

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	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 μ s 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	Dual Input 10-48VDC, or Single Input 36-75VDC with Single 10-48VDC Backup, or Single Input 110-370VDC or 90-264VAC 50/60Hz with Single 10-48VDC Backup
POWER CONSUMPTION (TYP.)	9 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Internal

Product Specifications

Table 3. Compliance Specification

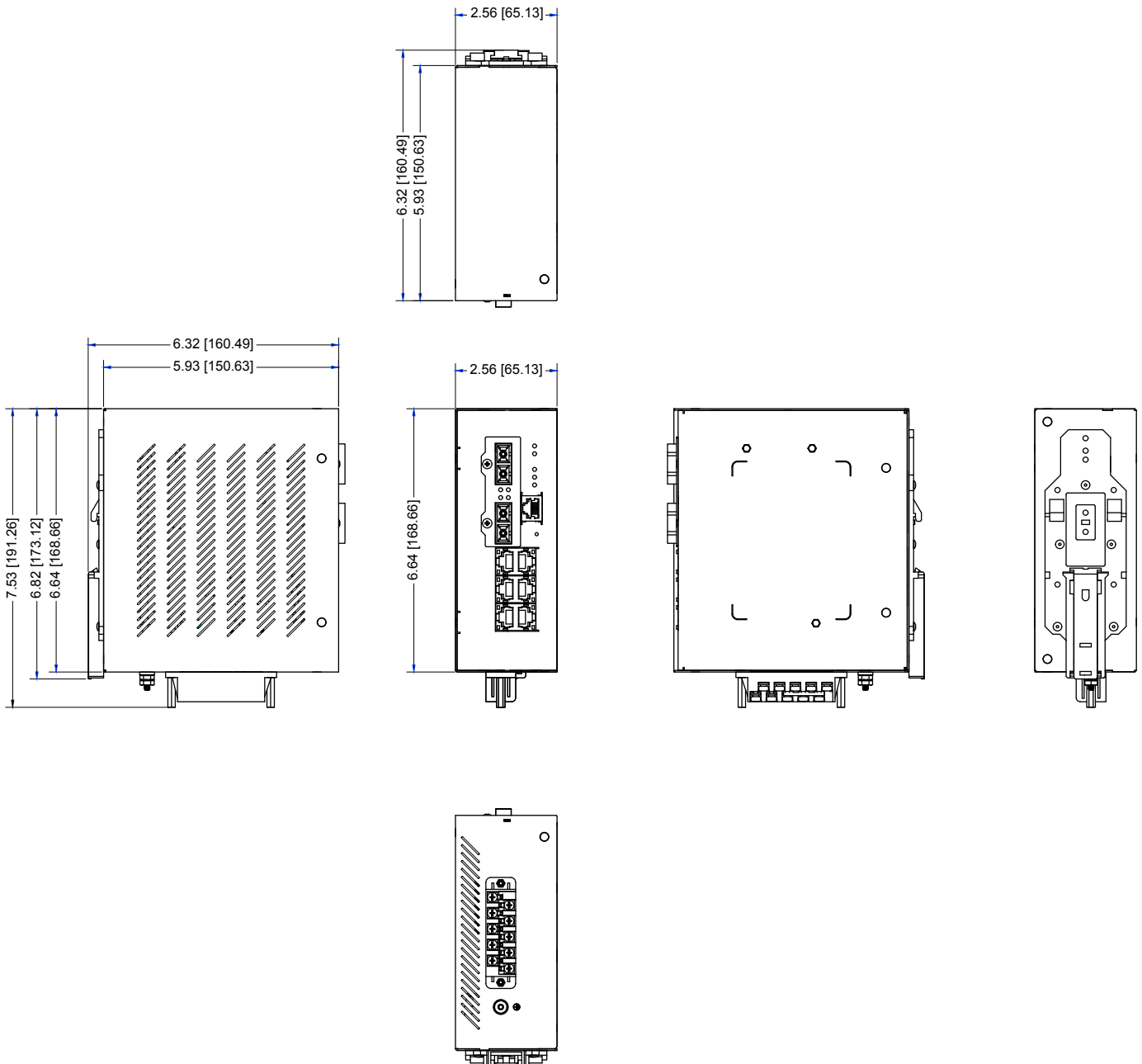
TYPE	STANDARDS
ELECTROMAGNETIC EMISSIONS	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)
ELECTROMAGNETIC IMMUNITY	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
SAFETY STANDARDS	EN60950-1
OPERATING 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	<p>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)</p>			
RFC COMPLIANCE	<table border="0"> <tr> <td> <ul style="list-style-type: none"> • 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 </td> <td> <ul style="list-style-type: none"> • 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 </td> <td> <ul style="list-style-type: none"> • 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+ </td> </tr> </table>	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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+
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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.



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