

# LES-2400-RPS

## 3 slots 10/100M Modularized + 2 x Gigabit Combo

### L2 Plus Managed Switch w/Redundant Power Supply

- Pro-Ring covers X-Ring, Couple Ring, and Dual Homing Topology
- X-Ring provides recovery time < 10ms up to 250 units in one Ring
- Web/ SNMP/ Telnet/ CLI/ RMON management



## OVERVIEW

Lantech LES-2400-RPS switch is a high density 10/100TX or 100M-SFP Switch for Metro Ethernet network applications requiring of Bandwidth control, IGMP Multicasting, Jumbo frame, Authentication for Access and Aggregation points.

LES-2400-RPS features SMTP and Sntp function which can send events to 6 email addresses as well as SNMP trap stations.

LES-2400-RPS supports DC48V redundant power supply to prevent network downtime. Various module types offer high flexibility for old network connection with 100M SFP and 100M Copper. LES-2400-RPS X-Ring fast recovery protocol can reconnect network disconnection in less than 10ms time. It supports Couple Ring which can secure two X-Ring groups connection without failure. Dual Homing can redundantly back up the X-Ring groups to the upper layer core switch via RSTP.

## FEATURES & BENEFITS

- **3 slots Module Hot-swappable for**
  - 8 port 10/100 Base-TX module
  - 8 port 100Mbps multi mode fiber module
  - 8 port 100Mbps single mode fiber module
  - 8 port 100Mbps SFP module
- **System Interface/Performance**
  - Back-plane (Switching Fabric): 8.8Gbps
  - 8K MAC Address Table
- **VLAN**
  - Port Based VLAN
  - Support 802.1 Q Tag VLAN
  - GVRP
- **Port Trunk with LACP**
- **QoS (Quality of Service)**
  - Support IEEE 802.1p Class of Service
  - Per port provides 4 priority queues
  - Port-base, Tag-base and TOS Priority
- **Security**
  - Port Security : MAC address entries/filter
  - IP Security: IP address security management to prevent unauthorized intruder.
- Login Security: IEEE 802.1X/RADIUS
- **IGMP with Query mode for Multi Media Application**
- **Pro-Ring**
  - Covers X-Ring, Dual Homing, and Couple Ring
  - Provides redundant backup feature and the recovery time below 10ms up to 250 units in one Ring
- **Supports up to 256 Policy base ACL**
- **Support IEEE802.1ab LLDP**
- **Bandwidth Control**
  - Ingress Packet Filter and Egress Rate Limit
  - Broadcast/Multicast Packet Filter Control
- **System Event Log**
  - System Log Server/Client
  - SMTP e-mail Alert
  - Relay Alarm Output System Events Security
- **SNMP Trap**
  - Device cold start
  - Power status
  - Authentication failure
  - Port Link up/Link down

**SPECIFICATION**

Hardware Specification		Software Specification	
IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 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 Rapid Spanning Tree IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE 802.1x User Authentication (Radius) IEEE802.1ab LLDP	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 4096. GVRP up to 256 groups.
Switch Architecture	Back-plane (Switching Fabric): 8.8Gbps Packet throughput ability(Full-Duplex): 5.9Mpps @64bytes	Q in Q	Provides Q in Q , double tag VLAN**
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Ethernet port	MVR	Provides MVR(Multicast VLAN Registration)**
MAC Address	8K MAC address table	Port Trunk with LACP	LACP Port Trunk: 13 Trunk groups/Maximum 4 trunk members
Jumbo frame	9K (for Gigabit Ports)	LLDP	Support LLDP to allow switch to advise its identification and capability on the LAN
Connector	10/100TX: 1 x RJ-45 with auto MDI/MDI-X function 10/100/1000T/ Mini-GBIC: 2 x SFP sockets RS-232 console port: 1	X-Ring	Support X-Ring, Dual Horning, and Couple Ring Provide redundant backup feature and the recovery time below 10ms
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)	Spanning Tree	Support IEEE802.1d Spanning Tree,IEEE802.1w Rapid Spanning Tree, and Multiple Spanning Tree(MSTP)**
Protocol	CSMA/CD	Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Different Service
LED	Per unit: Power 1 (Green) Gigabit Fiber: Link/Activity (Green) , Gigabit Copper: Link/Activity (Green), SFP Link/Activity (Green)	Class of Service	Support IEEE802.1p class of service, per port provides 4 priority queues
Power Supply	100~240VAC, 50 /60Hz, 0.8A (maximum), Redundant Power Support (DC 12~48V).	Port Security	Support 50 entries of MAC address for static MAC and another 50 for MAC filter
Power Consumption	18 Watts	Port Mirror	Support 3 mirroring types: "RX, TX and Both packet"
Ventilation	2 x DC cooling fan with fail detection Ventilation	IGMP	Support IGMP snooping v1,v2 256 multicast groups and IGMP query
Case Dimension	19" Metal case 440mm(W)x200mm(D)x44mm(H)	IP Security	Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Operating Humidity	5%~95% (Non-condensing)	Login Security	Support IEEE802.1X Authentication/RADIUS
Operating Temperature	Standard: 0°C~45°C	Access Control List(ACL)	Support up to 256 Policy
Storage Temperature	-40°C~75°C	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
EMI	FCC Class A	Flow Control	Support Flow Control for Full-duplex and Back Pressure for Half-duplex
Safety	UL, cUL, CE/EN60950-1	System Log	Support System log record and remote system log server
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)	SMTP	Support 1 SMTP Server and 6 e-mail accounts for receiving event alert
Warranty	2 years	SNMP Trap	Up to 3 Trap stations Cold start, Port link up, Port link down, Authentication Failure, Private Trap for power status
<b>Software Specification</b>		DHCP	Provide DHCP Client/ DHCP Server
Management	SNMP v1 v2c, v3/ Web/Telnet/CLI Management	DNS	Provide DNS client feature and support Primary and Secondary DNS server.
SNMP MIB	RFC 3418 SNMP MIB RFC 1213 MIBII RFC 2011 MIB RFC 1493 Bridge MIB RFC 2674 VLAN MIB RFC 1215 Trap MIB RFC 1643 Ethernet like RFC 1757, RSTP MIB RMON1(1,2,3,9) LLDP MIB Private MIB	SNTP	Support SNTP to synchronize system clock in Internet
		Firmware Update	Support TFTP firmware update.
		Support TFTP firmware update.	Support TFTP backup and restore

\*Future Release  
\*\*Optional

**ORDERING INFORMATION**

- **LES-2400-RPS.....P/N: 8220-600**  
3 slot 10/100M Modularized + 2 Gigabit Combo L2 plus Managed Switch
- **100 TX Module.....P/N: 8220-510**  
8 port 10/100 Base-TX module
- **100 SFP Module.....P/N: 8220-600**  
8 port 100 SFP module

**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)

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