# IES-3080/3062 Series

IES-3080          IES-3062 Series

❯❯ *Industrial 8-port managed Ethernet switch*

**1**

**Industrial Ethernet Switch**

## 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

- **O-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

- 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 protocol

- Support TACACS+ and 802.1x User Authentication for security

- Port lock to prevent access from unauthorized MAC address

- Event notification through Syslog, Email, SNMP trap, and Relay Output

- Windows utility **(Open-Vision)** support centralized management and configurable by Web-based ,Telnet, Console, CLI

- Complete 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

IP6 READY

O-Ring | Redundant PWR | Temperature -40~70°C

RoHS Lead Free | c(UL)us E331061 | CE | FC

## Introduction

IES-3080 / IES-3062 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.  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.  Another Open-Ring technology is also supported which can applied for other vendor's proprietary ring. IES-3080 / IES-3062 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 application.

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

## 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.
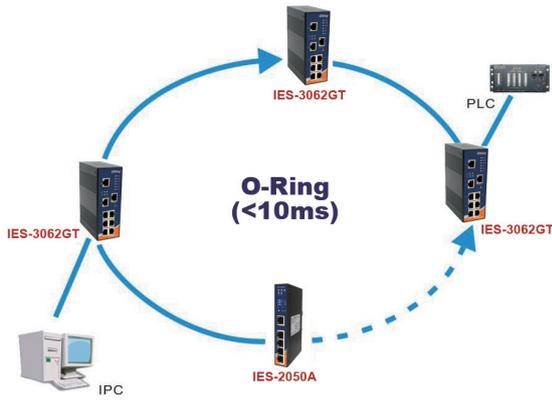


Network connection
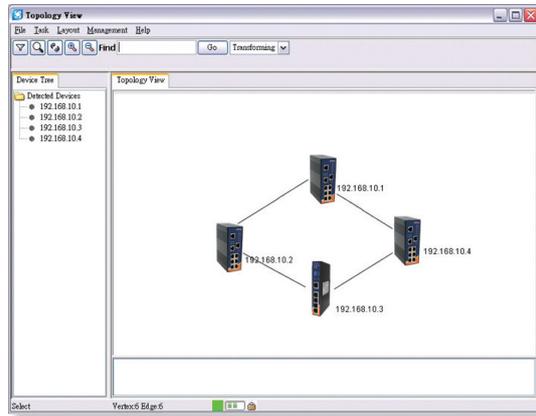


Topology View
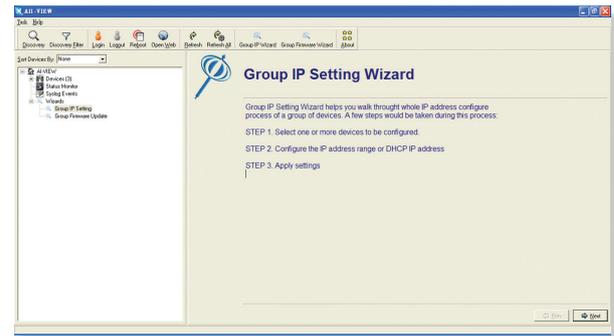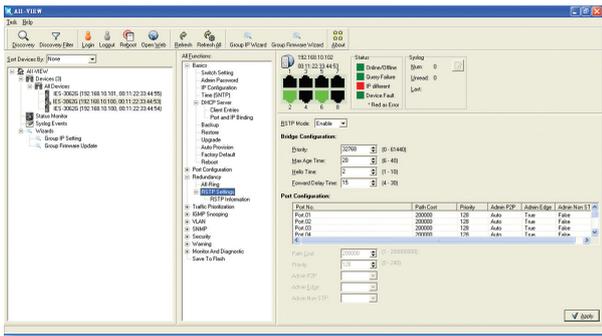


Monitoring and Configuration interface

## Dimensions



(Unit=mm)

Industrial
Ethernet Switch

Industrial
Media Converter

Industrial
Device Server

Industrial Wireless
Access Point

Industrial Cellular
VPN Router

Industrial
M2M Gateway

Accessories

Network
Management Software
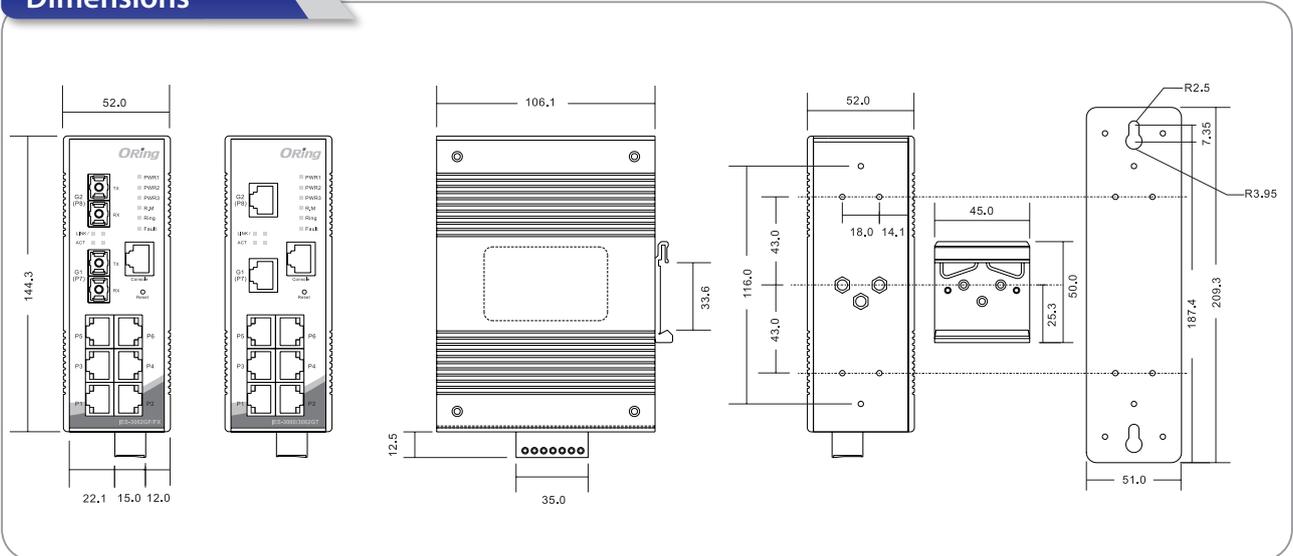
## Specifications

| ORing Switch Model | IES-3080 | IES-3062GT | IES-3062FX-MM | IES-3062FX-SS | IES-3062GF-MM | IES-3062GF-SS |
|---|---|---|---|---|---|---|
| **Physical Ports** | | | | | | |
| 10/100Base-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 Specifications** — 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 (Saturation) | - | - | 0 dBm | 0 dBm | 0 dBm | -3 dBm |
| Min. Input Optical Power (Sensitivity) | - | - | -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<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 802.3ad for LACP (Link Aggregation Control Protocol )<br>IEEE 802.3x for Flow control<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 | | | | | |
| MAC Table | 8192 MAC addresses | | | | | |
| Priority Queues | 4 | | | | | |
| Processing | Store-and-Forward | | | | | |
| Switch Properties | Switching latency : 7 µs<br>Switching bandwidth : 5.2Gbps<br>Max. Number of Available VLANs : 4096<br>IGMP multicast groups : 1024<br>Port rate limiting : User Define | | | | | |
| Security Feature | 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>SNMPV1/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 **PTP Client** (Precision Time Protocol) clock synchronization <br> DHCP Server / Client support <br> Port Trunk support <br> MVR (Multicast VLAN Registration) support <br> Modbus TCP | | | | | |
|---|---|---|---|---|---|---|
| Network Redundancy | O-Ring          Open-Ring <br> O-Chain         STP <br> RSTP:2004      MSTP <br> MRP**\*NOTE** | | | | | |
| 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 | | | | | |
| 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 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 events occurred | | | | | |
| 10/100Base-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 100Mbps indicator | | | | | |
| **Fault contact** | | | | | | |
| Relay | Relay output to carry capacity of 1A at 24VDC | | | | | |
| **Power** | | | | | | |
| Redundant Input Power | Triple DC inputs. 12~48VDC on 7-pin terminal block, 12~45VDC on power jack | | | | | |
| Power Consumption (Typ.) | 5 Watts | 8 Watts | 9 Watts | 9 Watts | 7 Watts | 7 Watts |
| Overload Current Protection | Present | | | | | |
| Reverse Polarity Protection | Present on terminal block | | | | | |
| **Physical Characteristics** | | | | | | |
| Enclosure | IP-30 | | | | | |
| Dimensions (W x D x H) | 52(W)x106.1(D)x144.3(H) mm (2.05x4.18x5.68 inch.) | | | | | |
| Weight (g) | 710 g | 722 g | 735 g | 735 g | 740 g | 740 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, UL508(E331061) | | | | | |
| MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25℃) | 324,409 | 287,493 | 280,176 | 280,176 | 290,610 | 290,610 |
| Warranty | 5 years | | | | | |

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

## Ordering Information

**IES-3 AA B CC - DD - EE**

| Code Definition | 10/100Base-T(X) Port Number | Additional Port Number | Additional Port Type | Fiber Optical Mode | Fiber Optical Connector |
|---|---|---|---|---|---|
| **Option** | **- 08:** 8 ports<br>**- 06:** 6 ports | **- 0:** 0 port<br>**- 2:** 2 ports | **- GT:** 10/100/1000Base-T(X)<br>**- FX:** 100Base-FX<br>**- GF:** 1000Base-X | **- MM:** Multi-mode<br>**- SS:** Single-mode | **- SC:** SC connector |

| | Model Name | Description |
|---|---|---|
| **Available Model** | IES-3080 | Industrial 8-port managed Ethernet switch with 8x10/100Base-T(X) |
| | IES-3062GT | Industrial 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x10/100/1000Base-T(X) |
| | IES-3062FX-MM-SC | Industrial 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x100Base-FX, multi-mode, 2km/1310nm, SC connector |
| | IES-3062FX-SS-SC | Industrial 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x100Base-FX, single-mode, 30km/1310nm, SC connector |
| | IES-3062GF-MM-SC | Industrial 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x1000Base-SX, multi-mode, 550m/850nm, SC connector |
| | IES-3062GF-SS-SC | Industrial 8-port managed Ethernet switch with 6x10/100Base-T(X) and 2x1000Base-LX, single-mode, 10km/1310nm, SC connector |

**Packing List**

- IES-3080 / 3062 series
- 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
- DR-45 series, 45W DIN-Rail power supply
- DR-75 series, 75W DIN-Rail power supply
- DR-120 series, 120W DIN-Rail power supply
- PAA-121000, 12VDC/1000mA 12W Power Adapter with universal 100 to 240VAC input, US plug
- PAE-121000, 12VDC/1000mA 12W Power Adapter with universal 100 to 240VAC input, EU plug
- SDR-240-48, 240W DIN-Rail power supply
- SDR-480-48, 480W DIN-Rail power supply