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Data Sheet

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.

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Features

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
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

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
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

Description	Specification
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	Dual Input 10-48VDC, or Single Input 36-75VDC with Single 10-48VDC Backup, or Single Input 110-370VDC or 90-264VAC with Single 10-48VDC Backup
Power Consumption (Typ.)	9 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Internal

Table 3. Compliance Specifications

| 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	-40°C to +85°C (-40° to 185°F) (no fans) EN 60068-2-21
Storage Environment	-40°C to +85°C (-40° to 185°F) 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

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.
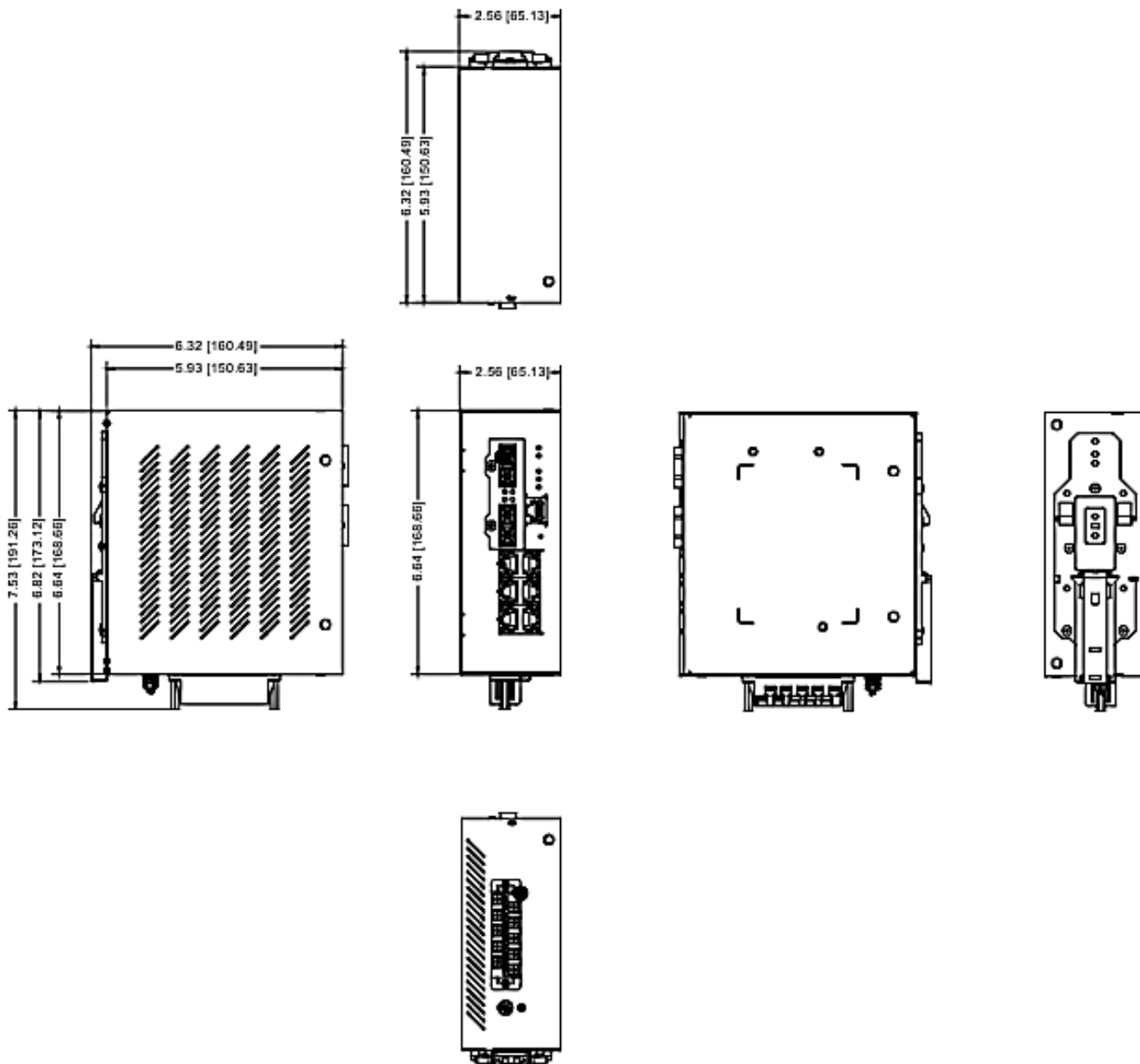
Ordering Information

Base	Power Supply	Mount	Ethernet Port 1-6	Ethernet Port 7&8	Conformal Coating	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

Example Order Code Description: **iES8-S-HV-D-6RJ45-2SMST15-C1**

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 Singlemode ST, 1310nm, 15km, C1 - added for conformal coating.