

iES28GP



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Intelligent 28 Port Managed Gigabit PoE Ethernet Switch

Features

- Supports 24x10/100/1000Base-T(X) P.S.E. fully compliant with IEEE802.3at standard, provides up to 30 Watts per port and 4x1000Base-X SFP ports
- Supports up to 9K Bytes Jumbo frame
- iRing (recovery time < 30ms over 250 units of connection), MSTP/RSTP/STP (IEEE 802.1s/w/D) for Ethernet Redundancy
- Supports IPV6 new internet protocol version
- Provides HTTPS/SSH protocol to enhance network security
- Supports SMTP client
- Supports IP-based bandwidth management
- Supports application-based QoS management
- Supports Device Linking security function
- Supports DOS/DDOS auto prevention
- Supports PoE scheduled configuration and PoE auto-ping check function
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Supports SNMP v1/v2c/v3, RMON and 802.1Q VLAN Network Management
- Support ACL, 802.1x User Authentication for security
- Multiple notifications for warning of unexpected events
- Web-based, Telnet, Console (CLI), and Windows utility (iManage Software Suite) configuration.
- Support for LLDP Protocol
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- 19 inches rack mountable



iS5 COMMUNICATIONS

SERVICES • SUPPORT • SECURITY • SOLUTIONS • SYSTEMS

**128
BIT
ENCRYPTION**



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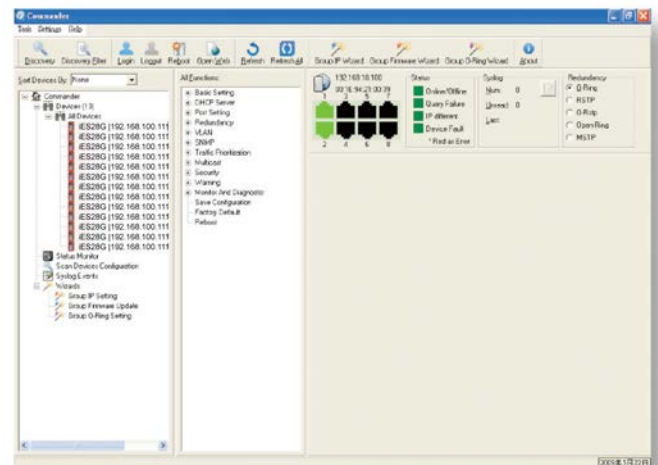
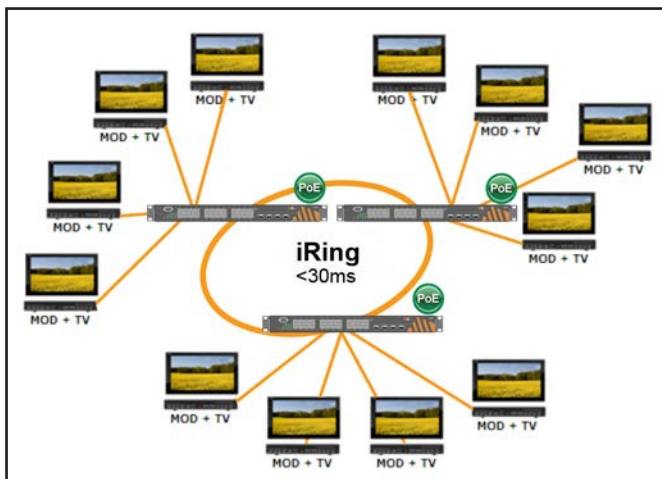


Introduction

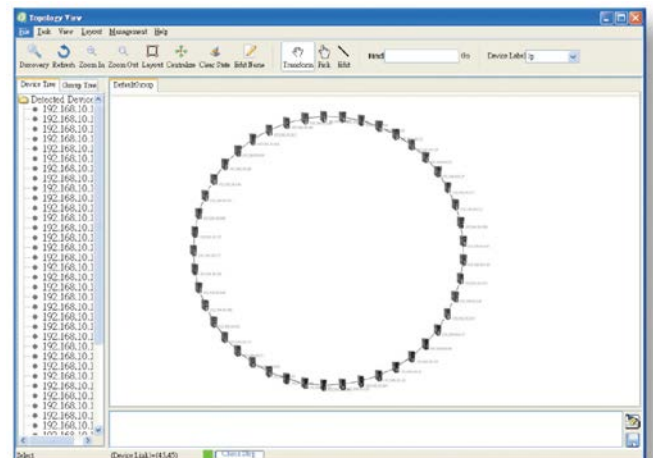
The iES28GP is a managed Ethernet switch with Ethernet Redundancy protocols such as iRing (recovery time <30ms with up to 250 Ethernet switches), and MSTP/RSTP/STP (IEEE 802.1s/w/D). The iES28GP can protect your mission-critical applications from network interruptions or temporary malfunctions to restore connectivity using its fast recovery technology. This iS5Com switch provides advanced IP-based bandwidth management, which can limit the maximum bandwidth of each IP device. Users can configure an IP camera and NVR with more bandwidth and limit the bandwidth of other devices. The iES28GP switch supports application-based QoS. Application-based QoS can set highest priority for data stream according to TCP/UDP port number. The special Device Linking function allows only specific IP addresses with a MAC address to access the networking. The iES28GP switch also provides for advanced DOS/DDOS auto prevention. If an IP flow gets too big in a short period of time, the switch locks the source IP address for a certain amount of time to prevent the attack. The switch can be managed centrally using the iManage Software Suite, as well as with a Web-based interface, Telnet and console (CLI) configuration. Each iES28GP series switch has 24X10/100/1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE connection. The product is made from galvanized steel and has a wide operating temperature from -40°C to +85°C suitable for the harshest of environments without the use of fans.

iManage Software Suite

The iManage Software Suite provides users a way to conveniently manage and monitor all of the industrial Ethernet switches on the network.



Monitoring and Configuration interface



Topology View



PoE Pin Definition

10/100Base-T(X) P.S.E. RJ-45 Port		1000Base-T P.S.E. RJ-45 Port	
RJ-45 Pin Definition		RJ-45 Pin Definition	
Pin No.	Description	Pin No.	Description
#1	TD+ with PoE Power input +	#1	BI_DA+ with PoE Power input +
#2	TD- with PoE Power input +	#2	BI_DA- with PoE Power input +
#3	RD+ with PoE Power input -	#3	BI_DB+ with PoE Power input -
		#4	BI_DC+
		#5	BI_DC-
#6	RD- with PoE Power input -	#6	BI_DB- with PoE Power input -
		#7	BI_DD+
		#8	BI_DDSpecifications

Specifications

Model Number iES28GP	
Physical Ports	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX with P.S.E.	24 Max.
1000Base-X SFP Port	4 Max.
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX 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 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) IEEE 802.1x for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) IEEE802.3at PoE Specification (up to 30 Watts per port for P.S.E.)
MAC Table	8k
Priority Queues	4
Processing	Store-and-Forward
Switch Properties	Switching latency: 7 μ s Switching bandwidth: 56Gbps Max. Number of Available VLANs: 256 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define
Jumbo frame	Up to 9K Bytes



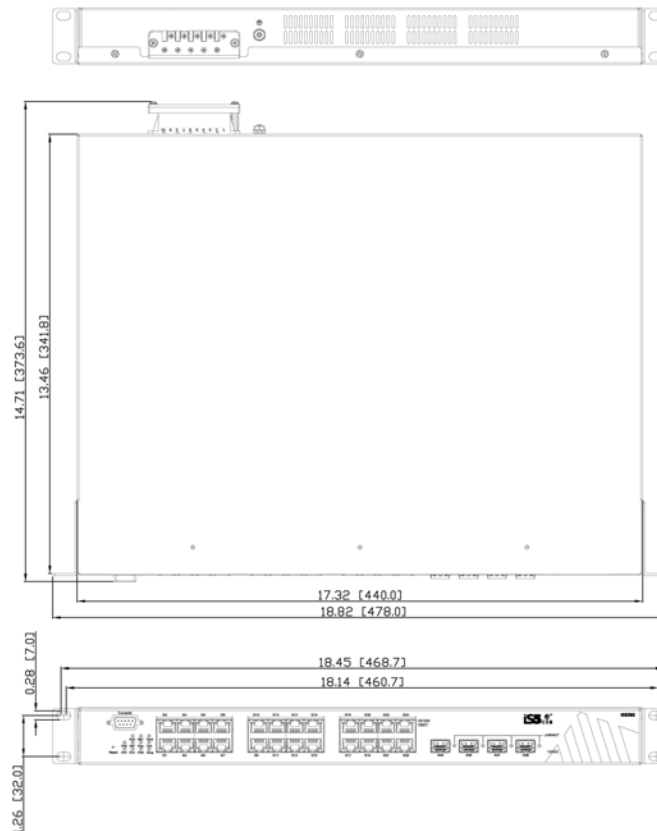
Security Features	Device Linking security feature Enable/disable ports, MAC based port security Port based network access control (802.1x) VLAN (802.1Q) to segregate and secure network traffic Radius centralized password management SNMPv3 encrypted authentication and access security Https / SSH enhance network security	
Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s) Redundant Ring (iRing) with recovery time less than 30ms over 250 units TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging and GVRP supported IGMP Snooping IP-based bandwidth management Application-based QoS management DOS/DDOS auto prevention Port configuration, status, statistics, monitoring, security DHCP Client/Server SMTP Client	
Network Redundancy	iRing Fast Recovery Mode STP RSTP MSTP	
RS-232 Serial Console Port	RS-232 in DB9 connector with console cable. 115200bps, 8, N, 1	
LED Indicators		
Power Indicator (PWR)	Green : Power indicator for AC Green : Power indicator for DC	
Power-1 Indicator (PW1)	Green : Indicate Power-1 input	
System Ready Indicator (STA)	Green : Indicates that the system is ready. Blinking while the system upgrades firmware	
Ring Master Indicator (R.M.)	Green : Indicates that the system is operating in iRing Master mode	
iRing Indicator (Ring)	Green : Indicates system is operating in iRing mode. Blinking indicates the Ring is broken.	
Fault Indicator (Fault)	Amber : Indicates unexpected event occurred	
System Running Indicator (RUN)	Green : System operated continuously	
Supervisor Login Indicator (RMT)	Green : System is accessed remotely	
Reset To Default Running Indicator (DEF)	Green : System reset to default configuration	
Ping Command To The Switch Indicator (Ping)	Green : System is processing "PING" request	
PoE indicator	Green for P.S.E. power output indicator	
10/100/1000Base-T(X) RJ45 Port Indicator	Left LED - Green for 1000Mbps, and Amber for 10/100Mbps, Right LED - Amber for full-duplex	
1000Base-X SFP Port Indicator	Green for port Link/Act.	
Fault Contact		
Relay	Relay output capacity of 1A at 24VDC	
Power		
Input Power Requirements	Terminal Block, 50 VDC (50-58 VDC), 1000 Watts	Terminal Block, 120-240 VAC
Internal Power Supply	None	Included
Power Consumption	36 Watts (typical with no P.S.E.), 756 Watts Max (36W for switch and 30W by 24 ports P.S.E.)	
Overload Current Protection	Present	



Physical Characteristic	
Enclosure	IP 40 Galvanized Steel Housing
Dimension (W x D x H)	443 (W) x 342 (D) x 44 (H) mm (17.46 x 13.46 x 1.73 inch)
Weight (g)	4250g
Environmental	
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	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
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Warranty	
Warranty	5 Years

Dimensions

All Dimensions are in Inches





Ordering Information

Base	Power Supply 1	Power Supply 2	Mount	Ethernet Port 1-8	Ethernet Port 9-16	Ethernet Port 17-24	Ethernet Port 25-26	Ethernet Port 27-28	Description
iES28GP	HV	XX	R	8GRJ45	8GRJ45	8GRJ45	2GSFP**	2GSFP**	
iES28GP									Core assembly and packaging
		XX							None
	PV								50 VDC (50-58 VDC)
	HV								100-240 VAC
			R						19" Rack Mount
			P						Panel Mounting
			N						No Mounting Hardware
				XX	XX	XX			None
				8GRJ45	8GRJ45	8GRJ45			8 X 10/100/1000Base TX P.S.E RJ45
							XX	XX	None
							2GSFP**	2GSFP**	2 X 1000Base (X) SFP (Blank, no transceivers)

SFP**

SEE ACCESSORIES FOR SFP TRANSCEIVER PRICING

Example Order Code:

iES28GP-HV-XX-R-8GRJ45-8GRJ45-8GRJ45-2GSFP**-2GSFP**-C1-F3.07

Description:

28 Port Gigabit Switch, Single Input Power Supply 1: 100-240VAC, Single Input Power Supply 2: None, Rack Mount, 8x10/100/1000Base-T(X) P.S.E. Ports, 8x10/100/1000Base-T(X) P.S.E. Ports, 8x10/100/1000Base-T(X) P.S.E. Ports, 2x100/1000Base-(X) SFP**, 2x100/1000Base (X) SFP**, Conformal Coating, Firmware version 3.07 C1 – Add for conformal coating FW – Leave blank for latest firmware



**SFP's to be ordered separately.

SFP Module #	Description
SFP100-MM-2	SFP 100Mbps Multimode LC Transceiver 2km, 1310nm, -40C - +85C
SFP100-SM-30	SFP 100Mbps Singlemode LC Transceiver 30km, 1310nm, -40C - +85C
SFP100-SM-60	SFP 100Mbps Singlemode LC Transceiver 60km, 1310nm, -40C - +85C
SFP100-SM-100	SFP 100Mbps Singlemode LC Transceiver 100km, 1550nm, -40C - +85C
SFP100-SM-120	SFP 100Mbps Singlemode LC Transceiver 120km, 1550nm, -40C - +85C
SFP100BIDI1-SM-20	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 20km, TX1310 nm, RX1550nm, -40C - +85C
SFP100BIDI2-SM-20	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 20km, TX1550 nm, RX1310nm, -40C - +85C
SFP100BIDI1-SM-40	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 40km, TX1310 nm, RX1550nm, -40C - +85C
SFP100BIDI2-SM-40	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 40km, TX1550 nm, RX1310nm, -40C - +85C
SFP100BIDI1-SM-60	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 60km, TX1310 nm, RX1550nm, -40C - +85C
SFP100BIDI2-SM-60	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 60km, TX1550 nm, RX1310nm, -40C - +85C
SFP1000-MM-550	SFP 1Gbps Multimode LC Transceiver 500m, 850nm, -20C - +85C
SFP1000-MM-2	SFP 1Gbps Multimode LC Transceiver 2km, 1310nm, -40C - +85C
SFP1000-SM-10	SFP 1Gbps Singlemode LC Transceiver 10km, 1310nm, -40C - +85C
SFP1000-SM-20	SFP 1Gbps Singlemode LC Transceiver 20km, 1310nm, -40C - +85C
SFP1000-SM-30	SFP 1Gbps Singlemode LC Transceiver 30km, 1310nm, -40C - +85C
SFP1000-SM-40	SFP 1Gbps Singlemode LC Transceiver 40km, 1310nm, -40C - +85C
SFP1000-SM-50	SFP 1Gbps Singlemode LC Transceiver 50km, 1550nm, -40C - +85C
SFP1000-SM-70	SFP 1Gbps Singlemode LC Transceiver 70km, 1550nm, -40C - +85C
SFP1000-SM-8-	SFP 1Gbps Singlemode LC Transceiver 80km, 1550nm, -40C - +85C
SFP1000BIDI1-SM-10	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 10km, TX1310 nm, RX1550nm, -40C - +85C
SFP1000BIDI2-SM-10	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 10km, TX1550 nm, RX1310nm, -40C - +85C
SFP1000BIDI1-SM-20	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 20km, TX1310 nm, RX1550nm, -40C - +85C
SFP1000BIDI2-SM-20	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 20km, TX1550 nm, RX1310nm, -40C - +85C
SFP1000BIDI1-SM-40	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 40km, TX1310 nm, RX1550nm, -40C - +85C
SFP1000BIDI2-SM-40	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 40km, TX1550 nm, RX1310nm, -40C - +85C
SFP1000BIDI1-SM-60	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 60km, TX1310 nm, RX1550nm, -40C - +85C
SFP1000BIDI2-SM-60	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 60km, TX1550 nm, RX1310nm, -40C - +85C
SFP1000BIDI1-SM-80	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 80km, TX1310 nm, RX1550nm, -40C - +85C
SFP1000BIDI2-SM-80	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 80km, TX1550 nm, RX1310nm, -40C - +85C