ORing Industrial Networking Corp.

Version 1.0

DESKTOP SWITCH INDUSTRIAL MANAGED

Quick Installation Guide

DES-3082GP-AIO_S Industrial Managed Ethernet Switch

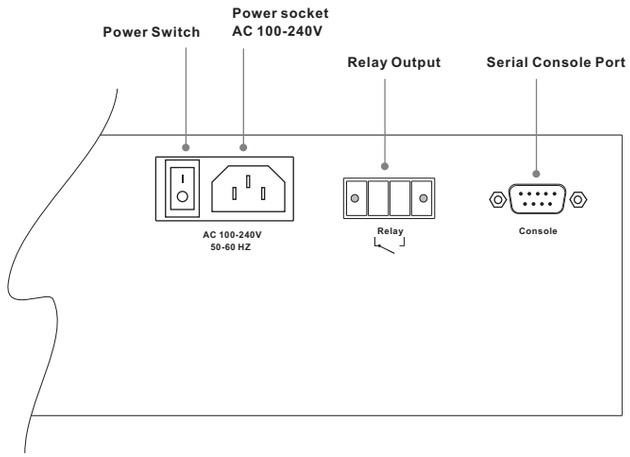
Introduction

DES-3082GP-AIO_S series are industrial managed Redundant Ethernet switches. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time <10ms over 250 unitsof connection), Open-Ring and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical 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. **DES-3082GP-AIO_S 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 and Fiber Ethernet application.

Features

- **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**
- **MSTP/RSTP/STP(IEEE 802.1s/w/D)**
- **Provide optical bypass function**
- **Support 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**
- **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)**
- **Support two SFP connectors for 100/1000Base-X SFP Fiber**
- **Rigid IP-30 housing design**

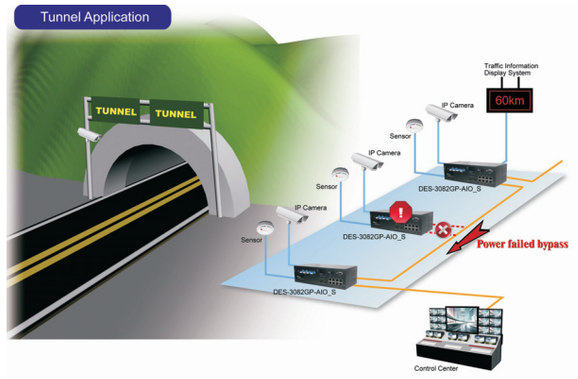
Power Connection Guide



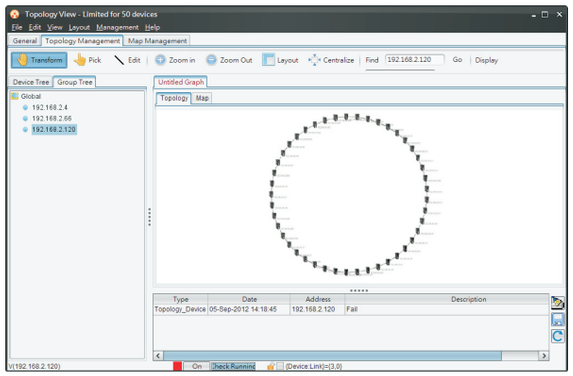
Open-Vision

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.

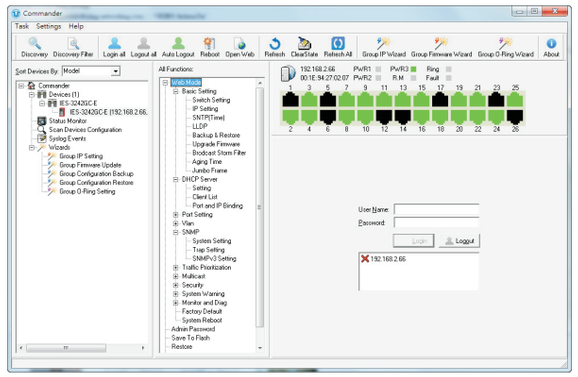
Network connectiong



Topology View



Configuration interface



Specifications

ORing Switch Model	DES-3082GP-SS-AIO_S	DES-3082GP-MM-AIO_S
Physical Ports		
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	8	
100/1000Base-X with SFP	2	
100/1000Base-X optical bypass interface in LC connector	**Single-Mode**	**Multi-Mode**
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 802.3x 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 lateency: 7us Switching bandwidth: 5.6Gbps 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 250units 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 (recision 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	
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 DB9 Female connector with console cable. 9600bps, 8, N, 1	
LED Indicators		
Power indicator	Green: Power LED x 3	
R.M. indicator	Green: Flashing to indicate system operated in O-Ring ringMaster mode	
Ring indicator	Green: Indicate system operated in O-Ring mode	
Fault indicator	Amber: Indicate unexpected event occurred	
10/100Base-T(X) RJ45 Port indicator	Green for port Link/Act. Amber for Duplex/Collision	
100/1000Base-X Fiber port indicator	Green for port Link/Act.	
Fault Contact		
Relay	Relay output to carry capacity of 1A at 24VDC	
Power		
Redundant input power	Dual 100~240V AC power inputs in single power socket	
Power consumption(Typ.)	100VAC (24.2 Watts) / 240VDC (35.76 Watts)	
Overload current protection	Present	
Physical Characteristic		
Enclosure	IP-30	
Dimension (W x D x H)	300 (W) x 165 (D) x 88 (H) mm	
Weight (g)	2350 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	
Warranty	5 years	

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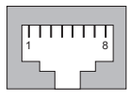
Communication Connections

10/100Base-T(X) Ethernet Port Connection

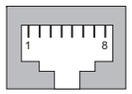
■ RJ45 (8-pin, MDI) Port Pinouts

Pin	Signal
1	Tx+
2	Tx-
3	Rx+
6	Rx-

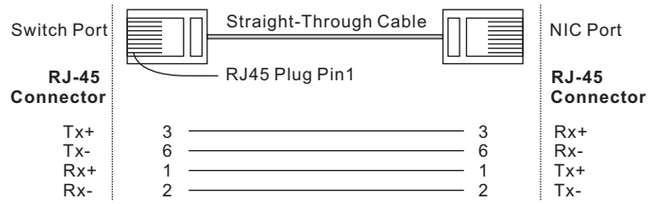


■ RJ45 (8-pin, MDI-X) Port Pinouts

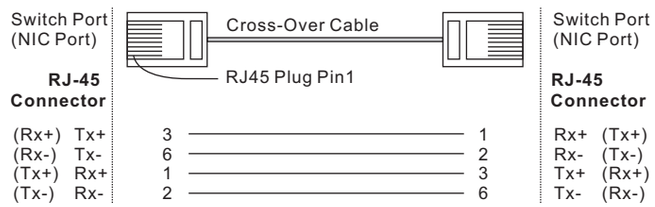
Pin	Signal
1	Rx+
2	Rx-
3	Tx+
6	Tx-



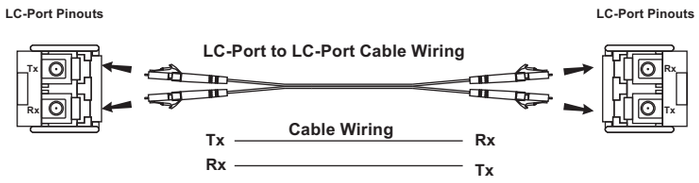
■ RJ45 (8-pin) to RJ45 (8-Pin) Straight-Through Cable Wiring



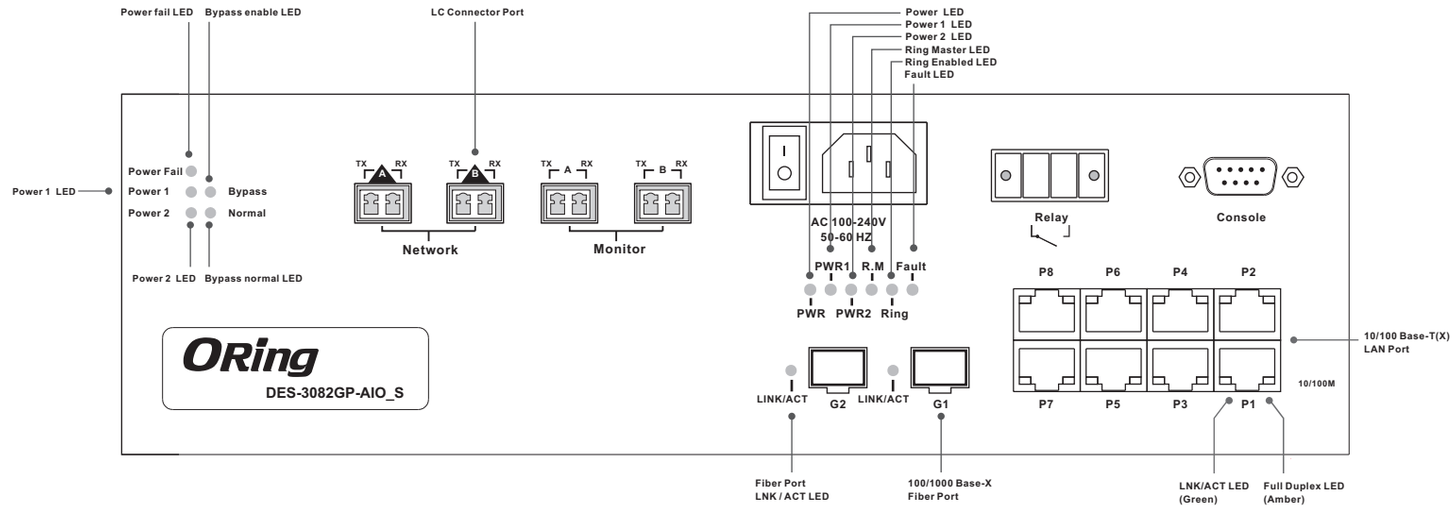
■ RJ45 (8-pin) to RJ45 (8-Pin) Cross-Over Cable Wiring



100/1000Base-X SFP Port Connection



Front Panel

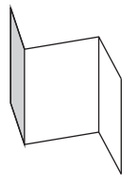


Accessory

① Dust Cover (RJ-45)

② Dust Cover (SFP)

③ QIG



④ CD

⑤ Power Cord

⑥ Console Cable

Packing list

Model Name	Model Description	Accessory
DES-3082GP-SS-AIO_S_US	Industrial 10-port desktop managed bypass Ethernet switch with 8x10/100Base-T(X) and 2x100/1000Base-X, SFP socket, single-mode LC connector bypass, US power cord	①X 8, ②X 2, ③X 1, ④X 1, ⑤X 1, ⑥X 1
DES-3082GP-SS-AIO_S_EU	Industrial 10-port desktop managed bypass Ethernet switch with 8x10/100Base-T(X) and 2x100/1000Base-X, SFP socket, single-mode LC connector bypass, EU power cord	①X 8, ②X 2, ③X 1, ④X 1, ⑤X 1, ⑥X 1
DES-3082GP-MM-AIO_S_US	Industrial 10-port desktop managed bypass Ethernet switch with 8x10/100Base-T(X) and 2x100/1000Base-X, SFP socket, Multi-mode LC connector bypass, US power cord	①X 8, ②X 2, ③X 1, ④X 1, ⑤X 1, ⑥X 1
DES-3082GP-MM-AIO_S_EU	Industrial 10-port desktop managed bypass Ethernet switch with 8x10/100Base-T(X) and 2x100/1000Base-X, SFP socket, single-mode LC connector bypass, EU power cord	①X 8, ②X 2, ③X 1, ④X 1, ⑤X 1, ⑥X 1

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