## **IGS-3032GC**



# ▶ Industrial 5-port managed Gigabit Ethernet switch with 3x10/100/1000Base-T(X) and 2xGigabit combo ports, SFP socket

#### **Features**

- Designed for Railway application and full compliant with the requirement of EN50155 standard
- Fastest Redundant Ethernet Ring: **O-Ring** (recovery time < 20ms over 250 units of connection)
- **Open-Ring** supports the other vendor's ring technology in open architecture
- **0-Chain** allow multiple redundant network rings
- Support standard IEC 62439-2 MRP (Media Redundancy Protocol) function
- Support Modbus TCP protocol
- STP/RSTP/MSTP supported
- Supports **PTP Client** (Precision Time Protocol) clock synchronization
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Port Trunking for easy of bandwidth management
- SNMP v1/v2c/v3 support for secured network management
- RMON for traffic monitoring
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Windows utility (Open-Vision) supports centralized management, plus Web-based , Telnet, and Console (CLI) configurations
- Supports five Gigabit ports
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled
- Supports LLDP Protocol

















#### Introduction

IGS-3032GC is a full gigabit managed Redundant Ring Ethernet switch with 3x10/100/1000Base-T(X) and 2xGigabit combo ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 20ms over 250 units of connection), Open-Ring, 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. IGS-3032GC can be managed centralized and convenient by a powerful windows utility — Open-Vision. The redundant DC power inputs guarantee a non-stop operation. The backup power input will take over immediately when the primary DC power input fails. IGC-3032GC provides relay outputs that can be set up to indicate events with urgency to notify or warn the technicians, so they can quickly respond to the message in priority. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

#### **Open-Vision**

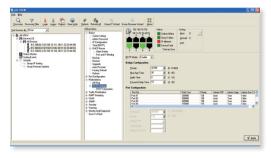
ORing's switches are intelligent switches. Different from other traditional redundant switches, ORing provides a set of Windows utility (Open-Vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.



| Description |

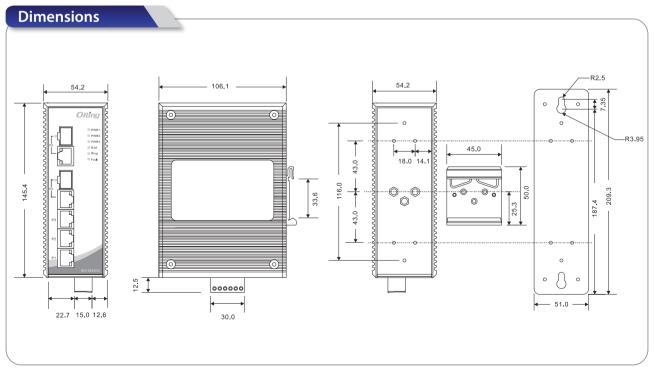
Network connection

Topology View





Monitoring and Configuration interface



(Unit=mm)

## Specifications

ORing Switch Model	IGS-3032GC	
Physical Ports		
10/100/1000Base-T(X) Ports in RJ45 Auto MDI/MDIX	3	
Gigabit Combo Ports with 10/100/1000Base-T(X) and 100/1000Base-X SFP Port	2	
Technology		
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX 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 802.1D for STP (Spanning Tree 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 MSTP (Multiple Spanning Tree Protocol) IEEE 802.1x for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)	
MAC Table	8192 MAC addresses	
Priority Queues	4	
Processing	Store-and-Forward	
Switch Properties	Switching latency : 7 µs Switching bandwidth : 10 Gbps Max. Number of Available VLANs : 4096 IGMP multicast groups : 1024 Port rate limiting : User Define	
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 Radius centralized password management SNMP v1/v2c/v3 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 for multicast filtering Port configuration, status, statistics, monitoring, security SNTP for synchronizing of clocks over network Supports PTP Client (Precision Time Protocol) clock synchronization DHCP Server / Client support Port Trunk support MVR (Multicast VLAN Registration) support	
Network Redundancy	O-Ring Open-Ring STP RSTP MSTP	
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable. 9600bps, 8, N, 1	
LED Indicators		
Power indicator	Green: Power LED x 3	
R.M. indicator	Green: Indicates that the system is operating in O-Ring Master mode	
Ring indicator	Green: Indicates that the system is operating in 0-Ring mode	
Fault indicator	Amber: Indicates unexpected event occurred	
10/100/1000Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for 100Mbps indicator	
100/1000Base-X SFP Port Indicator	Green for port Link/Act.	

Fault contact			
Relay	Relay output to carry capacity of 1A at 24VDC		
Power			
Redundant Input Power	Triple DC inputs: $+12 \sim +48$ VDC or $-12 \sim -48$ VDC on 7-pin terminal block, $12 \sim 45$ VDC on power jack		
Power Consumption (Typ.)	10 Watts		
Overload Current Protection	Present		
Reverse Polarity Protection	Present on terminal block		
Physical Characteristics			
Enclosure	IP-30		
Dimensions (W x D x H)	54.1(W)x106.1(D)x145.4(H) mm (2.13x4.18x5.72inch.)		
Weight (g)	820g		
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, EN50155 (EN50121-3-2, EN55011, EN50121-4)		
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, EN61373		
Free Fall	IEC60068-2-32		
Vibration	IEC60068-2-6, EN61373		
Safety	EN60950-1		
Warranty	5 years		

### **Ordering Information**



Code Definition	Code Definition 10/100/1000Base-T(X) Port Number		Additional Port Type
Option	- <b>03</b> : 3 ports	- <b>2</b> : 2 ports	-GC : Gigabit Combo port

Available	Model Name	Description
Model	IGS-3032GC	Industrial 5-port managed Gigabit Ethernet switch with 3x10/100/1000Base-T(X) and 2xGigabit combo ports, SFP socket
Packing List  IGS-3032GC  DIN-Rail Kit  Wall-mount Kit  Console 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  SFP 100 series: 100Mbps SFP optical transceiver  SFP 16 series: 16bps SFP optical transceiver  DR-45 series: 45 Watts DIN-Rail power supply  DR-75 series: 75 Watts DIN-Rail power supply  DR-120 series: 120 Watts DIN-Rail power supply  SDR-240-48, 240W DIN-Rail power supply  SDR-480-48, 480W DIN-Rail power supply