## **IES-3073GC**



# ▶ Industrial 10-port managed Ethernet switch with 7x10/100Base-T(X) and 3xGigabit combo ports, SFP socket

#### **Features**

- Fastest Redundant Ethernet Ring: **O-Ring** (recovery time < 10ms 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\*NOTE (Media Redundancy Protocol) function
- STP/RSTP:2004/MSTP supported
- Support IPV6 new internet protocol version
- Supports **PTP Client** (Precision Time Protocol) clock synchronization
- Provided HTTPS/SSH protocol to enhance network security
- 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
- 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, and Console (CLI)
- Supports 3 Gigabit combo ports
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled
- Supports LLDP Protocol
- Support TACACS+ and 802.1x User Authentication for security

















#### Introduction

IES-3073GC is managed Redundant Ring Ethernet switch with 7x10/100Base-T(X) ports and 3xGigabit combo ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-RSTP and MSTP/RSTP:2004/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. All function of IES-3073GC can be managed centralized and convenient by a powerful windows utility — Open-Vision. IES-3073GC support new DDM (Digital Diagnostic Monitoring) function, which can monitor instantly the status of electrical voltage, current and temperature. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed and Fiber Ethernet application.

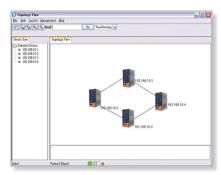
#### **Open-Vision**

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.

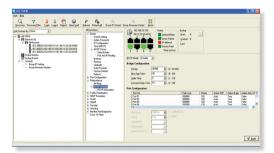


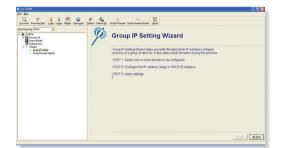
Network connection

DDM function

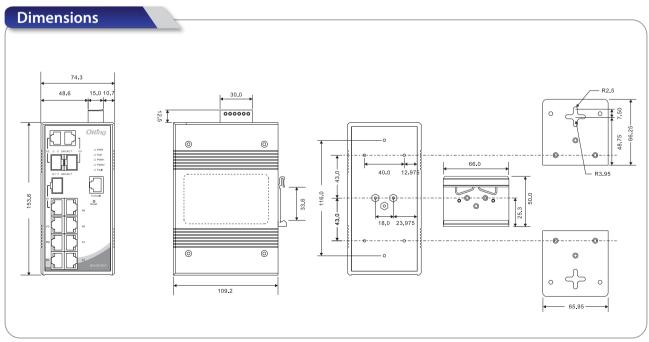


Topology View





Monitoring and Configuration interface



(Unit=mm)

## Specifications

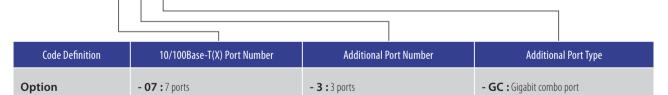
ORing Switch Model	IES-3073GC	
Physical Ports		
10/100Base-T(X) Port in RJ45 Auto MDI/MDIX	7	
Gigabit combo Port with 10/100/1000Base-T(X) and 100/1000Base-X SFP Port	3	
Technology		
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3z for 1000Base-X IEEE 802.3ab for 1000Base-T IEEE 802.3x for Flow control IEEE 802.3x for Flow control IEEE 802.3v for Flow control IEEE 802.1p for COS (Class of Service) IEEE 802.1p for VLAN Tagging IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004) 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: 7.4Gbps 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 Https / SSH enhance network security	
Software Features	STP/RSTP:2004/MSTP (IEEE 802.1D/w/s) Redundant Ring (0-Ring) with recovery time less than 10ms 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 v2/v3 (IGMP snooping support) for multicast filtering Port configuration, status, statistics, monitoring, security SNTP for synchronizing of clocks over network Support PTP Client (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 STP RSTP:2004 MSTP MRP*NOTE	
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	
LED Indicators		
Power Indicator	Green: Power LED x 3	
R.M. Indicator	Green: Indicates that the system is operating in O-Ring master mode	
O-Ring Indicator	Green: Indicates that the system is operating in O-Ring mode	
Fault Indicator	Amber: Indicates unexpected event occurred	

<sup>\*</sup>NOTE: This function is available by request only

10/100Base-T(X) RJ45 port indicator Green for port Link/Act. Amber for Duplex/Collision				
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 output to carry capacity of 1A at 24VDC				
Power				
Redundant Input Power Dual DC inputs. 12~48VDC on 6-pin terminal block				
Power Consumption (Typ.) 12 Watts				
Overload Current Protection Present				
Reverse Polarity Protection Present on terminal block				
Physical Characteristics				
Enclosure IP-30				
<b>Dimensions (W x D x H)</b> 74.3(W) x 109.2(D) x 153.6(H) mm (2.93x4.3x6.05 inch)				
Weight (g) 1045g				
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), EN6	51000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8,			
EN61000-4-11				
Shock IEC60068-2-27				
Shock IEC60068-2-27				
Shock         IEC60068-2-27           Free Fall         IEC60068-2-32				

### **Ordering Information**

IES-3 AABCC



Available Model	Model Name	Description
	IES-3073GC	Industrial 10-port managed Ethernet switch with 7x10/100Base-T(X) and 3xGigabit combo ports, SFP socket
Packing List  • IES-3073GC  • 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  SFP100 series, 100Mbps SFP optical transceiver  SFP1G series, 1Gbps SFP optical transceiver  DR-45 series, 45W DIN-Rail power supply  DR-75 series, 75W DIN-Rail power supply  DR-120 series, 120W DIN-Rail power supply  SDR-240-48, 240W DIN-Rail power supply  SDR-240-48, 240W DIN-Rail power supply