

IPES-2224C-24

24 10/100TX + 2 100/1000T/SFP combo with 24 PoE Injectors

Industrial Pro-Ring Managed Switch

- 24 Ports of 802.3af PoE (22.6 Watts/Port)
- Pro-Ring system: X-Ring 10ms, Dual Homing, Couple Ring and Central Ring
- Wide operating temperature range from -40°C to 75°C



OVERVIEW

The Lantech IPES-2224C-24 Industrial PoE switch is a highly integrated managed switch, equipped with 24-port 10/100TX + 2-port 1000T/SFP combo with 24 PoE Injectors. The power output of each PoE port is adjustable and can provide up to 22.6 Watts.

The IPES-2224C-24 is designed to meet the demands of Industrial environments, comes packaged in a robust IP30 housing and has been tested extensively to meet Industrial EMI and EMC standards. Rigorous mechanical testing has also been undertaken to comply with free fall, shock and vibration stability test requirements, which ensure long term reliability in critical industrial environments. Featured with wide operating temperature from -40°C to 75°C, the IPES-2224C-24 provides a reliable choice for strict environment. The PoE function also provides additional network reliability in the event of a local power outage. The grounding and fuse design double protect switch from outside statistic electricity and high power input.

Besides redundant power supply, the IPES-2224C-24 supports EFT protection for 4000VDC power and 6000VDC Ethernet

ESD protection, which can reduce unstable environment caused by power line and Ethernet. Featured with relay contact to alarm system function, the IPES-2224C-24 can immediately notify of power or port failure event.

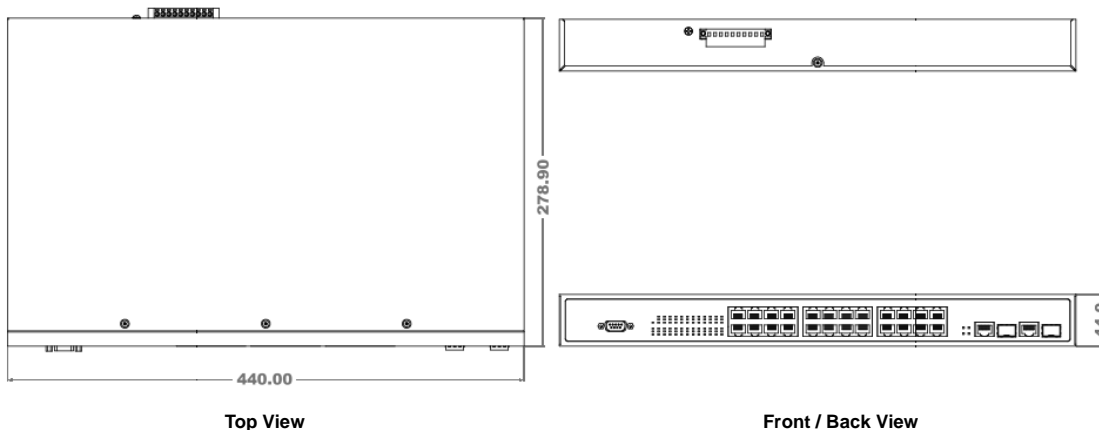
The Lantech IPES-2224C-24 supports full SNMP functions including the latest traffic control protocols of VLAN, RSTP, IGMP Query and Snooping and Priority Queuing. The Pro-Ring system includes self-recovery ring "X-Ring" that could resume the network disconnection within 10ms in which can ensure your data, voice, video traffic best performance without lag. Dual Homing and Couple Ring can double protect the network paths to the core switches (Dual Homing) and protect the X-Ring within 2 ring groups (Couple Ring) and/or 4 ring groups (Central Ring).

The 24 PoE interfaces provide flexible configuration options for the network. The Lantech IPES-2224C-4 is the best Industrial PoE switch to connect with IP Camera, Setup box, VOIP routers, Wireless Equipments for MTU, Transportation or Surveillance applications in critical network environments.

FEATURES & BENEFITS

- Hardened for outside plant
- 100/1000T/ SFP combo interfaces
- 24 10/100TX support auto MDI/MDI-X function
- Embedded 24 port PoE Injectors
- Adjustable power output up to 22.6W/port
- Harden switch operating from -40°C to 75°C (-E model)
- Pro-Ring auto recovery less than 10ms
- Dual Homing / Couple Ring / Central Ring
- QoS / CoS support
- VLAN tagging (up to 4K)
- 802.3ad LACP
- GVRP (256 groups)
- Port mirroring / Port security
- IGMP Snooping and Query mode supported
- IGMP multicast groups
- DHCP Client, Server, Relay
- 802.1X RADIUS
- DNS (Primary, Secondary)
- SNTP
- Ingress / Egress packet filtering
- User access authorization
- Login IP source authorization
- SNMP v1,v2, v3
- Remote upgrade support
- Provides EFT protection 4KV for power line
- Supports 6KV Ethernet ESD protection
- Polarity Reverse Protection

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification		Software Specification	
Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX / 100Base-FX IEEE802.3z Gigabit fiber IEEE802.3ab 1000Base-T IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.1d Spanning Tree IEEE802.1w RSTP IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE802.1x User Authentication (Radius) IEEE802.3af Power over Ethernet IEEE802.1ab LLDP	Operating Temperature	335 Watts (Full load) -40°C~75°C / -40°F~167°F
Switch Architecture	Back-plane (Switching Fabric): 8.8Gbps Packet throughput ability (Full-Duplex): 13.1Mpps@64bytes	Storage Temperature	-40°C~85°C / -40°F~185°F
Transfer Rate	14,880 pps for 10Base-T Ethernet port 148,800 pps for 100Base-TX/FX Fast Ethernet port 1,488,000 pps for Gigabit Fiber Ethernet port	Operating Humidity	5% - 95% (Non-condensing)
Packet Buffer	4Mbits	Fan	Fanless
Mac Address	8K MAC address table	Case Dimension	440mm (W) x 280mm (D) x 44mm (H)
Flash ROM	4Mbytes	Weight	3.7 kg
DRAM	32Mbytes	EMI & EMS	FCC Class A CE EN61000-4-2/3/4/6/8, CE EN61000-6-2, CE EN61000-6-4
Jumbo Frame	9022bytes (for Gigabit Ports)	Safety	UL, cUL, CE/EN60950-1
Connectors	(Front) RS-232 : Female DB-9 (for Console) (Rear) RS-232: Male DB-9 (for UPWM) 10/100TX: 24 x RJ-45 10/100/1000T/ Mini-GBIC Combo: 2 x RJ-45 + 2 x SFP sockets	Stability Testing	IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5, 5e, 6 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/5e, 6 cable EIA/TIA-568 100-ohm (100m) 1000Base-TX: 2-pair UTP/STP Cat. 5e, 6 cable EIA/TIA-568 100-ohm (100m)	MTBF	133495 hrs
LED	System Power (Green) Gigabit Fiber: Link/Activity (Green) Gigabit Copper: Link/Activity (Green), Full duplex/collision (Yellow), Mini-GBIC [(Link/Activity) Green]	Warranty	5 years
Power Supply	DC 48V A readily accessible disconnect device as part of the building installation shall be incorporated into the fixed wiring. Moreover, The disconnect device (appropriate circuit breaker) must be included in the ungrounded supply conductor.	Software Specification	
Redundant Power Supply	48VDC (45~56VDC), - 48VDC (- 45-- 56VDC) *48VDC support single power only, dual power will cause the risk of power leak(without grounding)	Management	SNMP v1 SNMP v2c SNMP v3 Web/ Telnet/ Console (CLI)
Power Consumption	11.8 Watts (Unload) 20.9 Watts (Full load: Only Ethernet) 321.6 Watts (Full load: Only PD load)	SNMP MIB	RFC 1215 Trap, RFC1213 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643, RFC 1757, RSTP MIB, Private MIB, PoE MIB, UPS MIB, LLDP MIB, RMON1
		VLAN	Port based VLAN, up to 24 groups IEEE802.1Q Tag VLAN Static VLAN groups up to 256, Dynamic VLAN group up to 2048, VLAN ID from 1 to 4094. GVRP up to 256 groups.
		Port Trunk with LACP	LACP Port Trunk: 13 Trunk groups/Maximum 4 trunk members
		LLDP	Supports LLDP to allow switch to advertise its identification and capability on the LAN
		Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree
		Pro-Ring	Supports X-Ring, Dual Homing, Couple Ring and Central Ring topology Provides redundant backup feature and the recovery time below 10ms for a ring of up to 250 switches
		Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Different Service
		Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues
		Port Security	Supports 50 entries of MAC address for static MAC and another 50 for MAC filter
		Port Mirror	Supports 3 mirroring types:"RX ,TX and Both packet "
		IGMP	Supports IGMP V1 and V2 snooping; IGMP Snooping for Multi-Media application, IGMP group supports 256 groups and IGMP query

Access Control List (ACL)	Supports up to 256 Policy	802.1x Authentication	Support IEEE802.1x User-Authentication and can report to RADIUS Server. <ul style="list-style-type: none"> · Reject · Accept · Authorize · Disable
Packet filter	Broadcast storm filter		
IP Security	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder	Relay Alarm	Provides one relay output for port breakdown and power failure. Alarm Relay current carry ability: 1A @ DC 24V
Login Security	Supports IEEE802.1X Authentication/RADIUS		
Bandwidth control	Support ingress packet filter and egress packet limit The egress rate control supports all of packet type and the limit rates are 0~100Mbps 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 0 to 100Mbps	SNMP Trap	<ol style="list-style-type: none"> 1. Device cold start, 2. Authorization failure, 3. X-Ring topology changed. 4. Port link up/ link down. 5. DC disconnect trap-PoE port Event Trap station up to 3
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex	Firmware Upgrade	Support TFTP & Console firmware update, TFTP & Console backup and restore
System log	Supports System log record and remote system log server	Configuration Upload & Download	Supports binary format configuration file for system quick installation
SMTP	Supports 1 SMTP Server and 6 e-mail accounts for receiving event alert	ifAlias	Each port allows importing 128bit of alphabetic string of word on SNMP and CLI interface.
SNTP	Supports SNTP to synchronize system clock to Internet		
DHCP	Provides DHCP Client/DHCP Server/IP Relay functions		
DNS	Provides DNS client feature and supports Primary and Secondary DNS server		

ORDERING INFORMATION

- **IPES-2224C-24.....P/N: 8350-710**
24 10/100TX w/24 PoE Injector Industrial Managed Switch; -40°C to 75°C

OPTIONAL ACCESSORIES

DIN Rail Power

- **AD1048-24FS** 24VDC, 2A, Wide AC Input, Convection 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 ~ 75°C, which means the output is 18 Watts at 75°C.)
- **AD1024-24F** 24VDC, 1A, Wide AC Input, Convection 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 ~ 75°C, which means the output is 9 Watts at 75°C.)
- **AD1240-48S** 48VDC, 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)
- **AD1120-48F** 48VDC, 2.5A, 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)

Mini GBIC (SFP)

■ 8330-162	MINI GBIC 1000SX (LC/0.5km) Transceiver
■ 8330-163	MINI GBIC 1000SX2 (LC/2km) Transceiver
■ 8330-165	MINI GBIC 1000LX (LC/10km) Transceiver
■ 8340-0591	MINI GBIC 1000LHX (LC/40km) Transceiver
■ 8330-166	MINI GBIC 1000XD (LC/50km) Transceiver
■ 8330-169	MINI GBIC 1000XD (LC/60km) Transceiver
■ 8330-167	MINI GBIC 1000ZX (LC/80km) Transceiver
■ 8330-170	MINI GBIC 1000EZ (120km) Transceiver
■ 8330-168	MINI GBIC 10/100/1000T (100m) Transceiver
■ 8330-060	100Base FX 2KM, Multi-mode, LC Transceiver
■ 8330-065	100Base FX 5KM, Multi-mode, LC Transceiver
■ 8330-061	100Base LX 30KM, Single-mode, LC Transceiver
■ 8330-188	LTSFP-1000BX-10KM Transceiver (WDM 1310)
■ 8330-189	LTSFP-1000BX-10KM Transceiver (WDM 1550)
■ 8330-186	LTSFP-1000BX-20KM Transceiver (WDM 1310)
■ 8330-187	LTSFP-1000BX-20KM Transceiver (WDM 1550)
■ 8330-180	LTSFP-1000BX-40KM Transceiver (WDM 1310)
■ 8330-182	LTSFP-1000BX-40KM Transceiver (WDM 1550)
■ 8330-181	LTSFP-1000BX-60KM Transceiver (WDM 1310)
■ 8330-183	LTSFP-1000BX-60KM Transceiver (WDM 1550)
■ 8330-184	LTSFP-1000BX-80KM Transceiver (WDM 1490)
■ 8330-185	LTSFP-1000BX-80KM Transceiver (WDM 1550)

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