

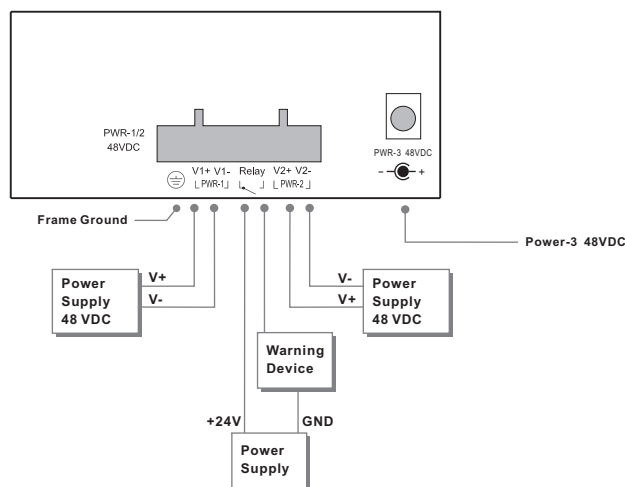
Introduction

IPS-2042 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) / 2x100Base-FX fiber or 2x100Base-FX SFP socket ports. IPS-2042 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 completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain and STP/RSTP (IEEE802.1w/D) technology. IPS-2042 series can be managed centralized and convenient by a powerful windows utility : Open-Vision. 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 easy 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 the other vendor's ring technology in open architecture
- > O-Chain support the multiple redundant ring technology
- > Provide Fast recovery technology for Ethernet multi-redundancy
- > STP/RSTP supported
- > SNMP v1/v2c/v3 support for secured network management
- > Support LLDP (Link Layer Discovery Protocol)
- > Configurable by Web-based and Windows utility (Open-Vision)
- > Event notification through Syslog, Email, and SNMP trap
- > Two 10/100Base-T(X) port support for long distance connection (IPS-2042TX only)
- > Two 10/100Base-FX fiber port support for long distance connection (IPS-2042FX only)
- > Two 100Base-FX SFP port support for long distance connection (IPS-2042P only)
- > High reliability and rigid IP-30 housing
- > DIN-Rail and wall-mount enabled

Power Connection Guide



Specifications

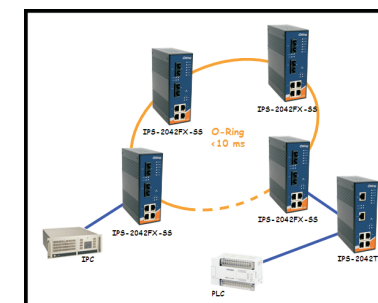
ORing Switch Model	IPS-2042TX	IPS-2042FX-MM	IPS-2042FX-SS	IPS-2042P
Physical Ports				
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX with PSE	4	4	4	4
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX without PSE	2	-	-	-
100 Base-FX SFP socket	-	-	-	2
Fiber Port Specification				
Fiber Ports Number	-	1	1	-
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 PSE)			
MAC Table	2048 MAC addresses			
Priority Queues	4			
Processing	Store-and-Forward			
Switch Properties	Switch bandwidth: 1.2Gbps VLANs: 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 Port configuration, status, statistics, monitoring, security			
Network Redundancy	O-Ring, STP, RSTP, fast recovery			
LED Indicators				
Power/PoE Indicator	Green: Power LED x3, Green: PoE LED x4			
R.M. Indicator	Green: Flashing to indicate system operated in O-Ring Master mode			
O-Ring indicator	Green: Indicate system operated in O-Ring mode			
Fault Indicator	Amber: Indicate unexpected event occurred			
10/100 Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for Link			
Fiber / SFP socket Port Indicator	Green for port Link/Act. Amber for Link			
Fault Contact				
Relay	Relay output to carry capacity of 1A at 24 VDC			
Power				
Redundant Input power	Triple DC inputs. Dual 48VDC on 7-pin terminal block, 48VDC on power jack			
Power consumption(Typ.)	5 Watts	7 Watts	7 Watts	7 Watts
Overload current protection	Present			
Reverse polarity protection	Present on terminal block			
Physical Characteristic				
Enclosure	IP-30			
Dimension (W x D x H)	54.2(W)x106.1(D)x145.4(H) mm (2.13x4.18x5.72 inch.)			
Weight (g)	696 g	709 g	709 g	700 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

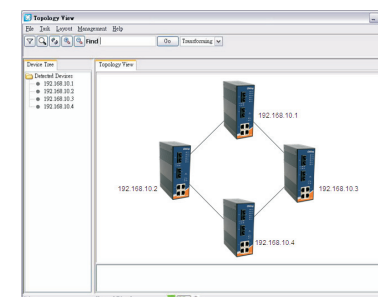
Open-Vision

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.

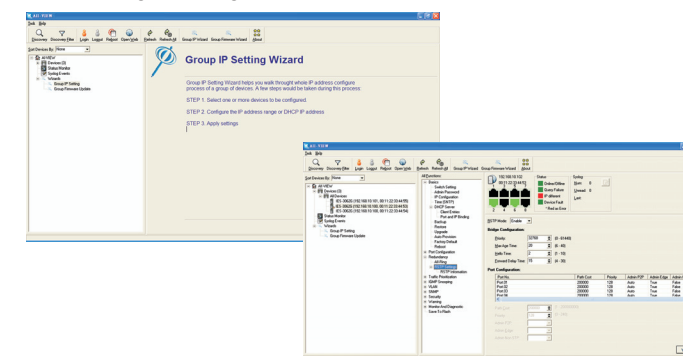
Network connection



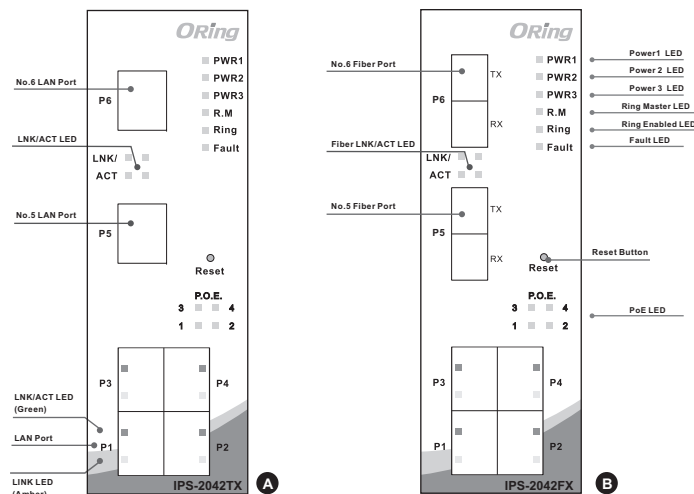
Topology View



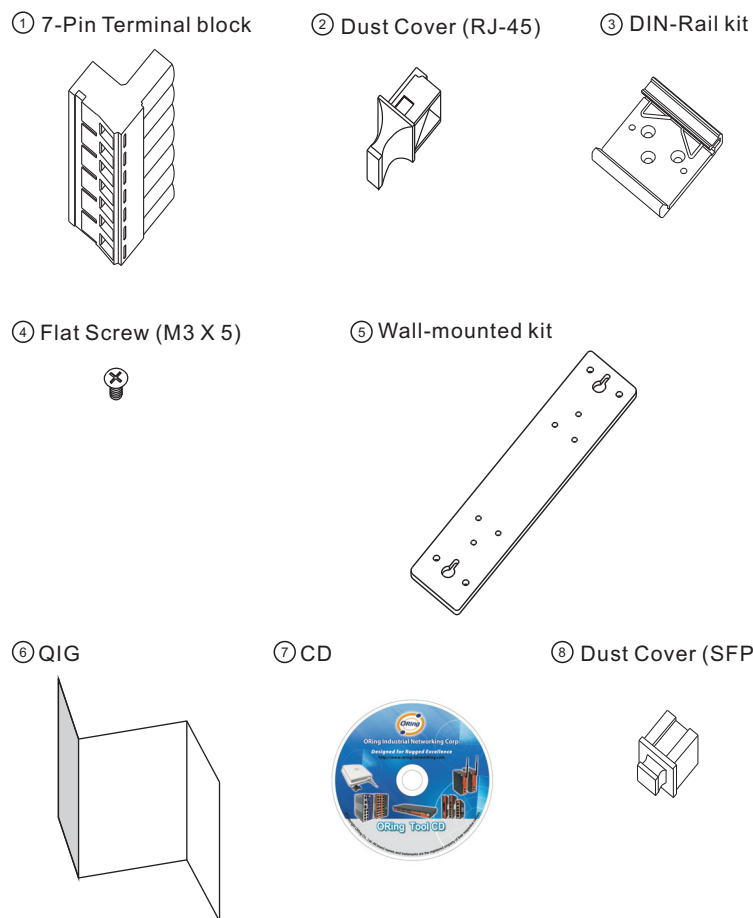
Monitoring and Configuration interface



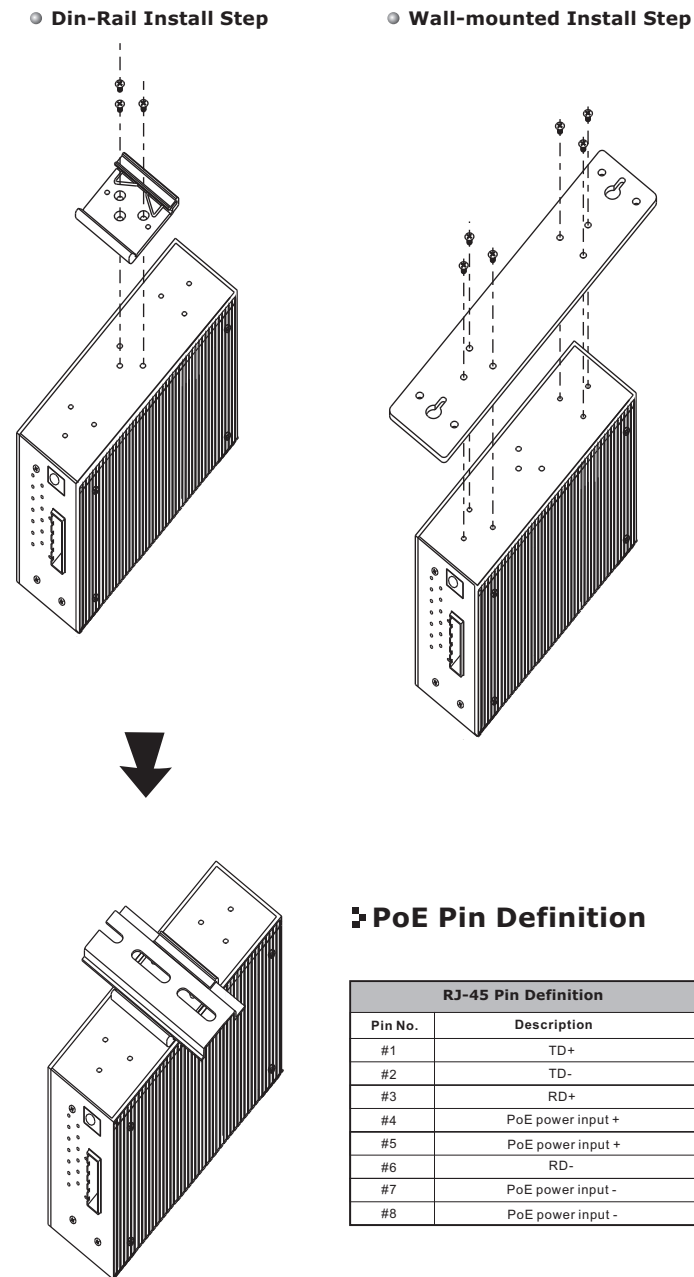
Front Panel



Accessory



Installation



RJ-45 Pin Definition	
Pin No.	Description
#1	TD+
#2	TD-
#3	RD+
#4	PoE power input +
#5	PoE power input +
#6	RD-
#7	PoE power input -
#8	PoE power input -

Packing list

Model name	Model Description	Accessory
IPS-2042TX	Industrial 6-port lite-managed PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x10/100Base-T(X)	⊗X1, ⊗X6, ⊗X1, ⊗X6, ⊗X1, ⊗X1, ⊗X1
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	⊗X1, ⊗X4, ⊗X1, ⊗X6, ⊗X1, ⊗X1, ⊗X1
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	⊗X1, ⊗X4, ⊗X1, ⊗X6, ⊗X1, ⊗X1, ⊗X1
IPS-2042P	Industrial 6-port lite-managed PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x100Base-FX, SFP socket	⊗X1, ⊗X4, ⊗X1, ⊗X6, ⊗X1, ⊗X1, ⊗X1, ⊗X2

ORing
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ROHS, FC, CE

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