

iES20G

Intelligent 18 Port Managed Gigabit Ethernet Switch

Product Overview



The iES20G is an intelligent 18 port managed Ethernet switch with 16 x 10/100Base-T(X) RJ45 Auto MDI/MDIX ports and

- up to 2 x 10/100/1000Base-T(X) RJ45 Auto MDI/MDIX ports, or
- up to 2 x 100/1000Base-X SFP ports, or
- up to 2 x 100FX ports, or
- up to 2 x 1000 SX/LX ports.

The iES20G provides redundancy support through functions such as STP/RSTP/MSTP assuring protection of all mission-critical network applications. iES20G can be managed via the Web UI, iManage Software Suite, Telnet/SSH v2, and Console (CLI).

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 environments without the use of fans.



Tel: +1 905-670-0004
Toll Free : +1 844-520-0588
Technical Support: +1 844-475-8324
Email: info@is5com.com
www.is5com.com





Features

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
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 wall mount	



Product Specifications

Table 2. Technical Specification

Description	Specification
10/100Base-T(X) RJ45 Ports Auto MDI/MDIX	16
10/100/1000Base-T(X) RJ45 Ports Auto MDI/MDIX	Up to 2
100/1000Base-X SFP	Up to 2
100FX	Up to 2
1000SX/LX	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 μs Switching bandwidth: 7.2 Gbps Max. Number of Available VLANs: 4096 IGMP multicast groups: 32 Port rate limiting: User Defined
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



Description	Specification
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)	101.6 (W) x 128.3 (D)x 172.7 (H) mm (4.0 x 5.05 x 6.80 inches) DIN rail 114.6 (W) x 114.3 (D)x 203.2 (H) mm (4.51 x 5.05 x 8.0 inches) side panel 114.3 (W) x 131.8 (D)x 203.2 (H) mm (4.50 x 5.19 x 8.0 inches) rear panel
Weight (g)	~1500 g
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.)	12 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

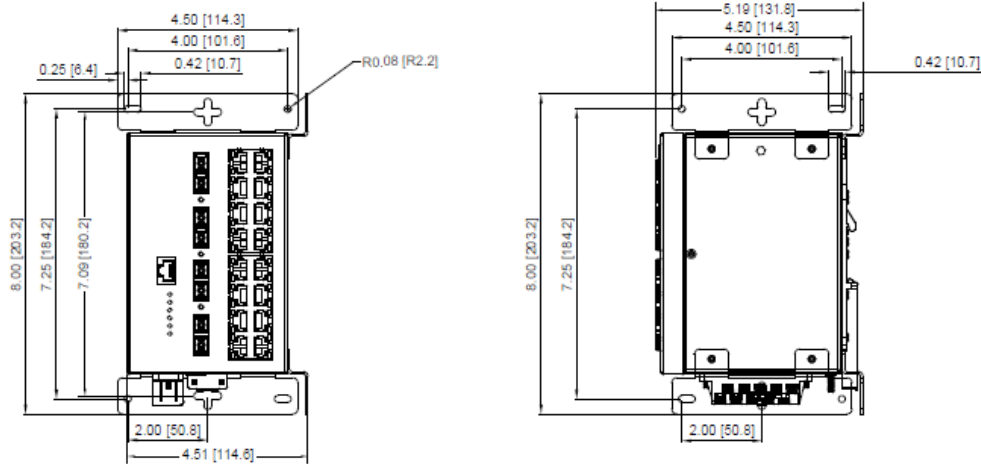
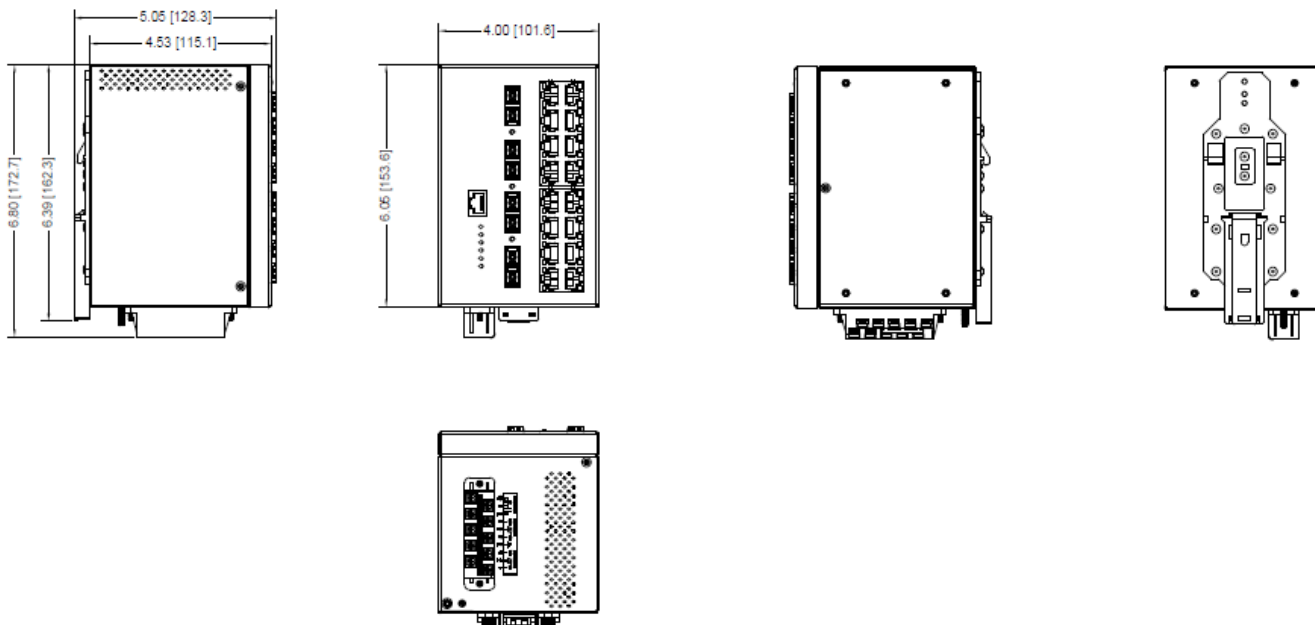
Table 4. Standards and Management

Description	Specification			
IEEE Standards	<p>IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3ab for 1000Base-T IEEE 802.z for 1000Base-X 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: SNMPv1 </td> <td> <ul style="list-style-type: none"> • 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 </td> <td> <ul style="list-style-type: none"> • RFC 2131, 2132: DHCP • RFC 2236: IGMP v2 • RFC 3376: IGMP v3 • RFC 2474: DiffServ Precedence • RFC 3046: DHCP Relay Agent Information Option • RFC 3580: 802.1x RADIUS </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: SNMPv1 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • RFC 2131, 2132: DHCP • RFC 2236: IGMP v2 • RFC 3376: IGMP v3 • RFC 2474: DiffServ Precedence • RFC 3046: DHCP Relay Agent Information Option • RFC 3580: 802.1x RADIUS
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Dimensions

All dimensions are shown in inches.



PANEL MOUNT OPTION
BRACKET INSTALLED AT SIDE OR REAR



Ordering Information

Base	Power Supply	Mount	Ethernet Port 1-8	Ethernet Port 9-16	Ethernet Port 17&18	Conformal Coating	Description
iES20G	HV	D	8RJ45	8RJ45	2SMSC100	C1	
iES20G							Managed 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
			8RJ45	8RJ45			8 X 10/100Base-T(X) RJ45
					XX		None
					2GRJ45		2 X 10/100/1000Base-T(X) RJ45
					2GSFP		2 X 100/1000Base-X SFP
					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
					2GMMSC		2 X 1000SX Multimode SC, 850nm, 550m
					2GMMST		2 X 1000SX Multimode ST, 850nm, 550m
					2GSMST10		2 X 1000LX Singlemode ST, 1310nm, 10km
					2GSMSC10		2 X 1000LX Singlemode SC, 1310nm, 10km
					2GSMSC40		2 X 1000LX Singlemode SC, 1310nm, 40km
					2GSMST40		2 X 1000LX Singlemode ST, 1310nm, 40km
					2GSMSC70		2 X 1000LX Singlemode SC, 1550nm, 70km
					2GSMST70		2 X 1000LX Singlemode ST, 1550nm, 70km
						C1	Conformal Coating

Example Order Code
Description:

iES20G-HV-D-8RJ45-8RJ45-2SMSC100-C1
iES20G—18 Port Ethernet Switch (Power Supply 1) Single Input 110-370VDC or 90-264VAC with Single 10-48VDC Backup, (Mount) DIN Rail Mounting, (Ethernet Port 1-8)) 8 X 10/100Base-T(X) RJ45, (Ethernet Port 9 -16) - 8 X 10/100Base-T(X) RJ45, (Ethernet Port 17&18) 2 X 100FX Singlemode SC, 1550nm, 100km, C1 - added for conformal coating.