



# IGS-3044GC

**Industrial 8-port managed Gigabit Ethernet switch with 4x10/100/1000Base-T(X) and 4xGigabit combo ports, SFP socket**

## Features

- World's fastest Redundant Ethernet Ring: **O-Ring** (recovery time < 20ms over 250 units of connection)
- **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
- STP/RSTP/MSTP supported
- Support **PTP Client** (Precision Time Protocol) clock synchronization
- Support Modbus/TCP protocol
- 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
- Supports **DDM** (Digital Diagnostic Monitoring) function
- Support LLDP (Link Layer Discovery Protocol)
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Port lock to prevent access from unauthorized MAC address
- Windows utility (**Open-Vision**) support centralized management and configurable by Web-based ,Telnet, Console(CLI)
- Support eight Gigabit ports
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled



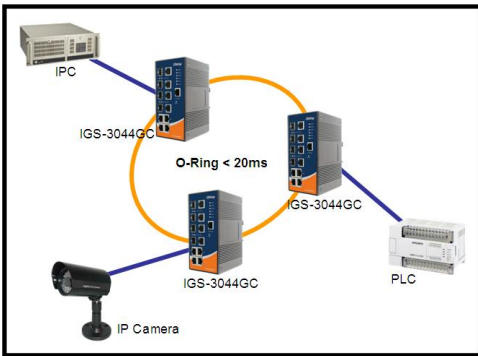
## Introduction

IGS-3044GC is managed redundant ring Ethernet switch with 4x10/100/1000Base-T(X) and 4xGigabit Combo ports. With completely support of Ethernet redundancy protocol, O-Ring (recovery time < 20ms over 250 units of connection), Open-Ring, O-Chain, MRP 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. Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring. 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. IGS-3044GC can be managed centralized and convenient by a powerful windows utility — Open-Vision. IGS-3044GC support new DDM (Digital Diagnostic Monitoring) function, which can monitor instantly the status of electrical voltage, current and temperature. The redundant DC power inputs guarantee a non-stop operation. The backup power input will take over immediately

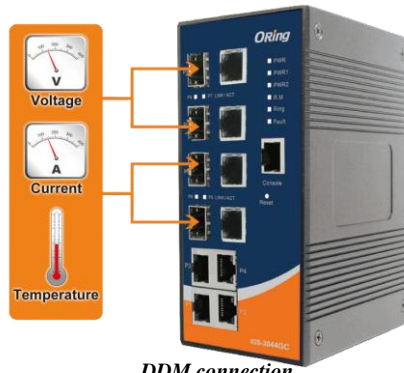
when the primary DC power input fails. IGS-3044GC provides relay outputs that can be set up to indicate events with urgency to notify or warn the technicians, so they can quickly respond to the message in priority. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

## Open-Vision

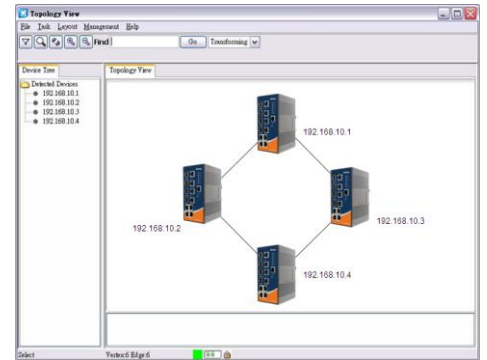
ORing's switches are intelligent switches. Different from other traditional redundant switches, ORing provides a set of Windows utility (Open-Vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.



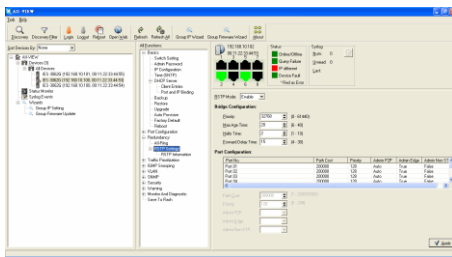
Network connection



DDM connection

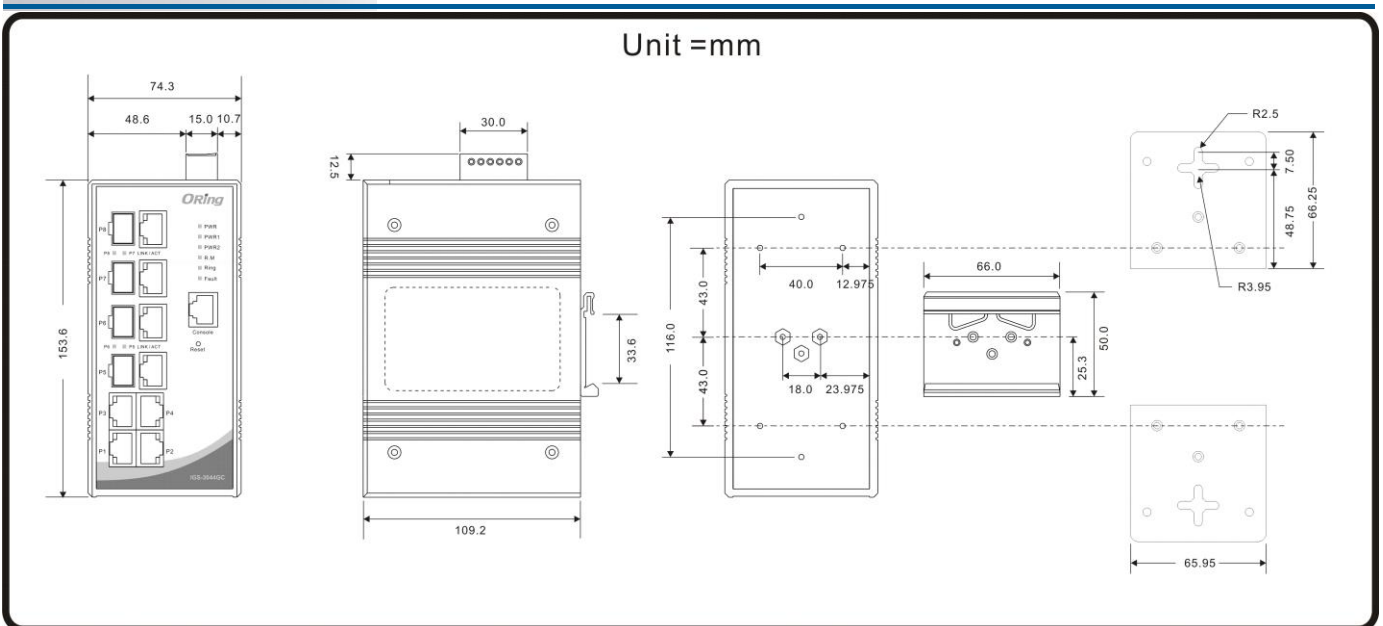


Topology View



Monitoring and Configuration interface

## Dimension



## Specifications

ORing Switch Model	IGS-3044GC
<b>Physical Ports</b>	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	4
Gigabit Combo Port with 10/100/1000Base-T(X) and 100/1000Base-X SFP Port	4
<b>Technology</b>	
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 802.1s 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 us Switching bandwidth: 16Gbps 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 Supports Q-in-Q VLAN for performance & security to expand the VLAN space 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 Support <b>PTP Client</b> (Precision Time Protocol) clock synchronization DHCP Server / Client support Port Trunk support MVR (Multicast VLAN Registration) support Modbus TCP
Network Redundancy	O-Ring Open-Ring O-Chain MRP STP / RSTP / MSTP
Warning / Monitoring System	Relay output for fault event alarming Syslog server / client to record and view events Include SMTP for event warning notification via email Event selection support
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable. 9600bps, 8, N, 1
<b>LED indicators</b>	
Power Indicator	Green : Power LED x 3

R.M. Indicator	Green : Indicate system operated in O-Ring Master mode
Ring Indicator	Green : Indicate system operated in O-Ring mode
Fault Indicator	Amber : Indicate unexpected event occurred
10/100/1000Base-T(X) RJ45 port indicator	Green for port Link/Act. Dual color LED for speed indicator : Amber for 100Mbps / Off-light for 10Mbps
100/1000Base-X SFP Port Indicator	Green for port Link/Act.
<b>Fault contact</b>	
Relay	Relay output to carry capacity of 1A at 24VDC
<b>Power</b>	
Redundant Input Power	Dual DC inputs. 12~48VDC on 6-pin terminal block
Power Consumption (Typ.)	22.8 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present
<b>Physical Characteristic</b>	
Enclosure	IP-30
Dimension (W x D x H)	74.3(W)x109.2(D)x153.6(H) mm (2.93 x 4.3 x 6.05 inch)
Weight (g)	1075 g
<b>Environmental</b>	
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
<b>Regulatory approvals</b>	
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
<b>MTBF</b>	725,087 hours
<b>Warranty</b>	5 years

## Ordering Information

**IGS-3AABCC**



Code Definition	10/100/1000Base-T(X) Port Number	Additional Port Number	Additional Port Type
Option	- 04: 4 ports	- 4: 4 ports	-GC: Gigabit Combo Port
Available Model	Model Name	Description	
	<b>IGS-3044GC</b>	Industrial 8-port managed Gigabit Ethernet switch with 4x10/100/1000Base-T(X) and 4xGigabit combo ports, SFP socket	

## Packing List

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- IGS-3044GC x 1
- DIN-Rail Kit x 1
- ORing Tool CD x 1
- Wall-mount Kit x 1
- Quick Installation Guide x 1
- Console Cable x 1

## Optional Accessories

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- Open-Vision M500 : Powerful Network Management Windows Utility Suit, 500 IP devices
- DR-45 series : 45 Watts DIN-Rail power supply
- DR-120 series : 120 Watts DIN-Rail power supply
- SFP100 series : 100Mbps SFP optical transceiver
- SFP 1G series : 1Gbps SFP optical transceiver
- DR-75 series : 75 Watts DIN-Rail power supply