

Industrial Gateway Solutions

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To view all of Advantech's Serial Device Servers, please visit www.advantech.com/products.



Selection Guide

Wireless Serial Device Servers

NEW



NEW



Model Name		EKI-1361	EKI-1362	EKI-1351	EKI-1352
Description		1-port RS-232/422/485 to 802.11b/g/n WLAN Serial Device Server	2-port RS-232/422/485 to 802.11b/g/n WLAN Serial Device Server	1-port RS-232/422/485 to 802.11b/g WLAN Serial Device Server	2-port RS-232/422/485 to 802.11b/g WLAN
Wireless LAN	IEEE Standard	802.11 b/g/n		802.11 b/g	
	Radio Number	1			
RF	Security	WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise		WEP, WPA, WPA2, w/o 802.11i	
	MIMO	2T2R		-	
	Maximum Transmit Output Power	19dBm (11n)		13dBm (11b)	
Ethernet LAN	Rceive Sensitivity	-93dBm (11g Rx0+Rx1)		-89dBm (11b 1Mbps)	
	Antenna Connector	R-SMA			
	No.	1			
Serial Communication	Connector	RJ45			
	Speed	10/100/1000 Mbps			
	Protection	1.5 KV built-in magnetic isolation protection			
Software	Type	RS-232/422/485			
	Baud Rate	50 bps ~ 921.6 kbps, any baud rate setting			
	No. of Ports	1	2	1	2
	Port Connector	DB9 Male			
Power	Protection	15 KV ESD for all signals			
	Configuration	Windows utility, Telnet console, Web Browser		Windows utility, Web Browser	
	Operation mode	VCOM, TCP Server/Client, UDP Server/Client			
Mechanism	Driver	32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, and Linux			
	Power Input Range	12 - 48 V _{DC}			
Certification	Fault Relay	V			
	No.	2			
Operating Temperature	Mounting	Din-Rail / Wall Mount			
	Operating Temperature	-30 ~ 65°C (-22 ~ 149°F)		-0 ~ 50°C (32 ~ 122°F)	
Page	CE	V		V	
	FCC	V		V	
	C1D2	V		-	
	ATEX	V		-	

Dual Ethernet Serial Device Servers



Model Name		EKI-1521/I/CI	EKI-1522/I/CI	EKI-1524/I/CI	EKI-1528/T	EKI-1526/T
Description		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	8-port RS-232/422/485 Serial Device Server	16-port RS-232/422/485 Serial Device Server
Ethernet LAN	No.	2				
	Connector	RJ45				
	Speed	10/100 Mbps				
	Protection	1.5 KV built-in magnetic isolation protection				
Serial Communication	Type	RS-232/422/485 (CI model with RS-422/485 only)				RS-232/422/485
	Baud Rate	50 bps ~ 921.6 kbps, any baud rate setting				
	No. of Ports	1	2	4	8	16
	Port Connector	DB9 Male				RJ45
Software	Protection	15 KV ESD for all signals (CI model with 2KV Isolation)				15 KV ESD for all signals
	Configuration	Windows utility, Telnet, Web Browser		Windows utility, Telnet, Console, Web Browser		
	Operation mode	VCOM, TCP Server/Client, UDP Server/Client				
Power	Driver	32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, and Linux				
	Power Input Range	12 - 48 V _{DC}		100 ~ 240 V _{AC} , 47 ~ 63 Hz (T model with 48 V _{DC} , Terminal Block)		
Mechanism	Fault Relay	V				-
	No.	2				1
Operating Temperature	Mounting	Din-Rail / Wall Mount				Rack Mount
	Operating Temperature	-10 ~ 60°C (-14 ~ 140°F)		V		V
		-30 ~ 65°C (-22 ~ 149°F)		-		-
		-40 ~ 70°C (-40 ~ 158°F)		V (I & CI model)		-
Page	CE	V		V		V
	FCC	V		V		V
	C1D2	V		-		-
	ATEX	V		-		-

Single Ethernet Serial Device Servers



Model Name		ADAM-4571	ADAM-4571L	ADAM-4570	ADAM-4570L
Description		1-port RS-232/422/485 Serial Device Server	1-port RS-232 Serial Device Server	2-port RS-232/422/485 Serial Device Server	2-port RS-232 Serial Device Server
Ethernet LAN	No.	1			
	Connector	RJ45			
	Speed	10/100 Mbps			
	Protection	1.5 KV built-in magnetic isolation protection			
Serial Communication	Type	RS-232	RS-232/422/485	RS-232	RS-232/422/485
	Baud Rate	50 bps ~ 921.6 kbps, any baud rate setting			
	No. of Ports	1			2
	Port Connector	DB9 Male			RJ48
Software	Protection	15 KV ESD for all signals			
	Configuration	Windows utility, Web Browser			
	Operation mode	VCOM, TCP Server/Client, UDP Server/Client			
	Driver	32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, and Linux			
Power Input Range		10 - 30 V _{DC}			
Certification		CE/FCC			
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Dual Ethernet Serial Device Servers



Model Name		EKI-1221I/CI	EKI-1222I/CI	EKI-1224I/CI	EKI-1221D	EKI-1222D
Description		1-port Modbus Gateway	2-port Modbus Gateway	4-port Modbus Gateway	1-port Modbus Gateway with Integrated Ethernet Cascading	2-port Modbus Gateway with Integrated Ethernet Cascading
Ethernet LAN	No.	2				
	Connector	RJ45				
	Speed	10/100 Mbps				
	Protection	1.5 KV built-in magnetic isolation protection				
Serial Communication	Embedded Switch (Daisy-Chain)					V
	Type	RS-232/422/485 (CI model with RS-422/485 only)				
	Baud Rate	50 bps ~ 921.6 kbps, any baud rate setting				
	No. of Ports	1	2	4	1	2
Power	Port Connector	DB9 Male				
	Protection	15 KV ESD for all signals (CI model with 2KV Isolation)				
	Power Input Range	12 - 48 V _{DC}				
	Fault Relay	V				
Mechanism	No.	2				
	Mounting Enclosure	Din-Rail / Wall Mount IP30				
Operating Temperature		V				
		V (I & CI model)				
Certification	CE	V				
	FCC	V				
	C1D2	V				
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Accessories



Model Name		OPT1-DB9	OPT1A	OPT1D	OPT1I	OPT1J
Length		-	1 m	30 cm	1 m	30 cm
Communication Interfaces	Connector Type	DB9 Female		RJ48		RJ45
	Qty	1		1		1
	Connector Type	Terminal		DB9 Male		DB9 Male
	Qty	1		1		1
Where Used		EKI-1000 Series, ADAM-4570 Series	ADAM-4570, ADAM-4570L		EKI-1526, EKI-1528	
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- 1 WebAccess+ Solutions
- 2 Motion Control
- 3 Power & Energy Automation
- 4 Automation Software
- 5 Intelligent Operator Panel
- 6 Automation Panels
- 7 Panel PCs
- 8 Industrial Wireless Solutions
- 9 Industrial Ethernet Solutions
- 10 Industrial Gateway Solutions
- 11 Serial communication cards
- 12 Embedded Automation PCs
- 13 DIN-Rail IPCs
- 14 CompactPCI Systems
- 15 IoT Wireless I/O Modules
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- 17 RS-485 I/O Modules
- 18 Data Acquisition Boards

EKI-1361

EKI-1362

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

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



Features

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

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** 10/100/1000 Mbps

Wireless LAN Communications

- **Compatibility** IEEE 802.11b/g/n
- **Speed** Up to 300Mbps
- **Network Mode** Infrastructure, Ad-hoc
- **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, 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: Data+, Data-, GND
- **Protection** 15 KV ESD for all signals

Software

- **OS Support** 32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, 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 without AP (peer to peer) 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** Plastic and metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall
- **Dimensions (W x H x D)** 28.5 x 120 x 85.3 mm (1.12" x 4.72" x 3.36")
- **Weight** 0.5 Kg

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** EKI-1361: 8W
EKI-1362: 9W

Environment

- **Operating Temperature** -30 ~ 65°C (-22 ~ 149°F)
- **Storage Temperature** -40 ~ 80°C (-40 ~ 176°F)
- **Operating Humidity** 5 ~ 95% RH

Regulatory Approvals

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

Ordering Information

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

EKI-1521/CI/1

EKI-1522/CI/1

EKI-1524/CI/1

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-1522

EKI-1524



Features

- Provides 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 max. of 5 hosts to access one serial port
- Allows a max. of 16 hosts to be accessed as TCP client mode
- Built-in 15 KV ESD protection for all serial signals
- Provides multiple configuration methods including Windows utility, Telnet console, and Web Browser
- Supports 32-bit/64-bit Windows 2000/XP/Vista/7/8/8.1, Windows Server 2003/2008/2012, Windows CE 5.0, and Linux
- 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

EKI-1521, EKI-1522 and EKI-1524 feature two independent Ethernet ports and MAC addresses to provide a redundant network mechanism to guarantee Ethernet network reliability. EKI-1521, EKI-1522 and EKI-1524 are serial device servers that connect RS-232/422/485 serial devices, such as PLC, meters, sensors, and barcode reader to an IP-based Ethernet LAN. They allow nearly any device with serial ports to connect and share an Ethernet network. EKI-1521, EKI-1522 and EKI-1524 provide various operations: 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 EKI-1521, EKI-1522 and EKI-1524, guaranteeing compatibility with legacy serial devices and enabling backward compatibility with existing software. With TCP server, TCP client, and UDP modes, EKI-1521, EKI-1522 and EKI-1524 ensure the compatibility of network software that uses a standard network API. Moreover, you can make serial devices communicate with other devices peer-to-peer, without any intermediate host PCs 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 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** EKI-1521: 1/EKI-1522: 2/EKI-1524: 4
- **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
'CI' models: 2KV Isolation for RS-422/485 signals

Software

- **OS Support** 32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, 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
- **Configuration Management** Windows utility, Telnet console, Web Browser
SNMP MIB-II

Mechanics

- **Dimensions (W x H x D)** EKI-1521: 36.6 x 140 x 95 mm (1.44" x 5.51" x 3.74")
EKI-1524: 48.6 x 140 x 95 mm (1.91" x 5.51" x 3.74")
- **Enclosure** Metal with solid mounting hardware

- **Mounting** DIN-rail, Wall
- **Weight** EKI-1521: 612g/EKI-1522: 620g/EKI-1524: 690g

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: 5.2 W
EKI-1522: 5.2 W
EKI-1524: 6.3 W

Environment

- **Operating Temperature** EKI-1521/EKI-1522/EKI-1524: -10 ~ 60°C (14 ~ 140°F) 'CI' & 'I' models: -40 ~ 70°C (-40 ~ 158°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% RH

Regulatory Approvals

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

Ordering Information

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

- 1 WebAccess+ Solutions
- 2 Motion Control
- 3 Power & Energy Automation
- 4 Automation Software
- 5 Intelligent Operator Panel
- 6 Automation Panels
- 7 Panel PCs
- 8 Industrial Wireless Solutions
- 9 Industrial Ethernet Solutions
- 10 Industrial Gateway Solutions
- 11 Serial communication cards
- 12 Embedded Automation PCs
- 13 DIN-Rail IPCs
- 14 CompactPCI Systems
- 15 IoT Wireless I/O Modules
- 16 IoT Ethernet I/O Modules
- 17 RS-485 I/O Modules
- 18 Data Acquisition Boards

EKI-1528/T

EKI-1526/T

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 Mbps Ethernet ports for LAN redundancy
- Supports up to 921.6 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

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
- **Speed** 10/100 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-1528T: 8
EKI-1526/EKI-1526T: 16
- **Port Connector** 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
RS-422: TxD+, TxD-, RxD+, RxD-, GND
RS-485: Data+, Data-, GND
- **Protection** 15 KV ESD for all signals

Software

- **OS Support** 32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, 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, IPv4, TCP, UDP, BOOTP/DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP, NTP
- **Management** SNMP MIB-II

Mechanics

- **Dimensions (W x H x D)** 440 x 44 x 220 mm (17.32" x 1.73" x 8.66")
- **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/EKI-1526: 100 ~ 240 VAC, 47 ~ 63 Hz
EKI-1528T/EKI-156T: 48 VDC, Terminal Block
- **Power Consumption** EKI-1528/EKI-1528T: 10 W
EKI-1526/EKI-1526T: 12 W

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 5 ~ 95% RH

Regulatory Approvals

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

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
- *All items include 1pc OPT1J

Accessories

- **OPT1J** 1 m RJ45 to DB9 Male Cable
- **OPT1J** 30 cm RJ45 to DB9 Male Cable
- **1702002600** Power Cable US Plug 1.8 m
- **1702002605** Power Cable EU Plug 1.8 m
- **1702031801** Power Cable UK Plug 1.8 m
- **1702031836** Power Cable China/Australia Plug 1.8 m

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-1222

EKI-1224



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
- Supports up to 16 connections and 32 requests simultaneously
- Auto searching slave ID over configuration utility
- Software selectable RS-232/422/485 communication
- 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 auto 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-1221/1222/1224 feature two independent Ethernet ports and MAC addresses to provide a redundant networking mechanism to guarantee Ethernet networking reliability. They provide a simple and cost-effective way to bring the advantage of remote management and data accessibility to thousand of devices that can not connect to a network. The EKI-1221/1222/1224 provide 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
- **No. of Ports** EKI-1221: 1
EKI-1222: 2
EKI-1224: 4
- **Port Connector** DB9 male
- **Data Bits** 7, 8
- **Stop Bits** 1, 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** 15 KV ESD for all signals
'CI' models: 2KV Isolation for RS-422/485 signals

Software

- **OS Support** 32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, 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** Modbus RTU, Modbus TCP, Modbus ASCII

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-1221/1222: 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
EKI-1224: 55 x 140 x 95 mm (2.17" x 5.51" x 3.74")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** EKI-1221: 0.592 Kg
EKI-1222: 0.6 Kg
EKI-1224: 0.668 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{dc}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** EKI-1221: 5.2 W
EKI-1222: 5.2 W
EKI-1224: 6.3 W

Environment

- **Operating Temperature** EKI-1221/EKI-1222/EKI-1224: -10 ~ 60°C (14 ~ 140°F)
'CI' & 'I' models: -40 ~ 70°C (-40 ~ 158°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 5 ~ 95% RH

Regulatory Approvals

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

Ordering Information

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

1	WebAccess+ Solutions
2	Motion Control
3	Power & Energy Automation
4	Automation Software
5	Intelligent Operator Panel
6	Automation Panels
7	Panel PCs
8	Industrial Wireless Solutions
9	Industrial Ethernet Solutions
10	Industrial Gateway Solutions
11	Serial communication cards
12	Embedded Automation PCs
13	DIN-Rail IPCs
14	CompactPCI Systems
15	IoT Wireless I/O Modules
16	IoT Ethernet I/O Modules
17	RS-485 I/O Modules
18	Data Acquisition Boards

EKI-1221D

EKI-1222D

1-port Modbus Gateway with Integrated Ethernet Cascading

2-port Modbus Gateway with Integrated Ethernet Cascading



EKI-1221D

EKI-1222D



Features

- Provides 2 x 10/100 Mbps Ethernet ports for Daisy-Chain connectivity
- Integration of Modbus TCP and Modbus RTU/ASCII networks
- Supports Ethernet auto-bypass function
- Master mode supports 32 TCP slaves at the same time
- Slave mode supports up to 16 TCP masters
- Supports mapping Modbus slave ID option
- Auto searching Modbus slave ID over configuration utility
- Mounts on DIN-rail and Wall mount
- Class I, Division 2 certification

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-1221D/1222D feature two Ethernet ports with one IP address for easier network wiring. One port can be used to connect to the network, and the other port can be used to connect to another Ethernet device or another EKI-1221D/1222D. They provide a simple and cost-effective way to bring the advantage of remote management and data accessibility to thousand of devices that can not connect to a network. The EKI-1221D/1222D provide 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
- **No. of Ports** EKI-1221D: 1
EKI-1222D: 2
- **Port Connector** DB9 male
- **Data Bits** 7, 8
- **Stop Bits** 1, 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
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- **Utility Software** Advantech EKI Device Configuration Utility
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Modbus ASCII Master/Slave mode
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- **Protocols** Modbus RTU, Modbus TCP, Modbus ASCII

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)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** EKI-1221D: 0.58 Kg
EKI-1222D: 0.588 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** EKI-1221D: 2 W
EKI-1222D: 2.5 W

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 5 ~ 95% RH

Regulatory Approvals

- **EMC** EN 55022, EN 55011, EN 61000-6-4, IEC 61000-4-2/3/4/5/6/8, FCC 47 CFR Part 15 Subpart B (Class A)
- **Hazardous Location** Class I, Division 2

Ordering Information

- **EKI-1221D** 1-port Modbus Gateway with Ethernet Cascading
- **EKI-1222D** 2-port Modbus Gateway with Ethernet Cascading
- * All items include 1 pc OPT1-DB9 D-Sub9 to Terminal Converter
- **OPT1-DB9** D-Sub9 to Terminal Converter