Quick Installation Guide

GIGABIT SWITCH MANAGED Rack-Mount

RGS-7244GP/-E

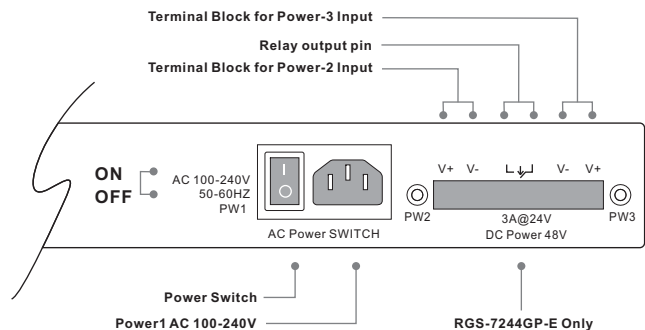## Managed Gigabit Ethernet Switch

Introduction

RGS-7244GP series are managed redundant ring Ethernet switch with 24x10/100/1000Base-(TX) ports and 4x1000Base-X SFP ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 20ms over 250 units of connection) and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. ORing's thunder switch series 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 the bandwidth of other device bandwidth. ORing's thunder switch series also support application-based QoS. Application-based QoS can set highest priority for data stream according to TCP/UDP port number. ORing's special IP police function can only permit allowed IP address with MAC address to access the networking. 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. ORing's thunder switch series also provided advanced DOS/DDOS auto prevention. If there is any IP flow become big in short time, ORing's thunder 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. And all functions of **RGS-7244GP series** can also be managed centralized and convenient by Open-Vision v3.0 or above, as well as the Web-based interface, Telnet and console (CLI) configuration. Therefore, the

Features

- Support 24x 10/100/1000 Base-T(X) and 4x1000Base-X SFP ports
- Support Jumbo frame up to 9K Bytes
- Supports O-Ring (recovery time < 20ms over 250 units of connection), MSTP/RSTP/STP (IEEE 802.1s/w/D) for Ethernet Redundancy
- Supports IP-based bandwidth management
- Supports application-based QoS management
- Supports IP police 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, 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 mounted design

Product Interface

Back View

Terminal Block for Power-3 Input
Relay output pin
Terminal Block for Power-2 Input

ON OFF
AC 100-240V 50-60HZ PW1
AC Power SWITCH
V+ V- ⊥ V- V+
PW2   3A@24V   PW3
DC Power 48V

Power Switch
Power1 AC 100-240V
RGS-7244GP-E Only

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-T(X), 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 9K Bytes	
Security Features	Enable/disable ports, MAC based port security Port based network access control (802.1x) VLAN (802.1Q) to segregate and secure network traffic Supports Q-in-Q VLAN for performance & security to expand the VLAN space Radius centralized password management SNMPv3 encrypted authentication and access security	
Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s), Redundant Ring (O-Ring) with recovery time less than 20ms 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	
Network Redundancy	O-Ring, 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
Power1 Indicator (PWR1)	N/A	Green : Indicate Power-1 input
Power2 Indicator (PWR2)	N/A	Green : Indicate Power-2 input
Power3 Indicator (PWR3)	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 system operated in 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
Sysem Runnig 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	
10/100/1000 Base-T(X) RJ45 Port Indicator	Left Green for Link/Act indicator Right Amber for full-duplex indicator	
1000Base-X SFP Port Indicator	Green for port Link/Act.	
Fault Contact		
Relay	N/A	Relay output to carry capacity of 3A at 24VDC
Power		
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	
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 (17.47x7.87x1.73 inch)	431 (W) x 342 (D) x 44 (H) mm (16.96x13.46x1.73 inch)
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	

Open-Vision

ORing's switches are intelligent switches. Different form 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.
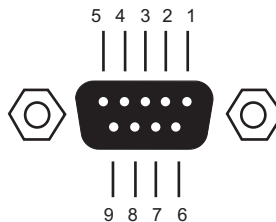
Network connection

MOD + TV (labels), O-Ring < 20ms
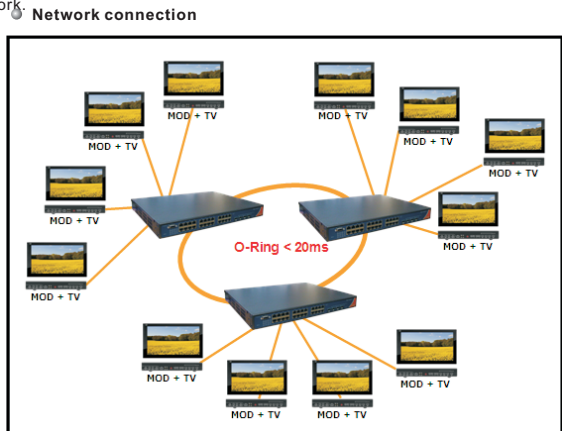
⦿ Monitoring and Configuration interface   ⦿ Topology View
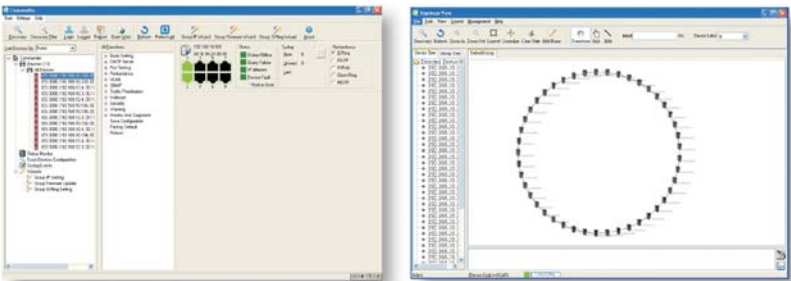
Console Port Pin Assignment

5 4 3 2 1
9 8 7 6

Pin#	RS232 Signal
1	-
2	TXD
3	RXD
4	-
5	GND
6	-
7	-
8	-
9	-
Console port act as DCE	

Setting: 115200 bps, 8, N, 1
User name: admin
Password: admin

GIGABIT SWITCH
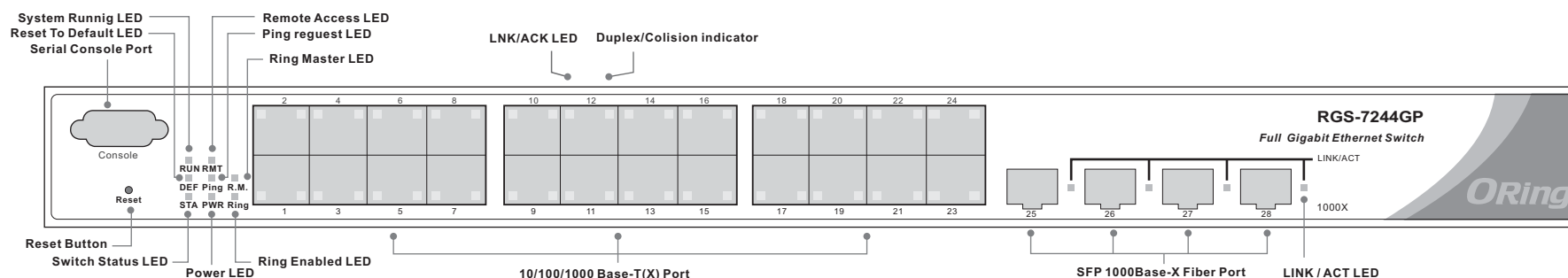MANAGED Rack-Mount

ORing Industrial Networking Corp.

Quick Installation Guide

RGS-7244GP/-E

Managed Gigabit Ethernet Switch

Front Panel

RGS-7244GP

System Runnig LED
Reset To Default LED
Serial Console Port
Remote Access LED
Ping reguest LED
Ring Master LED
LNK/ACK LED   Duplex/Colision indicator

Console

RUN RMT
DEF Ping R.M.
STA PWR Ring

Reset

RGS-7244GP
Full Gigabit Ethernet Switch

LINK/ACT
1000X

ORing

Reset Button
Switch Status LED   Power LED   Ring Enabled LED
10/100/1000 Base-T(X) Port
SFP 1000Base-X Fiber Port   LINK / ACT LED

RGS-7244GP-E

Power3 LED   Fault LED

Console

PW3 RUN RMT Fault
PW2 DEF Ping R.M.
PW1 STA PWR Ring

Reset

10/100 1000T

RGS-7244GP-E
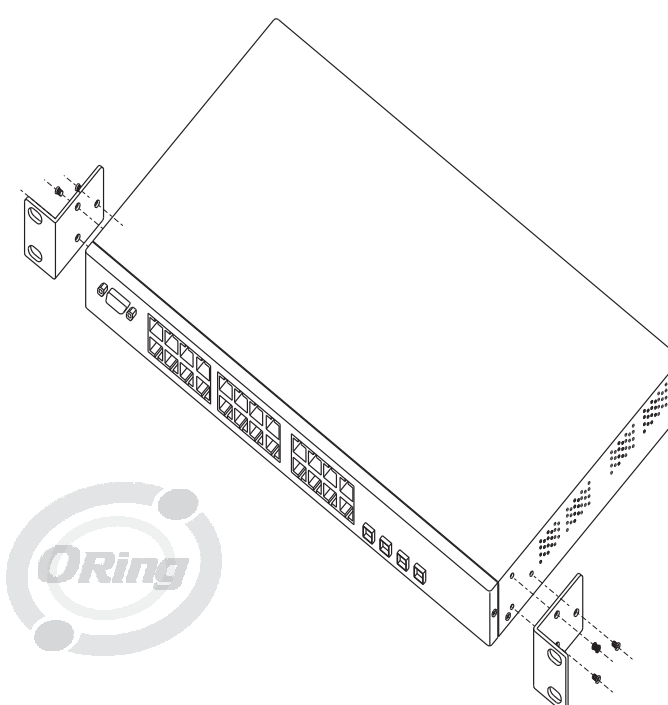*Full Gigabit Ethernet Switch*

LINK/ACT
1000X

ORing

Power2 LED   Power1 LED

Installation

RGS-7244GP Rack-mounted Install Step
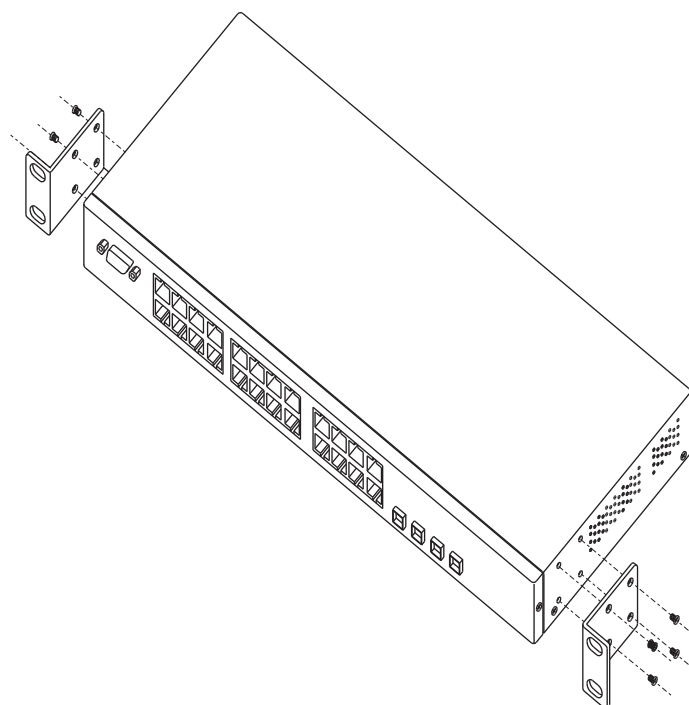
RGS-7244GP-E Rack-mounted Install Step

Accessory

① Power Cord   ② Console Cable   ③ 4-hole Rack-mounted kit (L&R)

④ 3-hole Rack-mounted kit   ⑤ Dust Cover (RJ-45)   ⑥ Dust Cover (SFP)

⑦ Round Screw (M4X 6)   ⑧ Flat Screw (M3X 4)   ⑨ CD   ⑩ QIG

Packing list

Model name	Model Description	Accessory
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	①X 1, ②X 1, ③X 1, ⑤X 24, ⑥X 4, ⑦X 8, ⑨X 1, ⑩X 1,
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	①X 1, ②X 1, ③X 1, ⑤X 24, ⑥X 4, ⑦X 8, ⑨X 1, ⑩X 1,
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	①X 1, ②X 1, ③X 1, ⑤X 24, ⑥X 4, ⑦X 6, ⑨X 1, ⑩X 1,
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	①X 1, ②X 1, ③X 1, ⑤X 24, ⑥X 4, ⑦X 6, ⑨X 1, ⑩X 1,