IES-3162GC

❯ *Industrial 18-port managed Ethernet switch with 16x10/100Base-T(X) and 2xGigabit combo ports, SFP socket*

Features

- Fastest Redundant Ethernet Ring : **O-Ring** (recovery time < 10ms over 250 units of connection)
- **Open-Ring** supports other vendors' ring technology in open architecture
- **O-Chain** allow multiple redundant network rings
- Support standard IEC 62439-2 **MRP*NOTE** (Media Redundancy Protocol) function
- Support Modbus TCP protocol
- 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 for support) filtering multicast traffic
- Port Trunking for easy of bandwidth management
- SNMP V1/V2c/V3 support for secured network management
- RMON for traffic monitoring
- Supports LLDP protocol
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Port lock to prevent access from unauthorized MAC address
- Windows utility (**Open-Vision**) supporting centralized management and configurable by Web-based, Telnet, and Console (CLI)
- Supports two Gigabit combo ports
- Support TACACS+ and 802.1x User Authentication for security
- Rigid IP-30 housing design
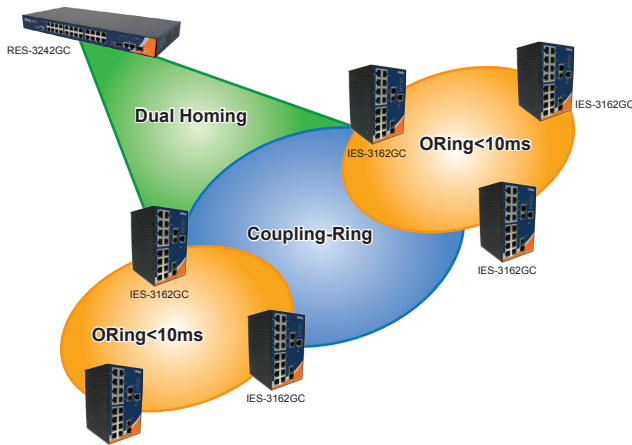- DIN-Rail and wall mounting enabled

Introduction

IES-3162GC is the managed Redundant Ring Ethernet switch with 16x10/100Base-T(X) ports and 2xgigabit combo ports. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, 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-3162GC can be managed centralized and convenient by a powerful windows utility — Open-Vision. 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.
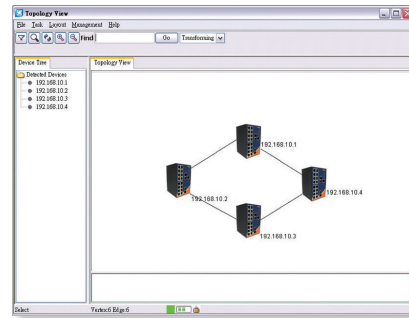
Open-Vision

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.
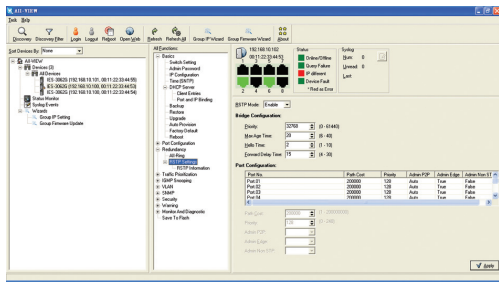
*NOTE: This function is available by request only

Industrial
Ethernet Switch

Industrial
Media Converter

Industrial
Device Server

Industrial Wireless
Access Point

Industrial Cellular
VPN Router

Industrial
M2M Gateway

Accessories

Network
Management Software

RES-3242GC

Dual Homing

ORing<10ms

IES-3162GC

IES-3162GC

Coupling-Ring
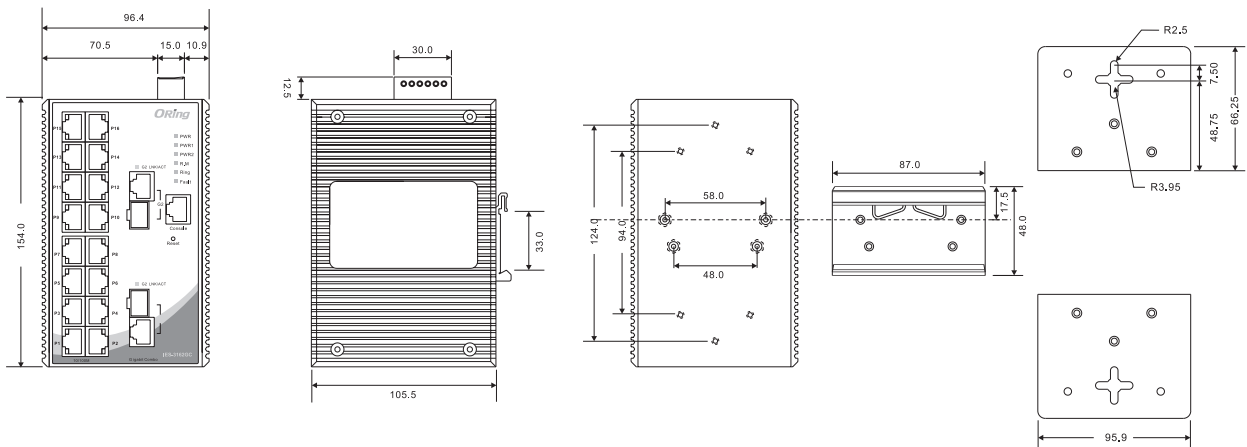
IES-3162GC

ORing<10ms

IES-3162GC

IES-3162GC

Network connection

Topology View

Monitoring and Configuration interface

Dimensions

(Unit=mm)

Specifications

ORing Switch Model	IES-3162GC
Physical Ports	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	16
Gigabit combo Port 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-TX 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 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004) 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 : 9 µs Switching bandwidth : 7.2Gbps 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 (O-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 O-Chain Open-Ring STP MRP***NOTE** RSTP:2004 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
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

*NOTE: This function is available by request only

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Industrial Ethernet Switch

Fault Indicator	Amber : Indicates unexpected event occurred
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	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
Dimensions (W x D x H)	96.4(W)x108.5(D)x154(H) mm (3.8 x 4.27 x 6.06 inch)
Weight (g)	1220 g
Environmental	
Storage Temperature	-40 to 85℃ (-40 to 185℉)
Operating Temperature	-40 to 70℃ (-40 to 158℉)
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
Warranty	5 years

Ordering Information

IES-3 AA B CC
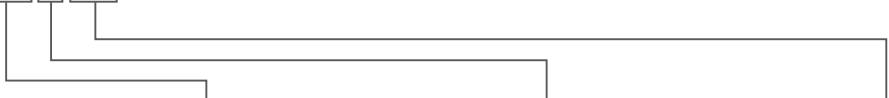
Code Definition	10/100Base-T(X) Port Number	Additional Port Number	Additional Port Type
Option	**- 16 :** 16 ports	**- 2 :** 2 ports	**- GC :** Gigabit combo port

Available Model	Model Name	Description
	IES-3162GC	Industrial 18-port managed Ethernet switch with 16x10/100Base-T(X) and 2xGigabit combo ports, SFP socket

Packing List
- IES-3162GC
- 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-480-48, 480W DIN-Rail power supply

Industrial Ethernet Switch

Industrial Media Converter

Industrial Device Server

Industrial Wireless Access Point

Industrial Cellular VPN Router

Industrial M2M Gateway

Accessories

Network Management Software