

EZR5231

4-ch Analog Input Ethernet IO Controller



Main features

- 4-ch AI, Ethernet-based smart I/O
- Built-in with SUNIX High-Performance Ethernet-IO controller
- Built-in dual 10/100 Ethernet ports for Ethernet cascading capability
- IP setting not required, enabling convenient and quick deployment configuration
- Supports daisy chain network topology for flexible and quick I/O expansion
- Automatic device enumeration mechanism facilitates terminal device networking
- Hardware may be wall or rail (DIN) mounted

Introduction

SUNIX EZR5231 utilizes SUNIX EAZInet networking technology to quickly expand Analog Input signals via Ethernet, allowing users to conveniently implement automation, swiftly incorporate the Internet of Things into their businesses, and raise their competitiveness.

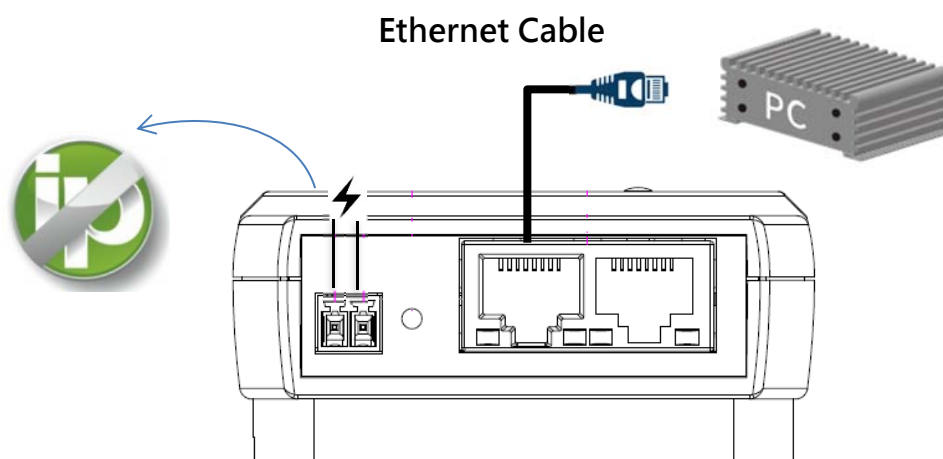
SUNIX EZR5231 does not require IP setting and supports full network topology, which substantially lightens the burden of network planning and management, shortens the hardware deployment process, and enables subsequent expansions to be executed more flexibly.

SUNIX EZR5231 is capable of automatic device enumeration, which allows the console terminal to quickly search for terminal devices, thus enabling plug-and-play functionality. This greatly improves the convenience of system development for users.

Features

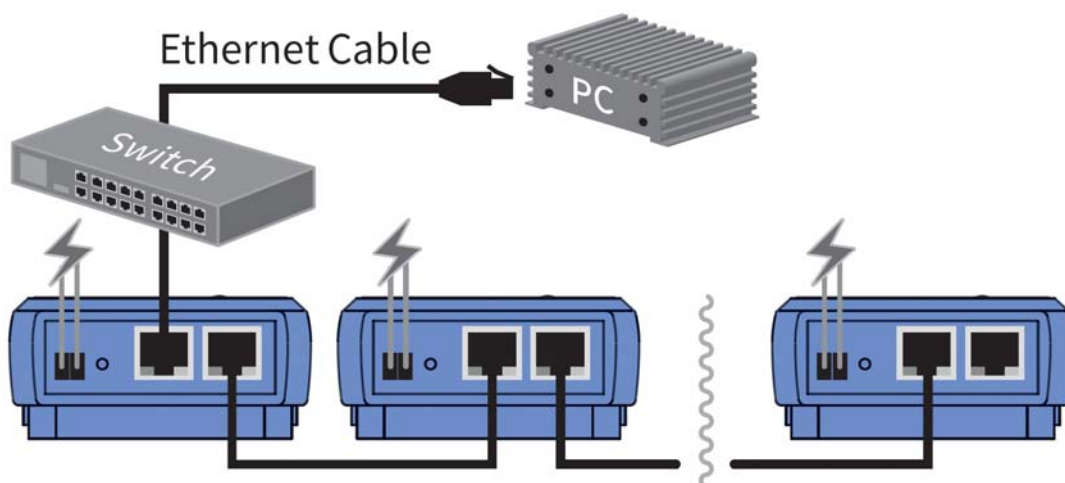
IP setting not required, enabling convenient and quick deployment configuration

SUNIX EAZInet networking technology reduces deployment time since it does not communicate via IP addresses. IP address planning and management are not required during hardware installation and deployment, and an I/O expansion simply requires the power supply and networking cables.



Supports daisy chain for flexible I/O expansion

SUNIX DevicePort I/O EZR5231 comes with two 10/100 Ethernet ports, one for connecting to the console device, and the other for connecting (daisy chain is supported) to a SUNIX DevicePort I/O device. This enables flexible I/O expansions, simplifies network cabling complexity, and reduces wiring cost.



Automatic device enumeration mechanism facilitates terminal device networking

SUNIX developed the EAZInet network's communication protocol with the aim of facilitating terminal device networking. With this technology, the EZR5231 can be quickly deployed using a network cable and does not need to set IP addresses. After deployment, the SUNIX DevicePort Manager installed in the console computer will promptly search for and detect all SUNIX DevicePort I/O devices in the local area network. Once a connection is established, the DevicePort Manager will automatically enumerate each I/O channel based on the models that are used.



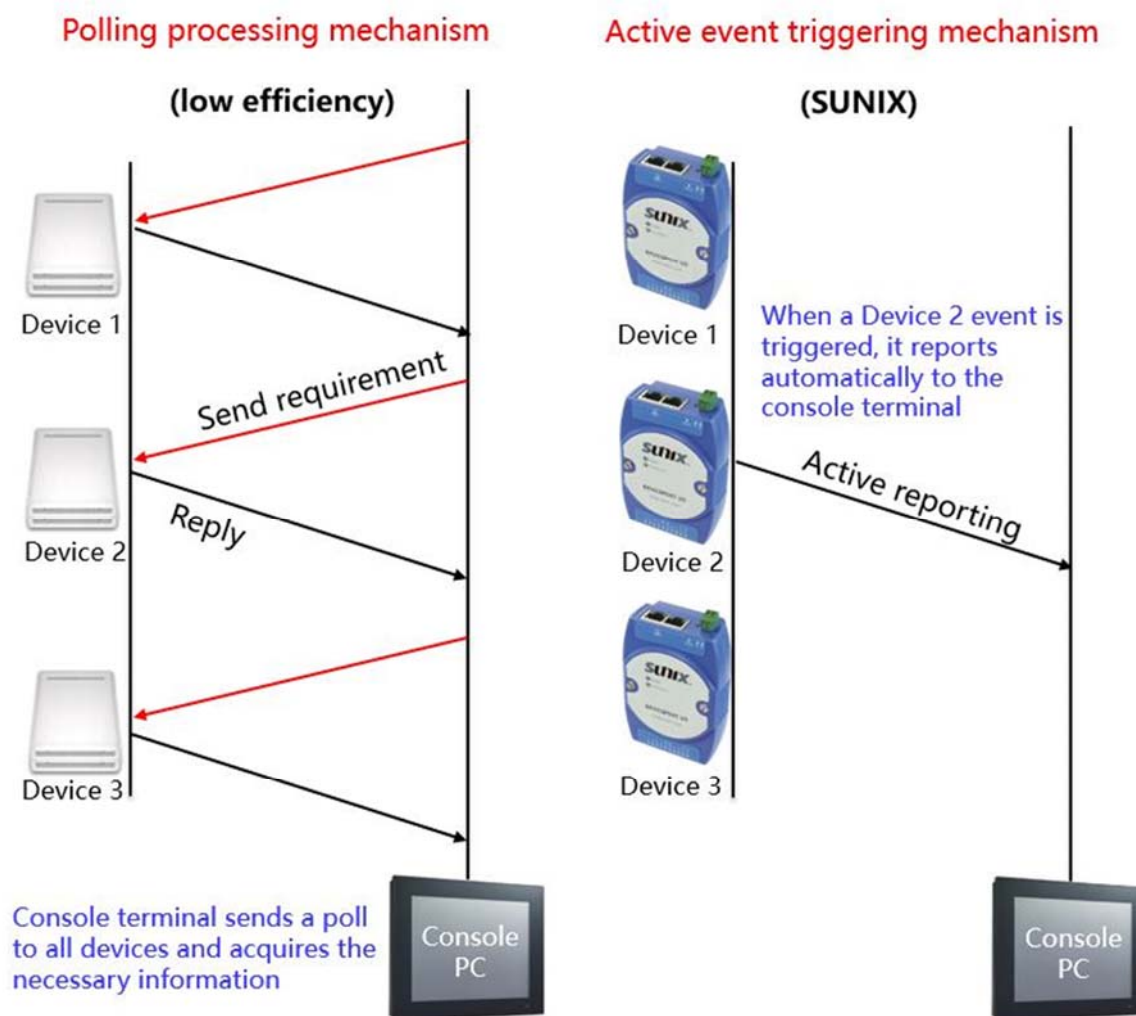
Multi Function AI 1

Selected DevicePort name EZR5231
Selected DevicePort MAC : 00:0a:0a:24:18:51

No	Source	Input Range (v)	Trigger Level (Lower, Upper)
1	Voltage	0~10	0.000,0.000
2	Voltage	0~10	0.000,0.000
3	Voltage	0~10	0.000,0.000
4	Voltage	0~10	0.000,0.000

Transfer and access mechanisms with active event trigger increase efficiency of data transmission

Most existing transmission and control mechanisms for terminal devices communicate via polling or other methods. These processing mechanisms suffer from low transmission efficiency, and when a large number of terminal devices are used, the delays of each terminal device are likely to substantially compromise the entire system's control and transmission efficiency. To address this efficiency problem, SUNIX EZR5231's transfer and access processing mechanisms utilize active event reporting.



Common Specifications

LAN

Ethernet: 2-port 10/100 Mbps RJ45 ports

Protection: 1.5 KV magnetic isolation

Protocols: SUNIX EAZInet

Physical Characteristics

Dimensions: 72.1 x 108 x 33.7 mm
(2.83 x 4.25 x 1.32 in)

Weight: 118 g

Mounting: DIN rail or wall

Environmental Limits

Operating Temperature:

Standard Models: -25 to 70°C (-13 to 158°F)

Storage Temperature: -30 to 75°C (-22 to 167°F)

Operation Humidity: 5 to 95%(non-condensing)

Standards and Certifications

- **EMC:** EN 55032, EN 55035
- **EMI:** CISPR 32, FCC Part 15B Class B
- **EMS:** IEC 61000-4-2
- **ESD:** Contact: 4 kV; Air: 8 kV

EZR5231 Specifications

Analog Input

Channels: 4 channels

Voltage Range: ± 100 mV ± 500 mV,
 ± 1 V, ± 5 V, ± 10 V,
 $+100$ mV $+500$ mV,
 $+1$ V, $+5$ V, $+10$ V

Current Range: ± 20 mA, $+20$ mA

Sampling Rates: 20 Samples/Second Total

Resolution: 16-bit

Accuracy: $\pm 0.1\%$ FSR

Input Impedance:

- $100\text{M}\Omega$: Voltage Mode ± 100 mV, ± 500 mV,
 ± 1 V,
 $+100$ mV, $+500$ mV
,
 $+1$ V
- $2.4\text{M}\Omega$: Voltage Mode ± 5 V, ± 10 V,
 $+5$ V, $+10$ V

- 120Ω : Current Mode

Span Drift: ± 25 ppm/°C

Zero Drift: ± 6 μ V/°C

Input Voltage Protection: Built-in TVS/ESD
Protection

Power Requirements

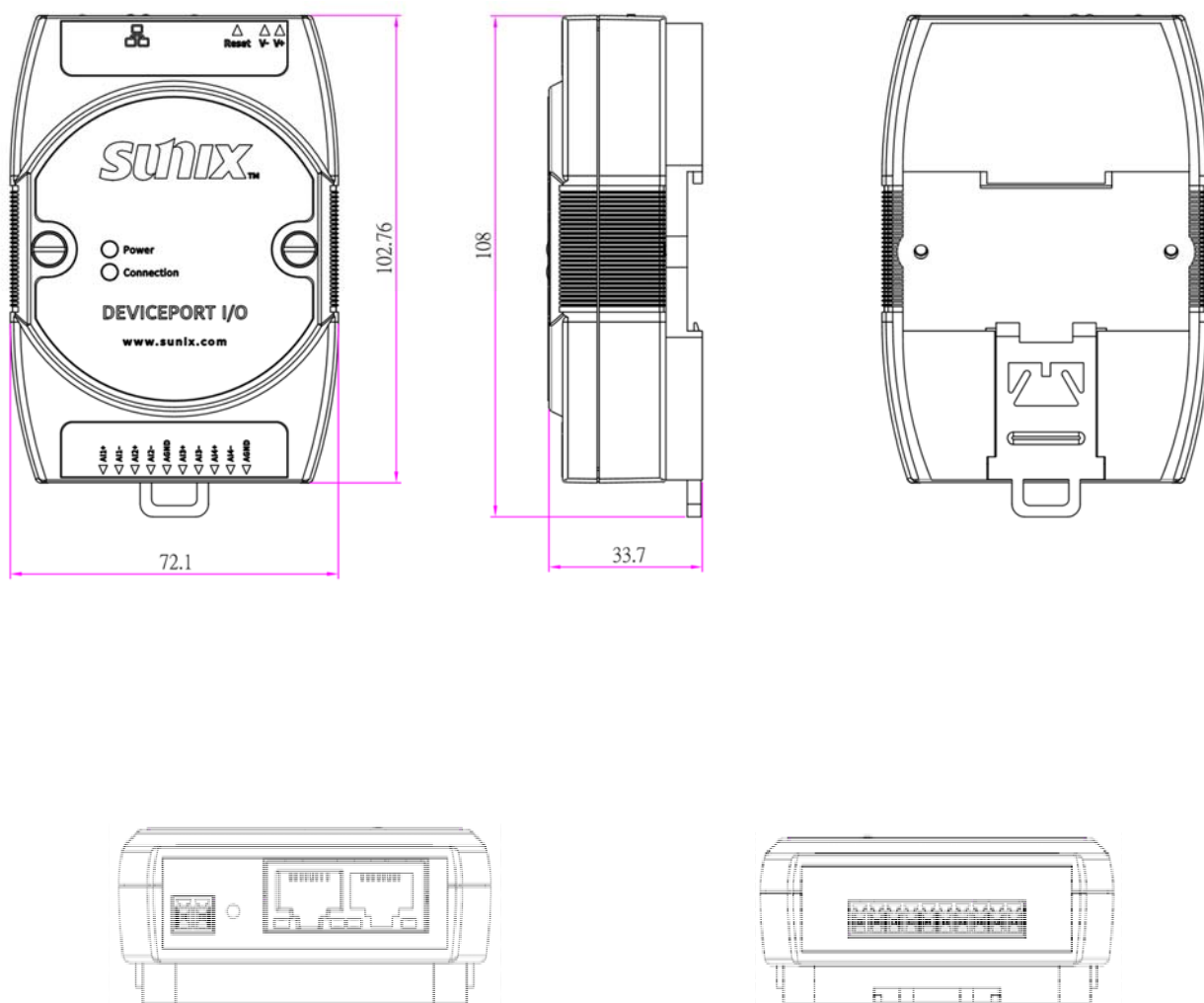
Input Voltage: 12 to 24 VDC

Power Consumption: 1.6W@ 24 VDC

Connector: 2 Plug-In Terminal Block

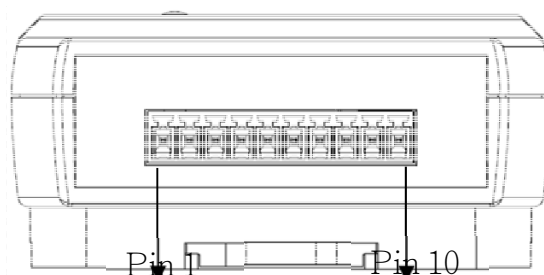
Dimensions

72.1 x 108 x 33.7 mm (2.83 x 4.25 x 1.32 in)



Pin Assignment

■ Analog Input



No	1	2	3	4	5	6	7	8	9	10
Pin	AI1 +	AI1 -	AI2 +	AI2 -	AGND	AI3 +	AI3 -	AI4 +	AI4 -	AGND

Package contents

- EZR5231, 4 Channels Analog Input Ethernet IO Controller
- Quick installation guide

Ordering Information

- **EZR5000**, 8 Channels Digital Input / 8 Channels Digital Output Ethernet IO Controller
- **EZR5002**, 2 Channels Digital Input / 4 Channels Digital Output Ethernet IO Controller
- **EZR5003**, 3 Channels Digital Input / 3 Channels Digital Output Ethernet IO Controller
- **EZR5004**, 4 Channels Digital Input / 2 Channels Digital Output Ethernet IO Controller
- **EZR5230**, 8 Channels Analog Input Ethernet IO Controller
- **EZR5231**, 4 Channels Analog Input Ethernet IO Controller

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