

# LES-2208

## 8 10/100TX + 1 Gigabit copper & mini GBIC managed switch

- Pro-Ring covers X-Ring, Couple Ring, and Dual Homing Topology
- X-Ring provides recovery time < 10ms up to 250 units in one Ring
- Supports 802.1p CoS, per port 4 queues
- IGMP snooping and Query mode support for Multi-Media application



## OVERVIEW

Lantech LES-2208 is a small network management switch featured with 8 UTP ports and 1 Giga Mini GBIC + 1 GigaT connection port. With DHCP server and client function, users of LES-2208 can manually configure a specific IP address, or direct the device to obtain an address from the scope. To avoid network traffic jam, LES-2208 supports Quality of Service (QoS) and 4 priority queues with CoS (Class of Service) standard.

The Internet Group Management Protocol (IGMP snooping) and query manages the multiple broadcast application on the network, for on-line study or video conference and so on. LES-2208 provides several interfaces for management,

including Web, SNMP, Telnet, CLI, and RMON, making it easy and flexible for user to manage and control the enterprise network.

LES-2208 supports Lantech patent-pending feature "Pro-Ring", which covers X-Ring, Couple Ring, and Dual Homing topology. X-Ring enables auto-network-recovery in less than 10ms, connecting up to 250 units in one X-Ring group.

Lantech LES-2208 provides a stable and controllable network environment with convenience. With its powerful functions, it is your best choice for enterprise and home network.

## FEATURES & BENEFITS

- 8 10/100TX + 1 Mini GBIC socket and 1 Gigabit copper
- Conforms to IEEE802.3 10BASE-T, 802.3u 100BASE-TX, 802.3z Gigabit fiber and IEEE 802.3ab 1000Base-T
- Pro-Ring covers X-Ring, Couple Ring, and Dual Homing topology
- X-Ring feature for auto-network-recovery in less than 10 ms up to 250 units in one Ring
- 5.6Gbps switch bandwidth
- 802.1p CoS, per port 4 queues
- IGMP snooping and Query mode support for Multi-Media application
- Port mirror and bandwidth control
- Supports GVRP function
- TFTP firmware update
- Web/SNMP/Telnet/CLI /RMON management
- Per port band width control
- Management IP address security
- System log
- Port Based VLAN /802 .1Q VLAN
- IEEE802.3x Flow control
  - Flow control for full duplex
  - Back pressure for half duplex
- IEEE802.3ad Port trunk with LACP
- Spanning tree protocol
  - STP / Rapid STP
- QoS for below method:
  - Port based / Tag based
  - IPv4 ToS / Ipv4, IPv6 DiffServe
- IEEE 802.1x user authentication
- Broadcast storm filter
- DHCP Client, Server
- SNTP and SMTP support
- MAC address security
- SNMP Trap support
- Configuration up-load and down-load

**SPECIFICATION**

Hardware Specification	
Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX IEEE802.3ab 1000Base-T IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE 802.1x User Authentication (Radius)
Connector	10/100TX: 8 x ports RJ-45 with Auto MDI/MDI-X function 10/100/1000T: 1 x ports RJ-45 with Auto MDI/MDI-X function Gigabit fiber: 1 x Mini-GBIC RS-232 DB-9 Female connector for switch management
Switch architecture	Store and forward switch architecture. 5.6Gbps system backplane. System throughput up to 8.3Mpps.
MAC address	8K MAC address table with Auto learning function
DRAM	32Mbytes
Packet buffer	1Mbits for packet buffer
Flash ROM	2Mbytes
System memory	8Mbytes
LED	System Power (Green) 10/100TX Port: Link/Activity (Green), Full-duplex/Collision (Yellow), 100Mbps(Green) Gigabit copper port: 1000/100Mbps (Green/Yellow), Link/Activity (Green), Full Duplex/Collision (Yellow) Mini GBIC: Link/Activity
RS-232 connector	One RS-232 DB-9 Female connector for switch management
Power supply	90~240VAC, 50/60Hz
Power consumption	10 Watts (Maximum)
Ventilation	Fan free design
Operating environment	0°C~45°C, 5%~95%RH
Storage environment	-40°C~70°C, 95% RH
Environment monitor	FAN fail detect (for two fans), Power detection
Dimension	217mm(W) x 140mm(D) x 43mm(H)
EMI	Compliance with FCC Class A, CE
Safety	Compliance with UL, cUL, CE/EN60950
Warranty	2 years
Software Specification	
Management	SNMP v1, SNMP v2c, SNMP v3, Telnet, Console (CLI) and Web management.
RFC standard	RFC2233 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 2665 Ethernet like MIB, RFC1215 Trap MIB, RFC 2819 RMON MIB, Private MIB, RFC2030 SNTp, RFC 2821 SMTP, RFC 1757 RMON1 MIB, RFC 1215 Trap
SNMP Trap	Cold start, warm start, link down, link up, authorization fail, Trap station up to 3.
Firmware Upgrade	TFTP,
Port Trunk	Support IEEE802.3ad with LACP function. Up to 3 trunk groups and maximum group member up to 4
ports.	
Spanning Tree	IEEE802.1d Spanning tree IEEE802.1w Rapid spanning tree
VLAN	Port based VLAN Double Tag VLAN for management IEEE802.1Q Tag VLAN. The static VLAN groups up to 256 and dynamic VLAN groups up to 2048, the VLAN ID can be assigned from 1 to 4094. GVRP function supports 256 groups. Double Tag VLAN (Q in Q)*
Class of Service	Per port supports 4 queues. Weight round ratio (WRR): High: Mid-High: Mid-Low: Low (8:4:2:1)
Quality of Service	Port based, Tag based, IPv4 Type of service, IPv6 Different service.
IGMP	IGMP v1 and v2 compliance and also supports 256 IGMP groups and support query mode.
Port Security	It supports ingress and egress MAC address filter and static source MAC address lock
Port Mirror	Global system supports 3 mirroring types: "RX, TX and Both packet". The maximum of port mirror entries is up to 8.
Bandwidth Control	Ingress rate limiting packet type: all of frames, broadcast, multicast, unknown unicast and broadcast packet. Egress rate shaping supports all of packet. Rate limiting levels: 100kbps to 64Mbits or up to 256Mbits for Gigabit port.
User Authentication	Support IEEE802.1x User-Authentication and can report to RADIUS server. → Reject → Accept → Authorize → Disable
DHCP	DHCP Client and DHCP Server. Provide global IP pool for DHCP server.
Packet filter	Broadcast storm packet filter.
Port security	Ingress and egress MAC address security, per port support 50MAC addresses. Port MAC address number limiting, per port support 50 MAC addresses.
IP security	Support 10 IP address accounts for system management security for Web, SNMP, Telnet management security to prevent intruder.
System log	Remote Log Server support. Provide 1000 log entries.
SMTP	Support SMTP Server and 6 e-mail accounts for receiving event alert
SNTp	Support SNTp to synchronize system clock in Internet
Configuration upload and download	Support text format configuration file for system quick installation
Pro-Ring	Pro-Ring covers X-Ring, Couple Ring, and Dual Homing. X-Ring feature for auto-network-recovery in less than 10 ms

\*Future Release

\*\*Optional

## ORDERING INFORMATION

- **LES-2208.....P/N: 8330-820**  
8 10/100TX + 1 Gigabit copper + 1 MINI GBIC managed switch

## 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
- **8330-166** MINI GBIC 1000LHX (LC/40km) Transceiver
- **8330-169** MINI GBIC 1000XD (LC/60km) Transceiver
- **8330-167** MINI GBIC 1000ZX (LC/80km) Transceiver
- **8330-168** MINI GBIC 1000T (100m) Transceiver
- **8330-170** MINI GBIC 1000EZ (120m) Transceiver
  
- **8330-061** 100Base LX 30KM, Single-mode, LC Transceiver
- **8330-060** 100Base FX 2KM, Multi-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)

Lantech Communications Global Inc.

www.lantechcom.tw  
info@lantechcom.tw

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