

Moxa E2240-T

MOXA ioLogik E2240-T Active Ethernet I/O Server User Manual

MODEL: E2240-T

Brand: Moxa

1. Introduction

The MOXA ioLogik E2240-T is an advanced Active Ethernet I/O Server designed for industrial automation applications. It functions as a universal controller, providing 8 analog input (AI) channels and 2 analog output (AO) channels. This device supports Click&Go logic for easy configuration of event-driven control and operates reliably in a wide temperature range from -40 to 75°C. This manual provides essential information for the proper installation, operation, maintenance, and troubleshooting of your ioLogik E2240-T.



Image 1: Front view of the MOXA ioLogik E2240-T Active Ethernet I/O Server. This image displays the compact grey housing with various terminal blocks for input/output connections and an Ethernet port. The Moxa logo and ioLogik branding are visible on the front panel.

2. Setup

2.1 Unpacking and Inspection

Carefully unpack the ioLogik E2240-T and its accessories. Verify that all items are present and undamaged. The package should typically include:

- MOXA ioLogik E2240-T unit
- Documentation (Quick Installation Guide, Warranty Card)
- Terminal block connectors

2.2 Physical Installation

The ioLogik E2240-T can be mounted on a DIN-rail or wall-mounted. Ensure adequate ventilation around the device to prevent overheating. Avoid locations with excessive vibration, dust, or moisture.

1. **DIN-Rail Mounting:** Attach the DIN-rail clip to the back of the unit and snap it onto a standard DIN-rail.
2. **Wall Mounting:** Use the provided mounting holes and screws to secure the unit to a flat surface.

2.3 Wiring Connections

Ensure all power is disconnected before making any wiring connections.

1. **Power Input:** Connect a 12 to 36 VDC power supply to the designated power input terminals. Observe correct polarity.
2. **Ethernet Connection:** Connect a standard Ethernet cable from your network switch or router to the Ethernet port on the ioLogik E2240-T.
3. **Analog Inputs (AI):** Connect your analog sensors or signal sources to the 8 AI terminals. The E2240-T supports various input types (e.g., voltage, current). Refer to the specifications for detailed wiring diagrams for each input type.
4. **Analog Outputs (AO):** Connect your actuators or control devices to the 2 AO terminals. The E2240-T provides voltage or current outputs.

2.4 Initial Configuration

After physical installation and wiring, power on the device. The default IP address is typically 192.168.127.254. Connect a PC to the same network segment and access the device's web console via a web browser to perform initial configuration, such as setting a static IP address, network parameters, and I/O settings.

3. Operating

3.1 Web Console Overview

The web console provides a graphical interface for monitoring and configuring the ioLogik E2240-T. Key sections include:

- **System Status:** Displays device information, network status, and firmware version.
- **I/O Configuration:** Allows setting parameters for analog inputs and outputs.
- **Network Settings:** Configures IP address, subnet mask, gateway, and DNS.
- **Click&Go Logic:** For creating and managing event-driven control rules.
- **Security:** User account management and access control.

3.2 Configuring Analog Inputs

Navigate to the I/O Configuration section. For each analog input channel, you can:

- Select the input type (e.g., 0-10V, 4-20mA, thermocouple, RTD).
- Set the measurement range and scaling parameters.
- Configure alarm thresholds and hysteresis.
- Enable or disable the channel.

3.3 Configuring Analog Outputs

In the I/O Configuration section, for each analog output channel, you can:

- Select the output type (e.g., 0-10V, 4-20mA).
- Set the initial output value.
- Define control methods (e.g., direct control via Modbus, or linked to Click&Go logic).

3.4 Click&Go Logic

The Click&Go logic allows you to define simple control rules without programming. You can set up conditions based on input values or system events, and trigger actions such as changing output states, sending email alerts, or logging data. Consult the detailed Click&Go Logic guide available on the Moxa website for advanced configurations.

3.5 Communication Protocols

The ioLogik E2240-T supports standard industrial communication protocols, including Modbus/TCP and SNMP. These protocols enable seamless integration with SCADA systems, PLCs, and other network management tools for data acquisition and control.

4. Maintenance

4.1 Firmware Updates

Periodically check the Moxa website for firmware updates. Firmware updates can provide new features, performance improvements, and security enhancements. Follow the instructions provided with the firmware package for a safe update process. Ensure a stable power supply during the update.

4.2 Cleaning

Keep the device clean and free from dust. Use a soft, dry cloth for cleaning. Do not use liquid cleaners or solvents, as they may damage the unit.

4.3 Environmental Considerations

Ensure the operating environment remains within the specified temperature and humidity ranges (-40 to 75°C). Protect the device from direct sunlight, excessive heat, and moisture to ensure optimal performance and longevity.

5. Troubleshooting

5.1 Common Issues and Solutions

- **No Power:** Check power supply connections, voltage, and ensure the power source is active.
- **No Network Connectivity:** Verify Ethernet cable connection, check network switch status, confirm IP address settings, and ensure no IP conflicts.
- **Incorrect I/O Readings:** Check sensor wiring, input type configuration, scaling settings, and sensor functionality.
- **Device Unresponsive:** Try power cycling the device. If the issue persists, consider a factory reset.

5.2 LED Indicators

The ioLogik E2240-T features several LED indicators on its front panel to provide status information:

- **PWR LED:** Indicates power status (On: Power OK, Off: No power).
- **LINK/ACT LED:** Indicates Ethernet link status and activity.
- **I/O LEDs:** Indicate the status of individual analog input/output channels.

Refer to the Quick Installation Guide for a detailed explanation of each LED's behavior.

5.3 Factory Reset

If the device becomes unresponsive or configuration issues cannot be resolved, a factory reset may be necessary. This will revert all settings to their default values. Locate the reset button (usually a small pinhole) and press it for approximately 5-10 seconds while the device is powered on. Consult the Quick Installation Guide for the exact procedure.

6. Specifications

Feature	Description
Model	ioLogik E2240-T
Analog Inputs (AI)	8 channels, configurable for voltage/current/thermocouple/RTD
Analog Outputs (AO)	2 channels, configurable for voltage/current
Ethernet Ports	1 x 10/100BaseT(X) auto-negotiating, RJ45
Protocols	Modbus/TCP, SNMP, HTTP, SMTP, TCP/IP, UDP, DHCP, BOOTP
Operating Temperature	-40 to 75°C (-40 to 167°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Power Input	12 to 36 VDC (redundant dual power inputs)
Mounting	DIN-rail, Wall mount
Dimensions (W x H x D)	Refer to product datasheet for exact dimensions
Housing	IP30 rated metal housing

7. Warranty

Moxa products typically come with a standard manufacturer's warranty. The specific terms and duration of the warranty may vary by region and product. For detailed warranty information, please refer to the warranty card included with your product or visit the official Moxa website at www.moxa.com.

8. Support

For technical assistance, additional documentation, software downloads, and frequently asked questions, please visit the Moxa support website. You can find product-specific resources by searching for the ioLogik E2240-T model on their site. Contact information for regional support centers is also available on the official Moxa website.

Moxa Official Website: www.moxa.com