# IGPS-7084GP

> ❯ *Industrial 12-port managed Gigabit PoE Ethernet switch with 8x10/100/1000Base-T(X) P.S.E. ports and 4x1000Base-X, SFP socket*

## Features

- Supports 8x10/100/1000Base-T(X) ports and 4x1000Base-X SFP ports

- 8 ports of **P.S.E.** fully compliant with IEEE802.3at standard, providing up to 30 Watts per port

- Supports Jumbo frame up to 9K Bytes

- Supports **O-Ring** (recovery time < 20ms over 250 units of connection), MSTP/RSTP/STP (IEEE 802.1s/w/D) for Ethernet Redundancy

- Supports IP-based bandwidth management

- Supports application-based QoS management

- Supports IP police security function

- Supports DOS/DDOS auto prevention

- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic

- Supports SNMP v1/v2c/v3, RMON and 802.1Q VLAN Network Management

- Supports ACL, 802.1x User Authentication for security

- Multiple notification for warning of unexpected event

- Windows utility (**Open-Vision v3.0 or above**) supporting centralized management and configuration by Web-based interface, Telnet and Console (CLI)

- Supports LLDP Protocol

- Rigid IP-30 housing design
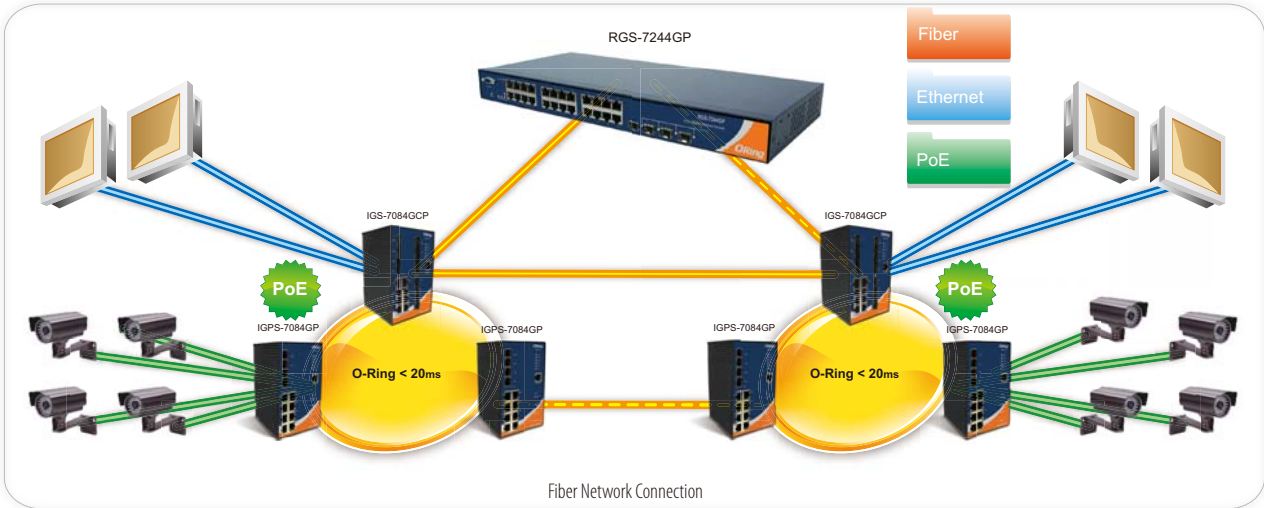
- DIN-Rail and wall mounting enabled

## Introduction

IGPS-7084GP is full Gigabit Managed Redundant Ring PoE Ethernet switch with 8x10/100/1000Base-T(X) ports with PoE (P.S.E.) function and 4x1000Base-X SFP ports.  With complete support of Ethernet Redundancy protocol, **O-Ring** (recovery time < 20ms over 250 units of connection) 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.

ORing's thunder switch series provide advanced IP-based bandwidth management which can limit the maximum bandwidth for each IP device.  User can configure IP camera and NVR with more bandwidth and limit other device bandwidth.  ORing's thunder switch series also support application-based QoS. Application-based QoS can set highest priority for data stream according to TCP/UDP port number.  ORing's special IP police function can permit only allowed IP address with specific MAC address to access the networking.  Hacker cannot access the IP surveillance network without permission.  It can avoid hacker from stealing video privacy data and attacking IP camera, NVR and controllers.  ORing's thunder series switch also provided advanced DOS/DDOS auto prevention.  If there is any IP flow become big in short time, ORing's thunder switch will lock the source IP address for certain time to prevent the attack.  It's hardware based prevention so it can prevent DOS/DDOS attack quickly and effetive.  IGPS-7084GP also support Power over Ethernet, a system to transmit electrical power up to **30 watts**, along with data, to remote devices over standard twisted-pair cable in an Ethernet network.  Each IGPS-7084GP switch has 8x10/100/1000Base-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 connection.  And all functions of IGPS-7084GP can also be managed centralized and convenient by Open-Vision v3.0 or above, Except the Web-based interface, Telnet and console (CLI) configuration are also avdilable.  Therefore, the switch is one of the most reliable choice for highly-managed and Gigabit Fiber Ethernet application.

Company Information

2011 Product Overview

Vertical Market Applications

**Industrial Ethernet Switch**

Industrial Media Converter

Industrial Device Server

Industrial Wireless Access Point

Industrial Cellular VPN Router

Industrial USB-Over-IP Server

Accessories

Network Management Utility

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**Industrial Ethernet Switch**

## Practical Operation
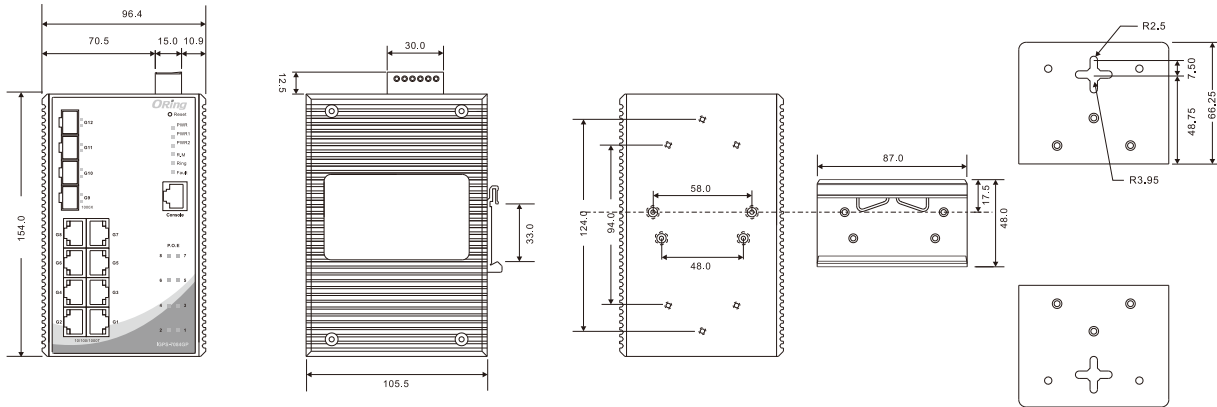


Fiber Network Connection

## Open-Vision

ORing's switches are intelligent switches.  Different form 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.
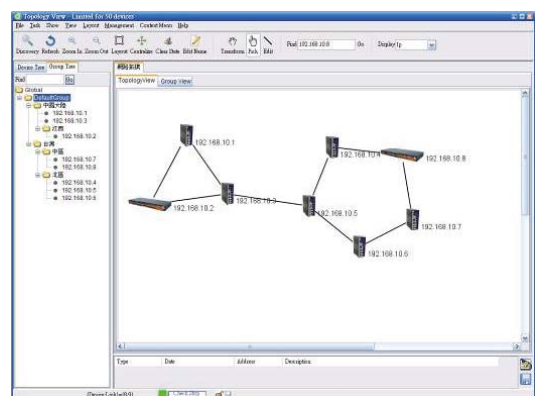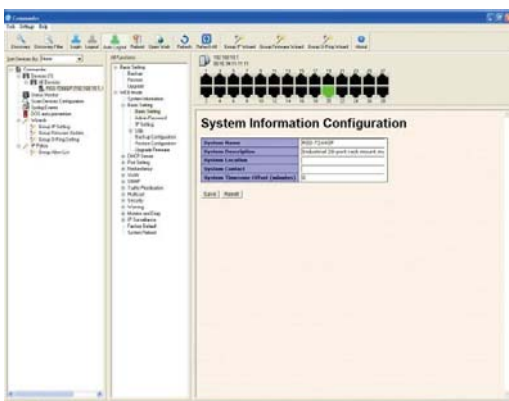
# Dimensions



(Unit=mm)

# PoE Pin Definition

| 10/100Base-T(X) P.S.E. RJ-45 Port | |
|---|---|
| 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 - |

| 1000Base-T P.S.E. RJ-45 Port | |
|---|---|
| RJ-45 Pin Definition | |
| Pin No. | Description |
| #1 | BI_DA+ with PoE Power input + |
| #2 | BI_DA- with PoE Power input + |
| #3 | BI_DB+ with PoE Power input - |
| #4 | BI_DC+ |
| #5 | BI_DC- |
| #6 | BI_DB- with PoE Power input - |
| #7 | BI_DD+ |
| #8 | BI_DD- |

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## Specifications

| ORing Switch Model | IGPS-7084GP |
|---|---|
| **Physical Ports** | |
| 10/100/1000Base-T(X) with P.S.E. ports in RJ45 Auto MDI/MDIX | 8 |
| 1000Base-X SFP Port | 4 |
| **Technology** | |
| Ethernet Standards | IEEE 802.3 for 10Base-T<br>IEEE 802.3u for 100Base-TX<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 802.1D for STP (Spanning Tree Protocol)<br>IEEE 802.1p for COS (Class of Service)<br>IEEE 802.1Q for VLAN Tagging<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 802.3at PoE specification (up to 30 Watts per port for P.S.E.) |
| MAC Table | 8192 MAC addresses |
| Priority Queues | 4 |
| Processing | Store-and-Forward |
| Switch Properties | Switching latency: 7 μs<br>Switching bandwidth: 24Gbps<br>Max. Number of Available VLANs : 256<br>IGMP multicast groups: 128 for each VLAN<br>Port rate limiting: User Define |
| Jumbo frame | Up to 9K Bytes |
| Security Features | IP Police security feature<br>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>Radius centralized password management<br>SNMPv3 encrypted authentication and access security |
| Software Features | STP/RSTP/MSTP (IEEE 802.1D/w/s)<br>Redundant Ring (O-Ring) with recovery time less than 20ms 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<br>IP-based bandwidth management<br>Application-based QoS management<br>DOS/DDOS auto prevention<br>Port configuration, status, statistics, monitoring, security<br>DHCP Client/Server |
| Network Redundancy | O-Ring<br>STP / RSTP<br>MSTP |
| RS-232 Serial Console Port | RS-232 in RJ45 connector with console cable.  115200bps, 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 |
| Ring Indicator | Green : Indicates that the system is operating in O-Ring mode |
| Fault indicator | Amber : Indicates unexpected event occurred |
| 10/100/1000Base-T(X) RJ45 port indicator | Green for port Link/Act. |
| PoE indicator | Green for PoE power injected |
| 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 DC inputs.  50VDC on 6-pin terminal block |
| Power Consumption (Typ.) | 20Watts (power device not included) |
| Overload Current Protection | Present |
| Reverse polarity protection | **NOT Present** |
| **Physical Characteristics** | |
| Enclosure | IP-30 |
| Dimensions (W x D x H) | 96.4 (W) x 108.5 (D) x 154 (H) mm (3.8 x 4.2.7 x 6.06 inch) |
| Weight (g) | 1400 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 |
| MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C) | 188,236 |
| Warranty | 5 years |

## Ordering Information

IGPS-7 AA B CC

| Code Definition | Gigabit P.S.E. Port Number | Additional Port Number | Additional Port Type |
|---|---|---|---|
| **Option** | **- 08:** 8 ports | **- 4:** 4 ports | **-GP**: 1000Base-X SFP |

| Available Model | Model Name | Description |
|---|---|---|
| | IGPS-7084GP | Industrial 12-port managed Gigabit PoE Ethernet switch with 8x10/100/100Basee-T(X) P.S.E. ports and 4x1000Base-X, SFP socket |

**Packing List**
- IGPS-7084GP
- 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
- SFP1G series, 1Gbps SFP optical transceiver
- DR-75-48, 75W DIN-Rail power supply
- DR-120-48, 120W DIN-Rail power supply