



IPS-3082GC-24V

# IPS-3082GC-24V

➤ *Industrial 10-port managed PoE Ethernet switch with 8x10/100Base-T(X) P.S.E. and 2xGigabit combo ports, SFP socket, 24V power inputs*

## Features

- World's fastest Redundant Ethernet Ring: **O-Ring** (recovery time < 10ms over 250 units of connection)
- **Open-Ring** support the other vendor's ring technology in open architecture
- Support MRP\*<sup>NOTE</sup>(IEC 62439-2) Ethernet redundant protocol
- STP/RSTP:2004/MSTP supported
- Supports IEEE 802.3af compliant PoE and total power budget is 120Watts with maximum 15.4Watts per port in -40°C ~ 70°C
- Provide **PoE power on delay** function, users can define delay time for PoE power supply
- Support IPV6 new internet protocol version
- Support **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
- Support LLDP (Link Layer Discovery Protocol)
- Supports DDM (Digital Diagnostic Monitoring) function
- Support TACACS+ and 802.1x User Authentication for security
- Support dual wide range 24~36VDC power inputs for power redundancy
- 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 Gigabit combo ports
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled



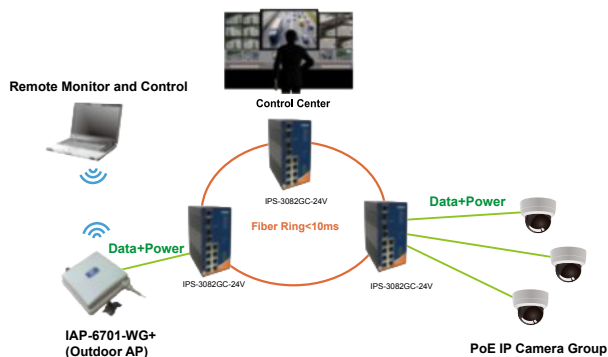
**\*NOTE: This function is available by request only**

## Introduction

IPS-3082GC-24V is managed redundant ring Ethernet switch with 8x10/100Base-T(X) ports with PoE (P.S.E.) function and 2xGigabit combo ports. With completely 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. IPS-3082GC-24V also supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-3082GC-24V supports wide range 24~36VDC power inputs and generates 48VDC P.S.E. power output per port. Each IPS-3082GC-24V switch has 8X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. IPS-3082GC-24V support new DDM (Digital Diagnostic Monitoring) function, which can monitor instantly the status of electronic voltage, current and temperature. All function of IPS-3082GC-24V can be managed centralized 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 with PoE function.

## Open-Vision

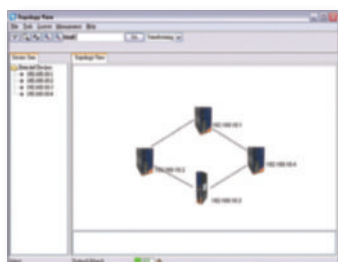
ORing's switches are intelligent switches. Being different from other traditional redundant switches, ORing provides a set of Windows utility (**Open-Vision**) for user to manage and monitor all of industrial Ethernet switches on the industrial network.



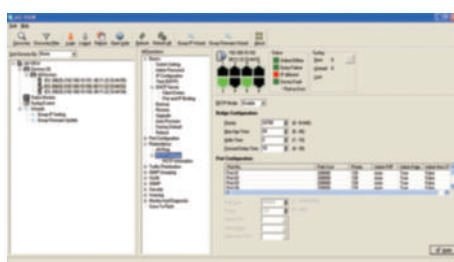
Network connection



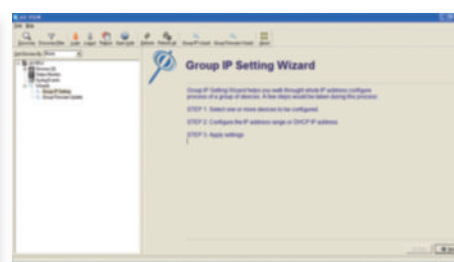
DDM function



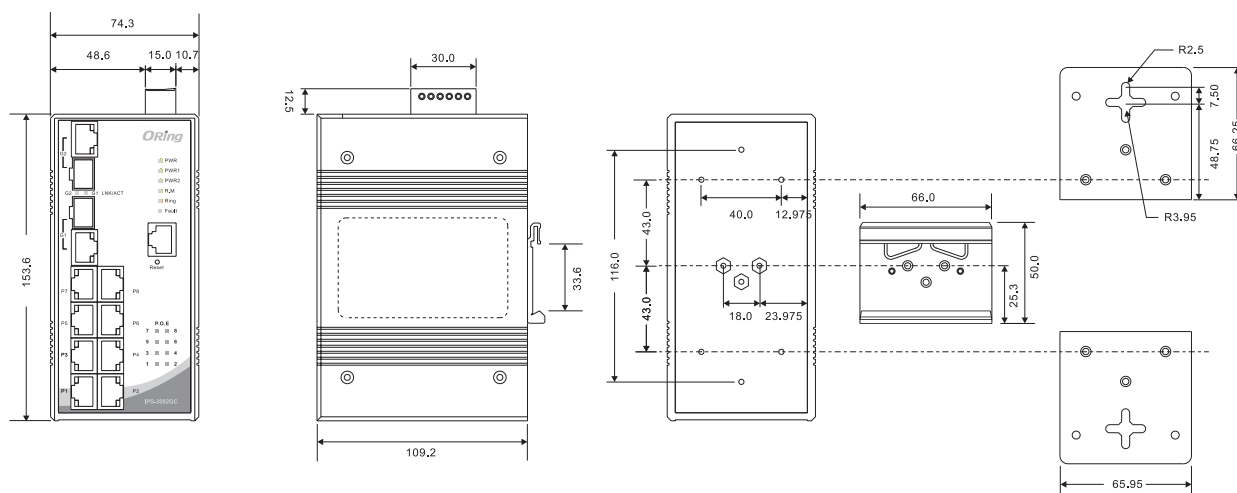
Topology View



Monitoring and Configuration interface



## Dimensions



(Unit=mm)

## PoE Pin Definition

| RJ-45 Pin Definition |                            |
|----------------------|----------------------------|
| Pin No.              | Description                |
| #1                   | TD+ with PoE Power input + |
| #2                   | TD- with PoE Power input + |
| #3                   | RD+ with PoE Power input - |
| #6                   | RD- with PoE Power input - |

## Specifications

| ORing Switch Model   | IPS-3082GC-24V  |
|--|---|
| <b>Physical Ports</b>  |   |
| 10/100 Base-T(X) Ports in RJ45<br>Auto MDI/MDIX with P.S.E.                  | 8   |
| Gigabit Combo Ports with 10/100/1000Base-T(X)<br>and 100/1000Base-X SFP port | 2   |
| <b>Technology</b>  |   |
| Ethernet Standards   | IEEE 802.3 for 10Base-T<br>IEEE 802.3u for 100Base-TX and 100Base-FX<br>IEEE 802.3z for 1000Base-X<br>IEEE 802.3ab for 1000Base-T<br>IEEE 802.3x for Flow control<br>IEEE 802.3ad for LACP (Link Aggregation Control Protocol )<br>IEEE 802.1p for COS (Class of Service)<br>IEEE 802.1Q for VLAN Tagging<br>IEEE 802.1D for STP (Spanning Tree Protocol)<br>IEEE 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004)<br>IEEE 802.1w for RSTP(Rapid Spanning Tree Protocol)<br>IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol)<br>IEEE 802.1x for Authentication<br>IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)<br>IEEE 802.3af PoE specification (up to 15.4 Watts per port for P.S.E.) |
| MAC Table  | 8192 MAC addresses  |
| Priority Queues  | 4   |
| Processing   | Store-and-Forward   |
| Switch Properties  | Switching latency: 7 $\mu$ s<br>Switching bandwidth: 5.6Gbps<br>Max. Number of Available VLANs: 4096<br>IGMP multicast groups: 1024<br>Port rate limiting: User Define  |
| Security Features  | Enable/disable ports, MAC based port security<br>Port based network access control (802.1x)<br>VLAN (802.1Q ) to segregate and secure network traffic<br>Supports Q-in-Q VLAN for performance & security to expand the VLAN space<br>Radius centralized password management<br>SNMP v1/v2c/v3 encrypted authentication and access security<br>Https / SSH enhance network security  |
| Software Features  | STP/RSTP:2004/MSTP (IEEE 802.1D/w/s)<br>Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units<br>TOS/Diffserv supported<br>Quality of Service (802.1p) for real-time traffic<br>VLAN (802.1Q) with VLAN tagging and GVRP supported<br>IGMP Snooping for multicast filtering<br>Port configuration, status, statistics, monitoring, security<br>SNTP for synchronizing of clocks over network<br>Support <b>PTP Client</b> (Precision Time Protocol) clock synchronization<br>DHCP Server / Client support<br>Support ModbusTCP<br>Port Trunk support<br>MVR (Multicast VLAN Registration) support<br>Modbus TCP  |
| Network Redundancy   | O-Ring    Open-Ring<br>STP       RSTP :2004<br>MSTP     MRP* <b>NOTE</b>  |
| Warning / Monitoring System  | Relay output for fault event alarming<br>Syslog server / client to record and view events<br>Include SMTP for event warning notification via email<br>Event selection support   |
| DDM Function   | Voltage / Current / Temperature   |
| RS-232 Serial Console Port   | RS-232 in RJ45 connector with console cable. 9600bps, 8, N, 1   |
| <b>LED Indicators</b>  |   |
| Power /PoE Indicator   | Green : Power LED x 3, Green : PoE LED x 8  |

\*NOTE: This function is available by request only

|  |  |
|--|--|
| O-Ring Indicator                         | Green : Indicate system operated in O-Ring mode  |
| R.M. Indicator                           | Green : Indicate system operated in O-Ring Master mode   |
| Fault Indicator                          | Amber : Indicate 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 Link/Act. Amber for 100Mbps indicator  |
| 100/1000Base-X Fiber 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. 24 ~ 36VDC on 6-pin terminal block   |
| Power Consumption (Typ.)                 | 11.52Watts (power consumption of P.S.E. is not included)   |
| Overload Current Protection              | Present  |
| Reverse Polarity Protection              | <b>NOT Present</b>   |
| <b>Physical Characteristics</b>          |  |
| Enclosure                                | IP-30  |
| Dimensions (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)                               | 1260 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  |
| Warranty                                 | 5 years  |

## Ordering Information

IPS-3 **AA** **B** **CC** -24V

| Code Definition | 10/100Base-T(X) P.S.E. Port Number | Additional Port Number | Additional Port Type                |
|-----------------|------------------------------------|------------------------|-------------------------------------|
| <b>Option</b>   | <b>- 08:</b> 8 ports               | <b>- 2:</b> 2 ports    | <b>- GC:</b> Gigabit combo with SFP |

| Available Model | Model Name     | Description  |
|-----------------|----------------|--|
|                 | IPS-3082GC-24V | Industrial 10-port managed PoE Ethernet switch with 8x10/100Base-T(X) P.S.E. and 2xGigabit combo ports, SFP socket, 24V power inputs |

### Packing List

- IPS-3082GC-24V
- 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 device
- SFP100 series, 100Mbps SFP optical transceiver
- SFP1G series, 1Gbps SFP optical transceiver
- DR-45-24 : 45 Watts@24VDC DIN-Rail power supply
- DR-75-24 : 75 Watts@24VDC DIN-Rail power supply
- DR-120-24 : 120 Watts@24VDC DIN-Rail power supply