



RGS-7244GP / RGS-7244GP-E

Industrial 28-port rack mount managed Gigabit Ethernet switch with 24x10/100/1000Base-T(X) and 4x1000Base-X, SFP socket

Features

- Support 24x10/100/1000Base-T(X) and 4x1000Base-X SFP ports
- Support Jumbo frame up to 9K Bytes
- Supports O-Ring (recovery time < 30ms over 250 units of connection), MSTP/RSTP/STP (IEEE 802.1s/w/D) for Ethernet Redundancy
- Open-Ring support the other vendor's ring technology in open architecture
- O-Chain allow multiple redundant network rings
- Support standard IEC 62439-2 MRP (Media Redundancy Protocol) function
- Provide Fast recovery technology for Ethernet multi-redundancy
- Support Jumbo frame up to 9.6K Bytes
- Supports IPV6 new internet protocol version
- Support Modbus TCP protocol
- Provided HTTPS/SSH protocol to enhance network security
- Supports SMTP client
- Supports IP-based bandwidth management
- Supports application-based QoS management
- Supports Device Binding security function
- Supports DOS/DDOS auto prevention
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Supports SNMP v1/v2c/v3, RMON and 802.1Q VLAN Network Management
- Support ACL, TACACS+ and 802.1x User Authentication for security
- Multiple notification for warning of unexpected event
- Windows utility (Open-Vision) support centralized management and configurable by Web-based interface, Telnet and Console (CLI)
- Support LLDP Protocol
- Event notification through Syslog, Email, SNMP trap, and Relay Output (for -E module)
- 19 inches rack mountable design



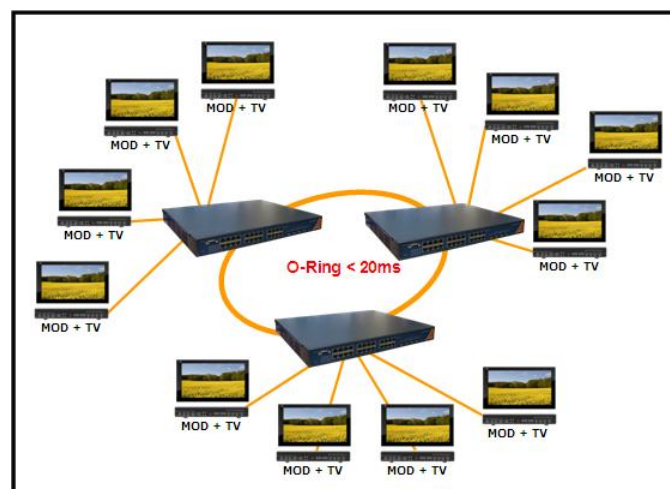
Introduction

RGS-7244GP series are managed redundant ring Ethernet switch with 24x10/100/1000Base-(TX) ports and 4x1000Base-X SFP ports. O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. And support wide operating temperature from -40 °C to 70 °C. RGPS-7244GP series can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

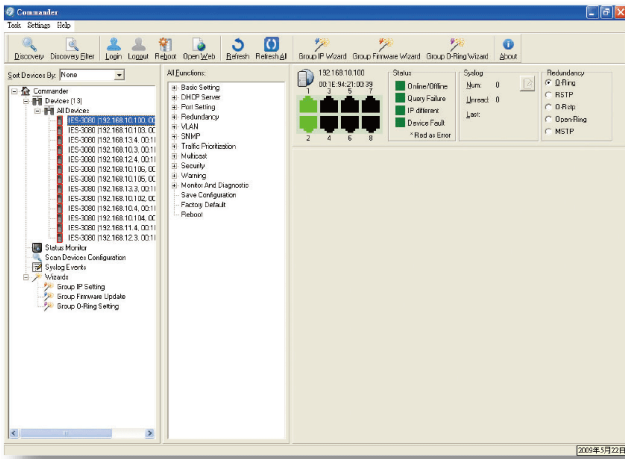
- **O-Ring** : O-Ring is ORing's proprietary redundant ring technology, with recovery time of less 30 milliseconds and up to 250 nodes. The O-Ring redundant ring technology can protect mission-critical application from network interruptions or temporary malfunction with its fast recover technology.
 - **Open-Ring** : Open-Ring is an enhanced redundant technology that makes ORing's switches compatible with other vendor's proprietary redundant ring technologies. It enables ORing's switches to form a single ring with other vendor's switch. In cases where the ring is setup using proprietary technology, ORing offers a compatibility service where ORing can make its switches compatible with your particular network requirements.
 - **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** : 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.
 - **IP-based Bandwidth Management** : The switch provide advanced IP-based bandwidth management which can limit the maximum bandwidth for each IP device. User can configure IP camera and NVR with more bandwidth and limit other device bandwidth.
 - **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..

Open-Vision

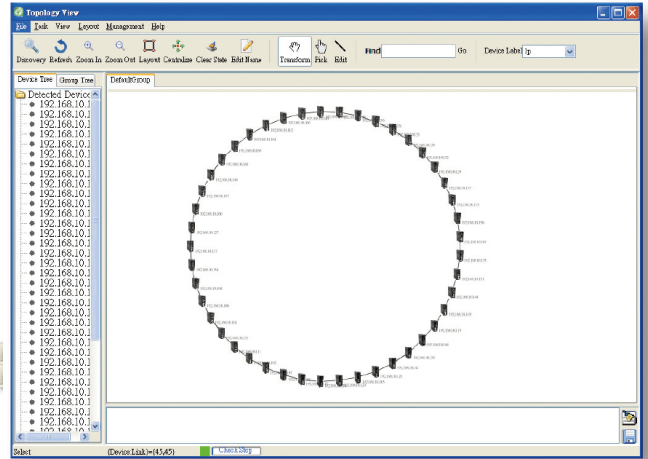
ORing's switches are intelligent switches. Different form other traditional redundant switches, ORing provides a set of Windows utility (Open-Vision v3.0 or above) for user to manage and monitor all of industrial Ethernet switches on the industrial network.



Network connection

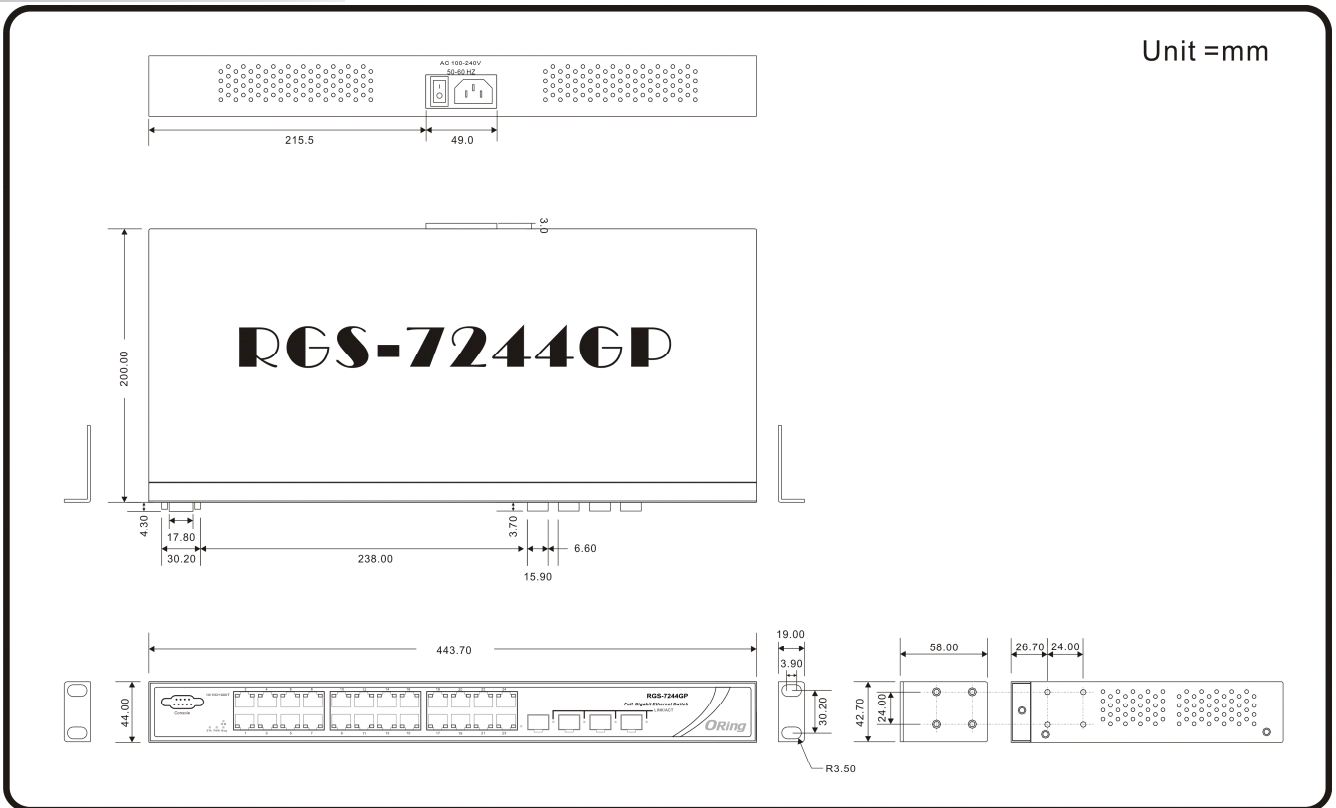


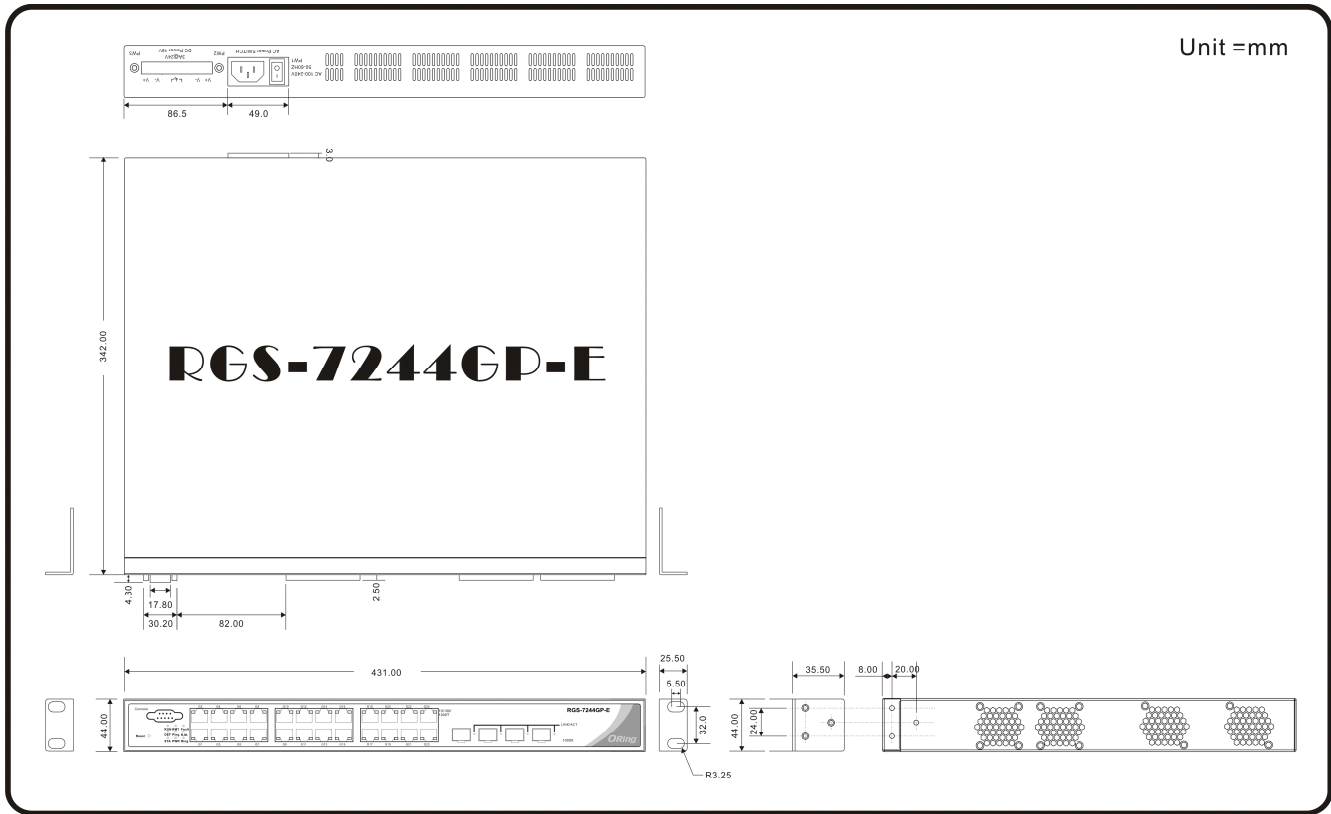
Monitoring and Configuration interface



Topology View

Dimension





Specifications

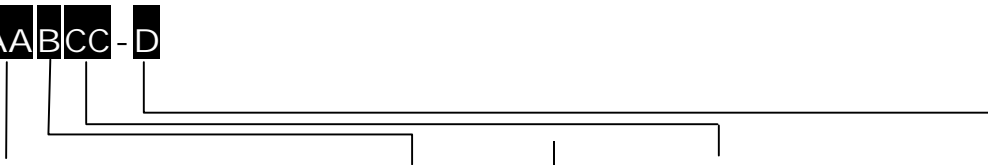
ORing Switch Model	RGS-7244GP	RGS-7244GP-E
Physical Ports		
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX		24
1000Base-X SFP Port		4
Technology		
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.z for 1000Base-X IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) IEEE 802.1x for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)	
MAC Table	8K	
Priority Queues	4	
Processing	Store-and-Forward	
Switch Properties	Switching latency: 7 us Switching bandwidth: 56Gbps 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 and 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 and GVRP supported IGMP Snooping IP-based bandwidth management Application-based QoS management DOS/DDOS auto prevention Port configuration, status, statistics, monitoring, security DHCP Client/Server SMTP Client Modbus TCP	
Network Redundancy	O-Ring Open-Ring O-Chain MRP Fast Recovery Mode STP/RSTP/MSTP	
RS-232 Serial Console Port	RS-232 in DB9 connector with console cable. 115200bps, 8, N, 1	
LED Indicators		
Power Indicator (PWR)	Green : Power indicator For AC	Green : Power indicator For AC and DC
Power-1 Indicator (PW1)	N/A	Green : Indicate Power-1 input
Power-2 Indicator (PW2)	N/A	Green : Indicate Power-2 input
Power-3 Indicator (PW3)	N/A	Green : Indicate Power-3 input
System Ready Indicator (STA)	Green : Indicate that the system is ready. The LED is blinking when the system is upgrading firmware	
Ring Master Indicator (R.M.)	Green : Indicate that the system is operating in O-Ring Master mode	
O-Ring Indicator (Ring)	Green : Indicate system operated in O-Ring mode Blinking to indicate Ring is broken.	
Fault Indicator (Fault)	N/A	Amber : Indicate unexpected event occurred
System Running Indicator (RUN)	Green : System operated continuously	
Supervisor Login Indicator (RMT)	Green : System is accessed remotely	
Reset To Default Running Indicator (DEF)	Green : System reset to default configuration	
Ping Command To The Switch Indicator (Ping)	Green : System is processing "PING" request	
10/100/1000Base-T(X) RJ45 Port Indicator	Green for port Link/Act indicator. Amber for half/full-duplex indicator	
1000Base-X SFP Port Indicator	Green for port Link/Act.	
Fault contact		
Relay	N/A	Relay output to carry capacity of 1A at 24VDC
Power		
Redundant Input Power	100 ~ 240VAC with power cord	100 ~ 240VAC with power cord, dual 36 ~ 72VDC power inputs at 6-pin terminal block
Power Consumption (Typ.)	36 Watts	36 Watts
Overload Current Protection	Present	
Physical Characteristic		
Enclosure	19 inches rack mountable	
Dimension (W x D x H)	443.7 (W) x 200 (D) x 44 (H) mm	431 (W) x 342 (D) x 44 (H) mm
Weight (g)	2700g	4250g
Environmental		
Storage Temperature	-40 to 85°C (-40 to 185°F)	

Operating Temperature	-40 to 70°C (-40 to 158°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

Ordering Information

RGS-7 **A** **A** **B** **C** **C** - **D**



Code	10/100/1000Base-T(X)	Additional Port Number	Additional Port Type	Model Type
Definition	Port Number			
Option	- 24: 24 ports	- 4: 4 ports	-GP: 1000Base-X SFP ports	-E: enhanced model with dual DC inputs and Relay output

	Model Name	Description
Available Model	RGS-7244GP_US	Industrial 28-port rack mount managed Gigabit Ethernet switch with 24x10/100/1000Base-T(X) and 4x1000Base-X, SFP socket, US power cord
	RGS-7244GP_EU	Industrial 28-port rack mount managed Gigabit Ethernet switch with 24x10/100/1000Base-T(X) and 4x1000Base-X, SFP socket, EU power cord
	RGS-7244GP-E_US	Industrial 28-port rack mount managed Gigabit Ethernet switch with 24x10/100/1000Base-T(X) and 4x1000Base-X, SFP socket, enhanced version, US power cord
	RGS-7244GP-E_EU	Industrial 28-port rack mount managed Gigabit Ethernet switch with 24x10/100/1000Base-T(X) and 4x1000Base-X, SFP socket, enhanced version, EU power cord

Packing List

- RGS-7244GP (-E) x 1
- Rack-mount Kit x 1
- ORing Tool CD x 1
- Console Cable x 1
- Quick Installation Guide x 1
- Power Cable x 1

Optional Accessories

- Open-Vision M500 : Powerful Network Management Windows Utility Suit, 500 IP devices
- DR-120-48 : 48V/120Watts DIN-Rail power supply (Only for -E)
- SFP 1G series : 1Gbps SFP optical transceiver
- DR-75-48 : 48V/75Watts DIN-Rail power supply (Only for -E)