

IPES-2208CA

8 10/100TX + 2 10/100/1000T/Dual Speed SFP Combo
w/ 8-PoE Managed Industrial Switch

- Pro-Ring IIse for self-recovery ring in 20ms; MSTP support
- 120W PoE budget
- PoE management incl. Detection, Delay and Scheduling
- Support Advanced SNMP including QoS, IPv6*, IGMP query & source only, QinQ, SSH/SSL*, DDM, CPU load monitoring



OVERVIEW

The Lantech IPES-2208CA is an 8-port 10/100BaseTX + 2-port 10/100/1000T/Dual Speed SFP Combo industrial PoE switch w/8 POE 802.3af Injectors and Pro-Ring IIse self-recovery in less than 20ms. The SFP connection is suitable with 100M or 1000M Dual Speed. The advanced SNMP management features include QoS for 4 queues, 802.1q VLAN, IGMP snooping, query and source only for multicast IP surveillance, SSH/SSL**, DDM(need to work with SFP that has diagnostic function) as well as Web Ping, CPU load monitoring, SMTP and SMTP etc.

Compliant with 802.3af standard, the Lantech IPES-2208CA is able to feed each PoE port up to 15.4 Watts providing the connected PD devices. The built-in relay contact is able to connect with alarm system and send Email, SNMP trap and Syslog alert in case of power or connection failure.

Lantech IPES-2208CA supports advanced PoE management including PoE detection, delay and scheduling. PoE detection can detect if the connected PD is hang up then restart the PD; PoE delay is to delay power feeding when the switch is completely booted up; PoE scheduling is to allow pre-set power feeding schedule upon routine time table. The exclusive IGMP source only function can auto choose IGMP query for surveillance application.

The innovative Pro-Ring IIse self-recovery scheme can recover Ring network in less than 20ms for single ring with only one step configuration. It also supports MSTP that allows RSTP over Vlan for redundant links. Lantech IPES-2208CA builds all the important management features required in large network like IPv6*, DHCP Client/Server, SSH/SSL*, 802.1X authentication, IGMP Query / Snooping and source only for reverse multicast flow ,advanced QoS and QinQ. It also supports Ping commands via Web to detect whether a specific device is connected for easy trouble-shooting.

The built-in factory reset button and watchdog design can restore all setting back to factory default and automatically reboot the switch when CPU is found dead.

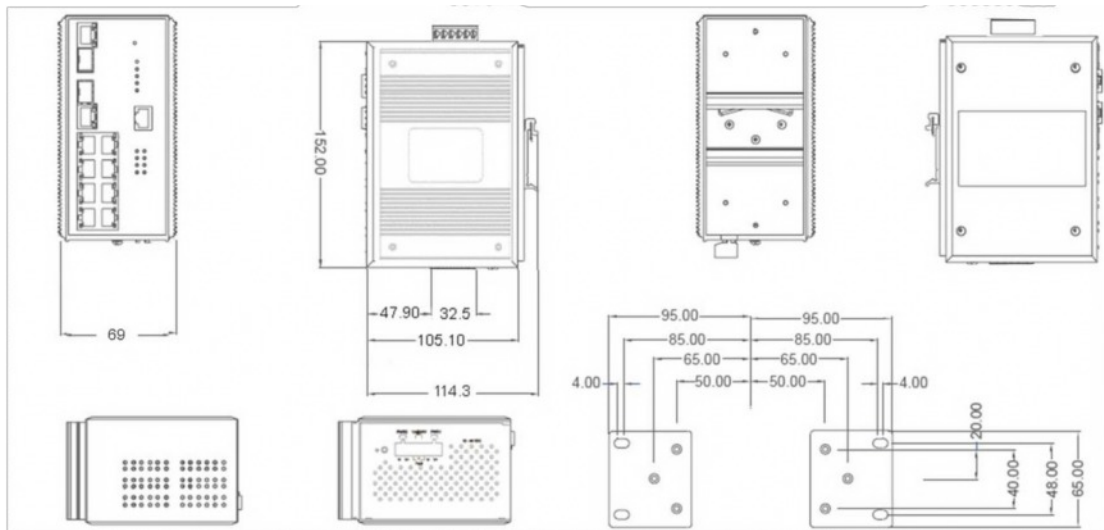
The Lantech IPES-2208CA can support up to 6KV ESD contact per UTP port to minimize the burn down risk where the electronic static discharge is usually found. It is the best to be used in municipal, city surveillance, automation, transportation, mining, heavy Industrial factory where needs PoE functionality under harsh environment. The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

FEATURES & BENEFITS

- Pro-Ring IIse for self-recovery scheme in less than 20ms in Ring for single ring
- Embedded 8-port PoE Injectors to feed power up to 15.4W .
- PoE management including PoE detection, delay and scheduling for PD(power devices)
- SFP slot supports 100/1000 Dual Mode with DDM for SFP diagnostic and monitoring (need to work with SFP

- with diagnostic function)
- Back-plane (Switching Fabric): 5.6Gbps
- 1Mbits Packet Buffer / 8K MAC address table
- IP-30 Protection with DIN rail and wall mount design
- Redundant Power Design for +DV power input
- Provides EFT protection 3000 VDC for power line
- Supports 6000 VDC ESD protection
- Support CPU load monitoring every 1,5,15 minutes and Web Ping to check if the connected device is alive
- IEEE 802.1d STP, IEEE 802.1w RSTP,802.1s MSTP VLAN redundancy
- Supports IPv6* and IPv4
- IGMP with Snooping and Query mode for Multi Media Application
- IGMP source only for auto query chosen in surveillance application
- Manual static multicast route for non-IGMP application
- Port Based VLAN, 802.1Q Tag VLAN, GVRP, QinQ
- Port Trunk with LACP
- Supports IEEE 802.1ab LLDP
- Supports IEEE 802.1p CoS, 4 priority queues per port
- Port base, Tag Base and Type of Service Priority
- Supports Ingress Packet Filter and Egress Rate Limit
- Supports Broadcast/Multicast Packet Filter Control
- Port Mirror: Monitor traffic in switched networks
 - TX, RX, Both of TX and RX Packet
- System Log Server/Client
- SMTP e-mail Alert up to 6 emails
- Security
 - Port Security: MAC address entries/Filter
 - IP Source Guard: IP address security management to prevent unauthorized intruder
 - Login Security: IEEE802.1X/RADIUS;SSH* / SSL*
- SNMP Trap
 - Device cold start, Power status, Authentication failure, Port Link up/Link down
- Relay Alarm Output System Events
- TFTP/Web Firmware Update & System Configure Restore/Backup
- Factory reset bottom can restore all setting back to factory default and Watchdog design to automatically reboot switch when CPU is found dead

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification	
IEEE Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.3af Power over Ethernet IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1s Multiple Spanning Tree IEEE802.1p Class of Service IEEE802.1Q VLAN Tag
Switch Architecture	IEEE802.1x User Authentication (Radius) IEEE802.1ab LLDP Back-plane (Switching Fabric): 5.6Gbps
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port
Packet Buffer	1Mbits
MAC Address	8K MAC address table
Flash ROM	4Mbytes
DRAM	32Mbytes
Connectors	10/100TX: 8 x ports RJ-45 with Auto MDI/MDI-X function 10/100/1000T/SFP Combo port: 2 x RJ-45 + 2 x

	100/1000 SFP socket with DDM RS-232 connector: RJ-45 type	PoE Power Budget	120W		
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)	MTBF	280,317 hrs		
	100Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)	Warranty	5 years		
	1000Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)	Software Specification			
		Management	SNMP v1 v2c, v3/ Web/Telnet/CLI		
Optical Fiber	Distance:	SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBIS, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 EtherLike, RFC 1757 Rmon, RSTP MIB, Private MIB, PoE MIB, LLDP MIB		
	Multi mode:	System Information	Show detail info incl.Name,S/N#, Version, Production Date* CPU load monitoring for every 1,5,15 minutes Display network parameters incl. Mac, IP, Gateway, Netmask Allow adding port description		
	0 to 5 km, 1300 nm (50/125 μm, 800 MHz*km) 0 to 4 km, 1300 nm (62.5/125 μm, 500 MHz*km)	Pro-Ring Ilse	Pro-Ring Ilse system covers Single-Ring for network recovery in less than 20ms up to 50 switches in a ring. Note:Pro-Ring Ilse is not compatible with Pro-Ring I; 20ms recovery is on fiber port.		
	Single mode:	Ping detection	Support Ping command through Web to detect the connected devices		
0 to 40 km, 1310 nm (9/125 μm, 3.5 PS/(nm*km)) 0 to 80 km, 1550 nm (9/125 μm, 19 PS/(nm*km))	Min. TX Output:	VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP (256 Groups) Double Tag VLAN (Q in Q)		
Multi mode: -20 dBm	Single mode: 0 to 40 km, -5 dBm; 0 to 80 km, -5 dBm	Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members		
Max. TX Output:	Multi mode: -14 dBm	LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN		
Single mode: 0 to 40 km, 0 dBm; 0 to 80 km, 0 dBm	Sensitivity: -36 to -32 dBm(SM); -34 to -30(MM)	Spanning Tree	Supports IEEE802.1d Spanning Tree, IEEE802.1w Rapid Spanning Tree, and IEEE802.1s Multiple Spanning Tree		
Protocol	CSMA/CD	PoE Management	<ul style="list-style-type: none"> PoE Detection to check if PD is hang up then restart the PD PoE Delay to send power when switch is completely boot up PoE Scheduling to On/OFF PD upon routine time table 		
PoE pin assignment	RJ-45 port # 1~# 8 support Hi-Power End-point, Alternative A mode. Per port provides up to 15.4W capability. Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6.	Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service		
PoE input voltage & Power feed voltage	Input V	Active Mode A /Output V	Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues	
	45~56V(af)	48V@15.4W	Port Security	Supports 100 entries of MAC address for static MAC and another 100 for MAC filter	
LED	Per unit: Power (Green), Power 1 (Green), Power 2 (Green), Fault (Yellow), Master (Green) 8 port 10/100: Link/Activity (Green), Full duplex/Collision (Yellow) SFP port: LNK/ACT(Green), 1000T: LNK/ACT(Green), 1000M(Green)		Port Mirror	Supports 3 mirroring types: "RX, TX and Both packet"	
	Power Supply		IGMP	Supports IGMP snooping v1,v2 IGMP Source only for query auto chosen Static Multicast Route for non-IGMP multicast 256 multicast groups and IGMP query	
PoE input 48V/52VDC, Ethernet Data input 12V~48VDC(9V~56VDC); Redundant power connective removable terminal block for master and slave power; -48VDC can only support single power input		Overload current protection	Present	IP Source Guard	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Operating Humidity	5% ~ 95% (Non-condensing)		Login Security	Supports IEEE802.1X Authentication/RADIUS/Telnet/SSH*/SSL*	
Operating Temperature	Standard: -20°C~60°C / -4°F~140°F Wide Operating Temperature for E models: -40°C~75°C / -40°F~167°F		Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex	
Storage Temperature	-40°C~85°C / -40°F~185°F		System Log	Supports System log record and remote system log server	
Case Dimension	IP-30, 74(W) x 114.3 (D) x 152 (H) mm		SMTP	Supports SMTP Server and 6 e-mail accounts for receiving event alert	
Weight	850 g		SNTP	Supports SNTP to synchronize system clock to Internet	
Fan Number	0				
Installation	Wall mount or DIN-type cabinet install				
EMI & EMS	FCC Class A, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-4-11, CE EN61000-4-12, CE EN61000-6-2, CE EN61000-6-4				
	Safety				
Safety	UL 60950				
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)				
Power Consumption	9.86 W (no PoE load) for Ethernet data at full load				

Bandwidth Control & Storm Control	Support ingress packet filter and egress packet limit The egress rate control supports all of packet type and the limit rates are 100K~102400Kbps(10/100), 100K~256000Kbps(1000) Ingress filter packet type combination rules are Broadcast/Multicast/Unknown Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all of packet. The packet filter rate can be set from 100K~102400Kbps(10/100), 100K~256000Kbps(1000)	DNS	Provide DNS client feature and support Primary and Secondary DNS server.
		Firmware Update	Supports TFTP and Web firmware update, TFTP backup and restore.
		Factory reset & Watchdog design	Factory reset bottom can restore all setting back to factory default and Watchdog design to automatically reboot switch under CPU loading is too high
		ifAlias	Each port allows importing 128bits of alphabetic string of word on SNMP and CLI interface
Relay Alarm	Provides one relay output for port breakdown, power fail alarm. Alarm Relay current carry ability: 1A @ DC24V		*Future Release **Optional
SNMP Trap	1. Cold start 2. Link down 3. Link up 4. Authorization fail 5. PoE port event 6. Environmental abnormal event**		
DHCP	Provides DHCP Client/ DHCP Server/ Port and IP Binding		

ORDERING INFORMATION

- **IPES-2208CA.....P/N: 8350-782**
8 10/100TX + 2 10/100/1000T/Dual Speed SFP Combo w/8 PoE Injectors 802.3af & Hi-Power Managed Industrial Switch; -20°C to 60°C
- **IPES-2208CA-E.....P/N: 8350-783**
8 10/100TX + 2 10/100/1000T/Dual Speed SFP Combo w/8 PoE Injectors 802.3af & Hi-Power Managed Industrial Switch; -40°C to 75°C

OPTIONAL ACCESSORIES

DIN Rail Power

- **AD1240-48S-5** 48~56VDC, 4.3A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)
- **AD1360-48S-5** 48~56VDC, 6.5A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)
- **AD1500-48S-5** 48~56VDC, 9A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)

Mini GBIC (SFP)

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| ■ 8330-162 MINI GBIC 1000SX (LC/0.5km) Transceiver | ■ 8330-188 LTSFP-1000BX-10KM Transceiver (WDM 1310) |
| ■ 8330-163 MINI GBIC 1000SX2 (LC/2km) Transceiver | ■ 8330-189 LTSFP-1000BX-10KM Transceiver (WDM 1550) |
| ■ 8330-165 MINI GBIC 1000LX (LC/10km) Transceiver | ■ 8330-186 LTSFP-1000BX-20KM Transceiver (WDM 1310) |
| ■ 8340-0591 MINI GBIC 1000LHX (LC/40km) Transceiver | ■ 8330-187 LTSFP-1000BX-20KM Transceiver (WDM 1550) |
| ■ 8330-166 MINI GBIC 1000XD (LC/50km) Transceiver | ■ 8330-180 LTSFP-1000BX-40KM Transceiver (WDM 1310) |
| ■ 8330-169 MINI GBIC 1000XD (LC/60km) Transceiver | ■ 8330-182 LTSFP-1000BX-40KM Transceiver (WDM 1550) |
| ■ 8330-167 MINI GBIC 1000ZX (LC/80km) Transceiver | ■ 8330-181 LTSFP-1000BX-60KM Transceiver (WDM 1310) |
| ■ 8330-170 MINI GBIC 1000EZ (120km) Transceiver | ■ 8330-183 LTSFP-1000BX-60KM Transceiver (WDM 1550) |
| ■ 8330-168 MINI GBIC 1000T (100m) Transceiver | ■ 8330-184 LTSFP-1000BX-80KM Transceiver (WDM 1490) |
| ■ 8330-061 100Base LX 30KM, Single-mode, LC Transceiver | ■ 8330-185 LTSFP-1000BX-80KM Transceiver (WDM 1550) |
| ■ 8330-060 100Base FX 2KM, Multi-mode, LC Transceiver | |
- All the above part-no ended with D are with Diagnostic function

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