



RGPS-R9244GP+ Series

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➔ **Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket**

Features

- Support Layer 3 static routing, RIP and VRRP function
- Support **O-Ring** (recovery time < 30ms) and MSTP (RSTP/STP compatible) for Ethernet Redundancy
- **O-Chain** allow multiple redundant network rings
- Support standard IEC 62439-2 **MRP*NOTE** (Media Redundancy Protocol) function
- 24 port P.S.E. fully compliant with IEEE802.3at standard, provide up to 30 Watts per port
- Support PoE on/off scheduled configuration
- Support PoE alive check and auto reboot function
- Support IPv6 new internet protocol version
- Support Modbus TCP protocol
- Support IEEE 802.3az **Energy-Efficient Ethernet** technology
- Provided HTTPS/SSH protocol to enhance network security
- Support SMTP client and SMTP server protocol
- Support application-based QoS management
- Support Device Binding security function
- Support DOS/DDOS auto prevention
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Support SNMP v1/v2c/v3 & RMON & 802.1Q VLAN Network Management
- Support ACL and 802.1x User Authentication for security
- Support 10K Bytes Jumbo Frame
- SFP socket support DDM function
- Multiple notification for warning of unexpected event
- Support **DBU-01** backup unit device to quickly backup/restore configuration
- Web-based, Telnet, Console (CLI), and Windows utility (**Open-Vision**) configuration
- Support LLDP Protocol
- 19 inches rack mountable design



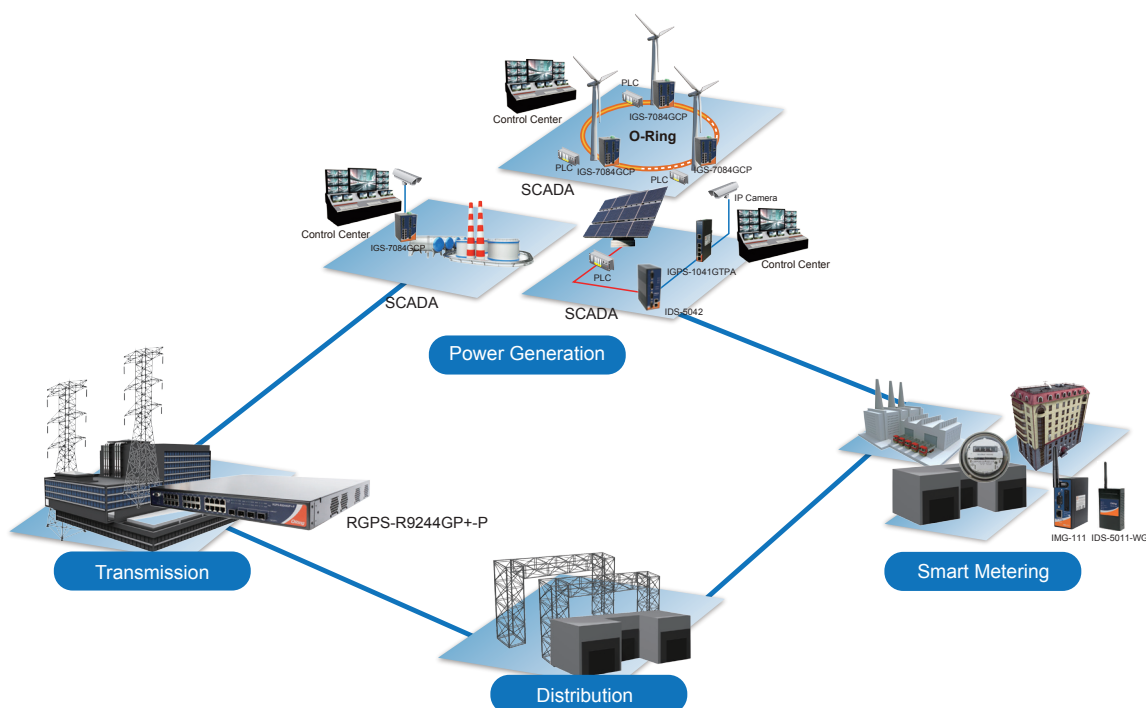
Introduction

RGPS-R9244GP+ series is Layer 3 Gigabit managed redundant ring PoE Ethernet switch with 24x10/100/1000Base-T(X) IEEE802.3at P.S.E. ports and 4x1G/10GBase-X SFP+ ports. The switch support Ethernet Redundancy protocol, **O-Ring** (recovery time < 30ms) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RGPS-R9244GP+ series also support Power over Ethernet, a system to transmit electrical power up to **30 watts**, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each RGPS-R9244GP+ series switch has 24x10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. And RGPS-R9244GP+ series support wide operating temperature from -20°C to 60°C. Besides the Web-based interface, Telnet and console (CLI) configuration, RGPS-R9244GP+ series can also be managed centralized and convenient by Open-Vision. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber PoE Ethernet application.

*NOTE: This function is available by request only

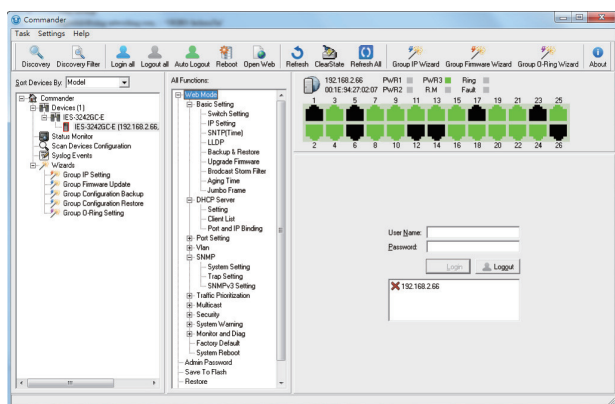
- **O-Ring** : O-Ring is ORing's proprietary redundant ring technology, with recovery time of less 30 milliseconds and up to 250 nodes. The O-Ring redundant ring technology can protect mission-critical application from network interruptions or temporary malfunction with its fast recover technology.
- **O-Chain** : O-Chain is the revolutionary network redundancy technology that provides the add-on network redundancy topology for any backbone network, O-Chain allows multiple redundant network rings of different redundancy protocols to join and function together as a larger and more robust compound network topology. O-Chain providing ease-of-use while maximizing fault-recovery swiftness, flexibility, compatibility, and cost-effectiveness in one set of network redundancy topology.
- **MRP*NOTE** : Media Redundancy Protocol (MRP) is a data network protocol standardized by the IEC 62439-2. It allows rings of Ethernet switches to overcome any single failure with recovery time much faster than achievable with Spanning Tree Protocol.
- **Application-Based QoS** : The switch also support application-based QoS. Application-based QoS can set highest priority for data stream according to TCP/UDP port number.
- **Device Binding Function** : ORing special Device Binding function can only permit allowed IP address with MAC address to access the network. Hacker cannot access the IP surveillance network without permission. It can avoid hacker from stealing video privacy data and attacking IP camera, NVR and controllers.
- **Advanced DOS/DDOS Auto Prevention** : The switch also provided advanced DOS/DDOS auto prevention. If there is any IP flow become big in short time, the switch will lock the source IP address for certain time to prevent the attack. It's hardware based prevention so it can prevent DOS/DDOS attack immediately and completely.
- **Modbus TCP** : This is a Modbus variant used for communications over TCP/IP networks.
- **IEEE 802.3az Energy-Efficient Ethernet** : This is a set of enhancements to the twisted-pair and backplane Ethernet family of networking standards that will allow for less power consumption during periods of low data activity. The intention was to reduce power consumption by 50% or more.

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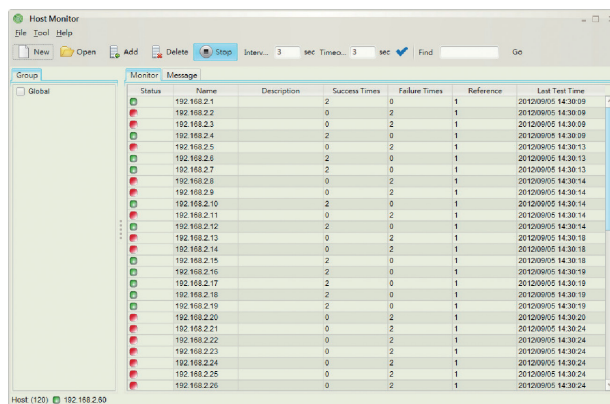


Open-Vision

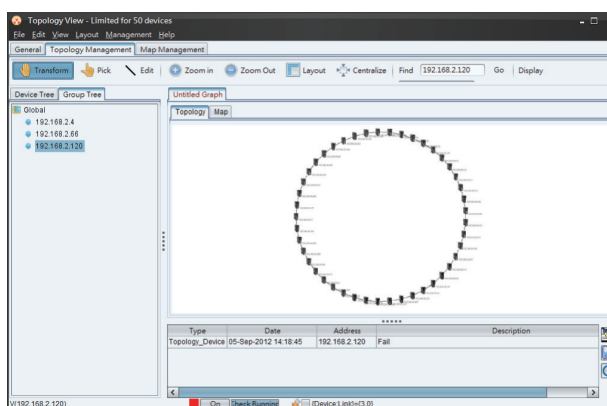
ORing's switches are intelligent switches. Different from other traditional redundant switches, ORing provides a set of Windows utility (Open-Vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.



Commander



Host Monitor



Topology View

PoE Pin Definition

10/100Base-T(X) P.S.E. RJ-45 Port	
RJ-45 Pin Definition	
Pin No.	Description
#1	TD+ with PoE Power input +
#2	TD- with PoE Power input +
#3	RD+ with PoE Power input -
#6	RD- with PoE Power input -

1000Base-T P.S.E. RJ-45 Port	
RJ-45 Pin Definition	
Pin No.	Description
#1	BI_DA+ with PoE Power input +
#2	BI_DA- with PoE Power input +
#3	BI_DB+ with PoE Power input -
#4	BI_DC+
#5	BI_DC-
#6	BI_DB- with PoE Power input -
#7	BI_DD+
#8	BI_DD-

The technical drawing illustrates the RPS-80240CP-LP monitor from three perspectives: front, top, and side.

- Front View:** Shows a large rectangular screen with a width of 49.0 inches and a height of 342.00 inches. The bezel thickness at the bottom is 4.30 inches. The distance between the mounting brackets at the bottom is 30.20 inches, with a central gap of 82.00 inches. The bottom bezel has a radius of R3.25.
- Top View:** Shows the monitor's profile with a depth of 6.7 inches. It includes details of the power input, USB ports, and various video inputs (DVI-D, DVI-I, HDMI, DisplayPort).
- Side View:** Shows the monitor's thickness of 44.00 inches. It details the VESA mounting bracket with a width of 431.00 inches and a height of 25.50 inches. The mounting holes are spaced 35.50 inches apart, with a center-to-center distance of 8.00 inches. The side view also shows the internal components and the rear panel with a radius of R3.25.

Specifications

ORing Get Connected Anytime, Anywhere

Processing	Store-and-Forward		
Switch Properties	Switching latency: 7 us Switching bandwidth: 128Gbps Max. Number of Available VLANs: 4095 VLAN ID Range : VID 1 to 4094 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define		
Security Features	Device Binding security feature Enable/disable ports, MAC based port security Port based network access control (802.1x) MAC-based authentication (802.1x) VLAN (802.1Q) to segregate and secure network traffic SNMPv3 encrypted authentication and access security Https / SSH enhance network security Web and CLI authentication and authorization IP source guard		
Software Features	IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static) Multiple Registration Protocol (MRP) MSTP (RSTP/STP compatible) Redundant Ring (O-Ring) with recovery time less than 30ms TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging IGMP v2/v3 Snooping Application-based QoS management DOS/DDOS auto prevention Port configuration, status, statistics, monitoring, security DHCP Server/Client/ Relay Modbus TCP NTP server SMTP Client		
Network Redundancy	O-Ring O-Chain MRP* NOTE Fast Recovery MSTP (RSTP/STP compatible)		
RS-232 Serial Console Port	RS-232 in DB-9 connector with console cable. 115200bps, 8, N, 1		
LED indicators			
Power Indicator (PWR)	Green: Power indicator		
Ring Master Indicator (R.M.)	Green: Indicates that the system is operating in O-Ring Master mode		
O-Ring Indicator (Ring)	Green: Indicates that the system operating in O-Ring mode Green Blinking: Indicates that the Ring is broken.		
Fault Indicator (Fault)	Amber: Indicate unexpected event occurred		
10/100/1000Base-T(X) RJ45 Port Indicator	Dual color LED for Link/Act/Speed indicator ~ Green (1G Link/Act) / Amber (10/100M Link/Act)		
1G/10GBase-X SFP+ Port Indicator	Green for port Link/Act.		
PoE Indicator	Green : PoE enabled LED x 24		
Fault contact			
Relay	None	None	Present
Power			
Power input	100~240VAC with AC socket	100~240VAC with AC socket	50~ 57VDC with terminal block
Power supply	1000 Watts	390 Watts	power supply not included
Power consumption (Typ.)	75 Watts (PoE output not included)	49 Watts	40 Watts
Max PoE output	720 Watts (-20°C~50°C) 320 Watts (50°C~60°C)	300Watts (-20°C~50°C) 240Watts (50°C~60°C)	720Watts
Overload current protection	Present		
Reverse Polarity Protection	Not Present		
Physical Characteristic			
Enclosure	19 inches rack mountable		
Dimension (W x D x H)	431 (W) x 342 (D) x 44 (H)mm (16.97 x 13.46 x 1.73 inch)		
Weight (g)	6,270 g	5,580 g	4,445 g
Environmental			
Storage Temperature	-40 to 85°C (-40 to 185°F)		
Operating Temperature	-20 to 60°C (-4 to 140°F)		
Operating Humidity	5% to 95% Non-condensing		

*NOTE: This function is available by request only

Regulatory approvals			
EMC	CE EMC (EN 55024, EN 55032), FCC Part 15 B		
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A		
EMS	EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS), IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8 (PFMF), IEC/EN 61000-4-11 (DIP))		
Shock	IEC 60068-2-27		
Free Fall	IEC 60068-2-31		
Vibration	IEC 60068-2-6		
Safety	EN 60950-1		
MTBF	249,143 hrs	214,432 hrs	296,701 hrs
Warranty	5 years		

Ordering Information

RGPS-R9 **AA** **B** **CCC** - **DD**

Code Definition	10/100/1000Base-T(X) P.S.E. Port Number	Additional Port Number	Additional Port Type	Power Supply Type
Option	- 24 : 24 ports	- 4 : 4 ports	- GP+ : 1G / 10GBase-X, SFP+ socket	: without power supply - P : 1000 Watts power supply - LP : 390 Watts power supply

Available Model	Model Name	Description
	RGPS-R9244GP+-P_US	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, high watts power supply included, US power cord
	RGPS-R9244GP+-P_EU	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, high watts power supply included, EU power cord
	RGPS-R9244GP+-P_UK	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, high watts power supply included, UK power cord
	RGPS-R9244GP+-P_JP	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, high watts power supply included, JP power cord
	RGPS-R9244GP+-P_AU	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, high watts power supply included, AU power cord
	RGPS-R9244GP+-LP_US	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, low watts power supply included, US power cord
	RGPS-R9244GP+-LP_EU	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, low watts power supply included, EU power cord
	RGPS-R9244GP+-LP_UK	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, low watts power supply included, UK power cord
	RGPS-R9244GP+-LP_JP	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, low watts power supply included, JP power cord
	RGPS-R9244GP+-LP_AU	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket, low watts power supply included, AU power cord
	RGPS-R9244GP+	Industrial Layer-3 28-port managed Gigabit PoE Ethernet switch with 24x10/100/1000Base-T(X) P.S.E. and 4x1G/10GBase-X, SFP+ socket
Packing List		Optional Accessories (Can be purchased separately)
- RGPS-R9244GP+/-P/-LP x 1 - Rack-mount Kit x 1 - ORing Tool CD x 1 - Power Cable x 1 - Quick Installation Guide x 1 - Console Cable x 1		- Open-Vision M500 : Powerful Network Management Windows Utility Suit, 500 IP devices - DBU-01 : backup unit device - SFP1G series : 1GMbps SFP optical transceiver - SFP10G series : 10GMbps SFP optical transceiver



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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
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Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.