SWITCH C1D2/ATEX INDUSTRIAL

Quick Installation Guide

IES-A3080/A3062 Series

Industrial C1D2/ATEX Managed Ethernet Switch

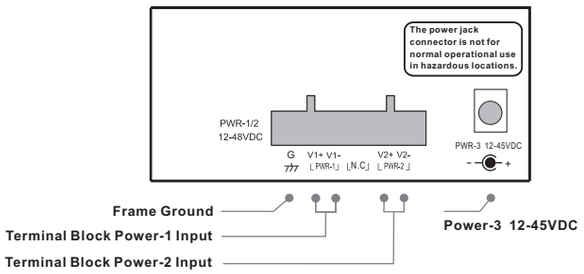
Introduction

IES-A3080 / IES-A3062 series are managed Redundant Ring Ethernet switches with 6x10/100Base-T(X) and 2x10/100Base-T(X), 100Base-FX, 1000Base-T, 1000Base-SX or 1000Base-LX ports which is specifically designed for the C1D2/ATEX certified with hazardous locations requirement. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms 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 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. **IES-A3080 / IES-A3062 series** can be managed centralized and convenient by a powerful windows utility : Open-Vision. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choice for highly-managed Fiber Ethernet in hazardous location application.

Features

- C1D2 and ATEX compliant for harsh industrial environments application
- World's fastest Redundant Ethernet Ring: O-Ring (recovery time < 10ms over 250 units of connection)
- Open-Ring support 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
- Supports MSTP/RSTP/STP (IEEE 802.1s/w/D)
- 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
- Support 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) support centralized management and configurable by Web-based ,Telnet, Console(CLI)
- Completely combination of 10/100Base-T(X), 100Base-FX, 1000Base-T, 1000Base-SX, and 1000Base-LX ports
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled

Power Connection Guide



*Note[1]: The power jack connector is not for normal operational use in hazardous locations.

Specifications

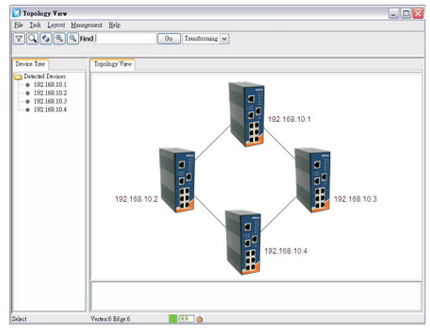
ORing Switch Model		IES-A3080	IES-A3062GT	IES-A3062FX-MM	IES-A3062FX-SS	IES-A3062GF-MM	IES-A3062GF-SS
Physical Ports							
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX		8	6	6	6	6	6
10/100/1000Base-T(X) Ports in RJ45 Auto MDI/MDIX		-	2	-	-	-	-
Fiber Ports Specification	Fiber Ports Number	-	-	2	2	2	2
	Fiber Ports Standard	-	-	100Base-FX	100Base-FX	1000Base-SX	1000Base-LX
	Fiber Mode	-	-	Multi-mode	Single-mode	Multi-mode	Single-mode
	Fiber Diameter (μm)	-	-	62.5/125 μm 50/125 μm	9/125 μm	62.5/125 μm 50/125 μm	9/125 μm
	Fiber Optical Connector	-	-	SC	SC	SC	SC
	Typical Distance (Km)	-	-	2 Km	30 Km	0.55 Km	10 Km
	Wavelength (nm)	-	-	1310 nm	1310 nm	850 nm	1310 nm
	Max. Output Optical Power (dbm)	-	-	-14 dbm	-8 dbm	-4 dbm	-3 dbm
	Min. Output Optical Power (dbm)	-	-	-23.5 dbm	-15 dbm	-9.5 dbm	-9.5 dbm
	Max. Input Optical Power (Sensitivity)	-	-	0 dbm	0 dbm	0 dbm	-3 dbm
	Min. Input Optical Power (Saturation)	-	-	-31 dbm	-34 dbm	-18 dbm	-20 dbm
	Link Budget (db)	-	-	7.5 db	19 db	8.5 db	10.5 db
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 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.3x for Flow control, 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					
MAC Table		8192 MAC addresses					
Priority Queues		4					
Processing		Store-and-Forward					
Switch Properties		Switch latency: 7 us Switch bandwidth: 5.2Gbps 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 SNMPv3 encrypted authentication and access security					
Software Features		STP/RSTP/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 Snooping 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, MSTP					
Warning / Monitoring System		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. Baud rate setting: 9600bps, 8, N, 1					
LED Indicators							
Power Indicator		Green: Power LED x3					
R.M. Indicator		Green: Flashing to indicate system operated in O-Ring Master mode					
O-Ring indicator		Green: Indicate system operated in O-Ring mode					
Fault Indicator		Amber: Indicate unexcepted event occurred					
10/100 Base-T(X)RJ45 Port Indicator		Green for port Link/Act. Amber for Duplex/Collision					
10/100/1000Base-T(X) / Fiber Port Indicator		Green for port Link/Act. Amber for Link					
Power							
Redundant Input power		Triple DC inputs. 12-48VDC on 7-pin terminal block, 12-45VDC on power jack *Note*					
Power consumption(Typ.)		5 Watts	8 Watts	10 Watts	10 Watts	7 Watts	7 Watts
Overload current protection		Present					
Reverse polarity protection		Present on terminal block					
Physical Characteristic							
Enclosure		IP-30					
Dimension (W x D x H)		52(W)x106(D)x144(H) mm (2.05x4.17x5.67 inch.)					
Weight (g)		710 g	722 g	735 g	735 g	740 g	740 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, UL508 (E331061), UL/cUL Class 1 Division 2 Group A/B/C/D, ATEX Class 1 Zone 2
Warranty	5 years

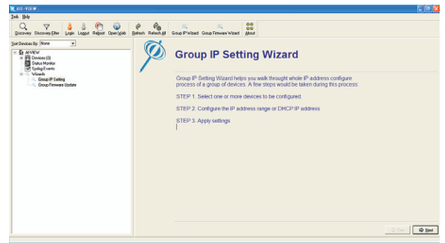
Open-Vision

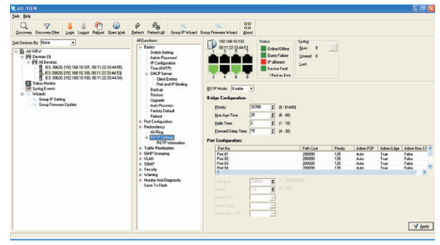
ORing's switches are intelligent switches. Different from other traditional redundant switches, ORing provides a set of Windows utility (Open-Vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.

Topology View



Monitoring and Configuration interface





ORing Industrial Networking Corp.

Version 1.1

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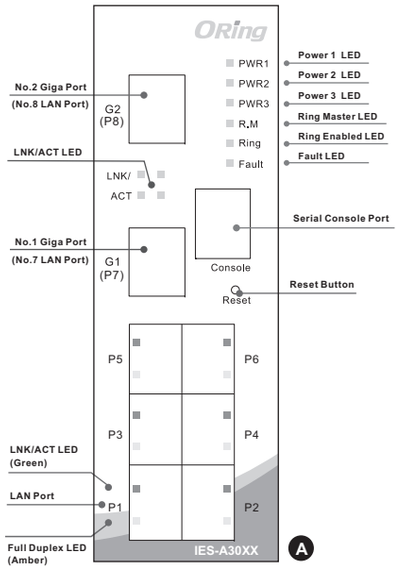
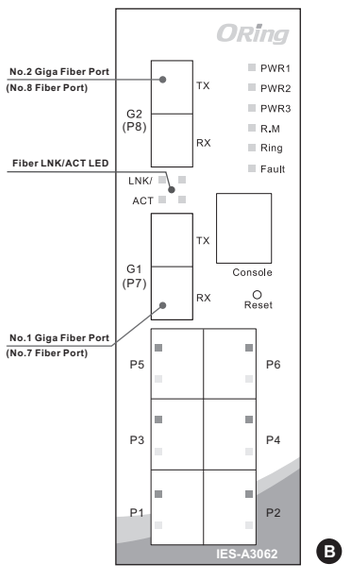
Front Panel

Non-Fiber Product

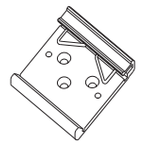


Fiber Product

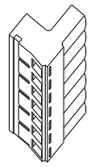


Accessory

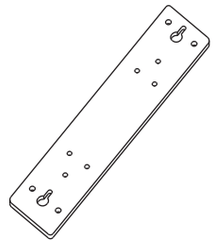
① 45mm DIN-Rail kit



② 7-Pin Terminal block

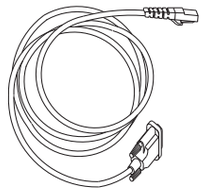


③ Wall-mounted Kit

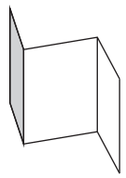


④ Dust Cover(RJ-45)

⑤ Console Cable



⑥ QIG



⑦ CD

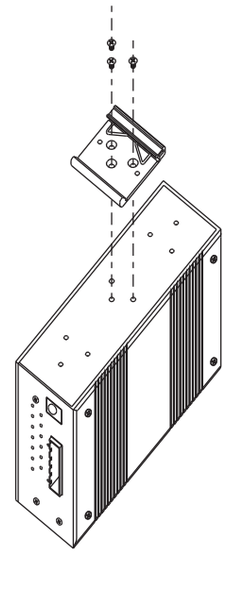
⑧ Screw M3x5

Packing list

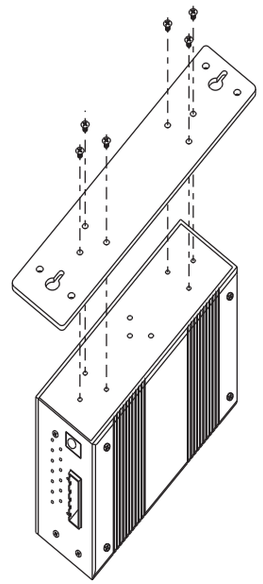
Model name	Front Panel	Model Description	Accessory
IES-A3080	A	Industrial C1D2/ATEX 8-port managed Ethernet switch with 8x10/100Base-T(X)	①X 1, ②X 1, ③X 1, ④X 8, ⑤X 1, ⑥X 1, ⑦X 1, ⑧X 6
IES-A3062GT	A	Industrial C1D2/ATEX 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x10/100/1000Base-T(X)	①X 1, ②X 1, ③X 1, ④X 8, ⑤X 1, ⑥X 1, ⑦X 1, ⑧X 6
IES-A3062FX-MM	B	Industrial C1D2/ATEX 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x100Base-FX, multi-mode	①X 1, ②X 1, ③X 1, ④X 6, ⑤X 1, ⑥X 1, ⑦X 1, ⑧X 6
IES-A3062FX-SS	B	Industrial C1D2/ATEX 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x100Base-FX, single-mode	①X 1, ②X 1, ③X 1, ④X 6, ⑤X 1, ⑥X 1, ⑦X 1, ⑧X 6
IES-A3062GF-MM	B	Industrial C1D2/ATEX 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x1000Base-SX, multi-mode	①X 1, ②X 1, ③X 1, ④X 6, ⑤X 1, ⑥X 1, ⑦X 1, ⑧X 6
IES-A3062GF-SS	B	Industrial C1D2/ATEX 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x1000Base-LX, single-mode	①X 1, ②X 1, ③X 1, ④X 6, ⑤X 1, ⑥X 1, ⑦X 1, ⑧X 6

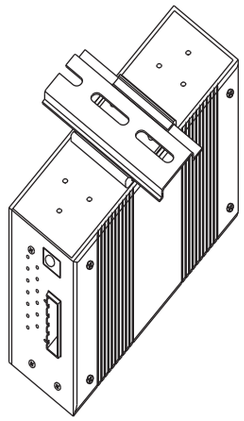
Installation

Din-Rail Install Step



Wall-mounted Install Step





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c UL us LISTED
Industrial ETHERNET Switch For use in Haz.Loc.lass I, Division 2, Groups A, B, C and D Temp. Code T4
Max. Surrounding Air Temperature 70°C

CE Ex II 3G DEMKO
13 ATEX 1317577X
Ex nA IIC T4 Gc
-40°C≤Tamb≤+70 C
Rated Cable Temp.≥104°C