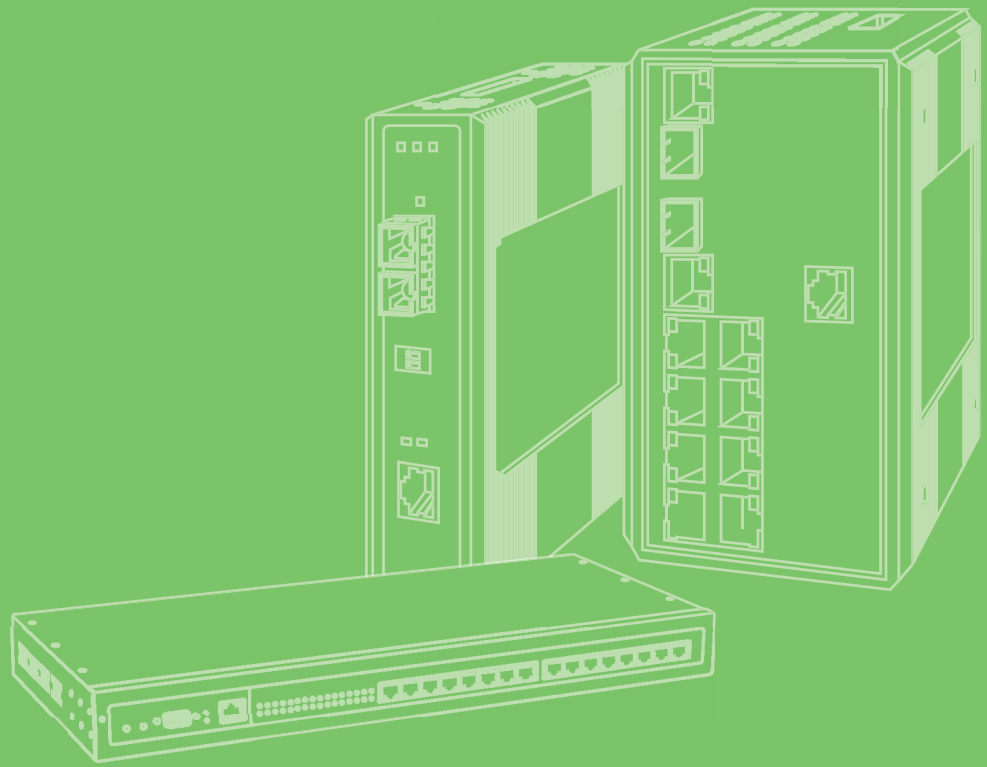


User Manual



EKI-1242IEIMS

**Modbus RTU/TCP to EtherNet/
IP|PROFINET|OPC UA Fieldbus
Gateway**

ADVANTECH

Enabling an Intelligent Planet

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2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
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5. Write the RMA number clearly on the outside of the package and ship the package prepaid to your dealer.

Declaration of Conformity

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This type of cable is available from Advantech. Please contact your local supplier for ordering information.

FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. In this event, users are required to correct the interference at their own expense.

Technical Support and Assistance

1. Visit the Advantech website at www.advantech.com/support to obtain the latest product information.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before calling:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Warnings, Cautions, and Notes

Warning! *Warnings indicate conditions that if not observed can cause personal injury!*



Caution! *Cautions are included to help prevent hardware damage and data losses. For example,*



“Batteries are at risk of exploding if incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type as recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.”

Note! *Notes provide additional optional information.*



Document Feedback

To assist us with improving this manual, we welcome all comments and constructive criticism. Please send all feedback in writing to support@advantech.com.

Packing List

Before system installation, check that the items listed below are included and in good condition. If any item does not accord with the list, contact your dealer immediately.

- 1 x Fieldbus gateway
- 1 x DIN-Rail mounting bracket and screws
- 1 x Wall-mounting bracket

Safety Instructions

1. Read these safety instructions carefully.
2. Retain this user manual for future reference.
3. Disconnect the equipment from all power outlets before cleaning. Use only a damp cloth for cleaning. Do not use liquid or spray detergents.
4. For pluggable equipment, the power outlet socket must be located near the equipment and easily accessible.
5. Protect the equipment from humidity.
6. Place the equipment on a reliable surface during installation. Dropping or letting the equipment fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. Do not cover the openings.
8. Ensure that the voltage of the power source is correct before connecting the equipment to a power outlet.
9. Position the power cord away from high-traffic areas. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage from transient overvoltage.
12. Never pour liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by skilled service personnel.
14. If any of the following occurs, have the equipment checked by skilled person:
 - The power cord or plug is damaged.
 - Liquid has penetrated the equipment.
 - The equipment has been exposed to moisture.
 - The equipment is malfunctioning, or does not operate according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment shows obvious signs of breakage.
15. Do not leave the equipment in an environment with a storage temperature of below -40 °C (-40 °F) or above 85 °C (185 °F) as this may damage the components. The equipment should be kept in a controlled environment.
16. In accordance with IEC 704-1:1982 specifications, the sound pressure level at the operator's position does not exceed 70 dB (A).

DISCLAIMER: These instructions are provided according to IEC 704-1 standards. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Safety Precautions - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

- To avoid electrical shock, always disconnect the power from the PC chassis before manual handling. Do not touch any components on the CPU card or other cards while the PC is powered on.
- Disconnect the power before making any configuration changes. A sudden rush of power after connecting a jumper or installing a card may damage sensitive electronic components.

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Chapter 1

Product Overview

1.1 Specifications

Table 1.1: Specifications

Specifications	Description	
Interface	I/O Port	2 x RJ45 + 2 x EtherNET/IP or PROFINET or OPC UA + 2 x RS-232/422/485
	Power Connector	6-pin removable screw terminal (power & relay)
	MicroSD Card	Configuration backup and restore
Physical	Enclosure	Metal with solid mounting hardware
	Installation	DIN-rail, wall mount
	Dimensions (W x H x D)	42 x 140 x 95mm (1.66" x 5.52" x 3.75")
LED Display	System LED	P1, P2, Status
	Protocol LED	EtherNET/IP (PL) or PROFINET (PL) or OPC UA (PL), Modbus (MS)
	Port LED	LAN: Speed, Link/Active Serial: Tx, Rx
Environment	Operating Temperature	-40 ~ 75°C (-40 ~ 167°F)
	Storage Temperature	-40 ~ 85°C (-40°F ~ 185°F)
	Ambient Relative Humidity	95%
Power	Power Consumption	5.2W
	Power Input	12~48 V _{DC} , redundant dual power inputs
Certifications	EMC	CE, FCC Part 15 Subpart B (Class A)

1.2 Hardware Views

1.2.1 Front View

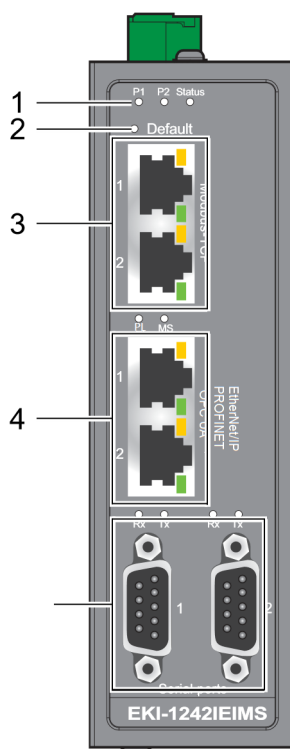


Figure 1.1 Front View

Table 1.2: Front View

No.	Item	Description
1	System LED panel	See “LED Indicators” on page 6 for further details.
2	Default	Press less than 5 seconds to restart device, press over 5 seconds to reset to factory default.
3	ETH port	RJ45 port for Modbus/TCP and device configuration.
4	ETH port	RJ45 port for EtherNET/IP or PROFINET or OPC UA.
5	Serial port	DB9 pin out, supports 232/422/485.

1.2.2 Rear View

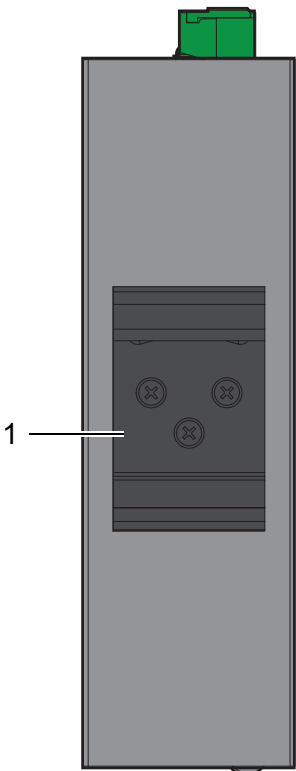


Figure 1.2 Rear View

Table 1.3: Rear View		
No.	Item	Description
1	DIN-Rail mounting plate	Mounting plate used for the installation to a standard DIN rail

1.2.3 Top View

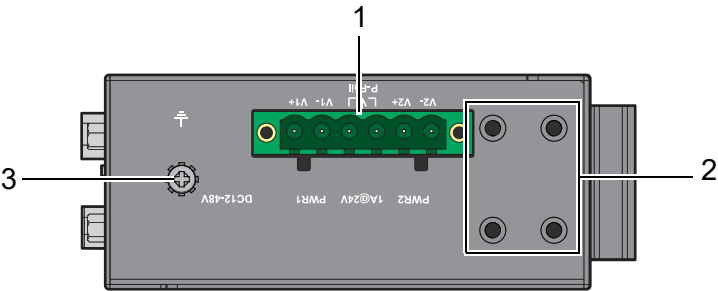


Figure 1.3 Top View

Table 1.4: Top View		
No.	Item	Description
1	Terminal block	Connect cabling for power and alarm wiring
2	Wall mounting holes	Screw holes (x4) used in the installation of a wall mounting plate
3	Ground terminal	Screw terminal used to ground chassis

1.2.4 Bottom View

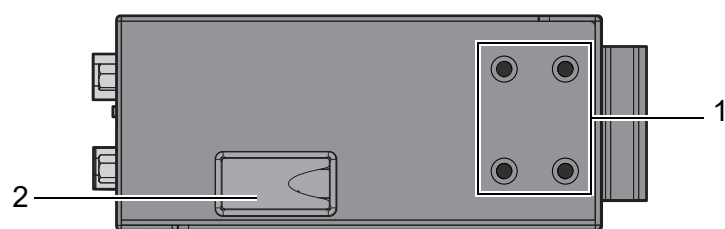


Figure 1.4 Bottom View

Table 1.5: Bottom View

No.	Item	Description
1	Wall mounting holes	Screw holes (x4) used in the installation of a wall mounting plate
2	Component cover	Open to access microSD card port (only supports FAT32 or exFAT file system).

1.2.5 LED Indicators

Table 1.6: LED Indicators

Catalog	LED Name	LED Color	Description
System LED	P1	Green	Power 1 is ON
		Off	Power 1 is off or power error condition exists
	P2	Green	Power 2 is ON
		Off	Power 2 is off or power error condition exists
	Status	Orange	Blinking: System is ready Solid: - Restore config from SD card successfully to factory default state during booting - Backup config to SD card successfully during booting - Automatically Backup function is disabled
		Off	System is not working
Protocol LED	EtherNET/IP (PL)	Orange	Reserved
		Green	Blinking: IO connection not established Solid: IO connection established
	PROFINET (PL)	Orange	Blinking: PLC connection not established
		Green	Blinking: Indicated by TIA portal Solid: IO connection established
	OPCUA (PL)	Green	OPC UA connection established
		Off	OPC UA connection not established
	Modbus (MS)	Orange	Blinking: One of the Modbus transaction queries failed
		Green	Solid: All Modbus transactions queries are successful
		Off	No Modbus transactions created
Port LED	Serial	Orange	Serial port is receiving data
		Green	Serial port is transmitting data
		Off	No data is transmitted or received through the serial port
	RJ45	Green	Off: No link Blinking: Link and activity On: Link without activity
		Orange/ Green	Off: no link
			Solid Orange: Current link speed is 100M Solid Green: Current link speed is 10M

Chapter 2

Fieldbus Gateway Installation

2.1 Installation Guidelines

The following guidelines are provided to optimize the device performance. Review the guidelines before installing the device.

- Make sure cabling is away from sources of electrical noise. Radios, power lines, and fluorescent lighting fixtures can interfere with the device performance.
- Make sure the cabling is positioned away from equipment that can damage the cables.
- Operating environment is within the ranges listed, see “Specifications” on page 2.
- Relative humidity around the fieldbus gateway does not exceed 95 percent (non condensing).
- Altitude at the installation site is not higher than 10,000 feet.
- In 10/100 and 10/100/1000 fixed port devices, the cable length from the fieldbus gateway to connected devices cannot exceed 100 meters (328 feet).
- Make sure airflow around the fieldbus gateway and respective vents is unrestricted. Without proper airflow the fieldbus gateway can overheat. To prevent performance degradation and damage to the fieldbus gateway, make sure there is clearance at the top and bottom and around the exhaust vents.

2.1.1 Connecting Hardware

In this instruction, you will learn how to find a proper location for your Fieldbus Gateway, how to connect to the network, hook up the power cable, and connect to the EKI-1242.

2.2 Verifying Fieldbus Gateway Operation

Before installing the device in a rack or on a wall, power on the fieldbus gateway to verify that the fieldbus gateway passes the power-on self-test (POST). To connect the cabling to the power source see “Power Supply Installation” on page 18.

At startup (POST), the System LED blinks green, while the remaining LEDs are a solid green. Once the fieldbus gateway passes POST self-test, the System LED turns green. The other LEDs turn off and return to their operating status. If the fieldbus gateway fails POST, the System LED turns amber.

After a successful self-test, power down the fieldbus gateway and disconnect the power cabling.

The fieldbus gateway is now ready for installation at its final location.

2.3 Installing the Fieldbus Gateway

2.3.1 DIN Rail Mounting

The DIN rail mount option is the quickest installation option. Additionally, it optimizes the use of rail space.

The metal DIN rail kit is secured to the rear of the fieldbus gateway. The device can be mounted onto a standard 35 mm (1.37") x 7.5 mm (0.3") height DIN rail. The devices can be mounted vertically or horizontally. Refer to the following guidelines for further information.

Note! A corrosion-free mounting rail is recommended.



When installing, make sure to allow for enough space to properly install the cabling.

2.3.1.1 Installing the DIN-Rail Mounting Kit

1. Position the rear panel of the fieldbus gateway directly in front of the DIN rail, making sure that the top of the DIN rail clip hooks over the top of the DIN rail, as shown in the following illustration.

Warning! Do not install the DIN rail under or in front of the spring mechanism on the DIN rail clip to prevent damage to the DIN rail clip or the DIN rail.



Make sure the DIN rail is inserted behind the spring mechanism.

2. Once the DIN rail is seated correctly in the DIN rail clip, press the front of the fieldbus gateway to rotate the fieldbus gateway down and into the release tab on the DIN rail clip.

If seated correctly, the bottom of the DIN rail should be fully inserted in the release tab.

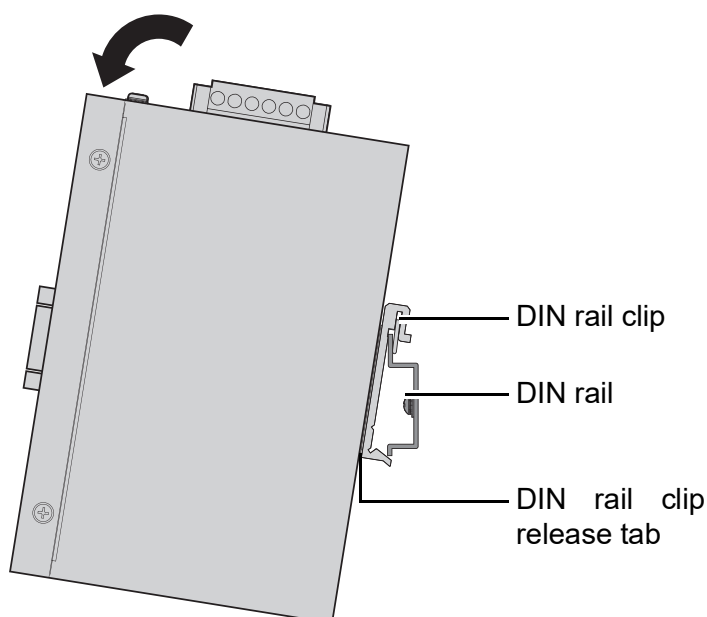


Figure 2.1 Installing the DIN-Rail Mounting Kit

See the following figure for an illustration of a completed DIN installation procedure.

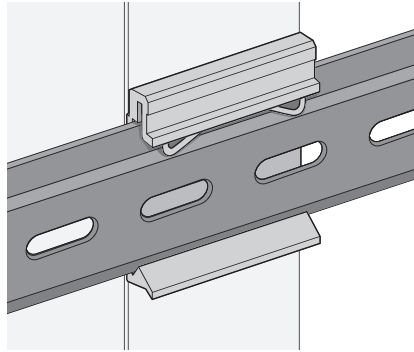


Figure 2.2 Correctly Installed DIN Rail Kit

3. Grasp the bottom of the fieldbus gateway and slightly rotate it upwards. If there is resistance, the fieldbus gateway is correctly installed. Otherwise, re-attempt the installation process from the beginning.

2.3.1.2 Removing the DIN-Rail Mounting Kit

1. Ensure that power is removed from the fieldbus gateway, and disconnect all cables and connectors from the front panel of the fieldbus gateway.
2. Push down on the top of the DIN rail clip release tab with your finger. As the clip releases, lift the bottom of the fieldbus gateway, as shown in the following illustration.

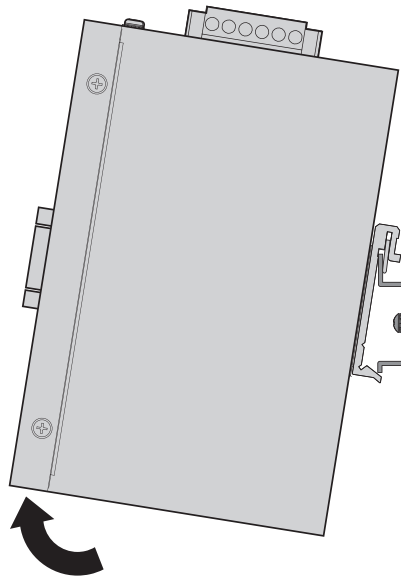


Figure 2.3 Removing the DIN-Rail

2.3.2 Wall-Mounting

The wall mounting option provides better shock and vibration resistance than the DIN rail vertical mount.

Note! When installing, make sure to allow for enough space to properly install the cabling.



Before the device can be mounted on a wall, you will need to remove the DIN rail plate.

1. Rotate the device to the rear side and locate the DIN mounting plate.
2. Remove the screws securing the DIN mounting plate to the rear panel of the fieldbus gateway.
3. Remove the DIN mounting plate. Store the DIN mounting plate and provided screws for later use.
4. Align the wall mounting plates on the rear side. The screw holes on the device and the mounting plates must be aligned, see the following illustration.
5. Secure the wall mount plates with M3 screws, see the following figure.

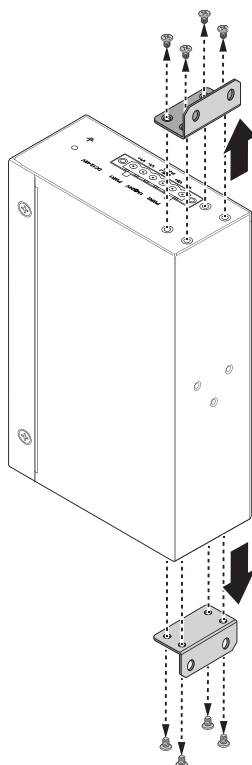


Figure 2.4 Installing Wall Mount Plates

Once the wall mounting plates are secure on the device, you will need to attach the wall screws (x4).

6. Locate the installation site and place the fieldbus gateway against the wall, making sure it is the final installation location.
7. Use the wall mount plates as a guide to mark the locations of the screw holes.
8. Drill four holes over the four marked locations on the wall, keeping in mind that the holes must accommodate wall sinks in addition to the screws.
9. Insert the wall sinks into the walls.

10. Insert the screws into the wall sinks. Leave a 2 mm gap between the wall and the screw head to allow for wall mount plate insertion.



Figure 2.5 Securing Wall Mounting Screws

- Note!**
- Make sure the screws dimensions are suitable for use with the wall mounting plate.
 - Do not completely tighten the screws into the wall. A final adjustment may be needed before fully securing the wall mounting plates on the wall.

11. Align the wall mount plate over the screws on the wall.
12. Install the wall mount plate on the screws and slide it forward to lock in place, see the following figure.

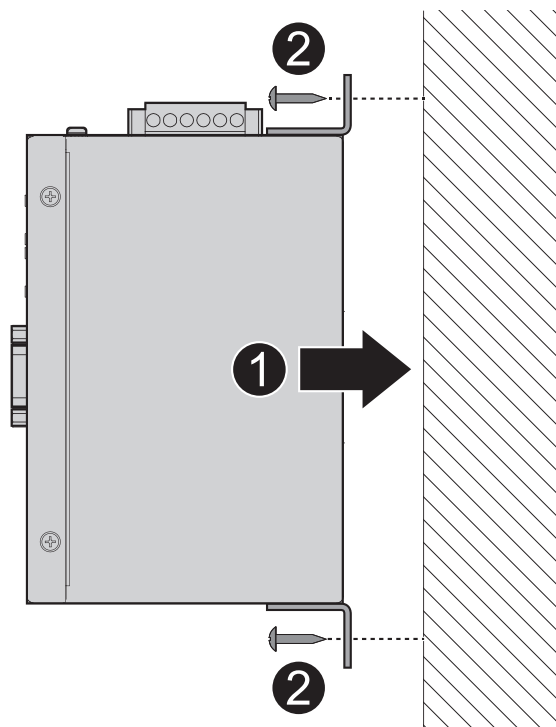


Figure 2.6 Wall Mount Installation

13. Once the device is installed on the wall, tighten the screws to secure the device.

2.4 Connecting the Fieldbus Gateway to Ethernet Ports

2.4.1 RJ45 Ethernet Cable Wiring

For RJ45 connectors, data-quality, twisted pair cabling (rated CAT5 or better) is recommended. The connector bodies on the RJ45 Ethernet ports are metallic and connected to the GND terminal. For best performance, use shielded cabling. Shielded cabling may be used to provide further protection.

Table 2.1: RJ45 Ethernet Cable Wiring

Straight-thru Cable Wiring		Cross-over Cable Wiring	
Pin 1	Pin 1	Pin 1	Pin 3
Pin 2	Pin 2	Pin 2	Pin 6
Pin 3	Pin 3	Pin 3	Pin 1
Pin 6	Pin 6	Pin 6	Pin 2

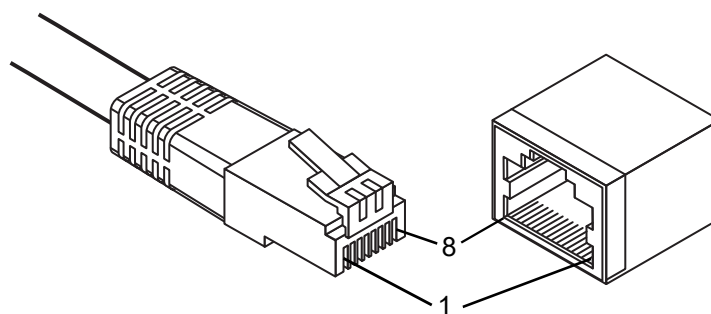


Figure 2.7 Ethernet Plug & Connector Pin Position

Maximum cable length: 100 meters (328 ft.) for 10/100BaseT.

2.5 Serial Connection

EKI-1242 provides eight ports DB9 (male) connectors. RS-232/422/485 pin assignments as below:

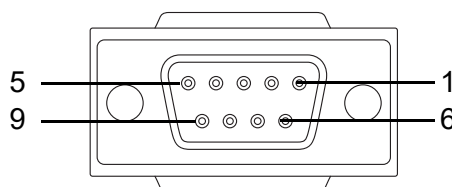


Figure 2.8 DB 9 Pin Position

Table 2.2: Serial Connection

Pin	1	2	3	4	5	6	7	8	9
RS-232	DCD	RX	TX	DTR	GND	DSR	RTS	CTS	RI
RS-422	TX-			TX+	GND		RX+		RX-
RS-485	DATA-			DATA+	GND				

2.6 MicroSD Card Installation

The EKI-1242 provides users with an easy way to backup, restore, and deploy configuration settings. The fieldbus gateway provides a microSD card slot to support simple means to manage system configuration settings.

Only microSD cards with the FAT32 or exFAT file systems are supported.

2.6.1 Installing a MicroSD Card

1. Before continuing, make sure the file system on the microSD card is set to FAT32 or exFAT. If necessary, format the microSD card and then continue with the procedure.
2. Open the component cover.

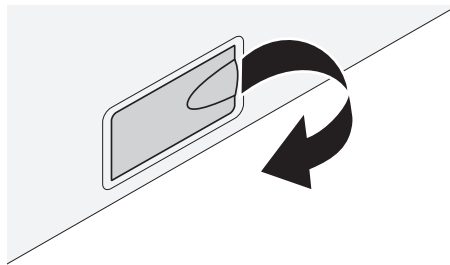


Figure 2.9 Opening the Component Cover

3. The microSD card has a beveled edge. Align the microSD card with the slot making sure the card is aligned with the groove. If there is any resistance, remove the card and re-align it to the slot.
4. Insert the microSD card and press it in until an audible click sounds.

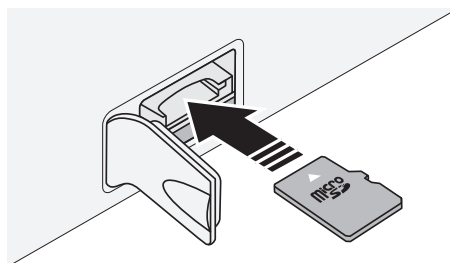


Figure 2.10 Installing the MicroSD Card

5. Close the component cover.

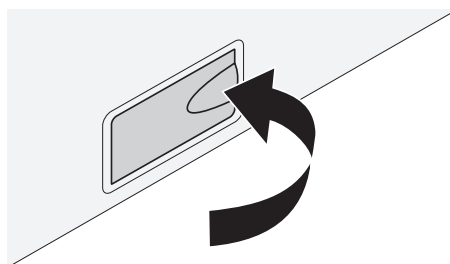


Figure 2.11 Closing the Component Cover

2.6.2 Utilizing a MicroSD Card

1. The device includes a microSD port to provide easy functionality to backup and deployment operations. The following information describes the supported uses when a microSD card (FAT32 or exFAT) is installed in the device.
Further information see “Backup Manager” on page 44 and “Upgrade Manager” on page 45.
2. The following functions are available:
 - Deployment management:
 - Reset configuration to factory default and power off.
 - Insert a microSD card with an valid configuration file.
 - Power on the device.
 - The device will use the valid configuration settings in the microSD card.
 - Backup management:
 - Device setting is not factory default.
 - Enable Automatically Backup, see “Backup Manager” on page 44.
 - Power off the device and insert a microSD card.
 - Power on the device. The device’s current configuration settings will be saved to the microSD card.

2.6.2.1 MicroSD Support

In the event of possible function errors, see the following information:

1. Check that the microSD card file system is FAT32 or exFAT.
2. Check that the microSD card has at least 20 Mbytes of free space.
3. Check that the microSD card is not write-protected.
4. Check that the file system is not corrupted.
5. Check that the microSD card is not damaged.

If any of the events occur, the fieldbus gateway halts operation and the status LED begins flashing.

2.7 Power Supply Installation

2.7.1 Overview

Warning! Power down and disconnect the power cord before servicing or wiring the fieldbus gateway.



Caution! Do not disconnect modules or cabling unless the power is first switched off.



The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the fieldbus gateway device.

Caution! Disconnect the power cord before installation or cable wiring.



The fieldbus gateways can be powered by using the same DC source used to power other devices. A DC voltage range of 12 to 48 V_{DC} must be applied between the V1+ terminal and the V1- terminal (PW1), see the following illustrations. The chassis ground screw terminal should be tied to the panel or chassis ground. A redundant power configuration is supported through a secondary power supply unit to reduce network down time as a result of power loss.

EKI-1242 supports 12 to 48 V_{DC}. Dual power inputs are supported and allow you to connect a backup power source.

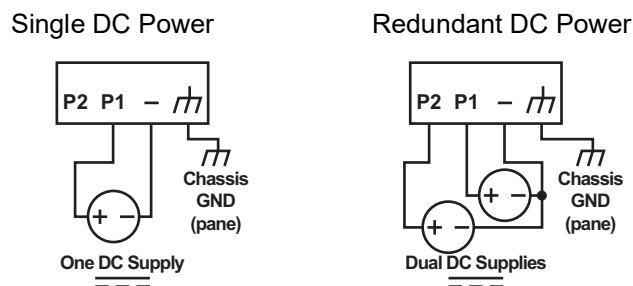


Figure 2.12 Power Wiring for EKI-1242

2.7.2 Considerations

Take into consideration the following guidelines before wiring the device:

- The Terminal Block (CN1) is suitable for 12-24 AWG (3.31 - 0.205 mm²). Torque value 7 lb-in.
- The cross sectional area of the earthing conductors shall be at least 3.31 mm².
- Calculate the maximum possible current for each power and common wire. Make sure the power draw is within the limits of local electrical code regulations.
- For best practices, route wiring for power and devices on separate paths.
- Do not bundle together wiring with similar electrical characteristics.
- Make sure to separate input and output wiring.
- Label all wiring and cabling to the various devices for more effective management and servicing.

Note! *Routing communications and power wiring through the same conduit may cause signal interference. To avoid interference and signal degradation, route power and communications wires through separate conduits.*



2.7.3 Grounding the Device

Caution! *Do not disconnect modules or cabling unless the power is first switched off.*



The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the fieldbus gateway device.

Caution! *Before connecting the device properly ground the device. Lack of a proper grounding setup may result in a safety risk and could be hazardous.*



Caution! *Do not service equipment or cables during periods of lightning activity.*



Caution! *Do not service any components unless qualified and authorized to do so.*



Caution! *Do not block air ventilation holes.*



Electromagnetic Interference (EMI) affects the transmission performance of a device. By properly grounding the device to earth ground through a drain wire, you can setup the best possible noise immunity and emissions.

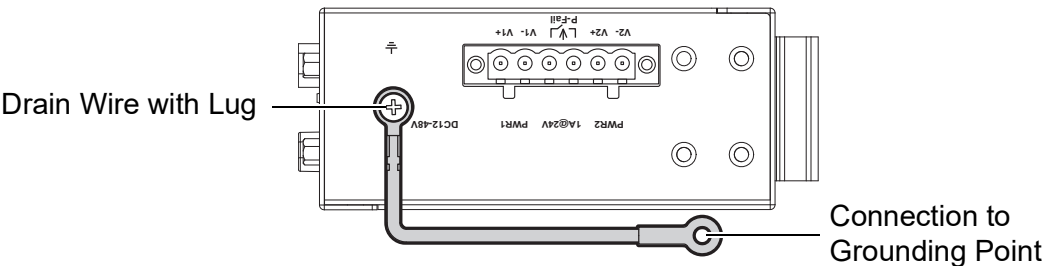


Figure 2.13 Grounding Connection

By connecting the ground terminal via drain wire to earth ground the fieldbus gateway and chassis can be grounded.

Note! *Before applying power to the grounded fieldbus gateway, it is advisable to use a volt meter to ensure there is no voltage difference between the power supply's negative output terminal and the grounding point on the fieldbus gateway.*



2.7.4 Wiring a Relay Contact

The following section details the wiring of the relay output. The terminal block on the EKI-1242 is wired and then installed onto the terminal receptor located on the EKI-1242.

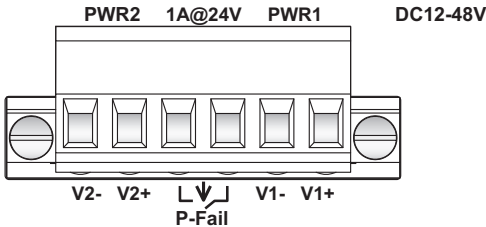


Figure 2.14 Terminal Receptor: Relay Contact

The terminal receptor includes a total of six pins: two for PWR1, two for PWR2 and two for a fault circuit.

2.7.5 Wiring the Power Inputs

Caution! Do not disconnect modules or cabling unless the power is first switched off.



The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the fieldbus gateway device.

Warning! Power down and disconnect the power cord before servicing or wiring the fieldbus gateway.



There are two power inputs for normal and redundant power configurations. The power input 2 is used for wiring a redundant power configuration. See the following for terminal block connector views.

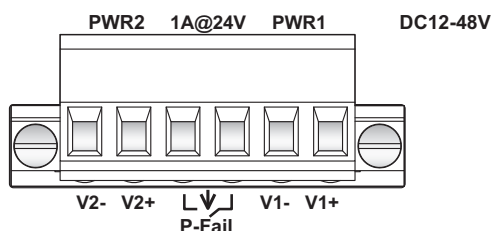


Figure 2.15 Terminal Receptor: Power Input Contacts

To wire the power inputs:

Make sure the power is not connected to the fieldbus gateway or the power converter before proceeding.

1. Loosen the screws securing terminal block to the terminal block receptor.
2. Remove the terminal block from the fieldbus gateway.

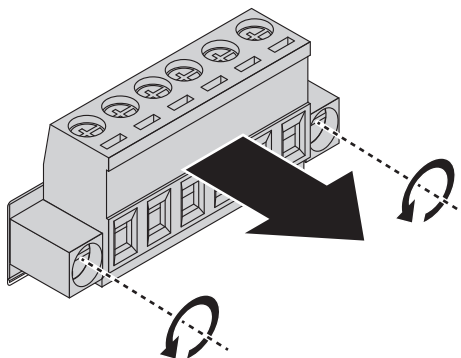


Figure 2.16 Removing a Terminal Block

3. Insert a small flat-bladed screwdriver in the V1+/V1- wire-clamp screws, and loosen the screws.
4. Insert the negative/positive DC wires into the V+/V- terminals of PW1. If setting up power redundancy, connect PW2 in the same manner.
5. Tighten the wire-clamp screws to secure the DC wires in place.

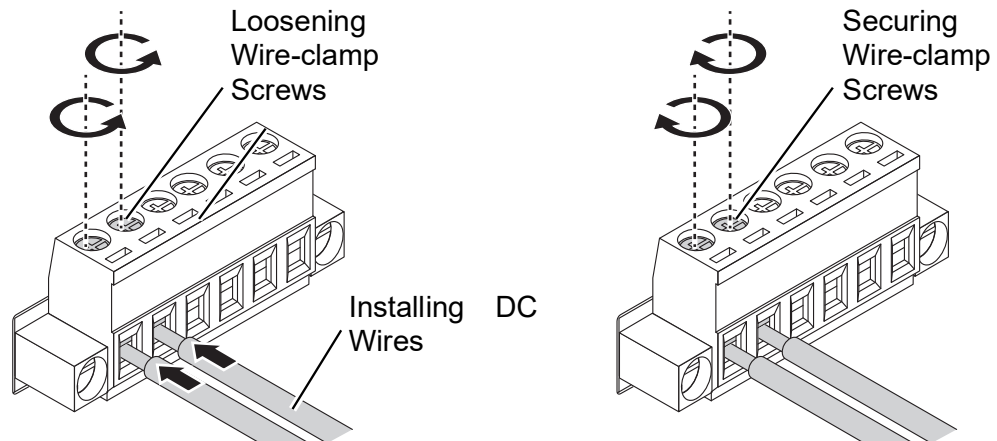


Figure 2.17 Installing DC Wires in a Terminal Block

6. Align the terminal block over the terminal block receptor on the fieldbus gateway.
 7. Insert the terminal block and press it in until it is flush with the terminal block receptor.
 8. Tighten the screws on the terminal block to secure it to the terminal block receptor.
- If there is no gap between the terminal block and the terminal receptor, the terminal block is seated correctly.

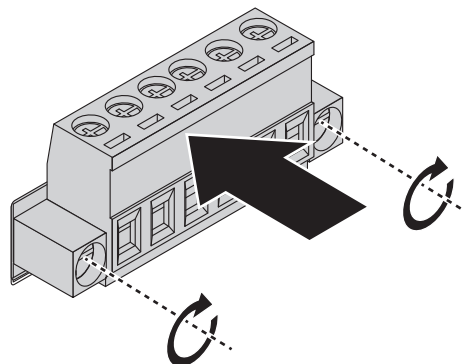


Figure 2.18 Securing a Terminal Block to a Receptor

2.8 Reset Button

Reset configuration to factory default: Press and hold Reset button for 5 seconds.
System reboot: Press and hold Reset button for 2 seconds.

Note! Do NOT power off the fieldbus gateway when loading default settings.



Chapter 3

Managing Fieldbus Gateway

3.1 Log In

To access the login window, connect the device to the network, and see “Connecting the Fieldbus Gateway to Ethernet Ports” on page 18. Once the fieldbus gateway is installed and connected, power on the fieldbus gateway and see the following procedures to log into your fieldbus gateway.

When the fieldbus gateway is first installed, the default network configuration is set to DHCP enabled. You will need to make sure your network environment supports the fieldbus gateway setup before connecting it to the network.

1. Launch your web browser on a computer.
2. In the browser’s address bar type in the fieldbus gateway’s default IP address (192.168.1.1). The login screen appears.
3. Enter the default username and password (admin/admin) to log into the management interface. You can change the default password after you have successfully logged in.
4. Click **Login** to enter the management interface.

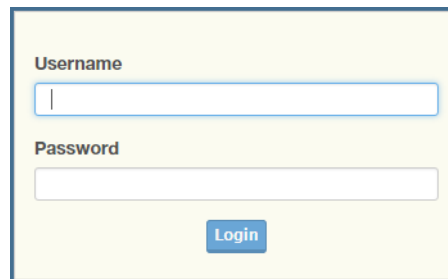
The image shows a login screen with a light yellow background. It contains two text input fields: the first is labeled "Username" and the second is labeled "Password". Below these fields is a blue button with the text "Login" in white.

Figure 3.1 Login Screen

3.1.1 Changing Default Password

In keeping with good management and security practices, it is recommended that you change the default password as soon as the device is functioning and setup correctly. The following details the necessary steps to change the default password.

To change the password:

1. Navigate to **System Management > Change Password**.
2. In the **Password** field, type in the new password. Re-type the same password in the **Confirmation** field.
3. Click **Apply** to change the current settings.

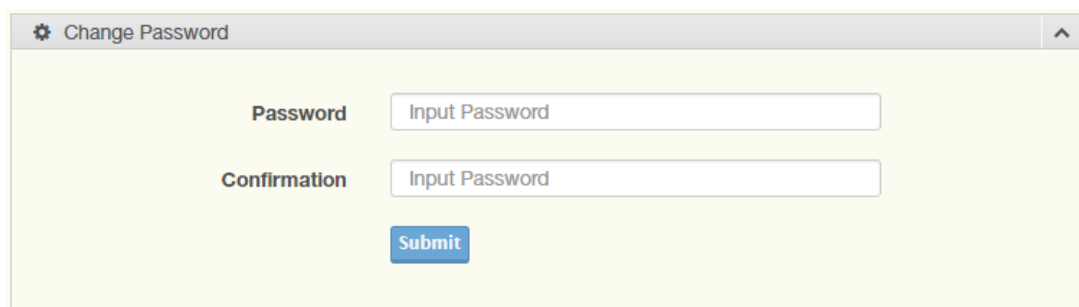
The image shows a "Change Password" window with a grey title bar containing a gear icon and the text "Change Password". The main area has a light yellow background. It contains two text input fields: the first is labeled "Password" and the second is labeled "Confirmation". Below these fields is a blue button with the text "Submit" in white.

Figure 3.2 Changing a Default Password

After saving all the desired settings, perform a system save (**System Management > Apply Configuration**). The changes are saved.

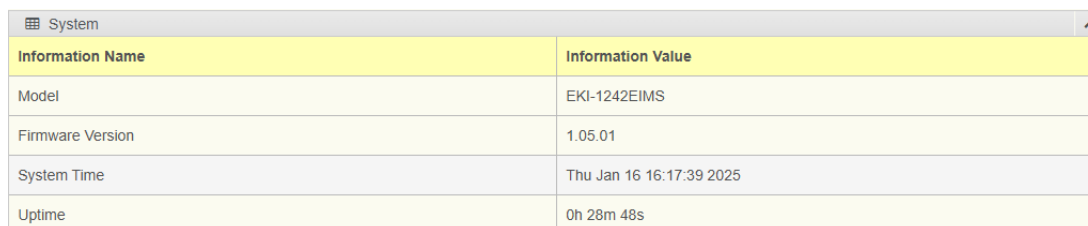
3.2 Overview

3.2.1 Device Information

The Device Information menu lists information, such as: Model, Firmware version, MAC Address, and more, pertaining to the system. The information is for review only. To modify the device information, see the respective item within the user interface.

The following figures represent multiple supported devices. Some interface screens may represent specific device models.

To access this page, click **Overview > Device Information**.

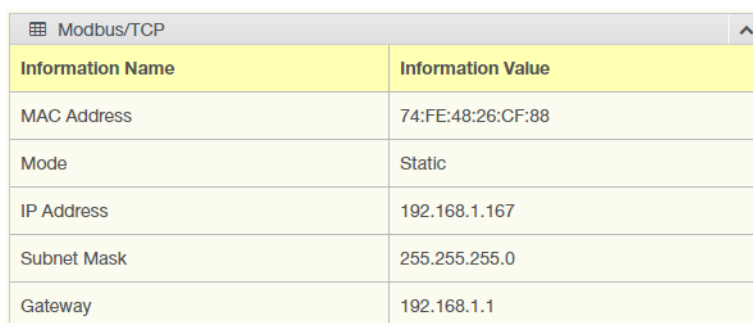


Information Name	Information Value
Model	EKI-1242EIMS
Firmware Version	1.05.01
System Time	Thu Jan 16 16:17:39 2025
Uptime	0h 28m 48s

Figure 3.3 Overview > Device Information > System

The following table describes the items in the previous figure.

Table 3.1: System	
Item	Description
System Time	Displays the system time of the device.
Model	Displays the model name of the device.
Firmware Version	Displays the current firmware version of the device.
Uptime	Displays the accumulated time for continuous operation.

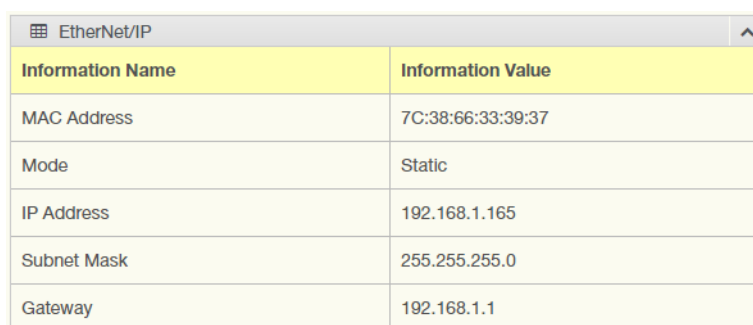


Information Name	Information Value
MAC Address	74:FE:48:26:CF:88
Mode	Static
IP Address	192.168.1.167
Subnet Mask	255.255.255.0
Gateway	192.168.1.1

Figure 3.4 Overview > Device Information > Modbus/TCP

Table 3.2: Modbus/TCP

Item	Description
MAC Address	Displays the MAC address of the device.
Mode	Displays the IP address setting mode of the device.
IP Address	Displays the assigned IP address of the device.
Subnet Mask	Displays the assigned subnet mask of the device.
Gateway	Displays the assigned gateway of the device.



The screenshot shows a software window titled 'EtherNet/IP'. Inside, there is a table with two columns: 'Information Name' and 'Information Value'. The table contains the following data:

Information Name	Information Value
MAC Address	7C:38:66:33:39:37
Mode	Static
IP Address	192.168.1.165
Subnet Mask	255.255.255.0
Gateway	192.168.1.1

Figure 3.5 Overview > Device Information > EtherNet/IP|PROFINET|OPC UA

The following table describes the items in the previous figure.

Table 3.3: EtherNet/IP|PROFINET|OPC UA

Item	Description
MAC Address	Displays the MAC address of the device.
Mode	Displays the IP address setting mode of the device.
IP Address	Displays the assigned IP address of the device.
Subnet Mask	Displays the assigned subnet mask of the device.
Gateway	Displays the assigned gateway of the device.

3.2.2 Diagnose

This page will display different information based on the different protocol settings.

The following tables are available only in Interface 1 Mode: EtherNet/IP.

- The following table for **EtherNet/IP Instance** settings are informational only: O->T Instance (Exclusive Owner), Exclusive Owner Data Size, O->T Instance (Input Only), Input Only Data Size, T->O Instance and T->O Instance Data Size.
- The following table for **EtherNet/IP Overview** settings are informational only: Class3 connections, Class1 connections, Total TCP Transmit Packets, Total TCP Receive Packets, Total UDP Transmit Packets and Total UDP Receive Packets.
- The following table for **I/O Connection** settings are informational only: UP Time, Originator, Receive Address, O->T Packets, T->O Packets, O->T Connection ID, O->T RPI (ms), T->O Connection ID and T->O RPI (ms).

The following tables are available only in Interface 1 Mode: PROFINET.

- The following table for **PROFINET** settings are informational only: Connect Status, Connect Counter, Connected PLC MAC Address, Connected PLC IP Address, PLC Operation Mode, Device Name and Send Clock (ms).

The following tables are available only in Interface 1 Mode: OPC UA.

- The following table for **OPC UA** Connection List settings is for reference only: Index, IP Address and TCP Port.

The following tables are available only in Interface 2 Mode: Modbus

- The ensuing table for **Modbus** settings is for reference only: Transaction Name, Connect Status, Read Counter, Write Counter, Connect Error Counter, Read Error Counter and Write Error Counter.

3.2.3 Data View

The I/O Data View function allows you to display the exchanged data for all I/O modules.

Select the data flow directions to view the correct EtherNet/IP data or OPC UA data or Profinet slot data.

To access this page, click **Overview > Data View**.

The displayed information will vary depending on the selected protocol settings.

The following table describes the items in the Interface 1 Mode: EtherNet/IP.

☐ Auto Refresh																
Address	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0000h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0010h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0020h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0030h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0040h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0050h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0060h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0070h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0080h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0090h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00a0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00b0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00c0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00d0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00e0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00f0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0100h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0110h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Name	FC	Data Size (Byte)	Byte Range
------	----	------------------	------------

Figure 3.6 Overview > Data View (EtherNet/IP)

The following table describes the items in the previous figure.

Table 3.4: Data View

Item	Description
Auto Refresh	Check the option to automatically have the table refresh the information.

The following figure displays the menu as found in Interface 1 Mode: PROFINET.

Data View

Modbus

Transaction Name	FC	Quantity
------------------	----	----------

Modbus Data

Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
0000h																
0010h																
0020h																
0030h																
0040h																

Figure 3.7 Overview > Data View (PROFINET)

The following figure displays the menu as found in Interface 1 Mode: OPC UA.

☐ Auto Refresh																
Address	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0000h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0010h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0020h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0030h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0040h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0050h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0060h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0070h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0080h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0090h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00a0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00b0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00c0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00d0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00e0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Show entries Search:

Name	FC	Data Size (Byte)	Byte Range
No data available in table			

Showing 0 to 0 of 0 entries

Note! When Interface 2 Mode is selected with the Python Script, the FC in the Data View will not be displayed.



3.3 Network Setting

3.3.1 IP Setting

The IP Setting menu allows you to select a static or DHCP network configuration. The Static displays the configurable settings for the static option.

To access this page, click **Network Setting > IP Setting**.

The following figure displays the menu as found in Interface 1 Mode: EtherNet/IP | OPC UA.

IP Setting

Modbus/TCP IP Address Setting

Mode: Static address

IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.254

☐ Modbus/TCP and EtherNet/IP interface use the same IP address setting

EtherNet/IP IP Address Setting

Mode: Static address

IP Address: 0.0.0.0

Subnet Mask: 0.0.0.0

Gateway: 0.0.0.0

Submit

Figure 3.8 Network Setting > IP Setting

The following table describes the items in the previous figure.

Table 3.5: IP Setting

Item	Description
Modbus/TCP IP Address Setting	
Mode	Click the drop-down menu to select the IP address setting mode: Static address, or DHCP client.
IP Address	Enter a value to specify the IP address of the interface. The default is 192.168.1.1.
Subnet Mask	Enter a value to specify the IP subnet mask for the interface. The default is 255.255.255.0.
Gateway	Enter a value to specify the default gateway for the interface. The default is 192.168.1.254.
Modbus/TCP and EtherNet/IP interface use the same IP address setting	Check the option to use same IP address setting on Modbus/TCP and EtherNet/IP interface. In this mode, the Ethernet ports of Modbus/TCP and EtherNet/IP are bridged, so the traffic can be forwarded between these interfaces. Unchecked the option to use two different IP subnet on Modbus/TCP and EtherNet/IP interface. In this mode, the Ethernet ports of Modbus/TCP and EtherNet/IP are not bridged, so the traffic can't be forwarded between these interfaces.
EtherNet/IP IP Address Setting OPC UA IP Address Setting	
Mode	Click the drop-down menu to select the IP Address Setting mode: Static address, or DHCP client.

Table 3.5: IP Setting

Item	Description
IP Address	Enter a value to specify the IP address of the interface. The default is 0.0.0.0.
Subnet Mask	Enter a value to specify the IP subnet mask for the interface. The default is 0.0.0.0.
Gateway	Enter a value to specify the default gateway for the interface. The default is 0.0.0.0.

The following figure displays the menu as found in Interface 1 Mode: PROFINET.

The screenshot shows a web interface titled "IP Setting". It contains two sections: "Modbus/TCP IP Address Setting" and "PROFINET IP Address Setting".

Modbus/TCP IP Address Setting:

- Mode: Static address (dropdown menu)
- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.1.254

PROFINET IP Address Setting:

- Mode: Static address
- IP Address: 0.0.0.0
- Subnet Mask: 0.0.0.0
- Gateway: 0.0.0.0

A "Submit" button is located at the bottom of the PROFINET section.

Figure 3.9 Network Setting > IP Setting

The following table describes the items in the previous figure.

Table 3.6: IP Setting

Item	Description
Modbus/TCP IP Address Setting	
Mode	Click the drop-down menu to select the IP address setting mode: Static address, or DHCP client.
IP Address	Enter a value to specify the IP address of the interface. The default is 192.168.1.1.
Subnet Mask	Enter a value to specify the IP subnet mask for the interface. The default is 255.255.255.0.
Gateway	Enter a value to specify the default gateway for the interface. The default is 192.168.1.254.
PROFINET IP Address Setting	
Mode	Displays the IP address setting mode of the device.
IP Address	Enter a value to specify the IP address of the interface. The default is 0.0.0.0.
Subnet Mask	Enter a value to specify the IP subnet mask for the interface. The default is 0.0.0.0.
Gateway	Enter a value to specify the default gateway for the interface. The default is 0.0.0.0.

3.4 Serial Settings

Note! When Interface 2 Mode is selected with the Python Script, the Serial Settings will be locked.

3.4.1 Port

To access this page, click **Serial Settings > Port 1/Port 2**.

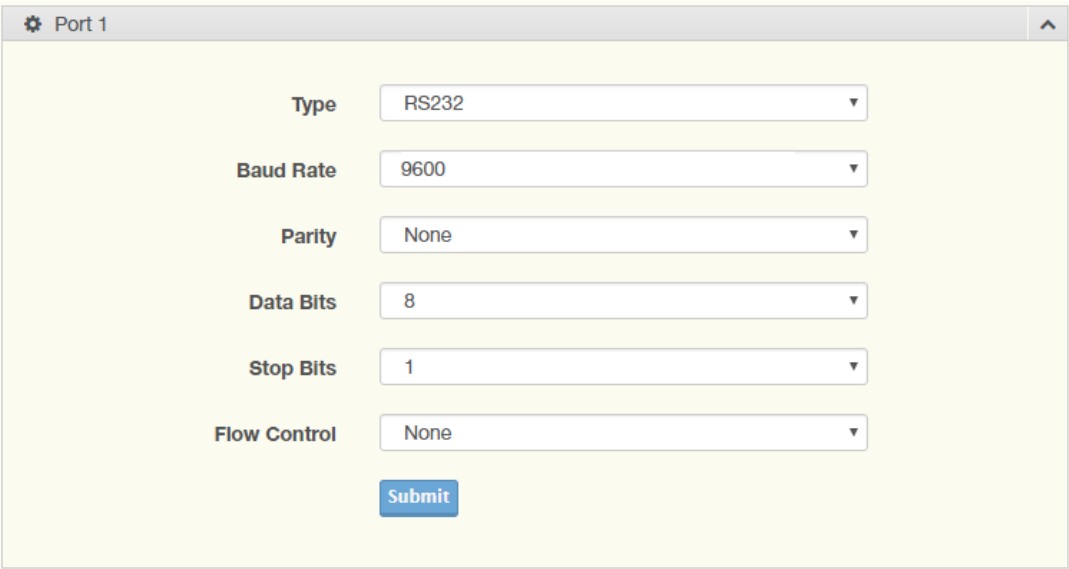


Figure 3.10 Serial Settings > Port 1/Port 2

The following table describes the items in the previous figure.

Table 3.7: Port	
Item	Description
Type	Click the drop-down menu to select a serial interface: RS232, RS422 or RS485.
Baud Rate	Enter a value to specify the baud rate. The value should conform to the current transmission speeds of connected devices when setting the baud rate.
Parity	Click the drop-down menu to select the parity: None, Odd, Even, Mark or Space.
Data Bits	Click the drop-down menu to select the data bits: 5, 6, 7, or 8.
Stop Bits	Click the drop-down menu to select the stop bits: 1, 1.5 or 2.
Flow Control	Click the drop-down menu to select the flow control mode: None, XOn/XOff or RTS/CTS.
Submit	Click Submit to save the values and update the screen.

3.5 Protocol Setting

3.5.1 Interface Setting - Protocol Conversion

The EKI-1242IEIMS supports Modbus RTU, Modbus TCP, EtherNet/IP, PROFINET, and OPC UA protocols. The EKI-1242 serves different roles on each of its sides. Different industrial protocols can be set based on different PLCs, and the role of the EKI-1242 can be configured accordingly. In a typical application, one side of the EKI-1242 will be configured as a server, while the other side will be configured as a client. The following configuration settings are possible:

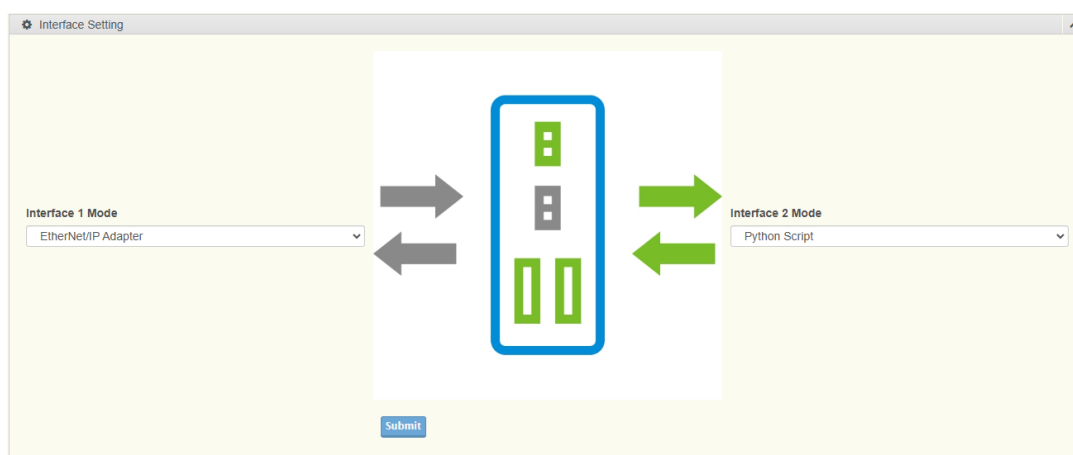


Figure 3.11 Interface Setting

Table 3.8: Interface Setting - Protocol Conversion

Interface 1 Mode	Interface 2 Mode
EtherNet/IP Adapter	Modbus Client
OPC UA Server	Python Script
PROFINE-IO Device	

After selecting the protocol and roles, proceed to Interface 1 Mode and Interface 2 Mode for further parameter configuration and Modbus command settings.

3.5.1.1 EtherNet/IP Setting

The EtherNet/IP Setting page is only available when Interface Setting > Interface 1 Mode is set to EtherNet/IP Adapter.

On the EtherNet/IP network, the gateway transmits mapped data to scanner through I/O data. The first two I/O mapped bytes in either direction can be dedicated for status/control information, and another 64 bytes of data coming from the Modbus/ TCP network can feature the Modbus exception codes.

To access this page, click **Protocol Setting > Interface 1 Mode**.

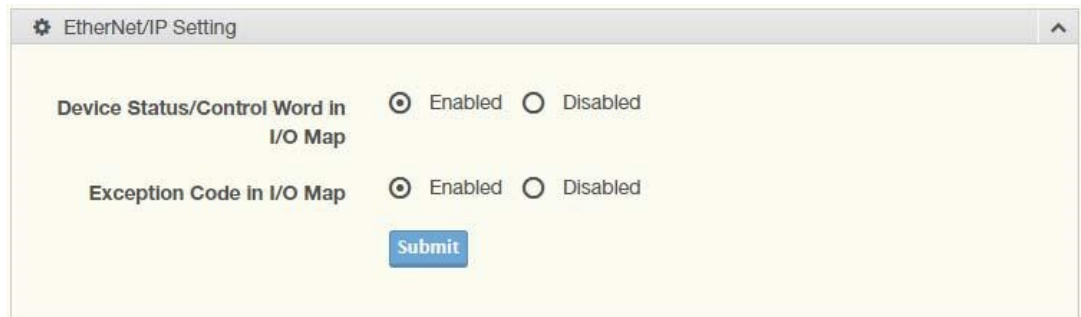


Figure 3.12 EtherNet/IP Setting

The following table describes the items in the previous figure.

Table 3.9: EtherNet/IP Setting

Item	Description
Device Status/Control Word in I/O Map	Select Enabled to dedicate the first two I/O mapped bytes for status/control information (default: Disabled).
Exception Code in I/O Map	Select Enabled to dedicate the last 64 bytes of data from the EtherCAT network stream (default: Disabled).
Submit	Click Submit to save the values and update the screen.

3.5.1.2 PROFINET Setting

The PROFINET Setting page is only available when Interface Setting > Interface 1 Mode is set to PROFINET I/O Device.

On the PROFINET network, the gateway transmits mapped data to PROFINET I/O Slot. There are two types of slot mappings as defined in the following figure.

To access this page, click **Protocol Setting > Interface 1 Mode**.

The screenshot shows a web interface with two main sections. The top section, titled 'Interface 1 Mode' with a gear icon, contains the 'PROFINET' settings. It includes two radio button options: 'Device Status/Control Word in Slot' (with 'Enabled' and 'Disabled' options, where 'Disabled' is selected) and 'Exception Code in Slot' (also with 'Enabled' and 'Disabled' options, where 'Disabled' is selected). Below these are two text input fields: 'Read Only Community' with the value 'public' and 'Read / Write Community' with the value 'private'. A blue 'Submit' button is at the bottom of this section. The bottom section, titled 'GSDML Generator' with a gear icon, contains a 'Sub-Category' text input field with the placeholder 'Sub-Category' and a blue 'Download' button labeled 'GSDML File'.

Figure 3.13 PROFINET Setting

The following table describes the items in the previous figure.

Table 3.10: PROFINET Setting

Item	Description
Device Status/Control Word in Slot	When enabled, Device Status/Control Word should be in PROF-INET slot 1. The Modbus exception codes should be in PROFINET I/O slot 2. When disabled, the Modbus exception codes should be in PROFINET I/O slot 1. (default: Disabled).
Exception Code in Slot	Enable to use the Modbus exception code setting, see Device Status/Control Word in Slot in previous definition.
Read Only Community	Enter the value for the SNMP Read Only Community string (default: public).
Read/Write Community	Enter the value for the SNMP Read/Write Community string (default: private).
GSDML Generator	
Sub-Category	Set the name of Sub-Category
GSDML File	Download GSDML File
Submit	Click Submit to save the values and update the screen.

3.5.1.3 OPC UA Setting

The OPC UA Setting page is only available when Interface Setting > Interface 1 Mode is set to OPC UA Server.

On the OPC UA network, the gateway transmits mapped data to the UPC UA nodes. To access this page, click **Protocol Setting > Interface 1 Mode**.

OPC UA Setting

Anonymous ☒ Enabled ☐ Disabled

Certificate Login ☐ Enabled ☒ Disabled

TCP Port (1 - 65535)

Maximum session (1 - 128)

Session timeout (30 - 3600 seconds)

Figure 3.14 OPC UA Setting

The following table describes the items in the previous figure.

Table 3.11: OPC UA Setting

Item	Description
Anonymous	Select Enabled to decided authentication setting in the OPC UA server (default: Enabled). When enabled, the server allowed anonymous login. When disabled, the server needs username and password, the username and password same as Web UI username and password.
Certificate Login	Select Enabled to enable the certificate login of clients. Client side can be select as below: Security Policy: ■ None ■ Basic128Rsa15 – Sign – Sign & Encrypt ■ Basic256Sha256 – Sign – Sign & Encrypt
TCP Port	Enter the value to specify the OPC UA server listen port (default: 4840).
Maximum session	Enter the value to specify the OPC UA server maximum sessions (default: 128).
Session time-out	Enter the value to specify each session timeout (default: 600 sec.)
Submit	Click Submit to save the values and update the screen.

3.5.1.4 Modbus Setting

The Modbus Setting page is only available when Interface Setting > Interface 2 Mode is set to Modbus Client.

To communicate with remote Modbus/TCP Server devices, specify the Modbus command for each Server device. Each Server device may need more than one command for communication, so it is necessary to add all the commands manually.

To access this page, click **Protocol Setting > Interface 2 Mode**.

Figure 3.15 Modbus Setting

The following table describes the items in the previous figure.

Table 3.12: Modbus Setting

Item	Description
Start-up Mode	Click the drop-down menu to select the Server device's mode at startup: Running or Idle (default: Running).
When Modbus/TCP	Click the drop-down menu to select the command to initiate in the event of an error: Freeze Data or Clear Data. ■ Select Freeze Data to continue delivering the data most recently received from the Modbus-TCP network to the EtherNet/IP scanner. ■ Select Clear Data to clear any input entered into the data area and transmit only zeros to the EtherNet/IP scanner.
Modbus TCP Re-Connect Delay	Set the time for automatic reconnection of MODBUS TCP.
Modbus Starting Address Indexing	0-Based or 1-Based
Submit	Click Submit to save the values and update the screen.

The ensuing table for Modbus Commands table settings is for reference only: Allocated input size, output size, Index, Name, Mode, Server ID, FC, Address/ Quantity, Trigger, Scan Interval, Data Swap, I/O Map, Response Timeout, I/O Disconnect, Safe Value, Import file, Export file, Add (click to add a new transaction), Edit (click to modify existing transactions), Delete (click to delete existing transactions), Copy (click to copy an existing transaction) and FlowCtrl Status.

Figure 3.16 Modbus Commands

To add a new transaction:

Figure 3.17 Modbus Command Setting > Add

The following table describes the items in the previous figure.

Table 3.13: Modbus Command Setting	
Item	Description
Name	Enter the name to identify the transaction, max length: 32 characters.
Mode	Click the drop-down menu to select Modbus protocol mode: TCP or RTU. TCP: Modbus TCP communication over TCP/IP networking. RTU: Modbus RTU communication via the serial port.
Server IP Address	Enter the IP address of the Modbus/TCP server on Modbus/TCP mode.
Port	Enter the TCP port number of the remote server device (default Modbus-TCP port is 502), value range: 0 - 65535.
Serial Port	Select the serial interface where the remote Modbus/RTU device is located.
Server ID	Enter the Modbus/TCP server ID.

Table 3.13: Modbus Command Setting

Function Code	The client device delivers packets to the server device containing instructions as defined in the function code fields. The following is a list of the supported function codes.
	■ 01: Read coils ■ 02: Read discrete inputs ■ 03: Read holding registers ■ 04: Read input register ■ 05: Write single coil ■ 06: Write single register ■ 15: Write multiple coils ■ 16: Write multiple registers ■ 23: Read/Write multiple registers
Trigger	Click the drop-down menu to select the trigger setting. ■ Cyclic: The trigger function is set to read/write in a cyclical instance once the specified interval is reached, see Poll Interval field. ■ Data change: Checks for any data changes at the specified interval as defined the Poll Interval field. When a given change in the data area is noted, a write command is delivered.
Poll Interval	The Poll Interval value defines the frequency with which the Modbus command is re-issued.
Data Swap	The Data Swap field determines the order in which the particular bytes of the received/transmitted data are delivered. ■ None: Do not swap ■ Word: 0x01, 0x02 becomes 0x02, 0x01 ■ Double Word: 0x01, 0x02, 0x03, 0x04 becomes 0x04, 0x03, 0x02, 0x01 NOTE: ■ When function code is set to 1, 2, 5, or 15, the available option is None. ■ When function code is set to 6, the available options are None and Word. ■ When function code is set to 3, 4, 16, or 23, the quantity must be designated as an even integer.
Read Starting Address	Designate the read from/write to starting address for the Modbus registry.
Read Quantity	Designate the number of read cycles.
I/O Map	Select Enabled to enable I/O map function (default: Enabled). The function is only available for OPC UA protocol.
Response Timeout	Define the span of time, in milliseconds, within which the server is required to produce a response to the exchange. In I/O mapped write transaction, when EtherNet/IP does not exchange I/O: ■ Clear data to Modbus server: Transmits only zeros. ■ Freeze data to Modbus server: Repeat the last stored data. ■ Write safe value: The value to transmit for each element. ■ Stop: The transmission of any and all data to the Modbus server is halted.
Submit	Click Submit to save the values and update the screen.
Back	Click Back to return the previous page.

3.5.1.5 Python

The Python page is only available when Interface Setting > Interface 2 Mode is set to Python Script. This feature allows you to set Modbus vendor-specific settings/Python script and package it.



Figure 3.18 Python > Script

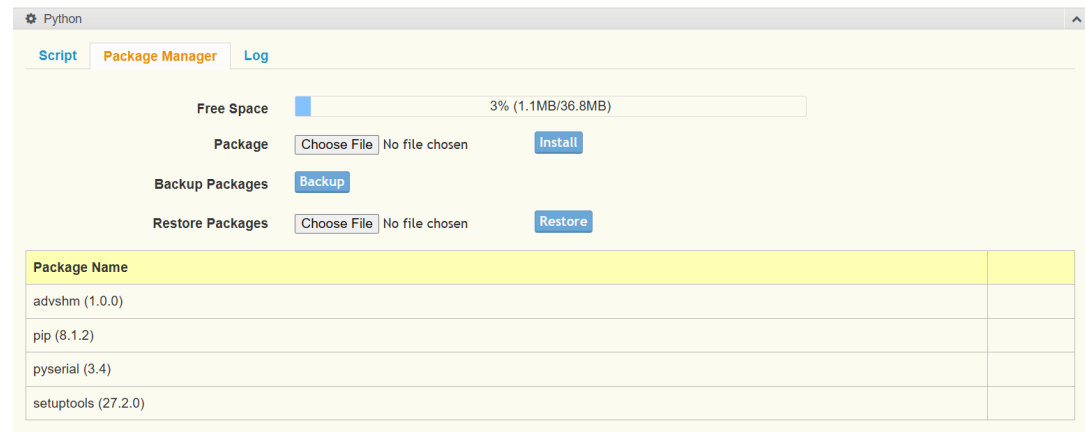


Figure 3.19 Python > Package Manager

The following table describes the items in the previous figure.

Table 3.14: Python	
Item	Description
Free Space	Display free space of the file system containing Python Package.
Package	Choose the Python Package and Install it.
Backup Packages	Click Backup to save Python packages.
Restore Packages	Choose the Python Package to Restore previous package version.
Package Name	Display installed Python Packages.

Specific events occur during the execution of software. Click Download to save Python log.

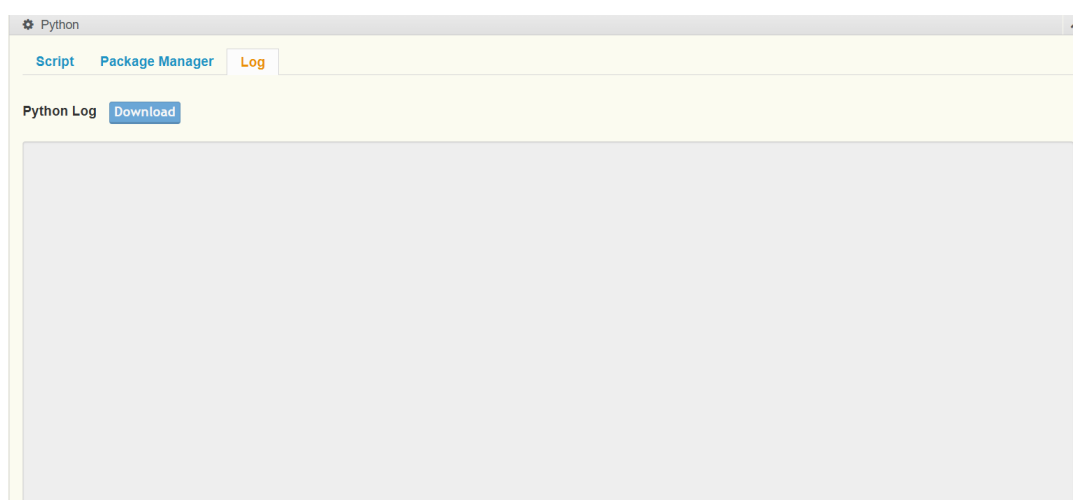


Figure 3.20 Python > Log

3.5.2 Mapping Overview

The Mapping Overview function allows the viewing of data between Modbus RTU/TCP to PROFINET Slot, EtherNet/IP I/O, OPC UA.

To access this page, click **Protocol Setting > Mapping Overview**.

The following tables are available only in Interface 1 Mode: EtherNet/IP Adapter and Interface 2 Mode: Modbus Client.

(If Interface 2 Mode' is set to Python Script, the Modbus – Client will section will display Input data and will not be displayed Function Code.)

- The ensuing table for **Input Mapping Overview** table settings is for reference only: Input Data Byte buffer view, Client Name, Client Function Code, Client Size (Byte) and Client Byte range.
- The ensuing table for **Output Mapping Overview** table settings is for reference only: Output Data Byte buffer view, Adapter Name, Adapter Function Code, Adapter Size (Byte) and Adapter Byte range.
- The ensuing table for **Transaction table settings** is for reference only: Name, Quantity, Class, Instance, Attribute and Access.

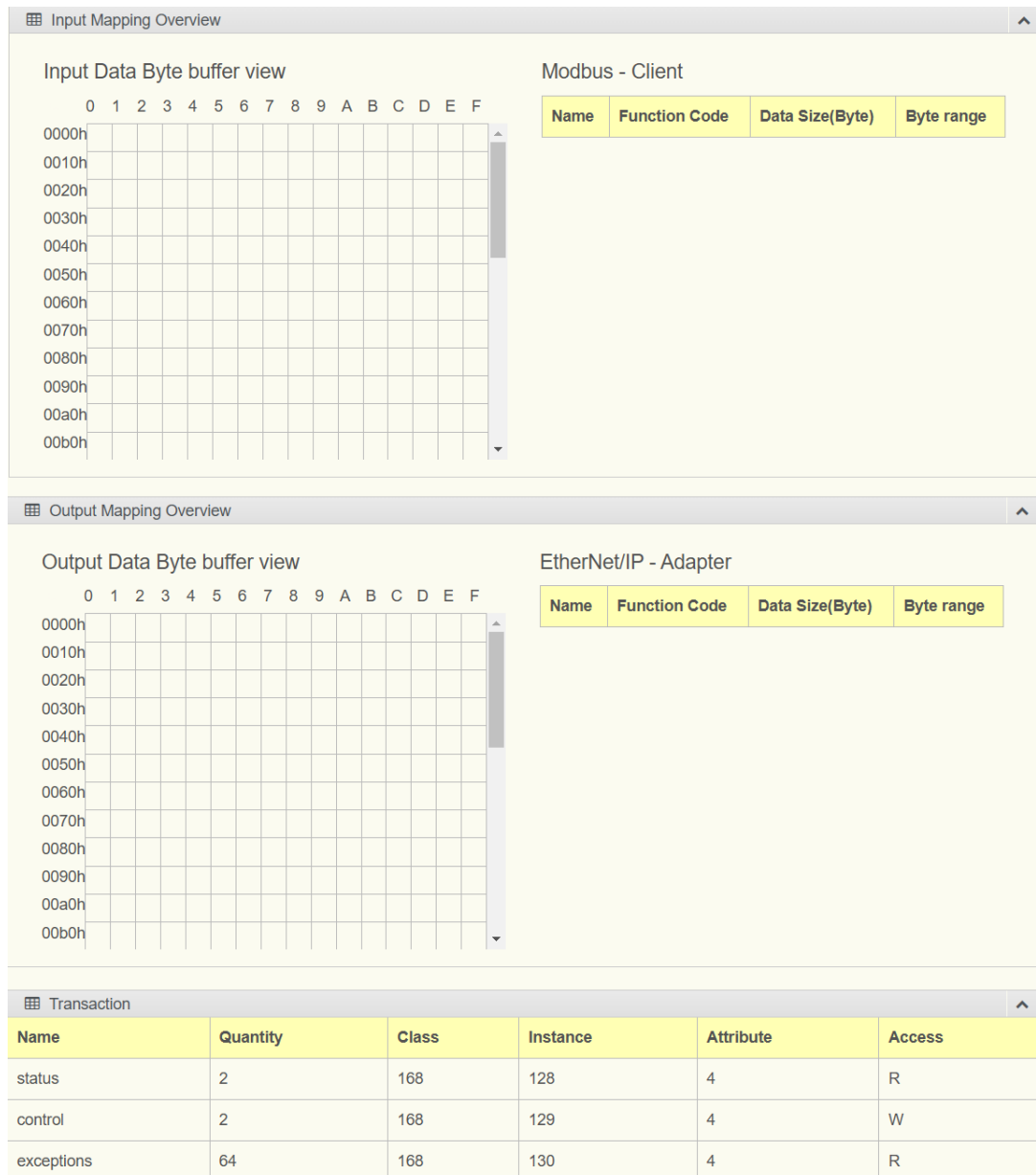


Figure 3.21 Mapping Overview (EtherNet/IP)

The following tables are available only in Interface 1 Mode: PROFINET-IO Device and Interface 2 Mode: Modbus Client.

(If Interface 2 Mode' is set to Python Script, the Modbus Client section will not be displayed.)

- The ensuing table for **PROFINET I/O** table settings is for reference only: Slot, Transaction Name, In Slot Range(bytes), Input Word and Output Word.
- The ensuing table for **Modbus Client** table settings is for reference only: Name, FC, Data Swap, Scan Time, Response Timeout, UID, Read/Write Starting Address, Quantity and When PROFINET doesn't exchange I/O.

3.6 System Management

3.6.1 System Time

The System Time page displays and allows you to set the device time.

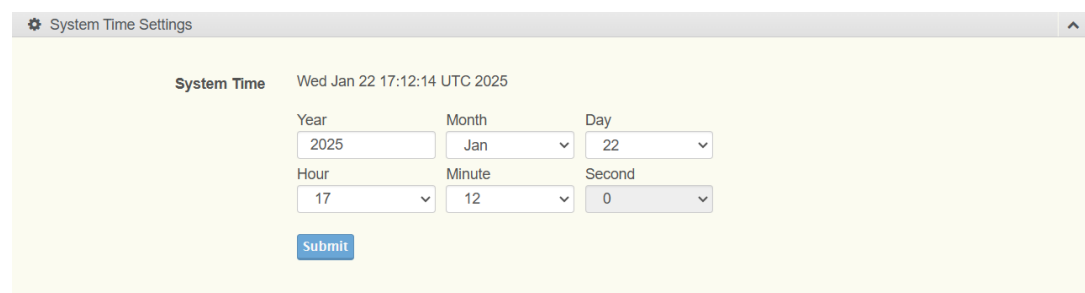


Figure 3.24 System Time Settings

3.6.2 Change Password

The Change Password function allows you to easily update your current password from a single menu.

To access this page, click **System Management > Change Password**.

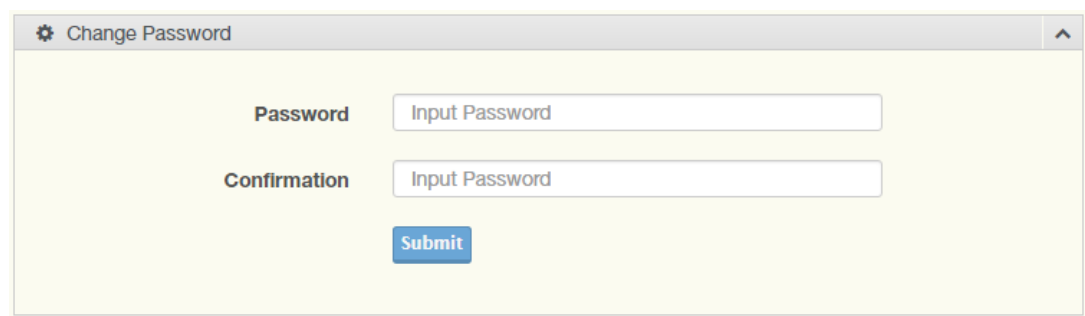


Figure 3.25 System Management > Change Password

The following table describes the items in the previous figure.

Table 3.15: Change Password	
Item	Description
Password	Enter the character set to define password.
Confirmation	Retype the password entry to confirm the profile password.
Submit	Click Submit to save the values and update the screen.

If you want to disable the password protection, change the password to the default option None (leave the password column blank). Be sure apply and reboot the system (**System Management > Apply Configuration**) to save the updates.

3.6.3 Syslog

The Syslog function records important EKI-1242 firmware events. You can **Enable** or **Disable** the Remote Server to select whether to log remotely. You can also click **Download** to save logs stored on the PC.

Remote Server

Remote Server ☐ Enabled ☒ Disabled

Host Name

IP Address

Port (1 - 65535)

Syslog

☒ Auto Scroll

Wed Jan 22 15:58:59 2025 kern.info kernel: [0.000000] Booting Linux on physical CPU 0x0
Wed Jan 22 15:58:59 2025 kern.notice kernel: [0.000000] Linux version 4.4.61 (joel@joel-VBX16) (gcc version 5.4.0 (LEDE GCC 5.4.0 unknown)) #0 Fri Nov 29 02:16:47 2024
Wed Jan 22 15:58:59 2025 kern.info kernel: [0.000000] CPU: ARMv7 Processor [413fc082] revision 2 (ARMv7), cr=10c5387d
Wed Jan 22 15:58:59 2025 kern.info kernel: [0.000000] CPU: PIPT / VIPT nonaliasing data cache, VIPT aliasing instruction cache
Wed Jan 22 15:58:59 2025 kern.info kernel: [0.000000] Machine model: TI AM3352 Advantech board with 4 fast ethernet and 2 serial
Wed Jan 22 15:58:59 2025 kern.info kernel: [0.000000] cma: Reserved 16 MIB at 0x8dc00000
Wed Jan 22 15:58:59 2025 kern.info kernel: [0.000000] Memory policy: Data cache writeback
Wed Jan 22 15:58:59 2025 kern.debug kernel: [0.000000] On node 0 totalpages: 65024
Wed Jan 22 15:58:59 2025 kern.debug kernel: [0.000000] free_area_init_node: node 0, pgdat c05fe750, node_mem_map cfbf1000
Wed Jan 22 15:58:59 2025 kern.debug kernel: [0.000000] Normal zone: 512 pages used for memmap
Wed Jan 22 15:58:59 2025 kern.debug kernel: [0.000000] Normal zone: 0 pages reserved

Figure 3.26 Syslog

3.6.4 Application

The Application page is to **Enable** or **Disable** to redirect all requests from HTTP to HTTPS. The default ports are 80 (for HTTP) and 443 (for HTTPS).

HTTPS uses TLS (SSL) to encrypt HTTP requests and responses, making it safer and more secure.

Applications

HTTP

Redirect HTTP requests to HTTPS

HTTPS port

HTTP port

Figure 3.27 Application

3.6.5 Backup Manager

The Backup Manager page allows you to backup configuration from the device or restore configuration file to the device.

To access this page, click **System Management > Backup Manager**.

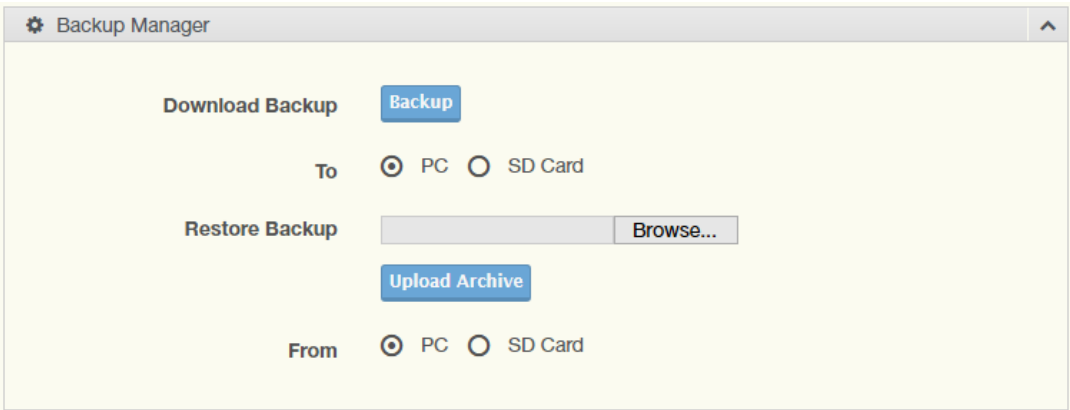


Figure 3.28 System Management > Backup Manager > Backup Manager

The following table describes the items in the previous figure.

Table 3.16: Backup Manager	
Item	Description
Backup	Click Backup to backup configuration from the device.
To	Click the radio-button to select the backup file saved destination.
Restore Backup	Click Browse to select the configuration file.
Upload Archive	Click Upload Archive to restore configuration to the device.
From	Click the radio-button to select upload file source.

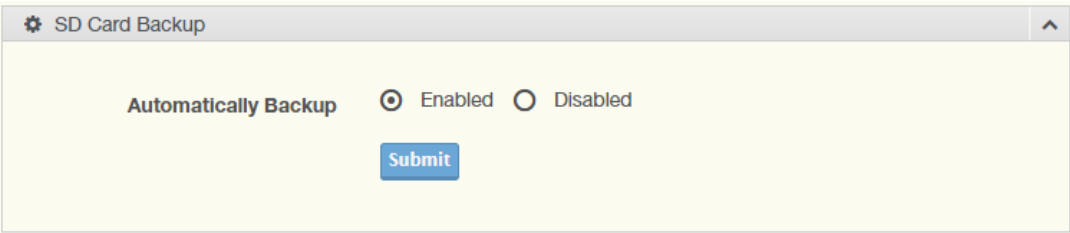


Figure 3.29 System Management > Backup Manager > SD Card Backup

The following table describes the items in the previous figure.

Table 3.17: SD Card Backup	
Item	Description
Automatically Backup	Click the radio-button to enable or disable the SD card automatically backup function.
Submit	Click Submit to save the values and update the screen.

3.6.6 Upgrade Manager

The Upgrade Manager page allows you to upgrade firmware.

To access this page, click **System Management > Upgrade Manager**.

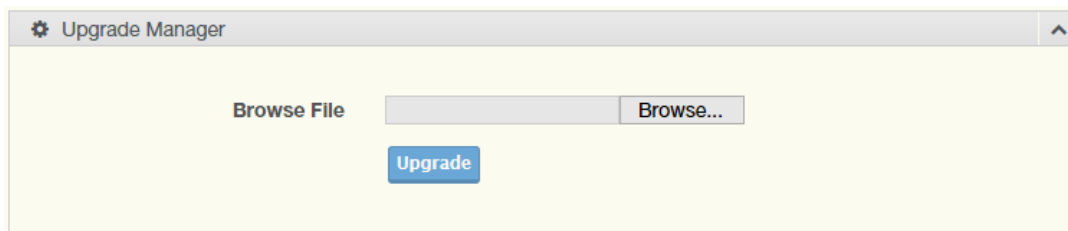


Figure 3.30 System Management > Upgrade Manager

The following table describes the items in the previous figure.

Table 3.18: Upgrade Manager	
Item	Description
Browse File	Click Browse to select the firmware file.
Upload Archive	Click Upload Archive to upgrade the firmware.

3.6.7 Reset System

To access this page, click **System Management > Reset System**.

Click **Reset** to have all configuration parameters reset to their factory default values. All changes that have been made will be lost, even if you have issued a save.

Reset settings take effect after a system reboot.



Figure 3.31 System Management > Reset System

3.6.8 Reboot Device

To access this page, click **System Management > Reboot Device**.

Click **Reboot** to reboot the fieldbus gateway. Any configuration changes you have made since the last time you issued a save will be lost.

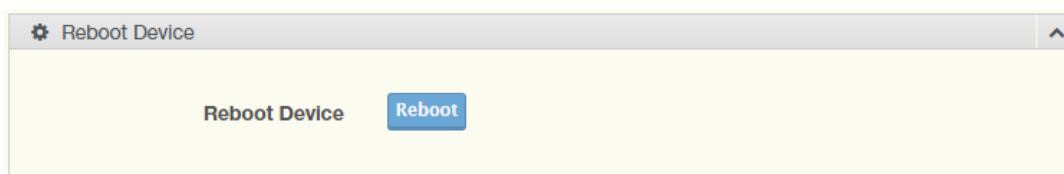


Figure 3.32 System Management > Reboot Device

3.6.9 Apply Configuration

To access this page, click **System Management > Apply Configuration**.
Click **Apply and Reboot** to have configuration changes you have made to be saved across a system reboot. All changes submitted since the previous save or system reboot will be retained by the device.

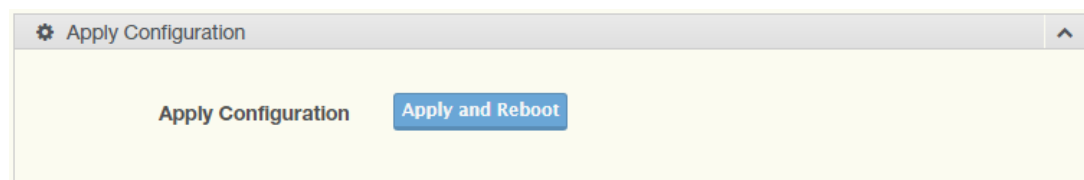


Figure 3.33 System Management > Apply Configuration

3.7 Tools

3.7.1 Modbus Traffic Catcher

The Modbus Traffic Catcher page shows only data sent and received by Modbus.
To access this page, click **Tools > Modbus Traffic Catcher**.

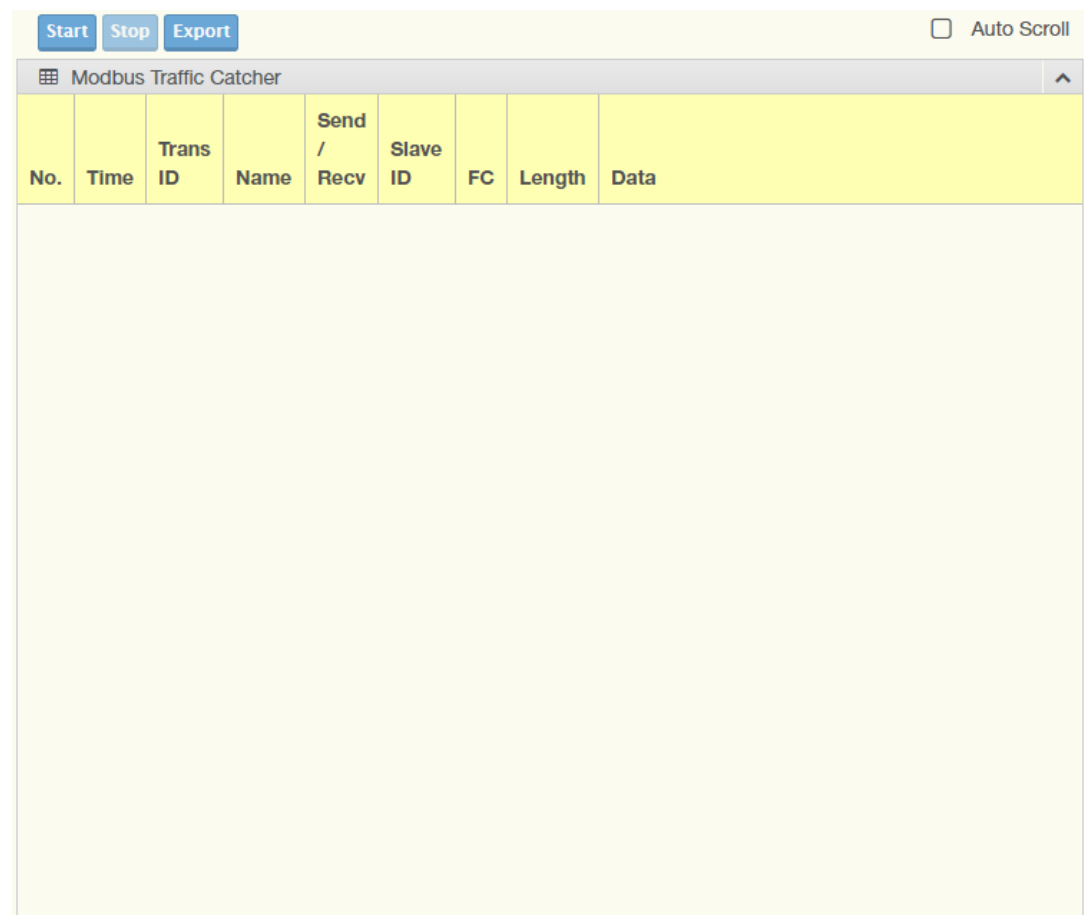


Figure 3.34 Tools > Modbus Traffic Catcher

The following table describes the items in the previous figure.

Table 3.19: Modbus Traffic Catcher

Item	Description
Start	Click Start to start capturing the data.
Stop	Click Stop to stop capturing the data.
Export	Click Export to export and download the captured data.
Auto Scroll	Check the option to cycle through all of the data screens automatically while start capturing data.

Note! *When Interface 2 Mode is selected with the Python script, the Modbus Traffic Catcher grays out.*



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