EKI-1221I-MT
EKI-1222I-SC

1-port Modbus Gateway with Fiber and WT
2-port Modbus Gateway with Fiber and WT

EKI-1221I-MT   **EKI-1222I-SC**

Features

- 1 x 10/100 Mbps Ethernet ports and 1 x 100 Mbps Fiber port
- 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 client mode and 32 sessions under Modbus server mode
- Software-selectable RS-232/422/485/485-4w 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 (2 kV) and line-to-earth (4 kV)
- "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-1221/1222 feature one Ethernet port with RJ45 connector and one fiber port with SC/ST connector 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 allow users to select client or server operation mode for each serial port. In addition to allowing an Ethernet client to control serial server, they also allow serial client to control Ethernet server.

Specifications

Ethernet Communications

- **Compatibility** — IEEE 802.3, IEEE 802.3u
- **Speed** — 10/100Base-T(X), 100Base-FX
- **Port** — 1 x RJ45 (Ethernet)
  EKI-1221I-MT: 1 x ST multi-mode Fiber
  EKI-1222I-SC: 1 x SC single mode Fiber
- **Protection** — Built-in 2.25 k VDC magnetic isolation

Optical Fiber

- **Multi-Mode (EKI-1221I-MT)** — Wavelength: 1310nm
  Tx Power: -14/-20dBm
  Rx Sensitivity: -32dBm
  Distance: 2KM
- **Single-Mode (EKI-1222I-SC)** — Wavelength: 1310nm
  Tx Power: -8/-15dBm
  Rx Sensitivity: -34dBm
  Distance: 30KM

Serial Communications

- **Port Type** — RS-232/422/485/485-4w, software selectable
- **No. of Ports** — EKI-1221I-MT : 1
  EKI-1222I-SC : 2
- **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
  RS-485 4-wire: TxD+, TxD-, RxD+, RxD-, GND
- **Protection** — 15 KV ESD for all signals

Software

- **OS Support** — 32-bit/64-bit Windows XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2008 R2/2012/2012 R2
- **Utility Software** — Advantech EKI Device Configuration Utility
- **Operation Modes** — Modbus RTU Client/Server mode
  Modbus ASCII Client/Server 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
  Fiber : Link/Active
  Serial: Tx, Rx
- **Reboot Trigger** — Built-in WDT (watchdog timer)

Mechanics

- **Dimensions (W x H x D)** — 30 x 140 x 95.3 mm (1.18 x 5.51 x 3.75 inch)
- **Enclosure** — Metal with solid mounting hardware
- **Mounting** — DIN-rail, Wall
- **Weight** — EKI-1221I-MT: 0.42Kg
  EKI-1222I-SC: 0.43kg

Power Requirements

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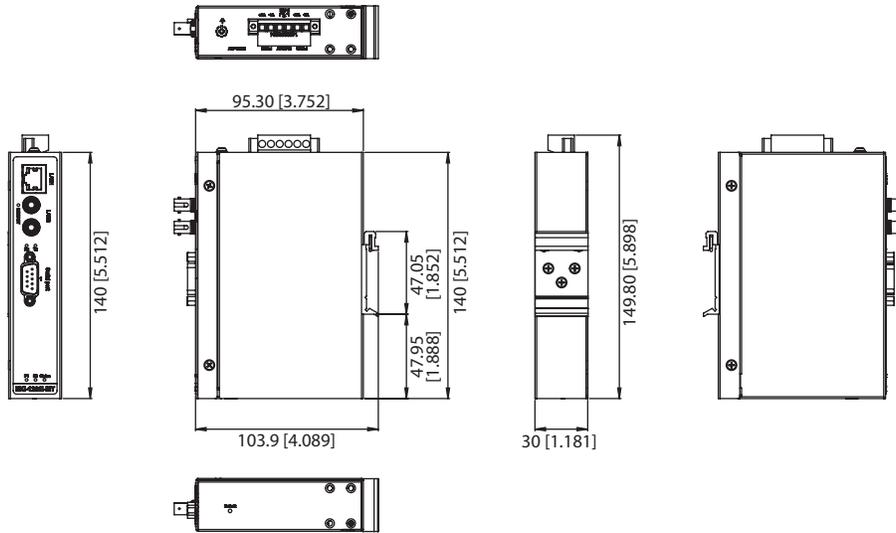- **Power Consumption** — 4W

Environment

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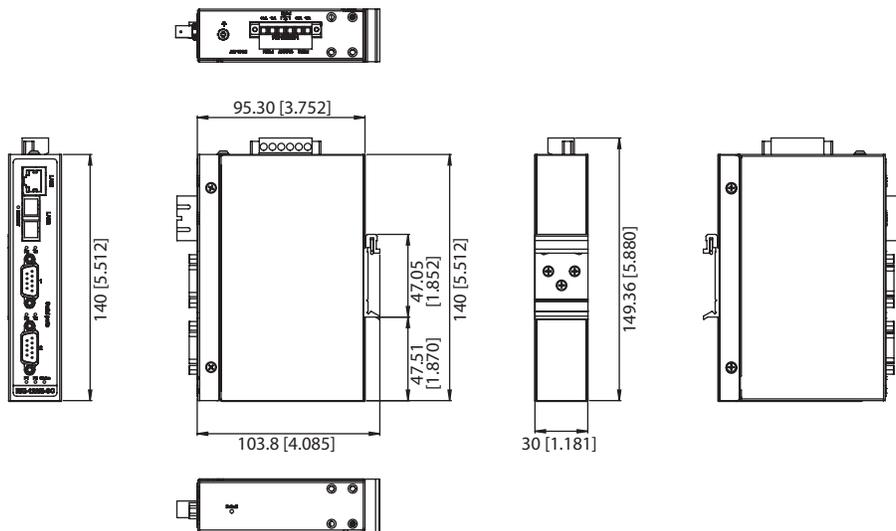- **Operating Humidity** — 10 ~ 95% RH

ADVANTECH | **Industrial Wireless and Protocol Gateway Solutions**

Dimensions

Unit: mm [inch]

EKI-1221I-MT

95.30 [3.752]

140 [5.512]

47.05 [1.852]

140 [5.512]

47.95 [1.888]

103.9 [4.089]

149.80 [5.898]

30 [1.181]

Panel Cut-out Dimensions: 95.3 x 140 x 30 (3.752 x 5.512 x 1.181)

EKI-1222I-SC

95.30 [3.752]

140 [5.512]

47.05 [1.852]

140 [5.512]

47.51 [1.870]

103.8 [4.085]

149.36 [5.880]

30 [1.181]

Panel Cut-out Dimensions: 95.3 x 140 x 30 (3.752 x 5.512 x 1.181)

Regulatory Approvals

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

Ordering Information

- **EKI-1221I-MT-A**   1-port Modbus Gateway with MM/ST Fiber and WT
- **EKI-1222I-SC-A**   2-port Modbus Gateway with SM/SC Fiber and WT