

LPES-2208CA

8 10/100TX + 2 100M/Giga SFP Combo Managed Switch

w/ 8 PoE Injectors & Pro-Ring System

- Pro-Ring covers X-Ring, Couple Ring, and Dual Homing Topology
- X-Ring provides recovery time < 10ms up to 250 units in one Ring
- Fully complies with IEEE802.3af PoE standard



OVERVIEW

Lantech LPES-2208CA is a 8-Port 10/100TX built in 8 PoE Injectors + 2-Port 10/100/1000T / Dual Speed SFP combo Managed Switch with SNMP and "X-Ring" Self-Heal Recovery functionality. The SNMP features are including QoS for 4 queues, 801.q VLAN, IGMP snooping and query mode as well as Sntp and SMTP.

Lantech LPES-2208CA supports Pro-Ring, fast network recovery scheme in less than 10ms. Couple Ring is to ensure network recovery protection between two Pro-Ring groups. Dual

homing is to back up the Pro-Ring groups when connect to upper layer or core switch.

LPES-2208CA supports 48V input power and fully complies with IEEE802.3af feeding power up to 15.4W per port up to 8 ports via twisted pair cable.

Lantech LPES-2208CA is the best switch to use in Surveillance, Traffic Management, Automation, Airport, Wireless backhaul etc where PoE function and SNMP are required.

FEATURES & BENEFITS

- **PoE Management**
 - PoE Enable/Disable, Power limit by classification, Power limit by management, Power feeding priority, Detect Legacy Signature
- **Pro-Ring System**
 - Covers X-Ring, Dual Homing, Couple Ring Topology
 - X-Ring provides redundant backup and recovery time below 10ms for a ring of up to 250 switches
- **Port Based, Tag Based VLAN, GVRP**
- **Port Trunk with LACP**
- **QoS (Quality of Service)**
 - Per port provides 4 priority queues
 - Port Base, Tag Base and Type of Service Priority
- **Port Mirror: Monitor traffic in switched networks.**
- **Security**
 - Port Security: MAC address entries/filter
 - IP Security: IP address security management to prevent unauthorized intruder.
 - Login Security: IEEE802.1X/RADIUS
- **IGMP**
 - Query mode for Multi Media Application
 - Support multicast filter
- **IEEE802.1d Spanning Tree; IEEE802.1w RSTP**
- **Support 802.1ab LLDP**
- **Bandwidth Control**
- **System Event Log**
- **SNMP Trap & Email Alert for events**
 - Device cold start, Power status, Authentication failure, Pro-Ring topology changed, Port Link up / Link down

SPECIFICATION

Hardware Specification

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|---------------------|--|
| Switch Architecture | Back-plane (Switching Fabric): 5.6Gbps Packet throughput ability (Full-Duplex): 2.38Mpps @64bytes |
| Transfer Rate | 14,880pps for Ethernet port 148,800pps for Fast Ethernet port |
| Mac Address | 8K MAC address table |
| Connector | 10/100TX: 8 x RJ-45 with auto MDI/MDI-X function 10/100/1000T/ Mini-GBIC Combo: 2 x RJ-45 + 2 x 100/1000 SFP sockets RS-232 connector: DB-9 |
| 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. 5/ 5E/6 cable EIA/TIA-568 100-ohm (100m) |

Optical Cable

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|-----------------|--|
| Distance: | Multi mode: 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) Single mode: 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: | Multi mode: -20 dBm Single mode: 0 to 40 km, -5 dBm; 0 to 80 km, -5 dBm |
| Max. TX Output: | Multi mode: -14 dBm Single mode: 0 to 40 km, 0 dBm; 0 to 80 km, 0 dBm |
| Sensitivity: | -36 to -32 dBm (Single mode); -34 to -30 dBm (Multi mode) |

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| Protocol | CSMA/CD |
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| PoE pin assignment | RJ-45 port # 1~# 8 support IEEE 802.3af End-point, Alternative A mode. Per port provides 15.4W ability. Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6. | | | |
| LED | System: Power Per port: Link/Activity, Speed, PoE Gigabit Combo port: Link/Activity | | | |
| Power Supply | External Power Supply: AC 100 ~240V , 1.5A , 50/60Hz DC Output +48V / 2A | | | |
| Power Consumption | Un- load | DC 48V | 102mA | |
| | | AC | 0.143A | |
| | | PF | 0.42 | |
| | | AC Input Power (watts) | 5.4 | |
| | Full Load(Only Ethernet) | DC 48V | 180mA | |
| | | AC | 0.243A | |
| | | PF | 0.46 | |
| | | AC Input Power (watts) | 10.3 | |
| | Full Load(Only PD load) | DC 48V | 1431mA | |
| | | AC | 0.868A | |
| | | PF | 0.96 | |
| | | AC Input Power (watts) | 75 | |
| | Full Load | AC Input Power (watts) | 80.6 | |
| | PoE Power budget | 15.4W per port, Max 84 Watts with 96W DC-48V power adapter | | |
| | Operating Humidity | 5% to 95% (Non-condensing) | | |
| Operating Temperature | Standard: 0°C ~45°C; | | | |
| Storage Temperature | -40°C to 85°C | | | |
| Case Dimension | 217mm (W) x 140mm (D) x 43mm (H) | | | |
| Fan Number | 0 | | | |
| Installation | Rack mount and wall mount ear. | | | |
| EMI | FCC Class A, CE | | | |
| Safety | CE/EN60950-1 | | | |

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| Warranty | 2 years |
| Software Specification | |
| Management | SNMP v1 v2c, v3/ Web/Telnet/CLI Management |
| 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, LLDP MIB |
| 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) |
| Port Trunk with LACP | LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members |
| LLDP | Support LLDP to allow switch to advise its identification and capability on the LAN |
| Spanning Tree | Support IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree |
| Pro-Ring | Support X-Ring, Dual Homing, Couple Ring Topology. Provide redundant backup feature and the recovery time below 10ms |
| Quality of Service | The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service |
| Class of Service | Support IEEE802.1p class of service, per port provides 4 priority queues |
| Port Security | Support 100 entries of MAC address for static MAC and another 100 for MAC filter |
| Port Mirror | Support 3 mirroring types: "RX, TX and Both packet". |
| IGMP | Support IGMP snooping v1,v2 256 multicast groups and IGMP query Support multicast filter |
| IP Security | Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder. |
| Login Security | Support 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 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) |
| Flow Control | Support Flow Control for Full-duplex and Back Pressure for Half-duplex |
| System Log | Support System log record and remote system log server |
| SMTP | Support SMTP Server and 6 e-mail accounts for receiving event alert |
| SNMP Trap | 1. Cold start, 2. Link down, 3. Link up, 4. Authorization fail, 5. PD disconnect trap-PoE port event |
| DHCP | Provide DHCP Client/ DHCP Server functions |
| SNTP | Support SNTP to synchronize system clock in Internet |
| Firmware Update | Support TFTP firmware update, TFTP backup and restore. |

*Future Release
**Optional

ORDERING INFORMATION

- **LPES-2208CA.....P/N: 8450-540**
8 10/100TX + 2 x 10/100/1000T /Dual Speed SFP combo w/ 8 PoE injectors Managed Switch with 96W DC-48V power adapter
- **LPES-2208CA.....P/N: 8450-541**
8 10/100TX + 2 x 10/100/1000T /Dual Speed SFP combo w/ 8 PoE injectors Managed Switch without power adapter

OPTIONAL ACCESSORIES

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

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

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