

## EZR5004

4-ch Digital Input / 2-ch Digital Output  
Ethernet IO Controller



SUNIX EZR5004 utilizes SUNIX EAZInet networking technology to quickly expand 4 digital input and 2 digital output signals via Ethernet, allowing users to conveniently implement automation, swiftly incorporate the Internet of Things into their businesses, and raise their competitiveness.

SUNIX EZR5004 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.

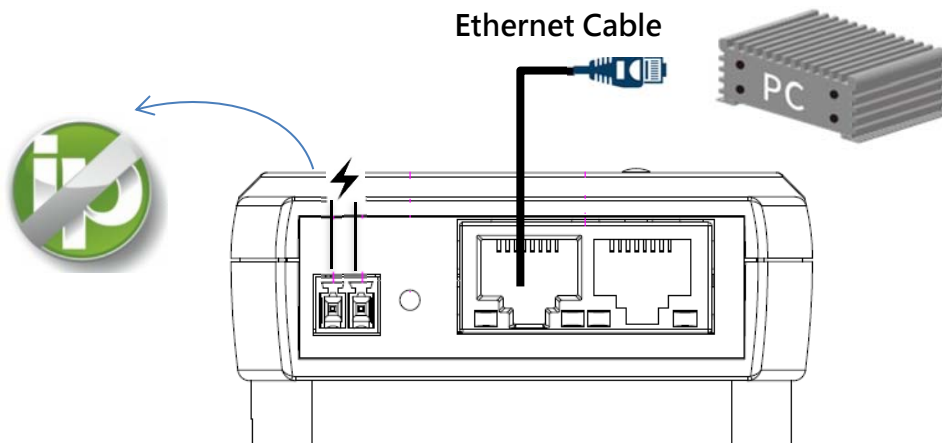
SUNIX EZR5004 is capable of automatic device enumeration, which allows the console terminal to quickly search for terminal devices, thus enabling plug-and-play functionality. This greatly improves the convenience of system development for users.

### Features

- 4-ch DI, 2-ch DO, 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

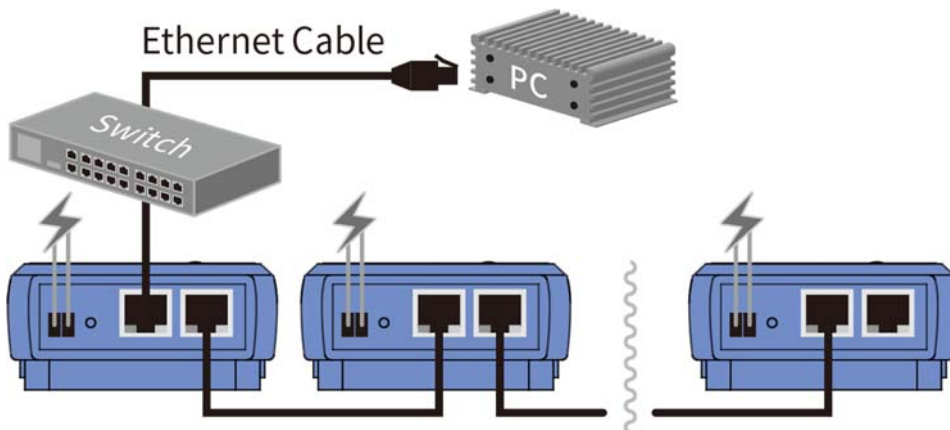
### IP setting not required, enabling convenient and quick deployment configuration

SUNIX EAZInet networking technology reduces deployment time since its 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 chaining for flexible I/O expansion

SUNIX DevicePort I/O EZR5004 comes with two 10/100 Ethernet ports, one for connecting to the console device, and the other for connecting (daisy chaining 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 EZR5004 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 EZR5004 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

The diagram illustrates the automatic device enumeration mechanism. On the left, a PC labeled "控制端 PC" (Control PC) is connected to a blue SUNIX EZR5004 device. A red dashed line connects the device to a software interface window titled "DIO 1".

The software interface displays the following information:

- Selected DevicePort name : EZR5004
- Selected DevicePort MAC : 00:0a:0a:91:00:5a

The interface shows two banks of I/O channels:

**Bank 1**

<input type="checkbox"/>	No	Direction	Invert	Status	Initial Status	Safe Status	Latch Pos
<input checked="" type="checkbox"/>	1	Input	False	Low	Low	Low	False
<input type="checkbox"/>	2	Input	False	Low	Low	Low	False

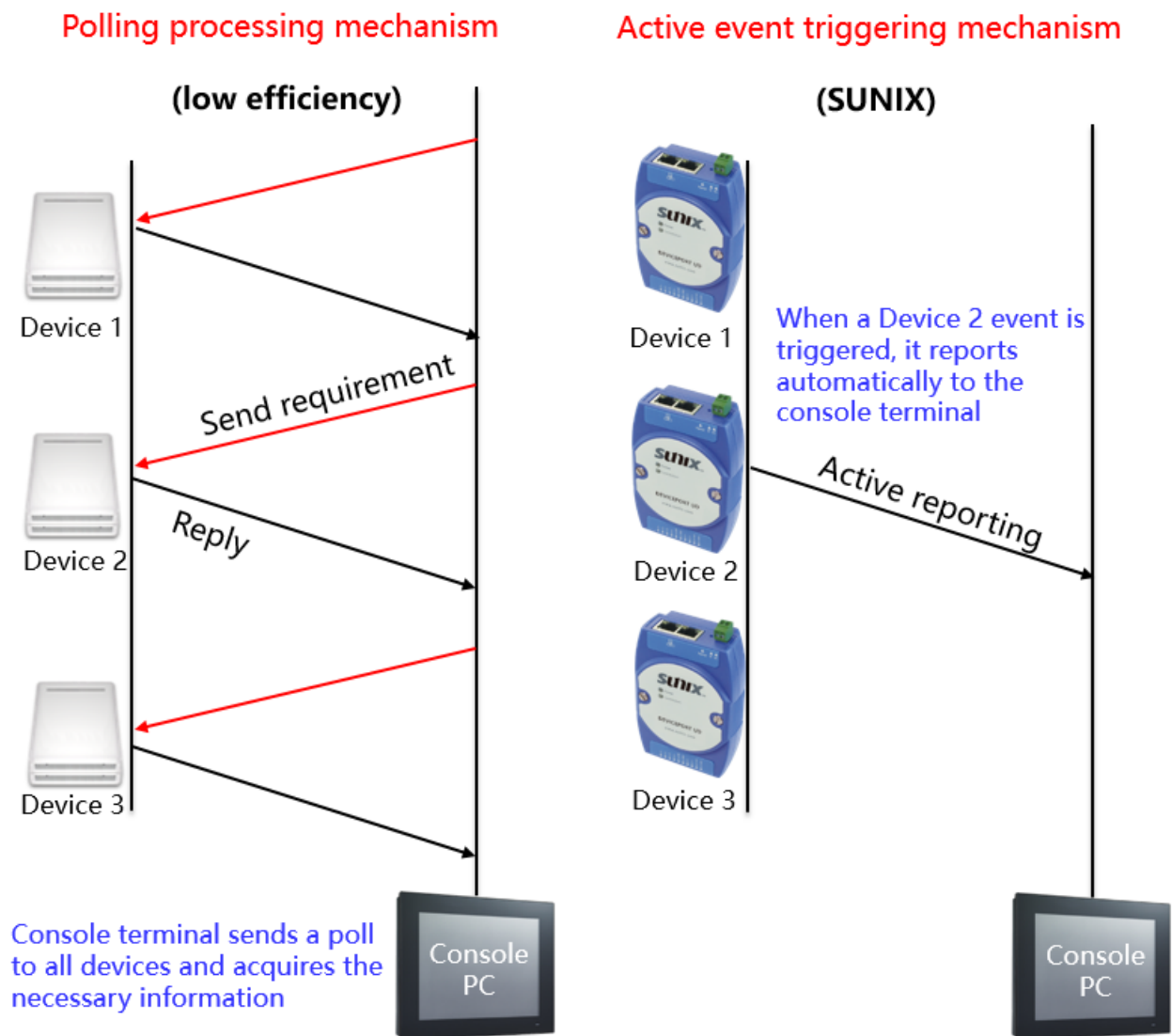
**Bank 2**

<input type="checkbox"/>	No	Direction	Invert	Status	Initial Status	Safe Status	Latch Pos
<input checked="" type="checkbox"/>	1	Output	False	Low	Low	Low	False
<input type="checkbox"/>	2	Output	False	Low	Low	Low	False
<input type="checkbox"/>	3	Output	False	Low	Low	Low	False
<input type="checkbox"/>	4	Output	False	Low	Low	Low	False

**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 EZR5004's transfer and access processing mechanisms utilize active event reporting.



## Common Specifications

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### 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:**

-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

## EZR5004 Specifications

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### Digital Input

Channels: 4 channels

**Dry Contact:**

- **Logic Level 0:** Open
- **Logic Level 1:** Close to GND

**Wet Contact:**

- **Logic Level 0:** 3V (Max.)
- **Logic Level 1:** 10 to 50V

**Input Resistance:** 10 k $\Omega$

**Isolation:** 1k VDC

**Over-Voltage Protection:** 70VDC

### Digital Output

Channels: 2 channels

**Output Type:** NPN

**Output Voltage Range:** 3.5-30V

**Normal Output Current:** 500mA per Channel

**Isolation:** 1k VDC

**Startup Value Setting:** Yes

**Communication Safety Value Setting:** Yes

### Power Requirements

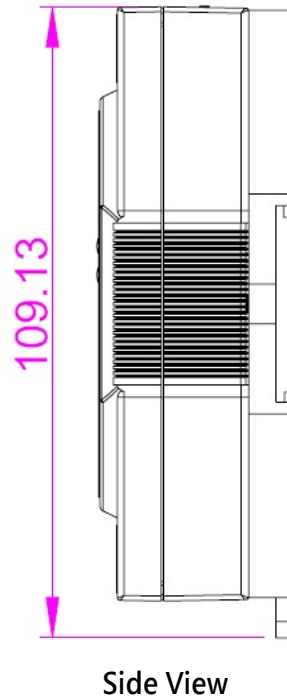
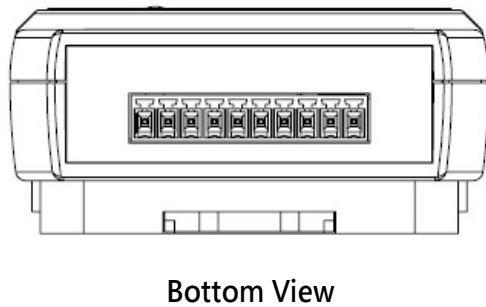
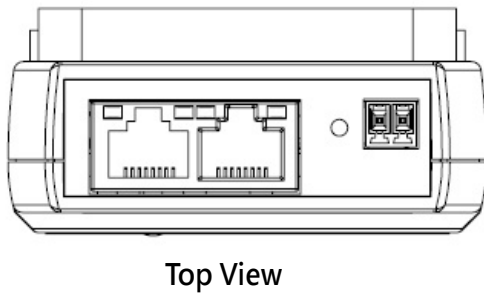
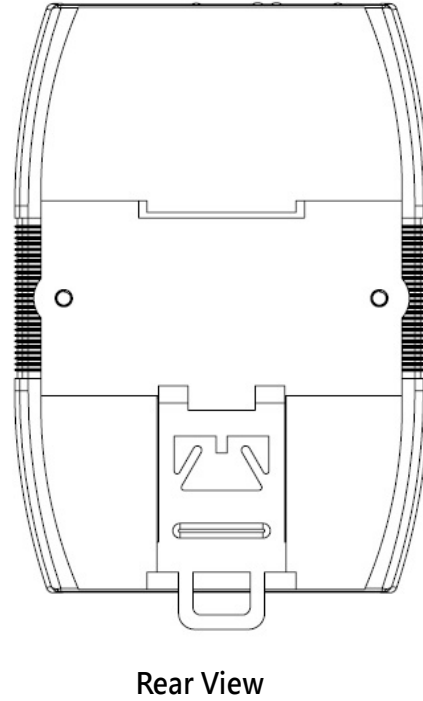
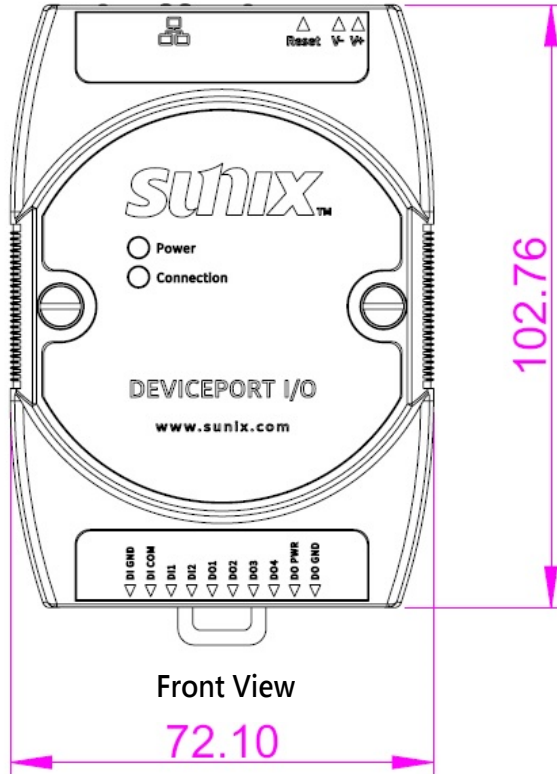
**Input Voltage:** 12 to 24 VDC

**Power Consumption:** 1.6W @ 24 VDC

**Connector:** 2 PIN Terminal Block

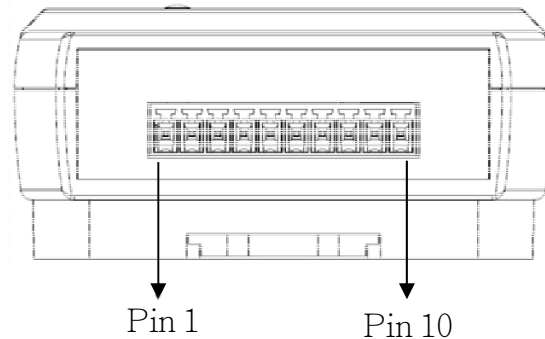
# Dimensions

72.1x108x33.7mm (2.83 x 4.25 x 1.32 in)



## Pin Assignment

- Digital Input / Digital Output



No	1	2	3	4	5	6	7	8	9	10	
EZR5004	Pin	DI GND	DI COM	DI1	DI2	DI3	DI4	DO1	DO2	DO PWR	DO GND

## Package Contents

- EZR5004, 4 Channels Digital Input / 2 Channels Digital Output 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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