

Quick Installation Guide

RGPS-9084GP-P



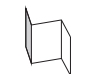




Managed Gigabit PoE Ethernet Switch

Introduction

The **RGPS-9084GP-P** is managed PoE Ethernet switch with eight Gigabit P.S.E. ports and four Gigabit SFP ports. The P.S.E ports can transmit electrical power up to 30 watts per port (240watts in total between -40 ~ 60°C and 120watts in total between 60 ~ 75°C) along with data to remote devices over standard twisted-pair cables. The switch supports several Ethernet redundancy technologies such as O-Ring (recovery time<30ms over 250units of connection) and O-Chain topologies, as well as MSTP protocol (RSTP/STP compatible) to protect mission-critical applications from network interruptions or temporary malfunctions with fast recovery technology. With a wide operating temperature from -40°C to 75°C, the device can be managed centrally via ORing's proprietary Open-Vision management utility as well as via Web-based interfaces, Telnet, and console (CLI).

Package Contents

The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
RGPS-9084GP-P		X 1
CD		X 1
QIG		X 1
Screw (M4 X6)		X 6
Rack-mounted kit (L&R)		X 1
Power cord		X 1
Console Cable		X 1

Preparation

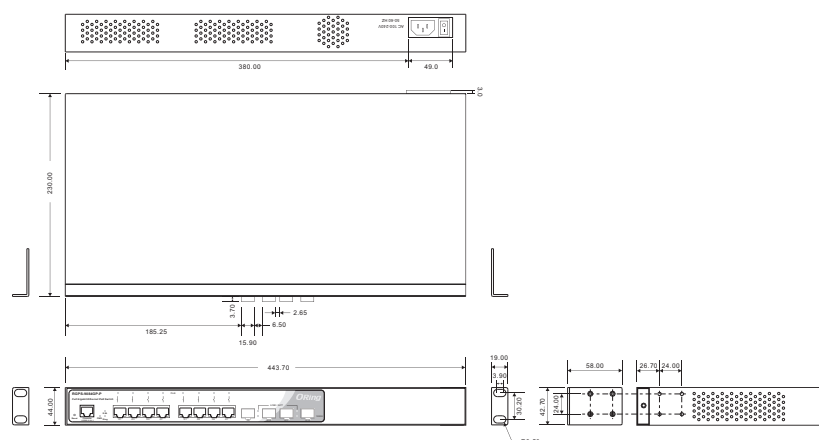
Before you begin installing the switch, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

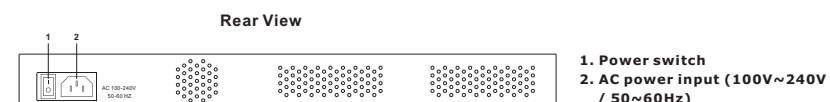
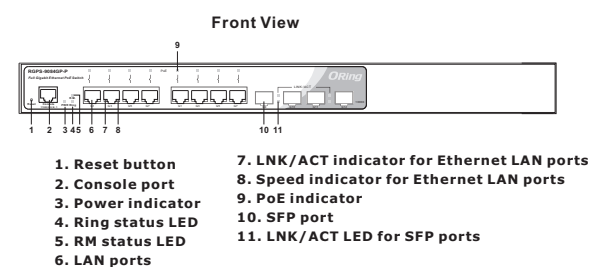
- Elevated Operating Ambient:** If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.

- Reduced Air Flow:** Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical Loading:** Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension



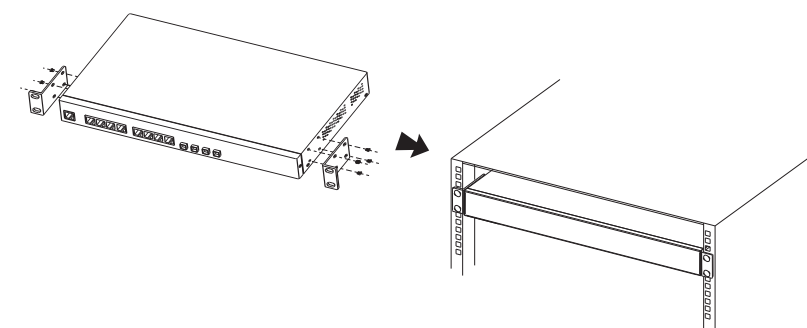
Panel Layouts



Installation

Rack-mounting

- Step 1:** Install left and right front mounting brackets to the switch using three screws on each side.
- Step 2:** With front brackets orientated in front of the rack, fasten the brackets to the rack using two more screws.



Network Connection

The series have standard Ethernet ports. According to the link type, the switch uses CAT 3, 4, 5, 5e UTP cables to connect to any other network devices (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000BASE-T	Cat. 5 / Cat. 5e 100-ohm UTP	UTP 100 m (328 ft)	RJ-45

For pin assignments for different types of cables, please refer to the following tables.

10/100Base-T(X) P.S.E. RJ-45 Port			1000Base-T P.S.E. RJ-45 port		
Pin Number	Assignments		Pin Number	Assignment	
1	TD+ with PoE Power input +		#1	BI_DA+ with PoE Power input +	
2	TD- with PoE Power input +		#2	BI_DA- with PoE Power input +	
3	RD+ with PoE Power input -		#3	BI_DB+ with PoE Power input -	
4	Not used		#4	BI_DC+	
5	Not used		#5	BI_DC-	
6	RD- with PoE Power input -		#6	BI_DB- with PoE Power input -	
7	Not used		#7	BI_DD+	
8	Not used		#8	BI_DD-	

10/100Base-T(X) MDI/MDI-X Pin Assignments:			1000Base-T MDI/MDI-X Pin Assignments		
Pin Number	MDI port	MDI-X port	Pin Number	MDI port	MDI-X port
1	TD+(transmit)	RD+(receive)	1	BI_DA+	BI_DB+
2	TD-(transmit)	RD-(receive)	2	BI_DA-	BI_DB-
3	RD+(receive)	TD+(transmit)	3	BI_DB+	BI_DA+
4	Not used	Not used	4	BI_DC+	BI_DD+
5	Not used	Not used	5	BI_DC-	BI_DD-
6	RD-(receive)	TD-(transmit)	6	BI_DB-	BI_DA-
7	Not used	Not used	7	BI_DD+	BI_DC+
8	Not used	Not used	8	BI_DD-	BI_DC-

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.

● Console Port Pin Definition

The device can be managed via console ports using the RJ-45 cable provided. You can connect the port to a PC using a Console cable provided to perform management

● Wiring

Power inputs

For power supply, simply insert the AC power cable to the power connector at the back of the switch and turn on the power switch. The input voltage range is 100~240VAC / 50~60Hz.

Grounding

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screws to the grounding surface prior to connecting devices.

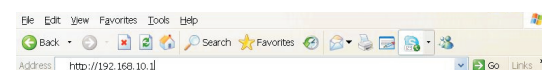
✚ Configurations

After installing the switch and connecting cables, start the switch by turning on power. The green power LED should turn on.

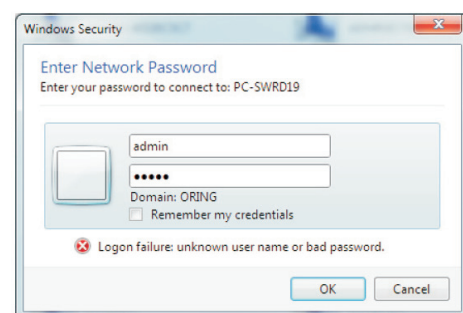
● LED indication table

LED	Color	Status	Description
PWR	Green	On	System power is connected
R.M	Green	On	Device is operating as a ring master
Ring	Green	On	Ring is enabled and device is running in Ring mode
		Blinking	Ring structure is broken
10/100/1000Base-T(X) RJ45 port			
Link/Act	Green	On	Port is linked
		Blinking	Transmitting data
Speed	Amber	On	Port is linked and runs at 10/100Mbps
		Green	Port is linked and runs at 1000Mbps
PoE	Blue	On	Power is supplied over Ethernet cable
SFP port			
Link/Act	Green	On	Port is linked
		Blinking	Transmitting data

1. Launch the Internet Explorer and type in IP address of the switch. The default static IP address is **192.168.10.1**



2. Log in with default user name and password (both are **admin**). After logging in, you should see the following screen. For more information on configurations, please refer to the user manual. For information on operating the switch using ORing's Open-Vision management utility, please go to ORing website.



● Resetting

To reboot the switch, press the Reset button for 2-3 seconds.

To restore the switch configurations back to the factory defaults, press the Reset button for 5 seconds.

✚ Specifications

ORing Switch Model	RGPS-9084GP-P
Physical Ports	
10/100/1000Base-T(X) with P.S.E. Ports in RJ45 Auto MDI/MDIX	8
100/1000Base-X SFP Port	4
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3z for 1000Base-X IEEE 802.3ab for 1000Base-T IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1x for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) IEEE 802.3af/at PoE specification
MAC Table	8K
Packet Buffer	4Mbits
Priority Queues	8
Processing	Store-and-Forward
Switch Properties	Switch latency: 7 us Switch bandwidth: 24Gbps Max. Number of Available VLANs: 256 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define
Jumbo frame	Up to 9.6K Bytes
Security Features	Device Binding security feature Enable/disable ports, MAC based port security Port based network access control (802.1x) VLAN (802.1Q) to segregate an secure network traffic Radius centralized password management SNMPv3 encrypted authentication and access security Https / SSH enhance network security
Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s) Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging IGMP Snooping IP-based bandwidth management Application-based QoS management DOS/DDOS auto prevention Port configuration, status, statistics, monitoring, security DHCP Server/Client SNMP Client Modbus TCP DNS client proxy NTP server
Network Redundancy	O-Ring, Open-Ring, O-Chain, Fast Recovery, MRP, MSTP (RST/STP compatible)
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable. 115200bps, 8, N, 1 (support backup unit DBU-01)
Power	
Overload current protection	100~240VAC with power socket
Power consumption(Typ.)	17 Watts (PoE output not included)
Overload current protection	Present
Physical Characteristic	
Enclosure	19 inches rack mountable
Dimension (W x D x H)	443.7 (W) x 230 (D) x 44 (H) mm (17.46 x 9.05 x 1.73 inches)
Weight (g)	3730g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 75°C (-40 to 167°F)
Operating Humidity	5% to 95% Non-condensing

Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD)
	EN61000-4-3 (RS)
	EN61000-4-4 (EFT)
	EN61000-4-5 (Surge)
	EN61000-4-6 (CS)
	EN61000-4-8 EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Warranty	5 years