iS5 COMMUNICATIONS
SERVICES • SUPPORT • SECURITY • SOLUTIONS • SYSTEMS

iES8-S

Intelligent 8 Port Managed Ethernet Switch

Product Overview

The iES8-S is an intelligent 8 Port managed Ethernet switch with up to 8 x 10/100Base-T(X) RJ45 ports and up to 2 x 100 FX SM/MM SC/ST ports.

The iES8-S provides redundancy support through functions such as STP/RSTP/MSTP assuring protection of all mission critical network applications. iES8-S can be managed via the Web UI, iManage Software Suite, Telnet/SSH v2, and Console (CLI) / SSH v2.

The switch is made of IP-40 galvanized steel and has a wide operating temperature range from -40°C to +85°C, which is suitable for the harshest of environments without the use of fans.

Features and Benefits

Table 1. Features

FEATURE	
SUPPORTS	• STP / RSTP / MSTP • LLDP (Link Layer Discovery Protocol) • Modbus TCP • VLAN Priority—supports priority-tagged frames to be received by specific IEDs • HTTPS / SSH v2 • SNTP for synchronizing the switch's clock • MRP - Media Redundancy Protocol*
IGMP V2 / V3 (IGMP SNOOPING)	
SNMP V1 / V2C / V3	
RADIUS FOR 802.1X AUTHENTICATION, TACACS+ FOR USER LOGIN AUTHENTICATION	
MULTIPLE ALARM NOTIFICATION METHODS	
CONFIGURABLE BY WEB UI, TELNET, CONSOLE (CLI), IMANAGE SOFTWARE RUNNING ON WINDOWS 10, NT /2000/ XP/2003/VISTA/7	
DIN RAIL AND PANEL MOUNT	

* MRP implementation is based on IEC 62439 Ed. 1.0

PRODUCT SPECIFICATIONS

Table 2. Technical Specification

DESCRIPTION	SPECIFICATION
10/100BASE-T(X) RJ45 AUTO MDI/MDIX	Up to 8
100FX SM/MM SC/ST	Up to 2
RS-232 SERIAL CONSOLE PORT	RS-232 in RJ45 connector with console cable: 9600 bps, 8, N, 1
WARNING / MONITORING SYSTEM	Relay output for fault event alarming 2 alarm warning methods for system events supported: • SYSLOG with server / client structure; recording and viewing events in the System Event Log • SMTP for notification via email Event selection per port
ALARM	Relay output to carry capacity of 1 A at 24 VDC
TECHNOLOGY	
MAC TABLE	8K
PRIORITY QUEUES	4
PROCESSING	Store-and-Forward
SWITCH PROPERTIES	Switching latency: 7 µs Switching bandwidth: 1.6 Gbps Max. Number of Available VLANs: 4096 IGMP multicast groups: 32 Port rate limiting: User Defined

Product Specifications

TECHNOLOGY

SECURITY FEATURES	• STP/RSTP/MSTP • RADIUS for 802.1x authentication • TACACS+ for user login authentication • Port based network access control (NAS) 802.1x • VLAN (802.1 Q) for segregation and securing network traffic enabled by GVRP • SNMPv3 authentication and privacy encryption • Management Security • Port security and MAC Blacklist • IP Guard • HTTPS / SSH v2 • Web and CLI authentication and authorization
SOFTWARE FEATURES	• Web or CLI based Management (RS-232 Serial Console or Telnet / SSH v2) • HTTPS • DHCP Server /Client / Relay • VLAN—Port-based (untagged) and 802.1Q (tagged) • Supports SNMPv1/v2/v3 • Traffic Prioritization—QoS, Port-based Priority, COS/802.1p, TOS/DSCP • Multicast traffic—IGMP Snooping (IGMP v2 / v3), MVR, Static Multicast Filtering • Warnings (SYSLOG and SMTP), Fault Alarm (power and ports failure), and Event Selection • Monitoring and Diagnostics—MAC Table and Port Statistics, Counters, and Monitoring, System Event Log, Traffic Monitoring, and Ping • SNTP for synchronizing of clocks over network
NETWORK REDUNDANCY	STP/ RSTP/ MSTP, Fast Recovery, Dual Port Recovery, and Ring

PHYSICAL CHARACTERISTICS

ENCLOSURE	IP-40 Galvanized Steel
DIMENSIONS (W X D X H)	65.13 mm(W)x160.49 mm (D)x191.26 mm(H) (2.56 x 6.32 x 7.53 inches)
WEIGHT (G)	~1.2 kg

POWER

INPUT POWER	Redundant Power Supplies: Dual Input 24VDC(Nom), 10-36VDC (Oper), or Single Input 48VDC(Nom), 36-75VDC (Oper) with Single 24VDC(Nom), 10-36VDC (Oper) Backup, or Single Input 100-240VDC(Nom), 88-300VDC(Oper) or 100-240VAC(Nom), 85-264VAC(Oper) 50/60Hz with Single 24VDC (Nom), 10-36VDC (Oper) Backup
POWER CONSUMPTION (TYP.)	9 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Internal

Product Specifications

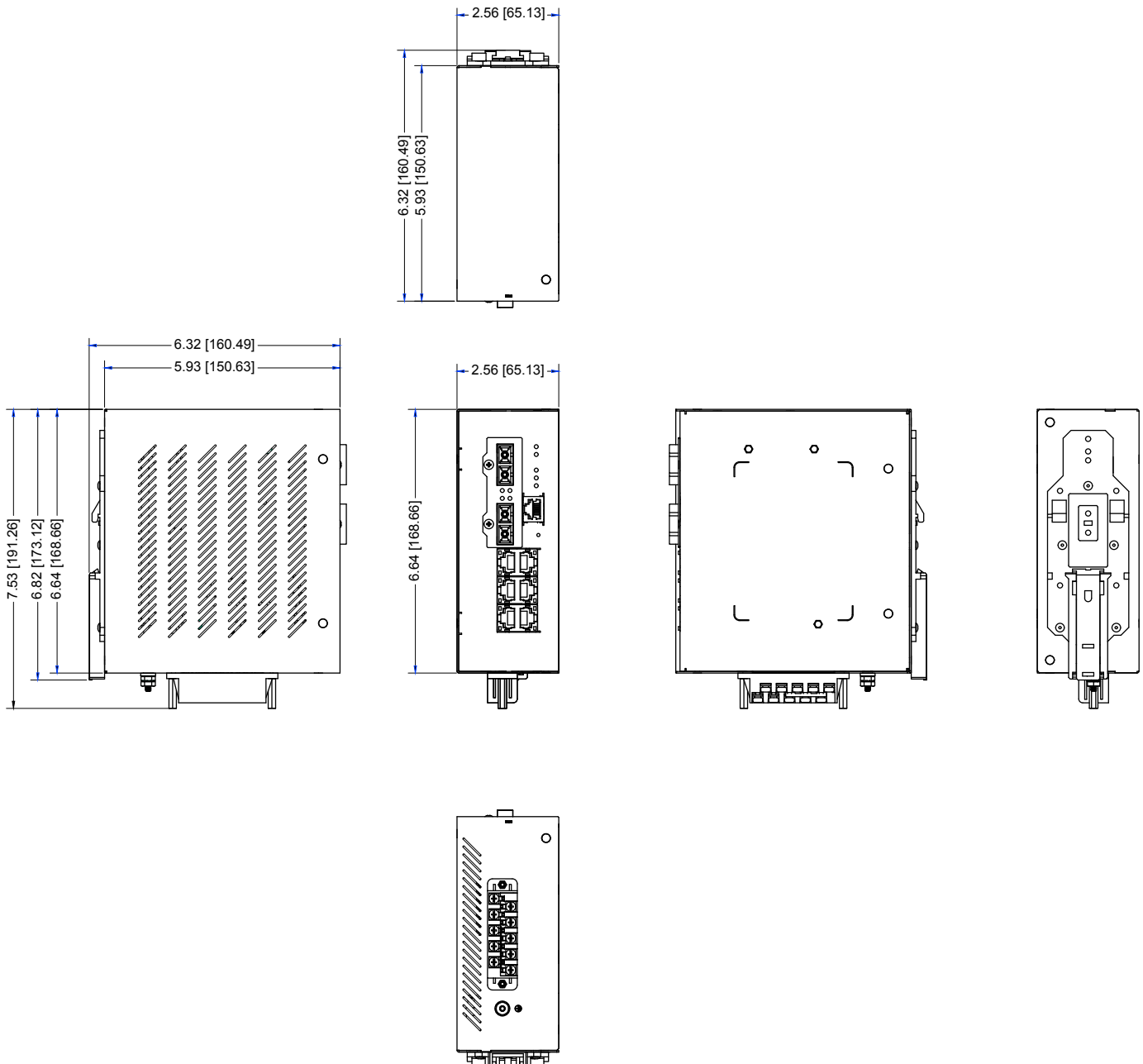Table 3. Compliance Specification

TYPE	STANDARDS
ELECTROMAGNETIC EMISSIONS	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)
ELECTROMAGNETIC IMMUNITY	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
SAFETY STANDARDS	EN60950-1
OPERATING ENVIRONMENT	-40oC to +85oC (-40o to 185oF) (no fans) EN 60068-2-21
STORAGE ENVIRONMENT	-40oC to +85oC (-40o to 185oF) EN 60068-2-14
OPERATING HUMIDITY	5% to 95% Non-condensing EN 60068-2-30
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC60068-2-6
WARRANTY	5 years, (extendable option with additional terms)
MTBF	273927 Hours / 31 Years (Operating Temperature: 55°C)

Table 4. Standards and Management

DESCRIPTION	SPECIFICATION		
IEEE 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 Spanning Tree Protocol IEEE 802.1w -2001 Rapid Spanning Tree Protocol (RSTP) IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP:2004) IEEE 802.1X-2010 Port Based Network Access Control IEEE 802.1AB – 2016 Station and Media Access Connectivity discovery (LLDP)		
RFC COMPLIANCE	• RFC 768: UDP • RFC 783: TFTP • RFC 791: IPv4 • RFC 792: ICMP • RFC 793: TCP • RFC 854: Telnet • RFC 959: FTP • RFC 1157: SNMP • RFC 1901,1902-1907 SNMPv2	• RFC 2273-2275: SNMPv3 • RFC 2571: SNMP Management • RFC 1166: IP Addresses • RFC 1643: Ethernet Interface MIB • RFC 2068: HTTP • RFC 2131, 2132: DHCP • RFC 2236: IGMP v2	• RFC 2817 Upgrading to TLS Within HTTP/1.1 • RFC 2818 HTTP Over TLS • RFC 3376: IGMP v3 • RFC 2474: DiffServ Precedence • RFC 3046: DHCP Relay Agent Information Option • RFC 3580: 802.1x RADIUS • RFC draft-ietf-opsawg-tacacs-09 -TACACS+

Dimensions

All dimensions are shown in inches [millimeters].

Ordering Information

BASE	POWER SUPPLY	MOUNT	ETHERNET PORT 1-6	ETHERNET PORT 7&8	MOD	DESCRIPTION
iES8-S	HV	D	6RJ45	2SMST15	C1	
iES8-S						Slim Line Core assembly and packaging
	LV					Dual Input 10-48VDC
	MV					Single Input 36-75VDC with Single 10-48VDC Backup
	HV					Single Input 110-370VDC or 90-264VAC with Single 10-48VDC Backup
		D				DIN Rail Mounting
		P				Panel Mounting
		N				No Mounting Hardware
			6RJ45			6 X 10/100Base-T(X) RJ45
				XX		None
				2RJ45		2 X 10/100Base-T(X) RJ45
				2MMSC		2 X 100FX Multimode SC, 1310nm, 2km
				2MMST		2 X 100FX Multimode ST, 1310nm, 2km
				2SMSC15		2 X 100FX Singlemode SC, 1310nm, 15km
				2SMST15		2 X 100FX Singlemode ST, 1310nm, 15km
				2SMSC40		2 X 100FX Singlemode SC, 1310nm, 40km
				2SMST40		2 X 100FX Singlemode ST, 1310nm, 40km
				2SMSC60		2 X 100FX Singlemode SC, 1310nm, 60km
				2SMST60		2 X 100FX Singlemode ST, 1310nm, 60km
				2SMSC80		2 X 100FX Singlemode SC, 1550nm, 80km
				2SMST80		2 X 100FX Singlemode ST, 1550nm, 80km
				2SMSC100		2 X 100FX Singlemode SC, 1550nm, 100km
				2SMST100		2 X 100FX Singlemode ST, 1550nm, 100km
					C1	Conformal Coating

iES8-S Sample Order Code

iES8-S-HV-D-6RJ45-2SMST15

Description: iES8 - 8 Port Ethernet Switch, (Power Supply) Dual Input 10-48VDC, (Mount) DIN Rail Mounting, (Ethernet Port 1-6) 6 X 10/100Base-T(X) RJ45, (Ethernet Port 7&8) 2 X 100FX Single mode ST, 1310nm, 15km.

The same unit, may be ordered with conformal coating by appending '-C1' to the order code, for example: iES8-S-HV-D-6RJ45-2SMST15-C1

Description: iES8 - 8 Port Ethernet Switch, (Power Supply) Dual Input 10-48VDC, (Mount) DIN Rail Mounting, (Ethernet Port 1-6) 6 X 10/100Base-T(X) RJ45, (Ethernet Port 7&8) 2 X 100FX Single mode ST, 1310nm, 15km. This system will be conformal coated.

Specifications are subject to change without notice.   Questions? Call: +1.844.520.0588

iS5 COMMUNICATIONS

SERVICES • SUPPORT • SECURITY • SOLUTIONS • SYSTEMS

For more information, visit is5com.com

General Inquiries: toll free: +1 844-520-0588 | info@is5com.com
Technical support: +1 844-475-8324   (+1 844-iS5-TECH) | support@is5com.com
Address: 5895 Ambler Drive, Mississauga, Ontario, L4W 5B7, Canada