3ISYS-ETHR-24C4F-G/24F-G-E

INDUSTRIAL 28-PORT RACK MOUNT MANAGED GIGABIT ETHERNET SWITCH WITH 24X10/100/1000BASE-T(X) AND 4X1000BASE-X, SFP SOCKET

FEATURES

- Support 4x1000Base-X SFP ports and 24x10/100/1000Base-T(X)
- Support Jumbo frame up to 9K Bytes
- Supports Sys-Ring (recovery time < 25ms over 250 units of connection), MSTP/RSTP/STP (IEEE 802.1s/w/D) for Ethernet Redundancy
- 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
- Provide Fast recovery technology for Ethernet multi-redundancy
- Support Jumbo frame up to 9.6K Bytes
- Supports IPV6 new internet protocol version
- Support Modbus TCP protocol
- Provided HTTPS/SSH protocol to enhance network security
- Supports SMTP client
- Supports IP-based bandwidth management
- Supports application-based QoS management
- Supports Device Binding 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
- Support ACL, TACACS+ and 802.1x User Authentication for security
- Multiple notification for warning of unexpected event
- Windows utility (System-Vision) support centralized management and configurable by Web-based interface, Telnet and Console (CLI)
- Support LLDP Protocol
- Event notification through Syslog, Email, SNMP trap, and Relay Output (for –E module)
- 19 inches rack mountable design

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PRODUCT OVERVIEW

3ISYS-ETHR-24C4F-G series are managed redundant ring Ethernet switch with 4x1000Base-X SFP ports and 24x10/100/1000Base-(TX) ports. 3ISYS-ETHR-24C4F-G is an environmentally hardened Industrial Managed Ethernet Switch with high Port-density, Gigabit Fiber link capability. It is specifically designed to operate stably in electrically harsh and the toughest environment under extended wide operating temperature range.   Sys-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.   And support wide operating temperature from -40 oC to 75 oC.   3ISYS-ETHR-24C4F-G series can also be managed centralized and convenient by System-Vision, except the Web-based interface, Telnet and console (CLI) configuration. The switch is the most reliable choice for highly-managed and Fiber Ethernet application in Industrial network.

System-Vision

3ISYS's switches are intelligent switches.   Different form other traditional redundant switches, 3ISYS provides a set of Windows Management utility (System-Vision v1.0 or above) for user to manage and monitor all of industrial Ethernet switches on the industrial network.
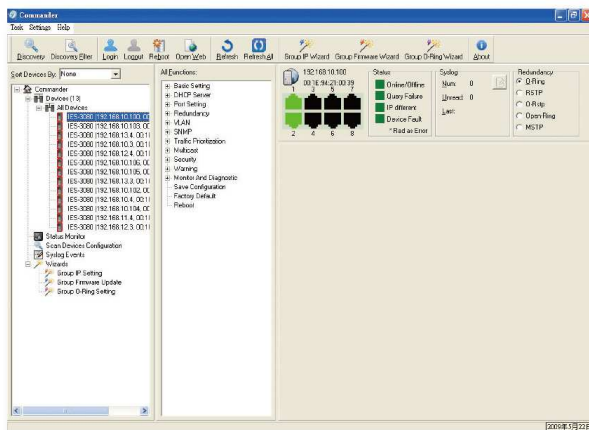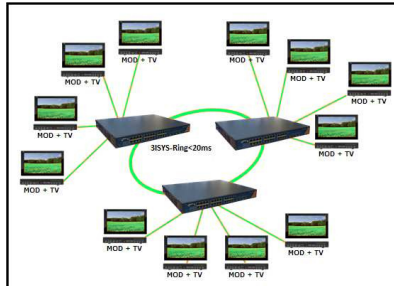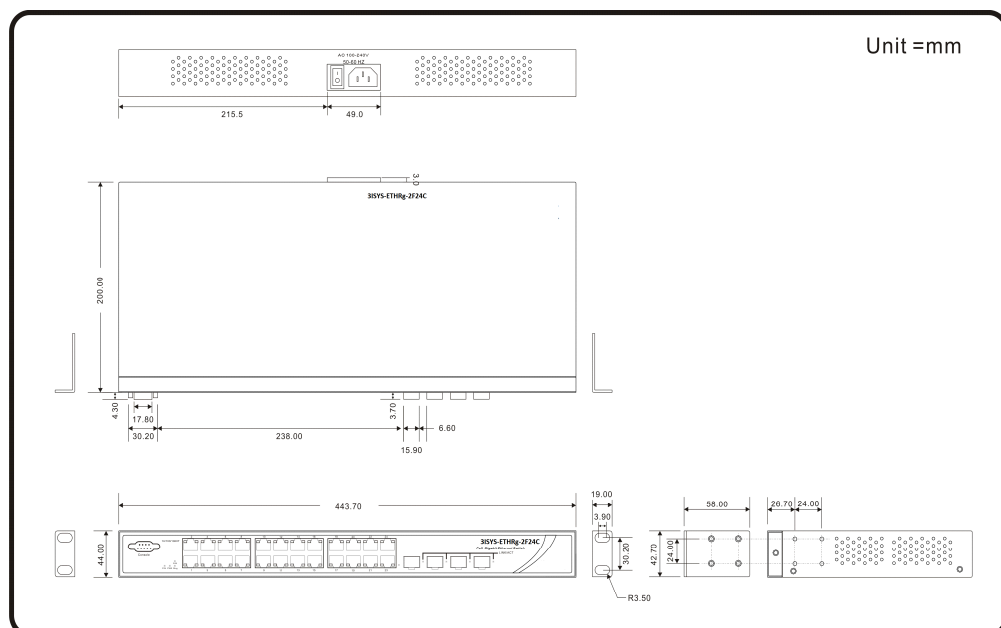

Monitoring and Configuration interface
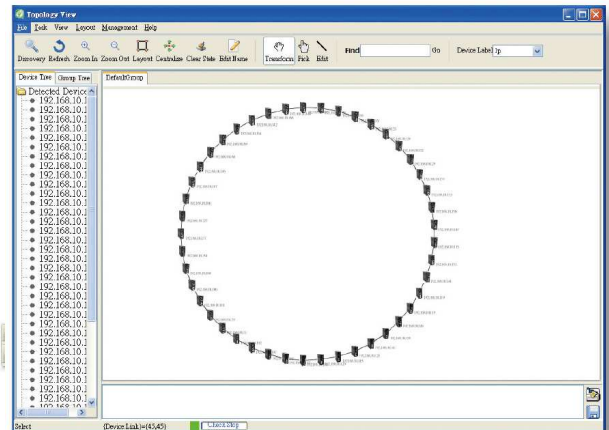
Topology View

Dimension

Unit =mm

Technical Specifications

3ISYS Switch Model	3ISYS-ETHR-24C4F-G	3ISYS-ETHRg-24C4F-G-E
Physical Ports		
1000Base-X SFP Port	**4**	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	**24**	
Technology		
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.z for 1000Base-X IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1D for STP (Spanning Tree Protocol) 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)	
MAC Table	8K	
Priority Queues	4	
Processing	Store-and-Forward	
Switch Properties	Switching latency: 7 us Switching bandwidth: 56Gbps Max. Number of Available VLANs: 256 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define	
Jumbo frame	Up to 9.6K Bytes	
Security Features	Device Binding security feature Enable/disable ports, MAC based port security Port based network access control (802.1x) VLAN (802.1Q) to segregate and secure network traffic Radius centralized password management SNMPv3 encrypted authentication and access security Https / SSH enhance network security	

Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s) Redundant Ring (Sys-Ring) with recovery time less than 30ms 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 IP-based bandwidth management Application-based QoS management DOS/DDOS auto prevention Port configuration, status, statistics, monitoring, security DHCP Client/Server SMTP Client Modbus TCP
Network Redundancy	Sys-Ring Uni-Ring Sys-Chain MRP Fast Recovery Mode STP/RSTP/MSTP
RS-232 Serial Console Port	RS-232 in DB9 connector with console cable. 115200bps, 8, N, 1

LED Indicators		
Power Indicator (PWR)	Green : Power indicator For AC	Green : Power indicator For AC and DC
Power-1 Indicator (PW1)	N/A	Green : Indicate Power-1 input
Power-2 Indicator (PW2)	N/A	Green : Indicate Power-2 input
Power-3 Indicator (PW3)	N/A	Green : Indicate Power-3 input
System Ready Indicator (STA)	Green : Indicate that the system is ready. The LED is blinking when the system is upgrading firmware	
Ring Master Indicator (R.M.)	Green : Indicate that the system is operating in Sys-Ring Master mode	
Sys-Ring Indicator (Ring)	Green : Indicate system operated in Sys-Ring mode Blinking to indicate Ring is broken.	
Fault Indicator (Fault)	N/A	Amber : Indicate unexpected event occurred

System Runnig Indicator (RUN)	Green : System operated continuously	
Supervisor Login Indicator (RMT)	Green : System is accessed remotely	
Reset To Default Running Indicator (DEF)	Green : System reset to default configuration	
Ping Command To The Switch Indicator (Ping)	Green : System is processing "PING" request	
10/100/1000Base-T(X) RJ45 Port Indicator	Green for port Link/Act indicator. Amber for half/full-duplex indicator	
1000Base-X SFP Port Indicator	Green for port Link/Act.	
Fault contact		
Relay	N/A	Relay output to carry capacity of 1A at 24VDC
Power		
Redundant Input Power	100 ~ 240VAC with power cord	100~240VAC with power cord, dual 36 ~ 72VDC power inputs at 6-pin terminal block
Power Consumption (Typ.)	36 Watts	36 Watts
Overload Current Protection	Present	
Physical Characteristic		
Enclosure	19 inches rack mountable	
Dimension (W x D x H)	443.7 (W) x 200 (D) x 44 (H) mm	431 (W) x 342 (D) x 44 (H) mm
Weight (g)	2700g	4250g
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
Warranty	1 year

Ordering Information

3ISYS®-AAAA-C- F

Module Identifier	Number of10/100/1000 Base-T(X) Ports	Number of 1000Base-X SFP Port
Rack mount Ethernet, ETHR	24	4

Items Included

§ **3ISYS-ETHR-24C4F-G (-E) x 1**

§ **Rack-mount Kit x 1**

§ **3ISYS Tool CD x 1**

§ **Console Cable x 1**

§ **Quick Installation Guide x 1**

§ **Power Cable x 1**

Optional Accessories

§ **System-Vision S5C : Powerful Network Management Windows Utility Suit, 500 IP devices**

§ **3ISYS-PWR-120-48 : 48V/120Watts DIN-Rail power supply (Only for –E)**

§ **3ISYS-SFP-1G: 1Gbps SFP optical transceiver**

§ **3ISYS-PWR-75-48 : 48V/75Watts DIN-Rail power supply (Only for –E)**

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