

3ISYS-ETH-8C2FC-POE

**INDUSTRIAL 10-PORT MANAGED POE ETHERNET SWITCH WITH
2XGIGABIT COMBO PORTS, SFP SOCKET AND 8X10/100BASE-T(X) P.S.E.**

FEATURES

- 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 allow multiple redundant network rings
- Support standard IEC 62439-2 MRP (Media Redundancy Protocol) function
- STP/RSTP/MSTP supported
- 8 ports P.S.E. fully compliant with IEEE802.3af standard, provide up to 30 Watts per port
- Provide PoE power on delay function, users can define delay time for PoE power supply
- Support PTP Client (Precision Time Protocol) clock
- Support Modbus/TCP protocol synchronization
- IGMP v2/v3 (IGMC 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 (Link Layer Discovery Protocol)
- Supports DDM (Digital Diagnostic Monitoring) function
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Port lock to prevent access from unauthorized MAC address
- Windows utility (System-vision) support centralized management and configurable by Web-based ,Telnet, Console (CLI)
- Support two Gigabit combo ports
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled



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PRODUCT OVERVIEW

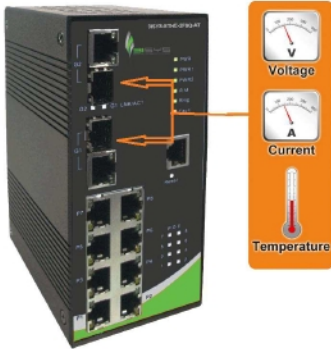
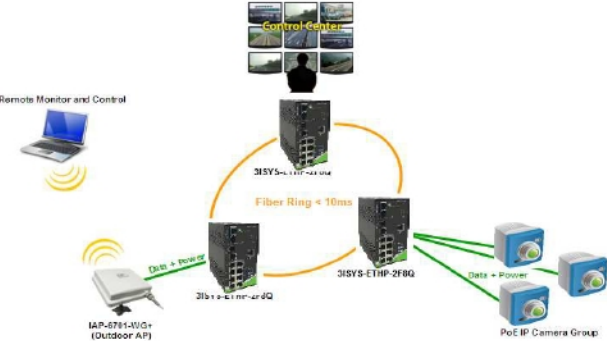
3ISYS-ETH-8C2FC-POE is managed redundant ring Ethernet switch with 8x10/100Base-T(X) ports with PoE (P.S.E.) function and 2xGigabit combo ports. With completely support of Ethernet redundancy protocol, Sys-Ring (recovery time < 10ms over 250 units of connection), Uni-Ring, Sys-Chain, MRP and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.

Another Uni-Ring technology is also supported which can be applied for other vendor's proprietary ring. Sys-Chain is the revolutionary network redundancy technology that provides the add-on network redundancy topology for any backbone network, Sys-Chain allows multiple redundant network rings of different redundancy protocols to join and function together as a larger and more robust compound network topology.

Sys-Chain providing ease-of-use while maximizing fault-recovery swiftness, flexibility, compatibility, and cost-effectiveness in one set of network redundancy topology.

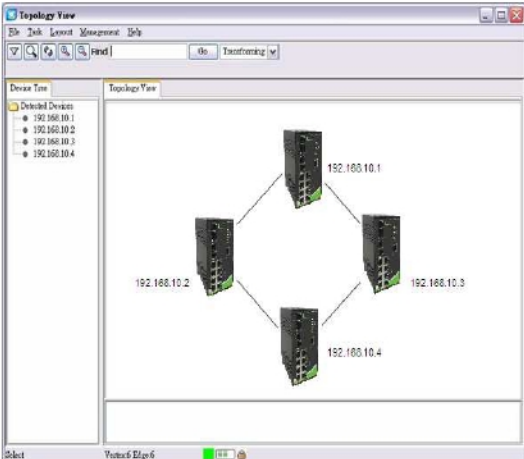
System-vision

3ISYS's switches are intelligent switches. Being different from 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.

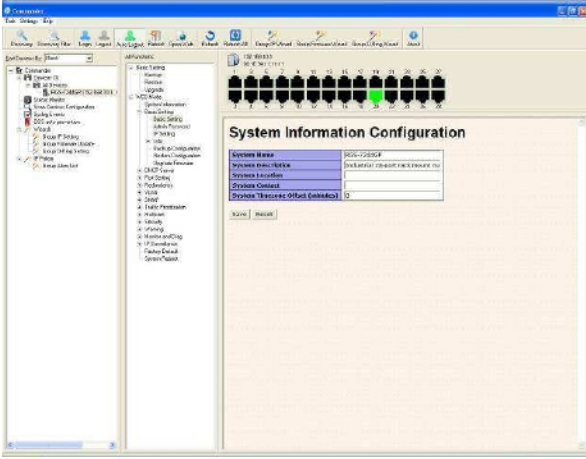


DDM

Network connection

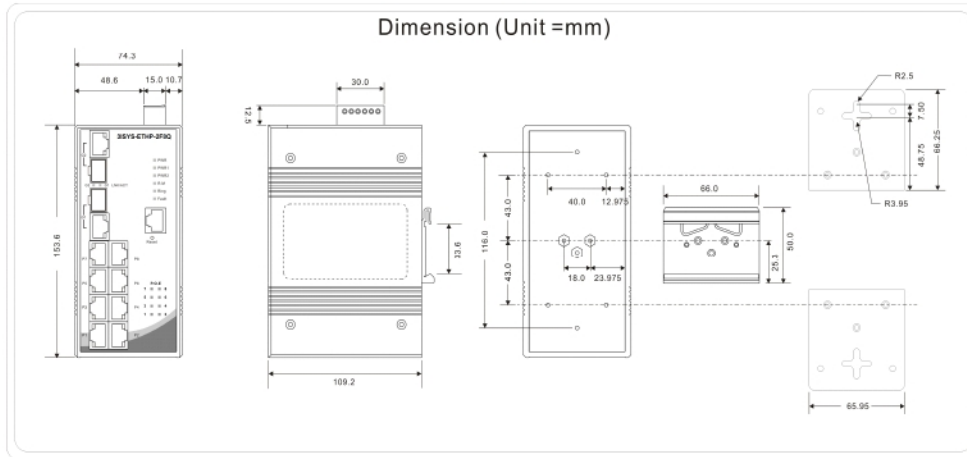


Topology View



Monitoring and Configuration interface

Dimension



PoE Pin Definition

| 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 - |

Specifications

| 3ISYS Switch Model | 3ISYS-ETH-8C2FC- 505 |
|---|---|
| Physical Ports | |
| Gigabit Combo Ports with 10/100/1000Base-T(X) and 100/1000Base-X SFP port | 2 |
| 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX with P.S.E. | 8 |
| Technology | |
| Ethernet Standards | <ul style="list-style-type: none"> § IEEE 802.3 for 10Base-T § IEEE 802.3u for 100Base-TX and 100Base-FX § IEEE 802.3z for 1000Base-X § IEEE 802.3ab for 1000Base-T § IEEE 802.3x for Flow control § IEEE 802.3ad for LACP (Link Aggregation Control Protocol) § IEEE 802.1D for STP (Spanning Tree Protocol) § IEEE 802.1p for COS (Class of Service) § IEEE 802.1Q for VLAN Tagging § IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) § IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) § IEEE 802.1x for Authentication § IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) § IEEE 802.3af / at 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 | <ul style="list-style-type: none"> § Switching latency: 7 us § Switching bandwidth: 5.6Gbps § Max. Number of Available VLANs: 4096 § IGMP multicast groups: 1024 § Port rate limiting: User Define |
| Security Features | <ul style="list-style-type: none"> § Enable/disable ports, MAC based port security § Port based network access control (802.1x) § VLAN (802.1Q) to segregate and secure network traffic § Supports Q-in-Q VLAN for performance & security to expand the VLAN space § Radius centralized password management § SNMP v1/v2c/v3 encrypted authentication and access security |
| Software Features | <ul style="list-style-type: none"> § STP/RSTP/MSTP (IEEE 802.1D/w/s) § Redundant Ring (Sys-Ring) with recovery time less than 10ms over 250 units § TOS/Diffserv supported § Quality of Service (802.1p) for real-time traffic § VLAN (802.1Q) with VLAN tagging and GVRP supported § IGMP Snooping for multicast filtering § Port configuration, status, statistics, monitoring, security § SNTP for synchronizing of clocks over network § Support PTP Client (Precision Time Protocol) clock synchronization § DHCP Server / Client support § Port Trunk support § MVR (Multicast VLAN Registration) support § Modbus TCP |
| Network Redundancy | <ul style="list-style-type: none"> § Sys-Ring § Uni-Ring § Sys-Chain § STP / RSTP / MSTP |
| Warning / Monitoring | <ul style="list-style-type: none"> § Relay output for fault event alarming |

| | |
|--|--|
| System | <ul style="list-style-type: none"> § Syslog server / client to record and view events § Include SMTP for event warning notification via email § Event selection support |
| DDM Function | Voltage / Current / Temperature |
| RS-232 Serial Console Port | RS-232 in RJ45 connector with console cable. 9600bps, 8, N, 1 |
| LED indicators | |
| Power/PoE Indicator | Green : Power LED x 3, Green : PoE LED x 8 |
| Sys-Ring Indicator | Green : Indicate system operated in Sys-Ring mode |
| R.M. indicator | Green : Indicate system operated in Sys-Ring Master mode |
| Fault indicator | Amber : Indicate unexpected event occurred |
| 10/100Base-T(X) RJ45 Port Indicator | Green for port Link/Act. Amber for Duplex/Collision |
| 10/100/1000Base-T(X) RJ45 Port Indicator | Green for Link/Act. Amber for 100Mbps indicator |
| 100/1000Base-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. 48VDC on 6-pin terminal block |
| Power Consumption (Typ.) | 9 Watts (power consumption of P.S.E. is not included) |
| Overload Current Protection | Present |
| Reverse polarity protection | Not Presented |
| Physical Characteristic | |
| Enclosure | IP-30 |
| Dimension (W x D x H) | 74.3 (W) x 109.2 (D) x 153.6 (H) mm (2.93 x 4.3 x 6.05 inch) |
| Weight (g) | 1100 g |
| Environmental | |
| Storage Temperature | -40 to 85°C (-40 to 185°F) |
| Operating | -40 to 70°C (-40 to 158°F) |

| | |
|-----------------------------|--|
| Temperature | |
| 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 | 1 year |

Ordering Information

3ISYS®-AAAA-C-FC

| Module Identifier | Number of 10/100 Base-T(X) Ports | Number of 100/1000Base-X SFP ports |
|--------------------|----------------------------------|------------------------------------|
| Fast Ethernet, ETH | 8 | 2 |

Part Numbers For Ordering:

ETH-8C2FC-POE = 8 Port 10/100 POE with 2 port 1G Combo Ports.
(SFP/Copper)

ETH-8C2FC = 8 Port 10/00 with 2 Port 1G Combo Ports (SFP /
Copper) (Non POE version)

Items Included

- | 3ISYS-ETH-8C2FC-POEx 1
- | 3ISYS Tool CD x 1
- | Quick Installation Guide x 1
- | DIN-Rail Kit x 1
- | Wall-mount Kit x 1
- | Console Cable x 1

Optional Accessories

- | System-vision : Powerful Network Management Windows Utility Suit, 500 IP devices
- | 3ISYS-PWR-75/120Watts
- | 100Mbps SFP optical transceiver
- | 1Gbps SFP optical transceiver
- | 3ISYS-PWR-240-48 : 240 Watts DIN-Rail power supply



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