RIO-9830

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

Features

- Modbus/TCP Server
- PWR/Comm./IO module redundant design
- LED & 7 segment display for local diagnostic
- RTC
- Supports 8 I/O module slots (4 sets of I/O redundancy)
- Auto parameter setting when replacement
- Hot Swap for all modules

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		
EMC	Emission	IEC 61000-6-4
	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

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 ℃
Certification		
EMC	Emission	IEC 61000-6-4
	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

📁 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.
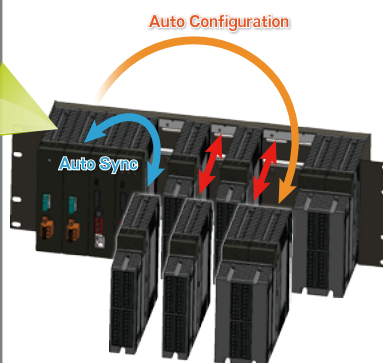

Flexible Combination

Hot-Swap

◆ Replace devices without send the shutdown command.

◆ When remove module, system would not be stopped.

◆ MCU would update system status in the shortest times.

Auto Confuguration

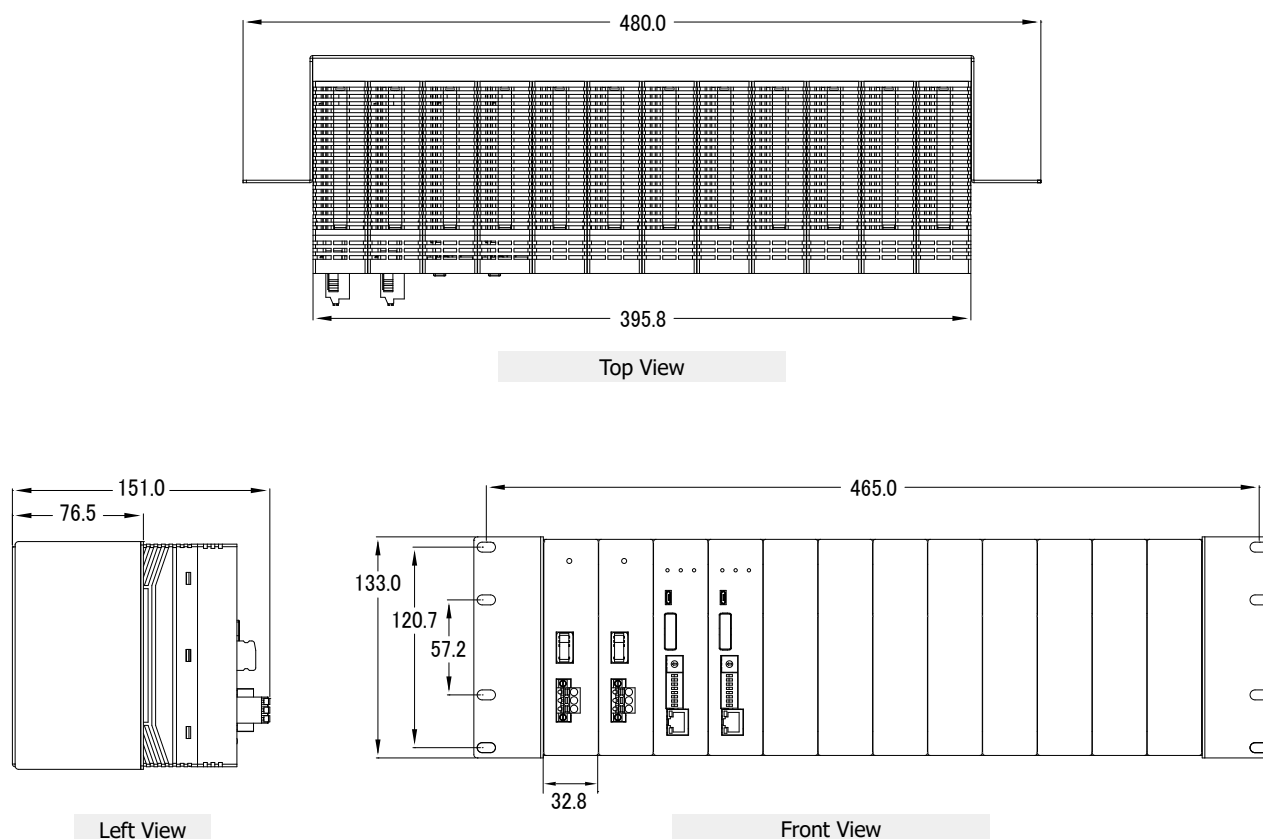◆ When replace module, the MCU would auto configure to the last setting.

Auto Configuration

Auto Sync

STOP COMMAND

📁 Appearance

RIO-9840 supports 8 single or 4 sets of dual I/O module designs.

■ Dimensions (Units: mm)

480.0

395.8

Top View

151.0

76.5

133.0

120.7

57.2

465.0

32.8

Left View

Front View

■ 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.