RGS-7168GCP / RGS-7168GCP-E

RGS-7168GCP/
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Industrial 24-port rack-mount managed Gigabit Ethernet switch with 16xGigabit combo ports and 8x100/1000Base-X, SFP socket

Features

- Support 24 Gigabit ports with **16 x Gigabit combo** ports and **8 x Gigabit SFP** ports
- Support **O-Ring** (recovery time < 30ms over 250 units of connection) and 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***NOTE (Media Redundancy Protocol) function
- Supports IPV6 new internet protocol version
- Support Modbus TCP protocol
- Provided HTTPS/SSH protocol to enhance network security
- Supports SMTP client
- Support IP-based bandwidth management
- Support application-based QoS management
- Support IP Police 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, 802.1x User Authentication for security
- Support 9K Bytes Jumbo Frame
- Multiple notification for warning of unexpected event
- Web-based ,Telnet, Console (CLI), and Windows utility (**Open-Vision v3.0**) configuration
- Support LLDP Protocol
- 19-inch rack-mountable design

ThunderRack

R6 READY | Full Gigabit | O-Ring | Redundant PWR | -40~70°C Temperature | RoHS Lead Free | CE | FC

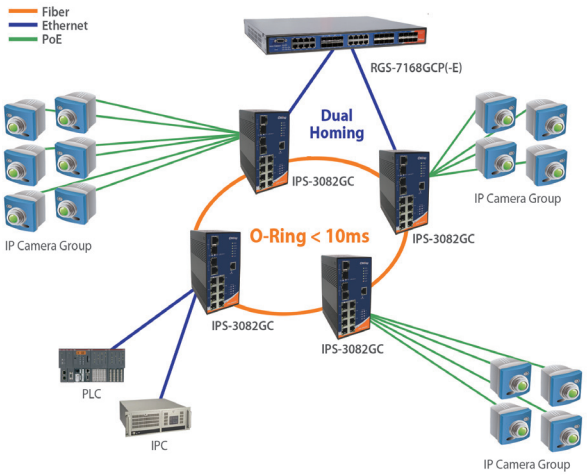
***NOTE: This function is available by request only**

Introduction

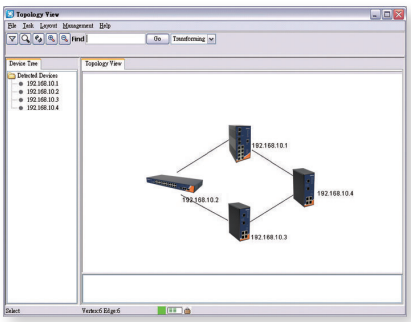
RGS-7168GCP series are managed redundant ring Ethernet switches with 16xGigabit combo ports and 8x100/1000Base-X SFP ports. With complete support of Ethernet Redundancy protocol, **O-Ring** (recovery time < 30ms over 250 units of connection) and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical 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 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 special IP police 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. ORing's thunder series switch 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-7168GCP 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 Gigabit Fiber Ethernet application.

Open-Vision

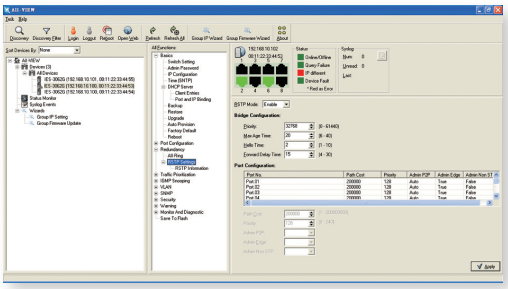
ORing's switches are intelligent switches. Different from other traditional redundant switches, ORing provides a set of Windows utility (Open-Vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.

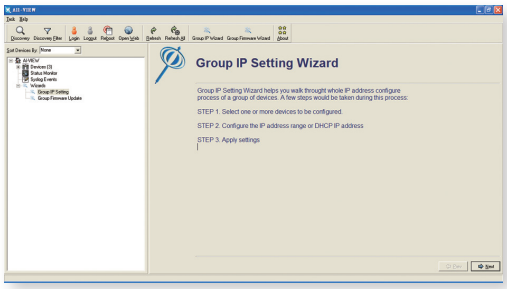


Network connection



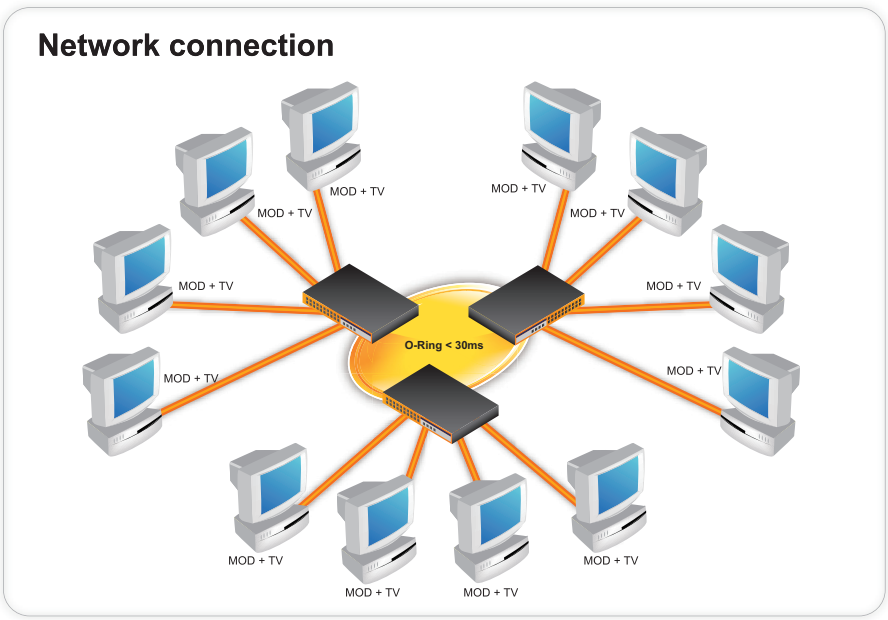
Topology View



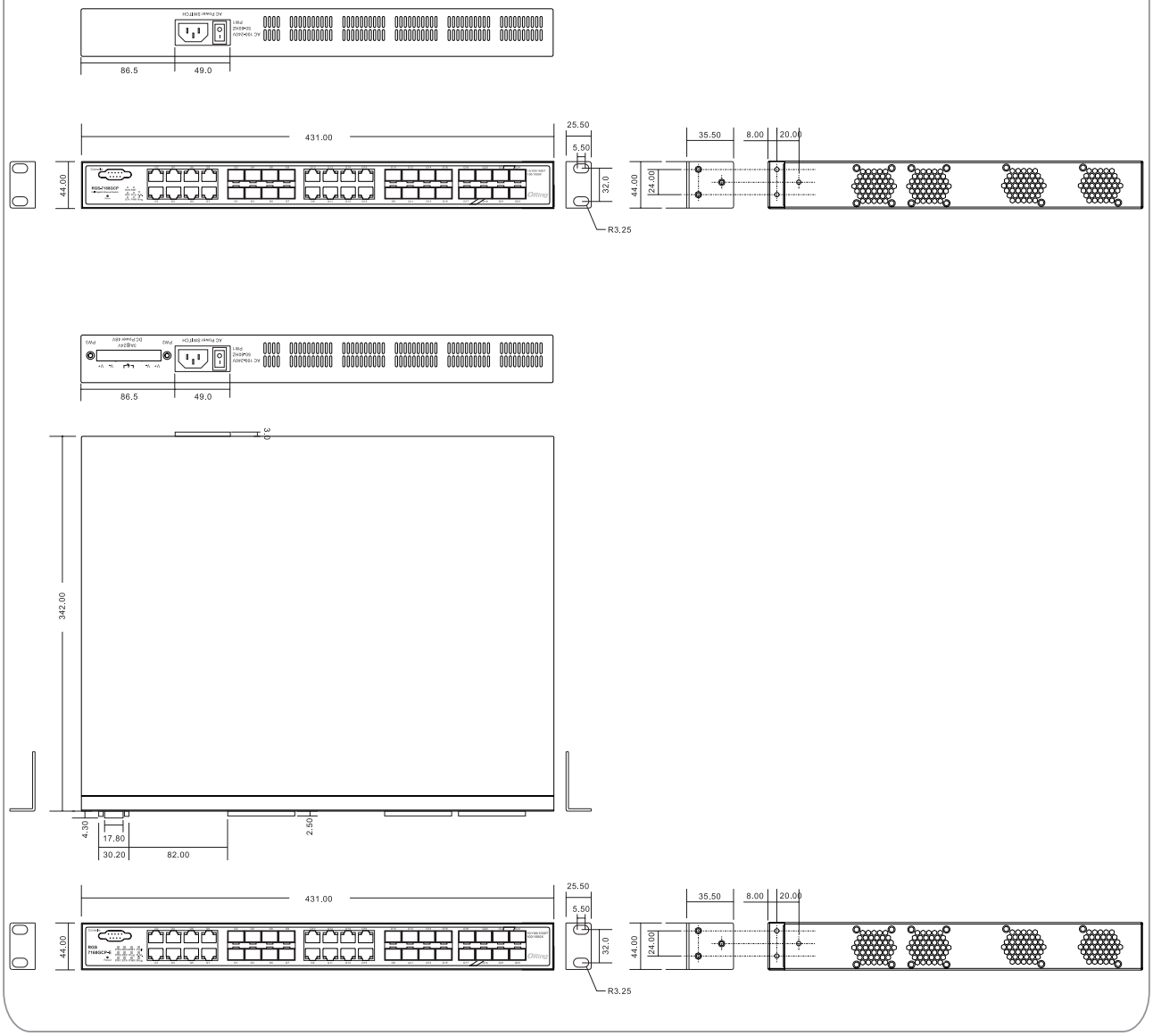


Monitoring and Configuration interface

Application



Dimensions



(Unit=mm)

Specifications

ORing Switch Model	RGS-7168GCP	RGS-7168GCP-E
Physical Ports		
Gigabit Combo port with 10/100/1000Base-T(X) and 100/1000Base-X SFP ports	16	
100/1000Base-X with SFP port	8	

Technology		
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX 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 µs Switching bandwidth: 48Gbps 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	IP Police 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 O-Chain Fast Recovery Mode STP MRP***NOTE** RSTP Open-Ring 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 : Indicates Power-1 input
Power-2 Indicator (PW2)	N/A	Green : Indicates Power-2 input
Power-3 Indicator (PW3)	N/A	Green : Indicates Power-3 input
System-Ready Indicator (STA)	Green : Indicates that the system is ready. The LED is blinking when the system is upgrading firmware.	
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 is operating in O-Ring mode. Green Blinking: Indicates that the Ring is broken.	
Fault Indicator (Fault)	N/A	Amber : Indicates unexpected event occurred
Sysem Runnig Indicator (RUN)	Green : System is operating continuously	
Supervisor Login Indicator (RMT)	Green : System is accessed remotely	
Reset To Default Running Indicator (DEF)	Green : System resets to default configuration	
Ping Command To The Switch Indicator (Ping)	Green : System is processing "PING" request	
10/100/1000Base-T(X) RJ45 Port Indicator	Left Green for 1000Mbps Link/Act indicator. Amber for 10/100Mbps Link/Act indicator Right Amber for full-duplex indicator	
100/1000Base-X SFP Port Indicator	Green for port Link/Act.	

***NOTE: This function is available by request only**

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.)	33 Watts	33 Watts
Overload Current Protection	Present	
Physical Characteristics		
Enclosure	19 inches rack-mountable	
Dimensions (W x D x H)	431 (W) x 342 (D) x 44 (H) mm	
Weight (g)	4350 g	4500 g
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	
Safety	EN60950-1	
MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C)	89,996	59,580
Warranty	5 years	

Ordering Information

RGS-7 AA B CC - D

Code Definition	Gigabit Combo Port Number	Gigabit SFP Port Number	Additional Port Type	Model Type
Option	**- 16:** 16 ports	**- 8:** 8 ports	**-GCP:** Gigabit Combo ports and Gigabit SFP ports	-E: enhanced model with dual DC inputs and Relay output

	Model Name	Description
Available Model	RGS-7168GCP_US	Industrial 24-port rack-mount managed Gigabit Ethernet switch with 16xGigabit combo ports and 8x100/1000Base-X, SFP socket, US power cord
	RGS-7168GCP_EU	Industrial 24-port rack-mount managed Gigabit Ethernet switch with 16xGigabit combo ports and 8x100/1000Base-X, SFP socket, EU power cord
	RGS-7168GCP-E_US	Industrial 24-port rack-mount managed Gigabit Ethernet switch with 16xGigabit combo ports and 8x100/1000Base-X, SFP socket, enhanced version, US power cord
	RGS-7168GCP-E_EU	Industrial 24-port rack-mount managed Gigabit Ethernet switch with 16xGigabit combo ports and 8x100/1000Base-X, SFP socket, enhanced version, EU power cord

Packing List

- RGS-7168GCP / RGS-7168GCP-E
- Rack-Mount Kit
- Console Cable
- Power Cable
- ORing Tool CD
- Quick Installation Guide

Optional Accessories (Can be purchased separately)

- Open-Vision M500, Powerful Network Management Windows Utility Suite, 500 IP devices
- SFP100 series, 100Mbps SFP optical transceiver
- SFP1G series, 1Gbps SFP optical transceiver
- DR-75-48 : 48V/75Watts DIN-Rail power supply (Only for –E model)
- DR-120-48 : 48V/120Watts DIN-Rail power supply (Only for –E model)
- SDR-240-48, 240W DIN-Rail power supply
- SDR-480-48, 480W DIN-Rail power supply