

IPS-2042TX/IPS-2042FX Series



IPS-2042TX/
IPS-2042FX Series

➤ Industrial 6-port lite-managed PoE Ethernet Switch

Features

- IPS-2042TX provides 4x10/100Base-T(X) P.S.E. and 2x10/100Base-T(X) ports
- IPS-2042FX series provide 4x10/100Base-T(X) P.S.E. and 2x100Base-FX single/multi mode fiber ports
- 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** support the multiple redundant ring technology
- Provides **Fast recovery technology** for Ethernet multi-redundancy
- STP/RSTP supported
- SNMP v1/v2c/v3 support for secured network management
- Supports LLDP (Link Layer Discovery Protocol)
- Configurable by Web-based and Windows utility (**Open-Vision**)
- Event notification through Syslog, Email, and SNMP trap
- Two 100Base-FX fiber port support for long distance connection
- Four P.S.E. ports based on IEEE 802.3af standard — up to 25 Watts per port
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled



Introduction

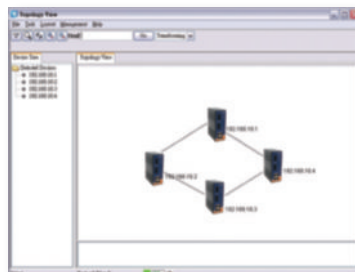
IPS-2042TX/2042FX series are lite-managed redundant ring Ethernet switches with 4x10/100Base-T(X) ports with PoE P.S.E. function and 2x10/100Base-T(X) or 2x100Base-FX fiber ports. IPS series support Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IPS switches has 4X10/100Base-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. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection) and Open-Ring, O-Chain and STP/RSTP(IEEE802.1w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. IPS-2042TX / 2042FX series can be managed centralized and convenient by a powerful windows utility — Open-Vision. 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 easy managed and Fiber Ethernet application.

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

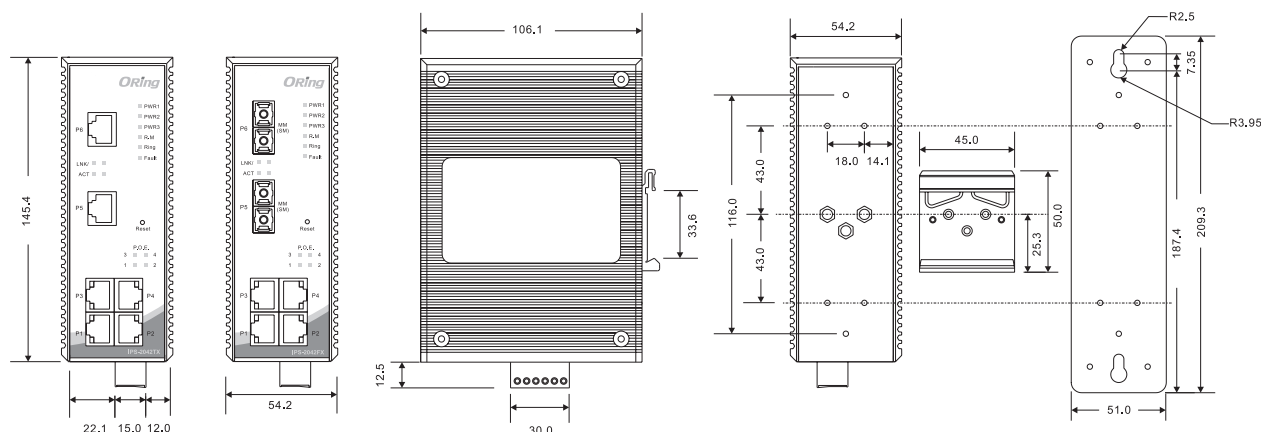


Topology View



Monitoring and Configuration interface

Dimensions



(Unit=mm)

PoE Pin Definition

| RJ-45 Pin Definition | |
|----------------------|-------------------|
| Pin No. | Description |
| #1 | TD+ |
| #2 | TD- |
| #3 | RD+ |
| #4 | PoE Power input + |

| RJ-45 Pin Definition | |
|----------------------|-------------------|
| Pin No. | Description |
| #5 | PoE Power input + |
| #6 | RD- |
| #7 | PoE Power input - |
| #8 | PoE Power input - |

Specifications

| ORing Switch Model | | IPS-2042TX | IPS-2042FX-MM-SC | IPS-2042FX-SS-SC |
|--|--|------------|--------------------------|------------------|
| Physical Ports | | | | |
| 10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX with P.S.E. | | 4 | 4 | 4 |
| 10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX without P.S.E. | | 2 | - | - |
| Fiber Ports Specifications | Fiber Ports Number | - | 2 | 2 |
| | Fiber Ports standard | - | 100Base-FX | 100Base-FX |
| | Fiber Mode | - | Multi-mode | Single-mode |
| | Fiber Diameter (μm) | - | 62.5/125 μm 50/125 μm | 9/125 μm |
| | Fiber Optical Connector | - | SC | SC |
| | Typical Distance (km) | - | 2 km | 30 km |
| | Wavelength (nm) | - | 1310 nm | 1310 nm |
| | Max. Output Optical Power (dBm) | - | -14 dBm | -8 dBm |
| | Min. Output Optical Power (dBm) | - | -23.5 dBm | -15 dBm |
| | Max. Input Optical Power (Saturation) | - | 0 dBm | 0 dBm |
| | Min. Input Optical Power (Sensitivity) | - | -31 dBm | -34 dBm |
| | Link Budget (dB) | - | 7.5 dB | 19 dB |

| Technology | | | |
|-------------------------------------|---|-----------|---|
| Ethernet Standards | IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3x for Flow control IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) IEEE 802.3af PoE specification (up to 25 Watts per port for P.S.E.) | | |
| MAC Table | 1024 MAC addresses | | |
| Priority Queues | 4 | | |
| Processing | Store-and-Forward | | |
| Switch Properties | Switching bandwidth : 1.2Gbps VLAN : Port Based | | |
| Security Features | Enable/disable ports VLAN to segregate and secure network traffic | | |
| Software Features | STP/RSTP (IEEE 802.1D/w) Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units Open-Ring support the other vendor's ring technology in open architecture Port configuration, status, statistics, monitoring, security DHCP Client | | |
| Network Redundancy | O-Ring | Open-Ring | O-Chain Fast recovery STP RSTP |
| LED Indicators | | | |
| Power Indicator | Green : Power LED x 3, Green : PoE LED x 4 | | |
| 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 event occurred | | |
| 10/100Base-T(X) RJ45 Port Indicator | Green for port Link/Act. Amber for Link | | |
| Fiber Port Indicator | Green for port Link/Act. Amber for Link | | |
| Fault contact | | | |
| Relay | Relay output to carry capacity of 1A at 24VDC | | |
| Power | | | |
| Redundant Input Power | Triple DC inputs. 2x48VDC on 7-pin terminal block , 1x48VDC on power jack | | |
| Power Consumption (Typ.) | 5 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) | 54.2(W) x 106.1(D) x 145.4(H) mm (2.13x4.18x5.72 inch.) | | |
| Weight (g) | 696 g | 709 g | 709 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) | 304,333 | 292,673 | 292,673 |
| Warranty | 5 years | | |

Ordering Information

IPS-2 AA B CC - DD - EE

| Code Definition | 10/100Base-T(X) P.S.E. Port Number | Additional Port Number | Additional Port Type | Fiber Optical Mode | Fiber Optical Connector |
|-----------------|------------------------------------|------------------------|---|---|----------------------------|
| Option | - 04 : 4 ports | - 2 : 2 ports | - FX : 100Base-FX - TX : 10/100Base-T(X) | - MM : Multi-mode - SS : Single-mode | - SC : SC connector |

| Available Model | Model Name | Description |
|-----------------|------------------|---|
| | IPS-2042TX | Industrial 6-port lite-managed PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x10/100Base-T(X) |
| | IPS-2042FX-MM-SC | Industrial 6-port lite-managed PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x100Base-FX, multi-mode, 2km/1310nm, SC connector |
| | IPS-2042FX-SS-SC | Industrial 6-port lite-managed PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x100Base-FX, single-mode, 30km/1310nm, SC connector |

Packing List

- IPS-204TX/2042FX
- DIN-Rail Kit
- Wall-mount Kit
- 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-75-48, 75W DIN-Rail power supply
- DR-120-48, 120W DIN-Rail power supply
- SDR-240-48, 240W DIN-Rail power supply
- SDR-480-48, 480W DIN-Rail power supply
- PAA-482500, 48VDC/2500mA 120W Power Adapter with universal 100 to 240VAC input, US power cord
- PAE-482500, 48VDC/2500mA 120W Power Adapter with universal 100 to 240VAC input, EU power cord