3ISYS-ETHP-4C2F/6C

INDUSTRIAL 6-PORT LITE-MANAGED POE ETHERNET SWITCH

FEATURES

- 3ISYS-ETHP-6C provide 4x10/100Base-T(X) P.S.E. and 2x10/100Base-T(X) ports
- 3ISYS-ETHP-4C2 FX series provide 4x10/100Base-T(X) P.S.E. and 2x100Base-FX single/multi mode fiber ports
- World's fastest Redundant Ethernet Ring: Sys-Ring (Recovery time < 10ms over 250 units of connection)
- Uni-Ring support the other vendor's ring technology in open architecture
- Sys-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 (System-Vision)
- Event notification through Syslog, Email, and SNMP trap
- Two 100Base-FX fiber port support for long distance connection
- 4 ports support P.S.E. based on IEEE 802.3af standard up to 25 Watts per port
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled

3ISYS
INNOVATIVE - INTEGRATED - INTELLIGENT

PRODUCT OVERVIEW

3ISYS-ETHP-6C/4C2F series are lite-managed redundant ring Ethernet switches with 2x10/100Base-T(X) or 2x100Base-FX fiber ports and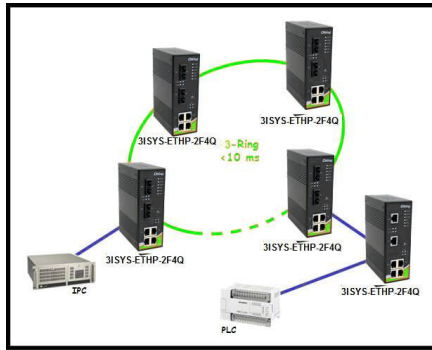 4x10/100Base-T(X) ports with PoE P.S.E. function.   IPS series support Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network.   Each IPS switches has 4X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports.   P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup.   With completely support of Ethernet Redundancy protocol, Sys-Ring (recovery time < 10ms over 250 units of connection), Uni-Ring, Sys-Chain and STP/RSTP (IEEE802.1w/D) technology. 3ISYS-ETHP-6C/4C2F series can be managed centralized and convenient by 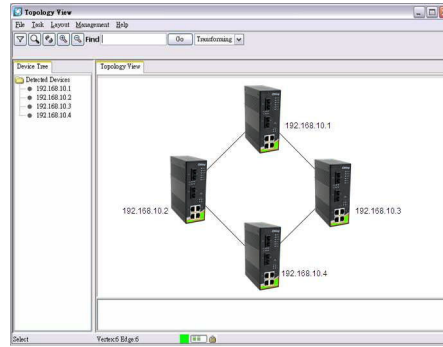a powerful windows utility — System-Vision. The wide operating temperature range from -40oC to 70oC can satisfy most of operating environment.   Therefore, the switch is one of the most reliable choice for easy managed and Fiber Ethernet application.
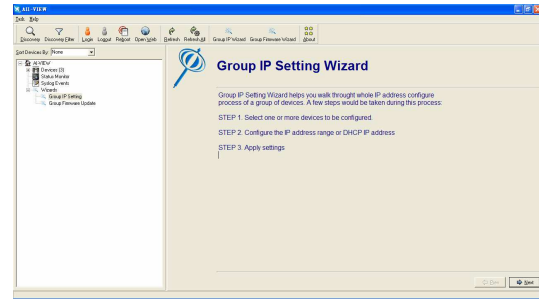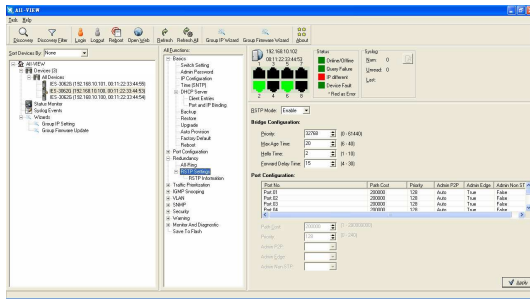
3ISYS's switches are intelligent switches.　Being different form other traditional redundant switches, 3ISYS provides a set of Windows utility (System-Vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.
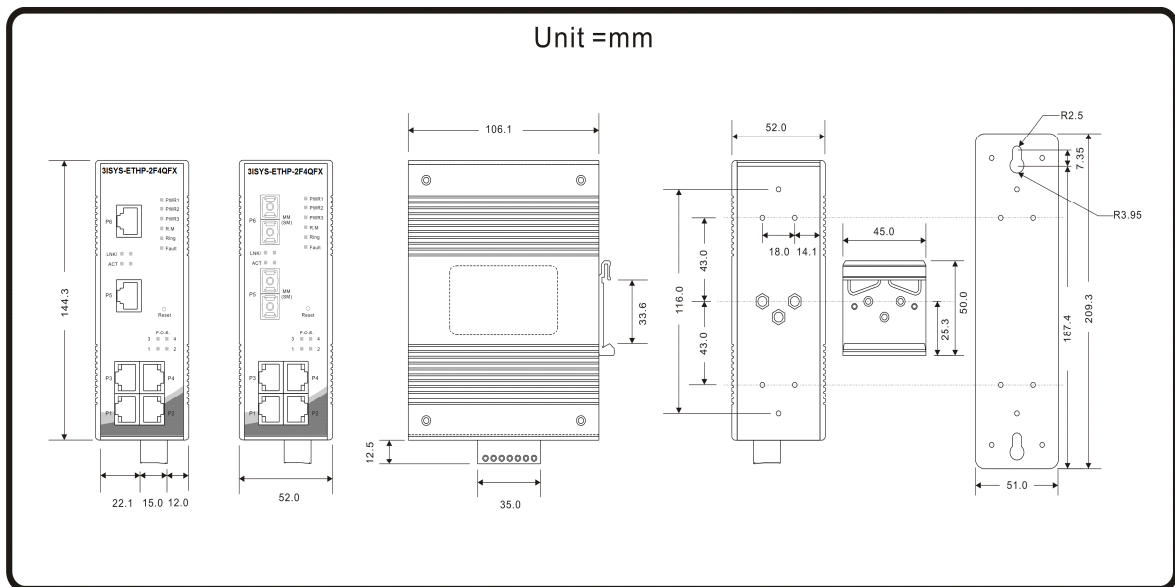

Network connection

Topology View

Monitoring and Configuration

Dimension

Unit =mm

PoE Pin Definition

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 -

Specifications

3ISYS Switch Model	3ISYS-ETHP-6C	3ISYS-ETHP-4C2F-MM-SC	3ISYS-ETHP-4C2F-SS-SC
Physical Ports			
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX with P.S.E.	4	4	4
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX without P.S.E.	2		
Fiber Ports Specification — 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 (Sys-Ring) with recovery time less than 10ms over 250 units § Uni-Ring support the other vendor's ring technology in open architecture § Port configuration, status, statistics, monitoring, security § DHCP Client
Network Redundancy	§ Sys-Ring § Uni-Ring § Sys-Chain § Fast recovery § STP § RSTP

LED indicators			
Power/PoE Indicator	Green : Power LED x 3. Green : PoE LED x 4		
R.M. Indicator	Green : Indicate system operated in Sys-Ring Master mode		
Sys-Ring Indicator	Green : Indicate system operated in Sys-Ring mode		
Fault Indicator	Amber : Indicate 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 Characteristic			
Enclosure	IP-30		
Dimension (W x D x H)	52(W) x 106.1(D) x 144.3(H) mm (2.05x4.18x5.68 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	304,333 hours	292,673 hours	
Warranty	1 year		

Ordering Information

3ISYS®-AAAA-C

Module Identifier	Number of 10/100Base-TX P.S.E Ports
Fast P.O.E Lite, ETHP	6

3ISYS-AAAA-C-F

Module Identifier	Number of 10/100Base-TX P.S.E Ports	Number of Fiber Ports
Fast P.O.E Lite, ETHP	4	2

Items Included

- **3ISYS-ETHP-6C/4C2F series x 1**
- **3ISYS Tool CD x 1**
- **Wall-mount Kit x 1**
- **Quick Installation Guide x 1**

Optional Accessories

- **System-Vision M5C : Powerful Network Management Windows Utility Suit, 500 IP devices**
- **3ISYS-PWR-482500, 48VDC/2500mA 120W Power Adapter with universal 100 to 240VAC input, US plug**
- **3ISYS-PWR-75-48 : 75 Watts DIN-Rail power supply**
- **3ISYS-PWR-120-48 : 120 Watts DIN-Rail power supply**
- **3ISYS-PWR-482500, 48VDC/2500mA 120W Power Adapter with universal 100**

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All specifications are subject to change without further notice. All features with * mark will be available by firmware upgrade.