKI-1362



Environment

- **Operating Temperature** -40 ~ 70°C (-40 ~ 166°F)
- **Storage Temperature** -40 ~ 80°C (-40 ~ 176°F)
- **Operating Humidity** 10 ~ 95% RH

Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class B)

Ordering Information

- **EKI-1361-CE** 1-port 802.11b/g/n WLAN Serial Device Server
- **EKI-1362-CE** 2-port 802.11b/g/n WLAN Serial Device Server
- **OPT1-DB9-AE** D-Sub9 to Terminal Converter

EKI-1511/L/I
EKI-1511/X

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

Features

- 1 x 10/100 Mbps Ethernet port
- Provides COM port redirection (Virtual COM), TCP, and UDP operation modes
- Baud rate: supports up to 230.4 Kbps
- Maximum of five hosts can access one serial port
- Maximum of 16 hosts accessed in TCP client mode
- Built-in 8-kV ESD protection for all serial signals
- Provides multiple configuration configuration methods including Windows utility, Telnet console, and web browser
- Supports 32/64-bit Windows 2000/XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2012, and Linux
- "I" models support a wide operating temperature

Introduction

The EKI-1511 Series focus on the entry level device server market, providing an economic solution that is designed to connect RS-232 or RS-422/485 serial devices such as PLC, meters, sensors, and barcode readers to an IP-based Ethernet LAN. This allows nearly any device with a serial port 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-1511 Series ensure compatibility in network software using a standard network API. Serial devices can 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** 1
- **Port Connector** 8-pin RJ45
- **Protection** Built-in 2.25 k V_{DC} magnetic isolation

Serial Communications

- **Port Type** L: RS-232
  X: RS-422/485
- **No. of Ports** 1
- **Port Connector** DB9 male
- **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** 300 bps ~ 230.4 kbps
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485 2-wire: Data+, Data-, GND
  RS-485 4-wire: TxD+, TxD-, RxD+, RxD- GND
- **Protection** Built-in 8 KV ESD for all signals

Software

- **Driver Support** 32-bit/64-bit Windows 2000/XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2012, 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)** 46 x 85.1 x 21.2 mm (1.81" x 3.35' x 0.83')
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.127 kg

General

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

Power Requirements

- **Input** 9 ~ 36 V_{DC}
- **Connector** Terminal block
- **Consumption** 1 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  I' models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

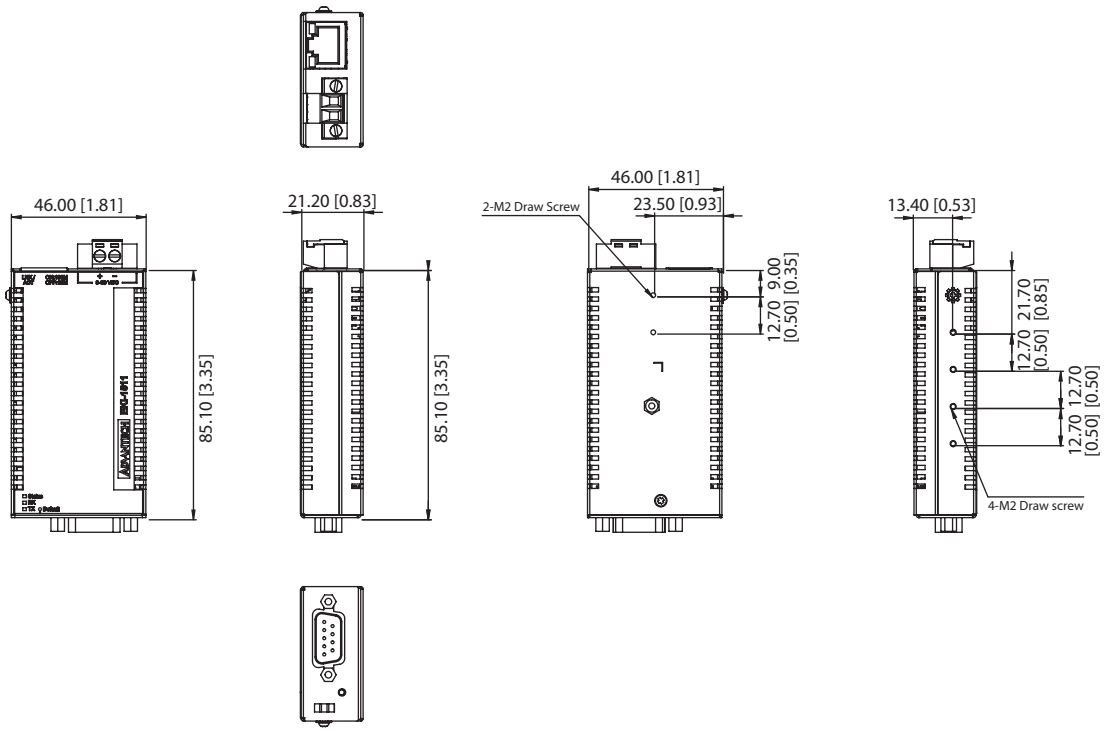
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)
- **Hazardous location** UL/cUL

Last updated: 19-Aug-2022

Dimensions

Unit: mm [inch]



Panel Cut-Out Dimensions: 46 x 85.1 x 21.2 (1.81 x 3.35 x 0.83)

Ordering Information

- **EKI-1511** 1-Port RS-232/422/485 Serial Device Server
- **EKI-1511L** 1-Port RS-232 Serial Device Server
- **EKI-1511IL** 1-Port RS-232 Serial Device Server with wide operating temperature
- **EKI-1511X** 1-Port RS-422/485 Serial Device Server
- **BB-RPS-v2-WR2-US** Power Adapter 12v 0.5A US
- **BB-RPS-v2-WR2-EU** Power Adapter 12v 0.5A Europe
- **BB-RPS-v2-WR2-UK** Power Adapter 12v 0.5A UK

EKI-1521I-SC

1-port Device Server with Fiber and WT

Features

- 1 x 10/100 Mbps Ethernet ports and 1 x 100 Mbps Fiber port 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 32/64-bit Windows 2000/XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2012, and Linux
- Automatic RS-485 direction control
- Supports line-to-line (2 kV) and line-to-ground (4 kV) surge protection
- Support a wide operating temperature

Introduction

The EKI-1521I-SC feature one Ethernet port with RJ45 connector and one fiber port with SC connector 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 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** 10/100Base-T(X), 100Base-FX
- **Port** 1 x RJ45 (Ethernet)
  1 x SC single mode Fiber
- **Protection** Built-in 2.25 k VDC magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485-2w/485-4w, software selectable
- **No. of Ports** 1
- **Port Connector** DB9 male
- **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** 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
  RS-485 4-wire: TxD+, TxD-, RxD+, RxD-, GND
- **Protection** Built-in 15 KV ESD for all signals

Software

- **Driver Support** 32-bit/64-bit Windows 2000/XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2012, 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)** 30 x 140 x 95.3 mm (1.18" x 5.51" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.42Kg

General

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

Power Requirements

- **Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Connector** Terminal block
- **Consumption** 4W

Environment

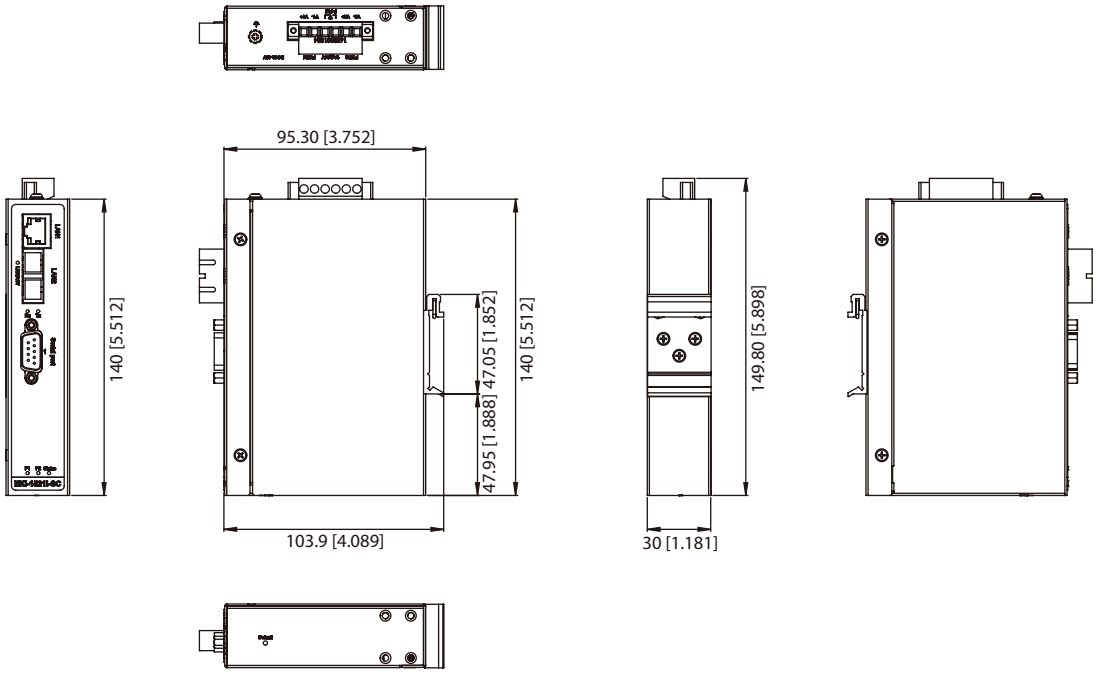
- **Operating Temperature** 'I' models: -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% RH

Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)
- **Hazardous location** UL

Dimensions

Unit: mm [inch]



Ordering Information

- **EKI-1521I-SC-A** 1-port Device Server with SM/SC Fiber and WT

EKI-1528/I/TI/N
EKI-1526/I/TI/N

8-port RS-232/422/485 Serial Device Server

16-port RS-232/422/485 Serial Device Server

EKI-1528 EKI-1526

Features

- 8 or 16-port RS-232/422/485 serial communication
- Provides 2 x 10/100/1000 Mbps Ethernet ports for LAN redundancy
- Supports up to 976.5 kbps, and any baud rate setting
- Provides COM port redirection (Virtual COM), TCP and UDP operation modes
- Provides rich configuration methods: Windows utility, Telnet console, Web Browser, and serial console
- Built-in 15 KV ESD protection for all serial signals
- SNMP MIB-II for network management
- Built-in buzzer for easy location
- Standard 1U rackmount size
- Rear wiring
- Automatic RS-485 data flow control
- "I" models support a wide operating temperature

Introduction

The EKI-1528 and EKI-1526 are industrial-grade network-based serial device servers for connecting up to 8 or 16 serial RS-232/422/485 devices, such as CNCs, PLCs, scales and scanners, directly to a TCP/IP network. The EKI-1528 and EKI-1526 feature two independent Ethernet ports and MAC addresses to provide a redundant network mechanism to guarantee Ethernet network reliability. The EKI-1528 and EKI-1526 provide a simple and cost-effective way to bring the advantages of remote management and data accessibility to thousand of devices that can't connect to an Ethernet network. The EKI-1528 and EKI-1526 offer multiple ways to configure through Windows utility, Web Browser, serial console or Telnet console, these methods make it easy manage many EKI-1528 and EKI-1526 or serial devices on your network.

Specifications

Ethernet Communications

- **Compatibility** IEEE 802.3, IEEE 802.3u, IEEE 802.3ab
- **Speed** 10/100/1000 Mbps, auto MDI/MDIX
- **No. of Ports** 2
- **Port Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** EKI-1528/EKI-1528I/EKI-1528TI/EKI-1528N: 8
  EKI-1526/EKI-1526I/EKI-1526TI/EKI-1526N: 16
- **Port Connector** DB9 male or 8-pin RJ45
- **Data Bits** 5, 6, 7, 8
- **Stop Bits** 1, 1.5, 2
- **Parity** None, Odd, Even, Space, Mark
- **Flow Control** XON/XOFF, RTS/CTS, DTR/DSR
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
  16 ports up to 230.4 kbps simultaneously
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, GND, RI
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND
- **Protection** 15 KV ESD for all signals

Software

- **Driver 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** COM port redirection mode (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, serial console
- **Protocols** ARP, ICMP, IPv6, TCP, UDP, BOOTP/DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP, NTP
- **Management** SNMP MIB-II

Mechanics

- **Dimensions (W x H x D)** 438 x 43.6 x 259.2 mm (17.24" x 1.71" x 10.2")
- **Enclosure** SECC chassis
- **Mounting** Rack

General

- **LED Indicators** System: Power, System Status
  LAN: Speed, Link/Active
  Serial: Tx, Rx
- **Alert Tools** Built-in buzzer and RTC (real time clock)
- **Reboot Trigger** Built-in WDT and push button for hardware reboot

Power Requirements

- **Power Input** EKI-1528(I)/EKI-1526(I): 100 ~ 240 V_{AC} , 50 ~ 60 Hz
  EKI-1528T(I)-VDC/EKI-1526T(I)-VDC 12 -48 V_{DC}
  EKI-1526T(I)-VHDC 120 -270 V_{DC}, Terminal Block
- **Power Consumption** 5.6 W

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
  "I" Model: -40 ~ 75°C (-40 ~ 167°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 10 ~ 95% RH

Regulatory Approvals

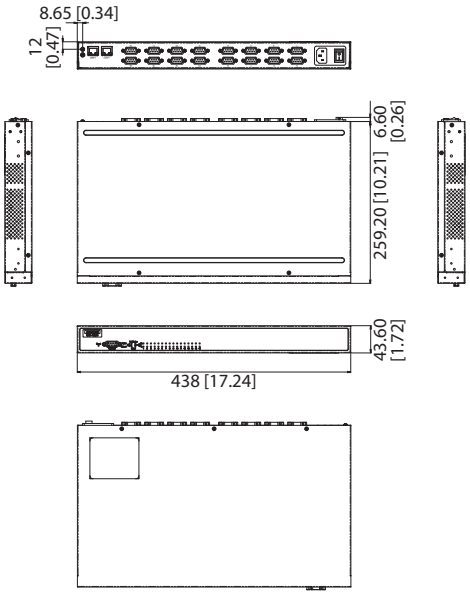
- **EMC** CE, FCC Part 15 Subpart B (Class A)

Last updated: 17-Mar-2020

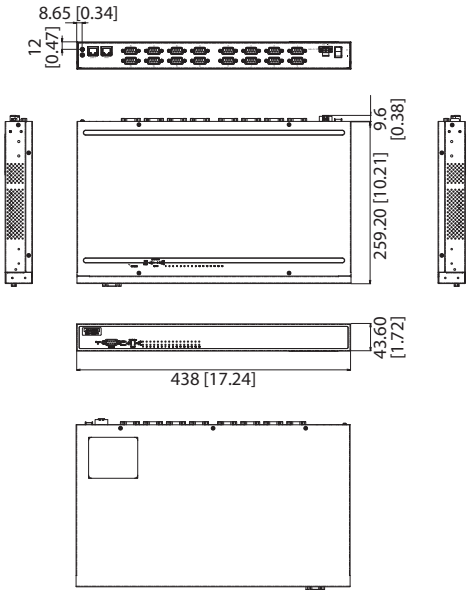
Dimensions

Unit: mm [inch]

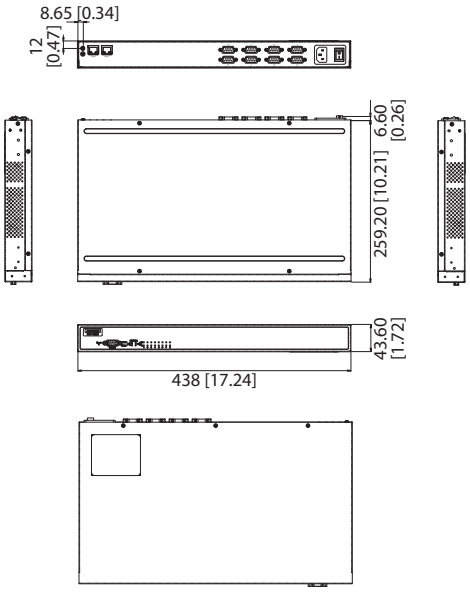
EKI-1526/1526I



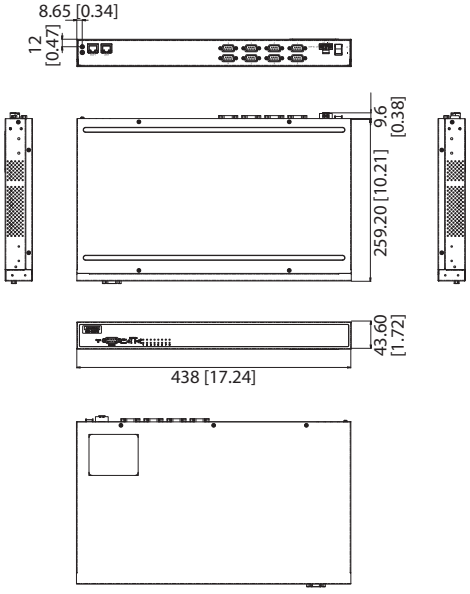
EKI-1526T/1526TI



EKI-1528/1528I



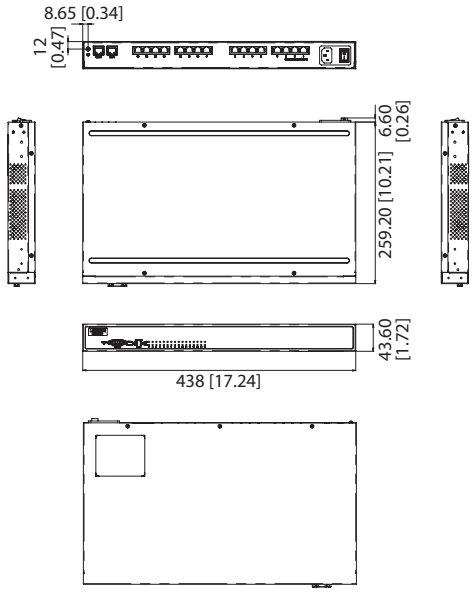
EKI-1528T/1528TI



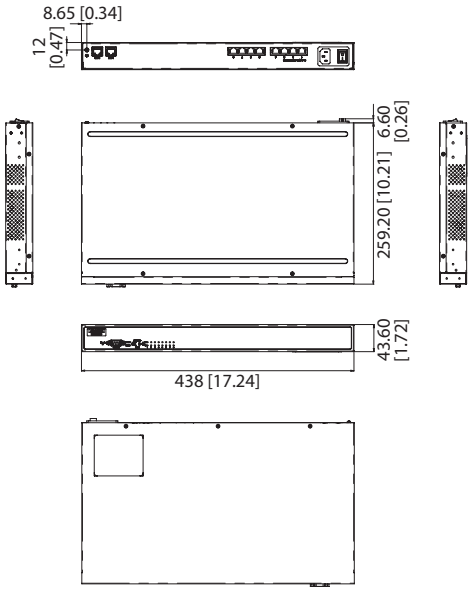
Dimensions

Unit: mm [inch]

EKI-1526N



EKI-1528N



Ordering Information

- **EKI-1528** 8-port RS-232/422/485 Serial Device Server
- **EKI-1526** 16-port RS-232/422/485 Serial Device Server
- **EKI-1528T-VDC** 8-port RS-232/422/485 Serial Device Server w/ DC Input
- **EKI-1526T-VDC** 16-port RS-232/422/485 Serial Device Server w/ DC Input
- **EKI-1528I** 8-port RS-232/422/485 Serial Device Server W/T
- **EKI-1526I** 16-port RS-232/422/485 Serial Device Server W/T
- **EKI-1528TI-VDC** 8-port RS-232/422/485 Serial Device Server w/ DC W/T Input
- **EKI-1526TI-VDC** 16-port RS-232/422/485 Serial Device Server w/ DC W/T Input
- **EKI-1528N** 8-port RS-232/422/485 Serial Device Server with RJ45 Connector
- **EKI-1526N** 16-port RS-232/422/485 Serial Device Server with RJ45 Connector
- **EKI-1526TI-VHDC** 16-port RS-232/422/485 Device Server W/T 125V

EKI-1751

10/100BASE-T, Ethernet Over VDSL2

Features

- Media and protocol converter 1 x 10/100BASE-T port to 1 x VDSL2 port
- Operates over existing CAT3 cabling
- Supports VDSL, Band Plans 997 and 998 (symmetrical and asymmetrical) transmission as per the ITU-T G.993.2 standard
- Onboard surge protection
- LED indicators for power, speed, and other status
- Adjustable SNR

Introduction

The EKI-1751-AE is a long reach Ethernet extender that utilizes existing copper cabling infrastructure (twisted pair) to extend Ethernet to up to 1200 m over VDSL2. Applications such as IP-based Internet, video surveillance, and voice services can benefit from the EKI-1751-AE series. The devices support VDSL2 Profiles 17a and 30a.

The EKI-1751-AE is designed to work in pairs over twisted a pair connection; as an unmanaged product, it is easy to install and each extender can be set to a master (CO) or remote (CPE) mode via a dip switch. Offering one model that can be set to master or remote mode and operate as a pair reduces investment costs while minimizing inventory.

The extenders support SNR margin, VDSL2 Profile 30a (high-bandwidth mode) or VDSL2 Profile 17a (long reach mode), and symmetric/asymmetric data throughput, all of which are dip switch-selectable. The selection of symmetrical/asymmetrical throughput of upstream/downstream data rates directly influences the distance covered. LEDs include link activity, VDSL status, and central office or customer premises equipment designation.

The extenders meet IEEE 802.3 Ethernet standards and offer transparent support IEEE 802.1Q for VLAN.

Specifications

Interface

- **I/O Port** 1 x 10/100BASE-T/TX RJ-45
1 x VDSL2 extender RJ-45
- **Power Connector** 2.1-mm DC jack

Dip Switch

- **Pin 1** Selectable CO or CPE mode
- **Pin 2** Selectable 30a or 17a (VDSL2 profile)
- **Pin 3** Selectable band plan (symmetric or asymmetric)
- **Pin 4** Selectable target SNR margin (6 or 9 dB)

Physical

- **Enclosure** Metal shell
- **Protection Class** IP30
- **Installation** DIN rail or panel rack mountable
- **Dimensions (W x H x D)** 72.5 x 23 x 94.5 mm (2.85" x 0.91" x 3.72")

LED Display

- **System LED** PWR
- **Port LED** Link, speed, activity

Environment

- **Operating Temperature** 0 ~ 45°C (32 ~ 113°F)
- **Storage Temperature** -40 ~ 70°C (-40 ~ 158°F)
- **Ambient Relative Humidity** 0 ~ 95% (non-condensing)
- **Humidity** 0 ~ 95% (non-condensing)

Power

- **Power Input** 12 V_{DC}/1A, external power adapter
- **Power Consumption** 4.2 W

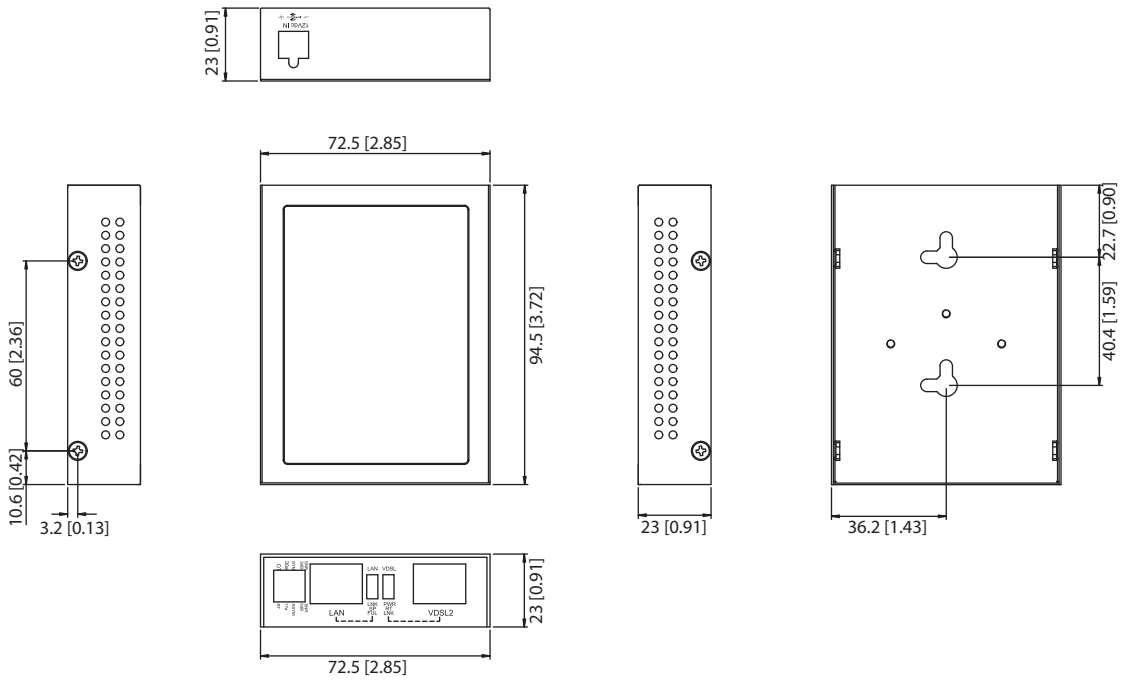
Certification

- **EMI** CE, FCC Class A
- **Safety** UL60950
- **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN 61000-4-11
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Patent** http://www.advantech.com/legal/patent

Last updated: 18-May-2018

Dimensions

Unit: mm [in.]



Panel Cutout Dimensions: 72.5 x 23 x 94.5 mm (2.85" x 0.91" x 3.72")

Ordering Information

- **EKI-1751-AE** VDSL2 Ethernet Extender Compact

EKI-1751I

Industrial Ethernet Over VDSL2 with M12

Features

- Media and protocol converter 3 x 10/100BASE-T ports to VDSL
- 2 x RJ45 Ethernet ports
- 1 x M12 Ethernet port
- Operates over existing CAT3 cabling or coaxial (combo port)
- Supports VDSL, Band Plans 997 and 998 (symmetrical and asymmetrical) transmission as per the ITU-T G.993.2 standard
- Extended operating temperature of -40 ~ 75°C
- Provides overcurrent and reverse-polarity protection
- IP30-rated enclosure

Introduction

The EKI-1751I is an industrial long reach Ethernet extender that utilizes existing copper cabling infrastructure (twisted pair or coaxial cable) to extend Ethernet to up to 2000 m over VDSL2. The EKI-1751I adds an M12 Ethernet connector as well as 2 RJ45 Ethernet connectors to offer the most flexibility possible for your project needs. The M12 connector adds the option to deploy these user-friendly plug and play devices in secure environments where reliability is the utmost priority.

The EKI-1751I is recommended to be used in pairs over a single pair of telephone-grade unshielded twisted pair (UTP) wire or a coaxial cable. EKI-1751I uses IP30 aluminum enclosures, ideal for industrial applications capable of handling wide range of temperatures -40 to +75 °C. A convenient dip switch provides easier configurability for to meet many deployment needs, giving you immediate control over VDSL2 band plans (asymmetric/symmetric) and the signal-to-noise ratio (6 or 9 dB). The LEDs also offer a quick view of the device status as well as diagnostics functions.

Specifications

Interface

I/O Port	I/O Port 2 x 10/100BASE-T/TX RJ-45 1 x 10/100BASE-T/TX M12 1 x Port VDSL2 extender combo terminal block or BNC
Power Connector	6-pin screw terminal block

Dip Switch

Pin 1	Selectable band plan (Symmetric or Asymmetric)
Pin 2	Selectable target SNR margin (6 or 9dB)
Pin 3	Selectable CO or RT

Physical

Enclosure	Metal shell
Protection Class	IP30
Installation	DIN rail
Dimensions (W x H x D)	62.5 x 135 x 106 mm (2.46" x 5.32" x 4.17")

LED Display

System LED	PWR1, PWR2
Port LED	Link, speed, activity

Environment

Operating Temperature	-40 ~ 75°C (-40 ~ 167°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Ambient Relative Humidity	5 ~ 95% (non-condensing)
Humidity	5 ~ 95% (non-condensing)

Power

Power Input	12 ~ 48 V_{DC}, redundant dual power input
Power Consumption	5 W

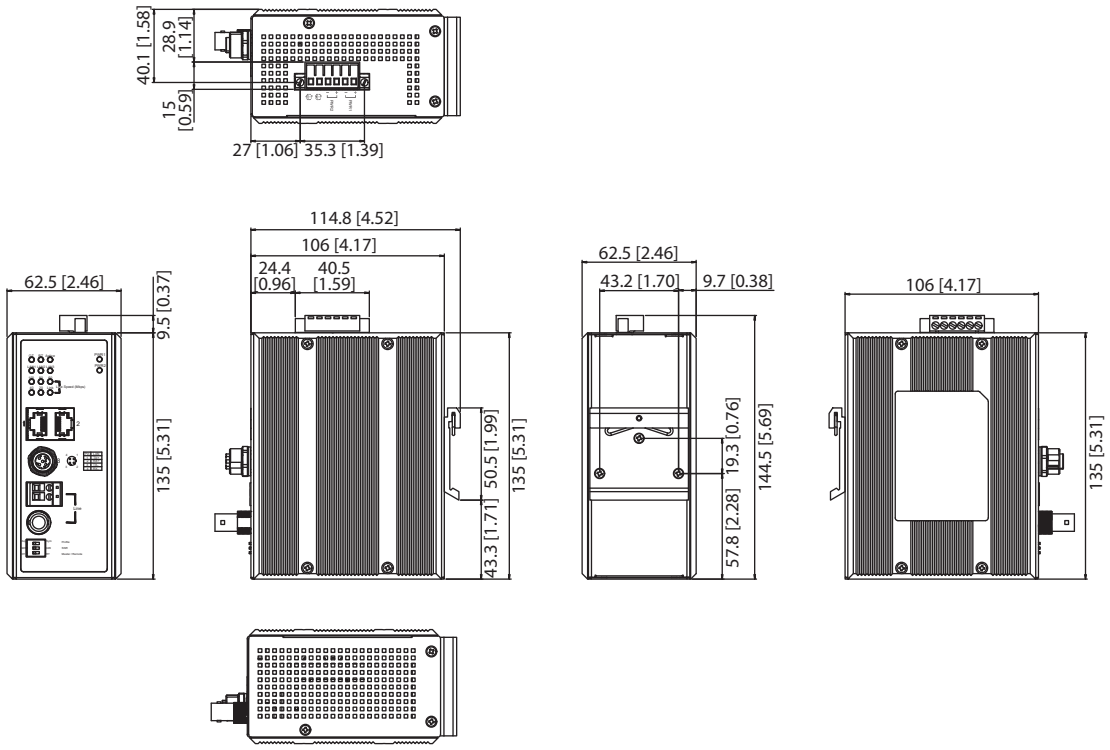
Certification

EMI	CE, FCC Class A
Safety	UL60950
EMC	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Patent	http://www.advantech.com/legal/patent

Last updated: 18-May-2018

Dimensions

Unit: mm [in.]



Panel Cutout Dimensions: 62.5 x 135 x 106 mm (2.46" x 5.32" x 4.17")

Ordering Information

- **EKI-1751I-AE** Industrial VDSL2 Ethernet Extender, M12

EKI-1751PI-M
EKI-1751PI-R

10/100Base-T, PoE Ethernet over VDSL2 (PoVDSL)

Features

- Media and protocol converter 4x 10/100BaseT ports to VDSL
- Power over VDSL (PoV)
- Power over Ethernet (PoE+)
- Operates over existing CAT3 cabling or Coaxial (combo port)
- Supports VDSL, Band plans 997 and 998 (symmetrical and asymmetrical) transmission per ITU-T G.993.2 standard
- Extended operating temperature of -40 to +75°C
- Provides over current protection
- LED indicators for power, PoE, and other status
- 30W for PoE+, per Ethernet port
- IP30 Rated enclosure

Introduction

The EKI-1751PI-M & EKI-1751PI-R are Industrial Long Reach Power over Ethernet Extenders to utilize existing copper cabling infrastructure (twisted pair or coaxial cable) extending Ethernet to up to 2000 meters over VDSL2. As an endspan unit, the Remote relies on its own source of power, and can provide 30W of power for each RJ-45 port to PD devices (up to 120W total), such as PTZ cameras, Wireless AP and VoIP phones. Both EKI-1751PI-M & EKI-1751PI-R comply to IEEE 802.3af/at standards, ensuring interoperability with a variety of compliant PD devices in the market. The EKI-1751PI-M & EKI-1751PI-R provide a unique PoE solution in the industry, offering flexibility and reliability.

Specifications

Interface

I/O Port	4 x 10/100Base-T/TX RJ-45 1 Port VDSL2 Extender Combo Terminal Block or BNC
Power Connector	6-pin screw Terminal Block

Physical

Enclosure	Metal Shell
Protection Class	IP 30
Installation	DIN-Rail
Dimensions (W x H x D)	62.5 x 135 x 106 mm (2.46" x 5.32" x 4.17")

LED Display

System LED	LPWR, RPWR, PoE Status
Port LED	Link / Speed / Activity

Environment

Operating Temperature	-40 ~ 75°C (-40 ~ 167°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Ambient Relative Humidity	5 ~ 95% (non-condensing)
Humidity	5 ~ 95% (non-condensing)

Power

Power Input	48 to 57 V_{DC}, redundant dual power input
Power Consumption	65W (EKI-1751PI-M) 125W (EKI-1751PI-R)
Power Budget	120W (local power) 30W (remote power)

Certification

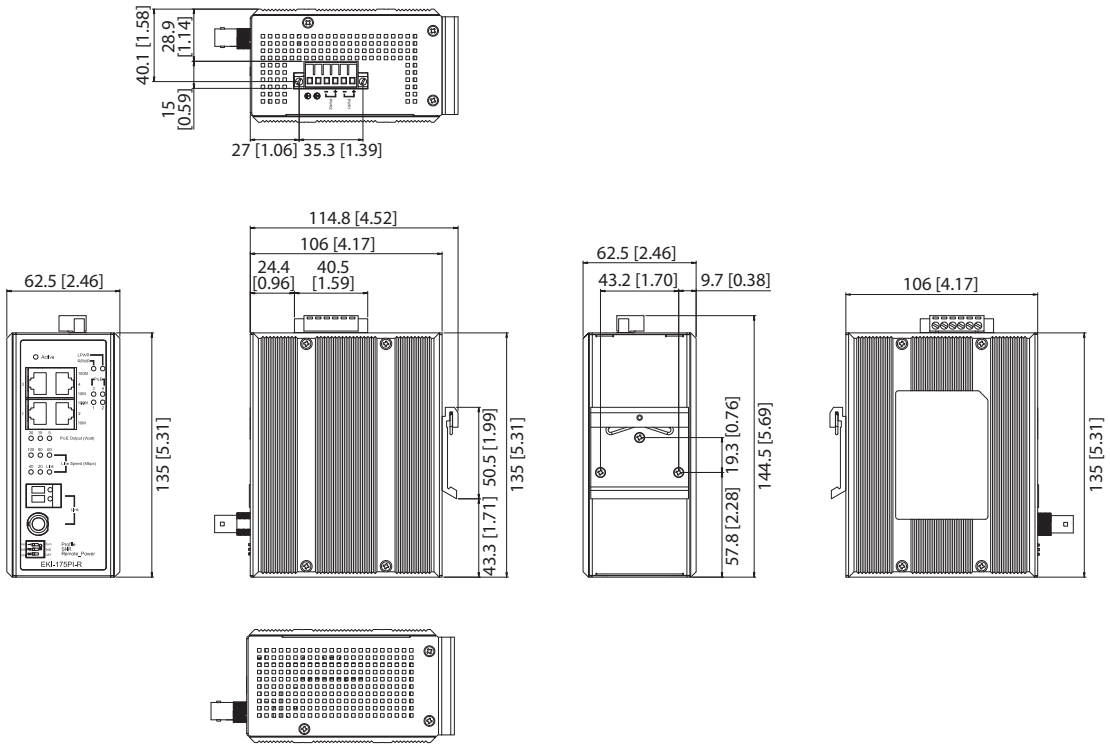
EMI	CE, FCC Class B
Safety	UL60950, LVD
EMC	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

*= Compliant

- **Patent** http://www.advantech.com/legal/patent

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 62.5 x 135 x 106 mm (2.46" x 5.32" x 4.17")

Ordering Information

- **EKI-1751PI-M-AE** Industrial VDSL2 Ethernet Extender, PoE, Master/CO
- **EKI-1751PI-R-AE** Industrial VDSL2 Ethernet Extender, PoE, Remote/CPE