



**RIO-9830** 

8-slot Redundant Distributed Modular I/O System with Modbus/TCP Server

#### **■** Features

- Support Modbus/TCP Server
- Support 8 I/O module slots (4 sets of I/O redundancy)
- Support module parameter configuration automatically
- Support redundancy for PWR / Comm. and I/O module
- Support hot-swap for all modules
- Seven-segment display for real-time display of module operation status
- Micro SD and RTC for real-time recording of module abnormal status











#### Introduction

The RIO-9830 system is composed of 2 redundant power modules, 2 redundant communication modules and 8 I/O modules. It is designed as a modular remote redundant I/O system. The power module supports 24VDC (±10%) power input, and the communication module provides Modbus/TCP Server function. It also has a 7-segment display, Micro SD and RTC system time to display and record module abnormality in real time. The I/O modules include analog current and voltage input/output, digital input/output, TC/RTD temperature measurement, counter and HART communication functions, etc. The I/O module can be quickly connected to on-site signals and wired for testing through the terminal board. In addition, all modules of RIO-9830 are equipped with hot-swap replacement and automatic parameter setting functions to improve maintenance convenience.

### Specifications

RPM-D24				
Voltage Input		24 VDC ±10%		
Short Protection		Fuse, 5A		
Conducted Emission		EN55022 Class A		
Radiated Emission		EN55022 Class A		
Redundancy		Yes		
Power Consumption		0.24W (0.01A@24VDC)		
Operating Temperature		-25 ~ 70 ℃		
Certification				
	Emission	IEC 61000-6-4		
		IEC 61000-6-2		
EMC		IEC 61000-4-3		
		IEC 61000-4-4		
	Immunity	IEC 61000-4-6		
		IEC 61000-4-9		
		IEC 61000-4-10		
		IEC 61000-4-12		

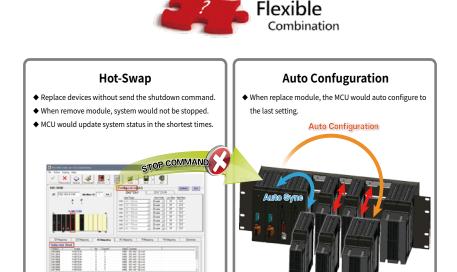
RCM-MTCP				
LAN Port		10/100BASE-TX (Auto negotiating, Auto MDIX)		
Protocol		Modbus/TCP Server		
Fault Display		7-segment display, Micro SD		
Redundancy		Yes		
LED Indicators		1 Power, 2 Fault, 1 Link/Active/Speed		
Power Consumption		1.7W (0.07A@24VDC)		
Operating Temperature		-25 ~ 70 °C		
Certification				
	Emission	IEC 61000-6-4		
EMC	Immunity	IEC 61000-6-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-6 IEC 61000-4-9 IEC 61000-4-10 IEC 61000-4-12		

1/3

ICP DAS CO., LTD Website: https://www.icpdas.com Vol. 2025.01

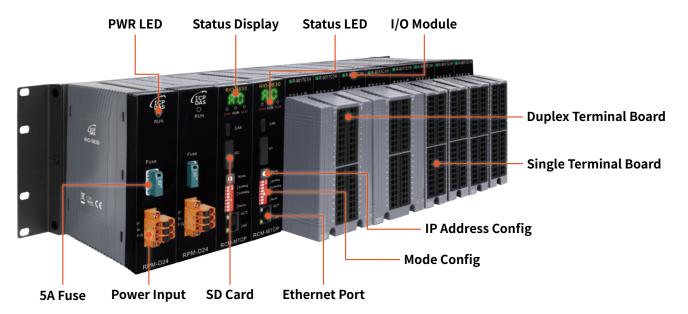
#### **■** Feature

The redundant I/O design of RIO-9830 improves on-site monitoring security requirements, provides a variety of analog I/O, digital I/O, temperature, pulse and HART communications, and supports hot-swap and automatic parameter setting functions.



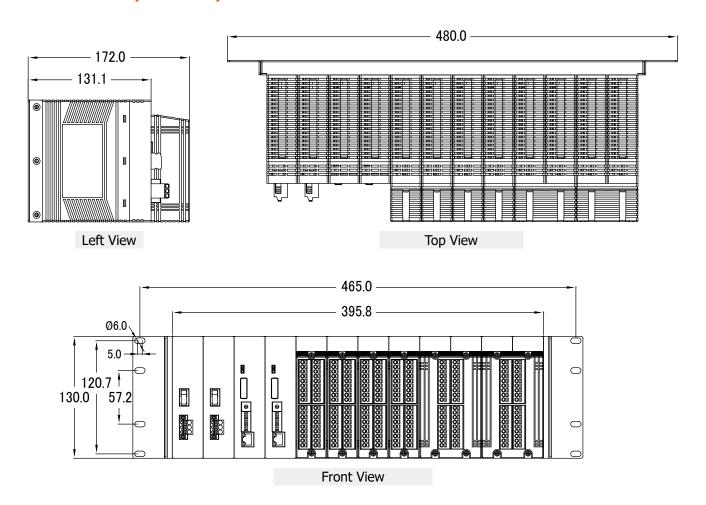
## **Appearance**

RIO-9830 can be configured up to 8 sets of single or max. 4 sets of duplex.





# **■** Dimensions (Units: mm)



## **■** Ordering Information

RIO-9830 CR	8-slot Redundant Distributed Modular I/O System with Ethernet (RoHS)	
	Includes 2x RPM-D24 and 2x RCM-MTCP	

## **Accessories**

RCM-MTCP CR	Modbus/TCP with support redundant function.
RCM-ECAT CR	Ethercat with support redundant function.
RCM-EIP CR	Ethernet/IP with support redundant function.
RPM-D24 CR	24 VDC input, 35W@5V, 120W@24V, with redundant function.
R-9040 CR	32-ch, current sinking / sourcing, two common for 32 channels (every 16-ch).
R-9041 CR	32-ch, current sinking, open collector, two common for 32 channels (every 16-ch).
R-9017C1H CR	8-ch, 4~20mA with HART compliant, Isolated.
R-9017C2H CR	16-ch, 4~20mA with HART compliant.
R-9015 CR	12-ch, RTD sensor Pt100, Pt1000, JPt100, Isolated.
R-9019 CR	16-ch Thermocouple.(J, K, T, E, R, S, B, N, C, L, M), Isolated.
R-9028V1 CR	8-ch, 1~5V, +/-10V, Isolated.
R-9028CH CR	8-ch, 4~20mA with HART compliant, Isolated.
R-9084 CR	8-channel High Speed Pulse Input Module, Isolated.

ICP DAS CO., LTD Website: https://www.icpdas.com Vol. 2025.01 3/3