

# iES12GP

Intelligent 12 Port Managed PoE Gigabit Ethernet Switch

## Product Overview



The iES12GP is an intelligent managed 12 port PoE Gigabit Ethernet switch with 8 Gigabit RJ45 PoE ports and 4 Gigabit SFP ports.

The iES12GP provides redundancy support through functions such as STP/RSTP/MSTP assuring protection of all mission critical network applications. iES12GP can be managed via the Web, iManage Software Suite, Telnet, 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 of environments without the use of fans.



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# Features

Table 1. Features

Feature	
<b>Supports:</b>	<ul style="list-style-type: none"><li>• STP / RSTP / MSTP</li><li>• LLDP (Link Layer Discovery Protocol) and Modbus TCP</li><li>• VLAN Priority—supports priority-tagged frames to be received by specific IEDs</li><li>• HTTPS and SSH</li><li>• SNTP for synchronizing the switch's clocks</li><li>• PTP clock synchronization</li></ul>
IGMP v2 / v3 (IGMP Snooping)	
SNMP v1 / v2c /v3 & RMON	
ACL, RADIUS, and NAS 802.1x (User Authentication)	
9.6K Bytes Jumbo Frame	
Multiple alarm notification methods	
Configurable by Web browser, 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
8 X 10/100/1000Base-T(X) RJ45 PoE ports RJ45 Auto MDI/MDIX	8
4 X 100/1000Base-X SFP	4
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable: 115200 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"> <li>• SYSLOG with server / client structure; recording and viewing events in the System Event Log</li> <li>• SMTP for notification via email</li> </ul> Event selection per port
Alarm	Relay output to carry capacity of 1 A at 24 VDC
<b>Technology</b>	
MAC Table	8K
Priority Queues	8
Processing	Store-and-Forward
Switch Properties	Switching latency: 7 $\mu$ s Switching bandwidth: 24 Gbps Max. Number of Available VLANs: 4096 IGMP multicast groups: 32 per each VLAN Port rate limiting: User Defined
Jumbo frame	9.6K
Security Features	<ul style="list-style-type: none"> <li>• STP/RSTP/MSTP</li> <li>• Device Binding and Remote Control Security</li> <li>• Access Control List (ACL) for every port</li> <li>• Authentication, Authorization and Accounting (AAA)</li> <li>• RADIUS Authentication management</li> <li>• Port based network access control (NAS) 802.1x</li> <li>• QoS for achieving efficient bandwidth utilization</li> <li>• Private VLAN with Port Isolation Configuration</li> <li>• VLAN (802.1 Q) for segregation and securing network traffic</li> <li>• SNMPv3 authentication and privacy encryption</li> <li>• HTTPS / SSH enhanced network security</li> <li>• Web and CLI authentication and authorization</li> </ul>



Description	Specification
<b>Software Features</b>	<ul style="list-style-type: none"> <li>• Web or CLI based Management (Console or Telnet / SSH)</li> <li>• Redundancy— STP/RSTP/MSTP and Fast Recovery</li> <li>• DHCP Server / Relay</li> <li>• VLAN (802.1Q) for segregating and securing network traffic</li> <li>• Supports SNMPv1/v2/v3</li> <li>• Traffic Prioritization—Storm Control and Quality of Service (QoS) including DSCP-Based QoS Ingress Port Classification</li> <li>• Multicast traffic—IGMP Snooping (IGMP v1/v2 / v3) and unregistered IPMCv4 Flooding</li> <li>• Warnings (Syslog and SMTP) and Fault Alarm (power failure)</li> <li>• Monitoring and Diagnostics—MAC Table and Port Statistics (ports monitoring including for SFP ports, system information, issuing PING packets for troubleshooting IP connectivity issues)</li> <li>• SNTP for synchronizing of clocks over network</li> <li>• Supports PTP Client (Precision Time Protocol) clock synchronization</li> </ul>
<b>Network Redundancy</b>	<ul style="list-style-type: none"> <li>• RSTP (IEEE 802.1 D/w)</li> <li>• MSTP (RSTP/ STP compatible)</li> <li>• Fast Recovery and Dual Port Recovery</li> </ul>
<b>Physical Characteristics</b>	
<b>Enclosure</b>	IP-40 Galvanized Steel
<b>Dimensions (W x D x H)</b>	164.2 (W) x 179.07(D) x 187.7 (H) mm (6.46 x 7.07 x 7.39 inches) DIN rail mount 164.2 (W) x 179.07(D) x 203.2 (H) mm (6.46 x 7.07 x 8.00 inches) panel mount
<b>Weight (g)</b>	iES12GP (external power) - 3000g iES12GP (internal power) - 4000g
<b>Power</b>	
<b>Input Power</b>	Redundant Power Supplies: (MV-MV) Input 50-57VDC, (HV (External) – HV) Input 90-350VDC or 100-240VAC (External), or (HV (Internal)) Input 141-373VDC or 100-264VAC (Internal)
<b>Power Consumption (Typ.)</b>	13W max (no PoE); PoE power budget 240W. 267W max with PoE (30W per port)
<b>Overload Current Protection</b>	Present
<b>Reverse Polarity Protection</b>	Internal



**Table 3. Compliance Specifications**

Type	Standards
<b>Electromagnetic Emissions</b>	FCC Part 15, CISPR (EN55022) class A, EN 50155 (EN 50121-3-2, EN 55011, EN 50121-4)
<b>Electromagnetic Immunity</b>	EN 61000-4-2 (ESD), EN 61000-4-3 (RS), EN 61000-4-4 (EFT), EN 61000-4-5 (Surge), EN 61000-4-6 (CS), EN 61000-4-8, EN 61000-4-11
<b>Safety Standards</b>	EN 60950-1
<b>Operating Environment</b>	-40°C to +85°C (-40° to 185°F) (no fans) EN 60068-2-21
<b>Storage Environment</b>	-40°C to +85°C (-40° to 185°F) EN 60068-2-14
<b>Operating Humidity</b>	5% to 95% Non-condensing EN 60068-2-30
<b>Shock</b>	IEC 60068-2-27
<b>Free Fall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-32
<b>Warranty</b>	5 years

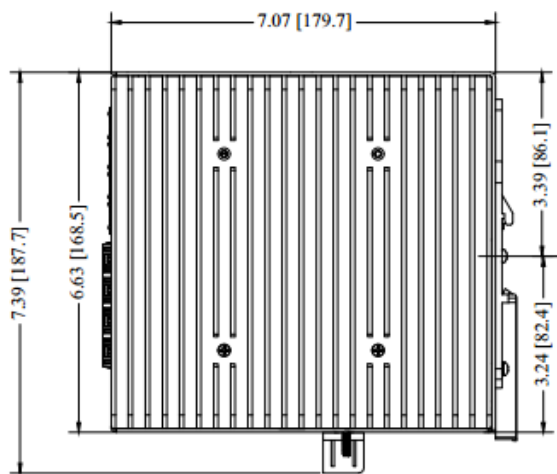
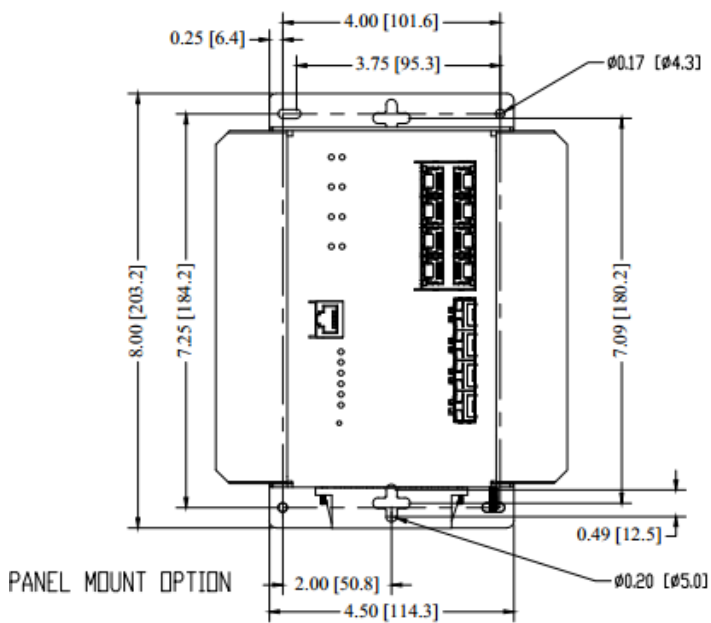
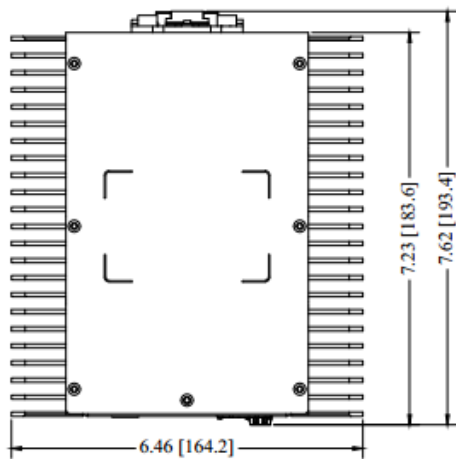
**Table 4. Standards and Management**

Description	Specification			
<b>IEEE Standards</b>	<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 802.3ad for LACP (Link Aggregation Control Protocol)            IEEE 802.3af PoE (15.4W) / IEEE 802.3at PoE (25.5W)            IEEE 802.1D - 1998 Spanning Tree Protocol (STP)            IEEE 802.1D - 2004 /w Rapid Spanning Tree Protocol (RSTP)            IEEE 802.1Q - 2014 Bridged Networks            IEEE 802.1-2010 Port Based Network Access Control            IEEE 802.1AB - 2016 Station and Media Access Connectivity discovery (LLDP)            IEEE 802.1AX Link Aggregation</p>			
<b>RFC Compliance</b>	<table border="0"> <tr> <td> <ul style="list-style-type: none"> <li>• RFC 768: UDP</li> <li>• RFC 783: TFTP</li> <li>• RFC 791: IPv4</li> <li>• RFC 792: ICMP</li> <li>• RFC 793: TCP</li> <li>• RFC 854: Telnet</li> <li>• RFC 959: FTP</li> <li>• RFC 1157: SNMPv1</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• RFC 1901,1902-1907 SNMPv2</li> <li>• RFC 2273-2275: SNMPv3</li> <li>• RFC 2571: SNMP Management</li> <li>• RFC 1166: IP Addresses</li> <li>• RFC 1643: Ethernet Interface MIB</li> <li>• RFC 1757: RMON</li> <li>• RFC 2068: HTTP</li> <li>• RFC 2990 QoS</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• RFC 2131, 2132: DHCP</li> <li>• RFC 2236: IGMP v2</li> <li>• RFC 3376: IGMP v3</li> <li>• RFC 2474: DiffServ Precedence</li> <li>• RFC 3046: DHCP Relay Agent Information Option</li> <li>• RFC 3580: 802.1x RADIUS</li> <li>• RFC 4250-4252 SSH Protocol</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>• RFC 768: UDP</li> <li>• RFC 783: TFTP</li> <li>• RFC 791: IPv4</li> <li>• RFC 792: ICMP</li> <li>• RFC 793: TCP</li> <li>• RFC 854: Telnet</li> <li>• RFC 959: FTP</li> <li>• RFC 1157: SNMPv1</li> </ul>	<ul style="list-style-type: none"> <li>• RFC 1901,1902-1907 SNMPv2</li> <li>• RFC 2273-2275: SNMPv3</li> <li>• RFC 2571: SNMP Management</li> <li>• RFC 1166: IP Addresses</li> <li>• RFC 1643: Ethernet Interface MIB</li> <li>• RFC 1757: RMON</li> <li>• RFC 2068: HTTP</li> <li>• RFC 2990 QoS</li> </ul>	<ul style="list-style-type: none"> <li>• RFC 2131, 2132: DHCP</li> <li>• RFC 2236: IGMP v2</li> <li>• RFC 3376: IGMP v3</li> <li>• RFC 2474: DiffServ Precedence</li> <li>• RFC 3046: DHCP Relay Agent Information Option</li> <li>• RFC 3580: 802.1x RADIUS</li> <li>• RFC 4250-4252 SSH Protocol</li> </ul>
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# Dimensions

All dimensions are shown in inches.





# Ordering Information

Base	Power Supply 1	Power Supply 2*	Mount	Ethernet Port 1-8	Ethernet Port 9-12	Conformal Coating	Description
iES12GP	MV	XX	D	8PGRJ45	4GSFP		
iES12GP							Core assembly and packaging
		XX					None
	MV	MV					Input 50-57VDC
	HV (External)	HV					Input 90-350VDC or 100-240VAC (External)
	HV (Internal)						Input 141-373VDC or 100-264VAC (Internal)
			D				DIN Rail Mounting
			P				Panel Mounting
			N				No Mounting Hardware
				8PGRJ45			8 X 10/100/1000Base-T(X) RJ45 PoE
					4GSFP		4 X 100/1000Base-X
						C1	Conformal Coating

**\*Internal HV power supply has a standard internal MV power supply 2**  
**Please note that the iES12GP will now support all 8 copper PoE at 15W per port or 4 ports PoE at 30W per port**

**Example Order Code**      **iES12GP-MV-XX-D-8PGRJ45-4GSFP-C1**

**Description:**

**12 Port Ethernet PoE Switch with a combination of Gig ports, (Power Supply 1) Input 50-57VDC, (Power Supply 2) None (Mount) DIN Rail Mounting, (Ethernet Port 1-8) 8 X 10/100/1000Base-T(X) RJ45 PoE, (Ethernet Port 9-12) 4 X 100/1000Base-X SFP, C1 - added for conformal coating.**