L3 460W Managed Gigabit PoE+ Switch with 10G uplink

48-Port PoE+ Gigabit + 6 Ports 10G SFP+

L3POE-XGS4806-460

Rich L3 Features	L3 DHCP Server/Relay	L3 DHCP Snooping	ACL, ERPS
L3 OSPF Routes Support	IPv4/v6 L3 Static Route	10G SFP+ Uplink	PoE Watchdog 802.3at/af support

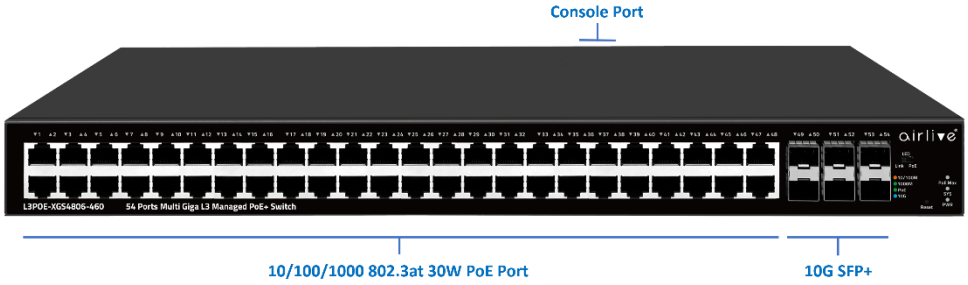
Overview

Rich L3 Features

The L3POE-XGS4806 series offers high performance hardware 48x port 1G PoE 30W (802.3at/af) RJ-45 and 6x 10G SFP+ ports, IP routing. Static route, OSPF, and RIP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers. With the L3POE-XGS4806 series, customers could easily achieve a Policy-based Route (PBR), which is important when they need a Switch-to-switch application and short network heal time.

What Is a Layer 3 Switch?

A Layer 3 switch is a specialized hardware device used in network routing. Layer 3 switches technically have a lot in common with typical routers, and not only in physical appearance. Both can support the same routing protocols, inspect incoming packets, and make dynamic routing decisions based on the source and destination addresses inside. One of the main advantages of a Layer 3 switch over a router is in the way routing decisions are performed. Layer 3 switches are much low network latency since packets don't have to take additional steps through a router.



Features

- Rich Layer 3 Features
- Fully L2 features provide easier manageability, security and QoS
- Support STP/RSTP/MSTP (ERPS) Support Loop Detection and self-healing, support remote loopback monitoring and control
- Support IPV4/ IPV6, RIP V1/V2, OSPF V2
- SFP+ 10Gbps Fiber Long Distance
- Support multiple VLAN division, Voice, VLAN, MAC VLAN, Surveillance VLAN, Protocol VLAN, Private VLAN and more
- Support IP address+ MAC address +VLAN+ port binding, DHCP Snooping, IP source and DAI protection
- PoE Port configuration and scheduling
- 802.3af/802.3at PoE standard
- 460W High PoE power, ensure full power for connected device
- Clear Statues display including traffic, CPU, POE consumption, per-port status
- Easy management; Support WEB, TELNET, CLI, SSH, SNMP, RMON management.

Major Specifications

- 48 x 30W PoE 10/100/1000 RJ45
- 6 x 10G SFP+
- 802.3at/802.3af compliant
- Each port up to 30W
  PoE Power 460W
- Rich Layer 3 Features
- L3 DHCP Server/Relay
- L3 DHCP Snooping
- IPv4/IPv6 L3 static route
- OSPF Routes dynamic routing
- Surge Protection 6KV, ESD Protection 8KV
- PoE management, PoE Watchdog
- Authentication: 802.1x, AAA
- DHCP Snooping prevents unauthorized router installed

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Applications of Layer-3 Switches

- Layer3 Switches are widely used in data centers and universities, factories and enterprises. Where there is a very big setup of computer networking. Owing to its features like static and dynamic routing and its fast-switching speed than a router, it is used in LAN connectivity for interconnection of several VLAN and LAN networks.

- The L3POE-XGS4806 has the skills to offload the overloaded routers. This can be done by configuring a layer-3 switch, each with a main router in a wide area networking scenario so that the switch can manage all the local level VLAN routing.

- The layer-3 switch in combination with a number of layer-2 switches supports more users to connect on the network without the need for implementation of an extra layer-3 switch and more bandwidth. Thus, it is widely implemented in universities and small-scale industries. In case if the number of end users on a network platform increases, then without any enhancement of the network, it can be accommodated in the same running scenario easily.

- A layer-3 switch is smart enough to handle and manage the routing and traffic controlling of locally connected servers and end devices utilizing its high bandwidth.

Large PoE Power Budget

Airlive Power over Ethernet (PoE) products are suitable for commercial and industrial applications which provide highly reliable power and data transmission in compliance with the 802.3af/at standard and the unique intelligent PoE watchdog control function can meet all the requirements of IP surveillance, IP communications, POS systems, PoE lighting and other applications.

AirLive L3POE-XGS4806 supports up to 400W of PoE power. This higher total power budget allows it to power more device like IP cameras or Access points. Scalability for Large Networks With 400W total budget, you can connect dozens of devices without worrying about power limits. Great for enterprise environments, campuses, or smart buildings.

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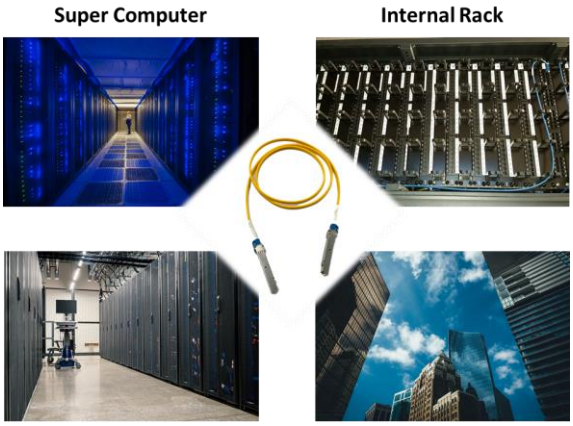
10G Performance and Scalability

With high switching capacity, the L3POE-XGS4806 support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

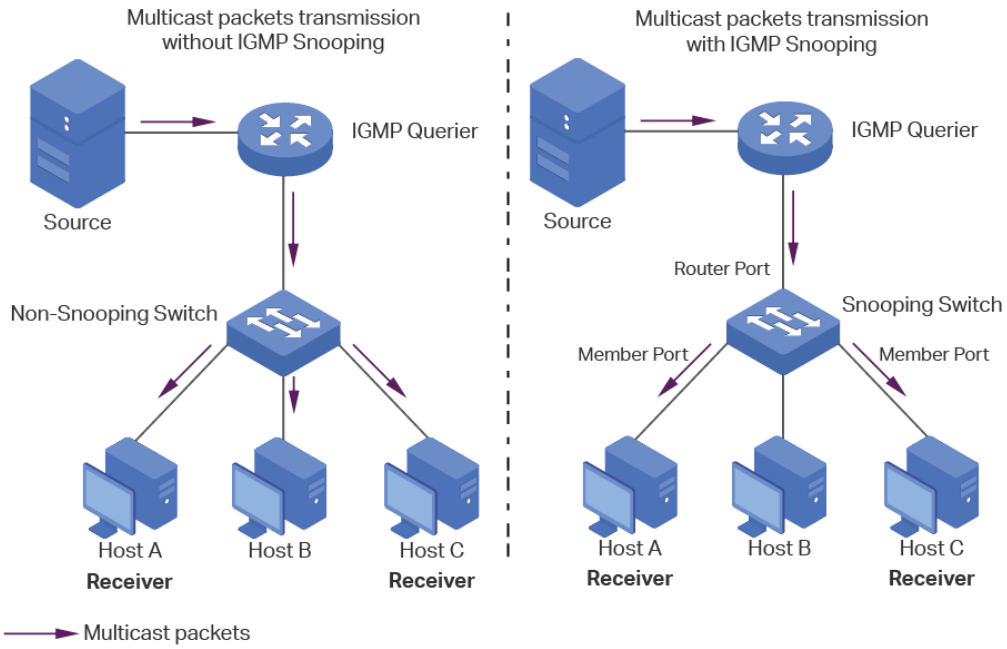
The 10 Gigabit Ethernet connectivity of L3POE-XGS4806 is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber (The distance depends on the optical module chosen).

10G SFP+ Connect Applications



Strong L3 IGMP Snooping Multicast

L3 multicast protocols is compliant with IGMPv1/v2/v3 and supports abundant multicast features such as IGMP v2/v3 snooping and fast leave. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions; the L3POE-XGS4806 fiber series provides a great application experience for the customer.



Layer 2 Switch

Layer 3 Switch

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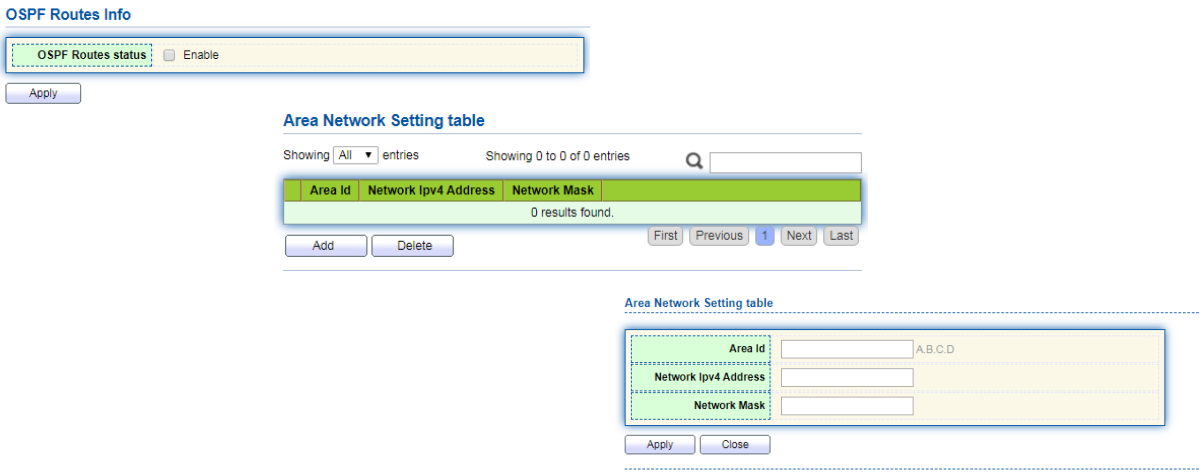
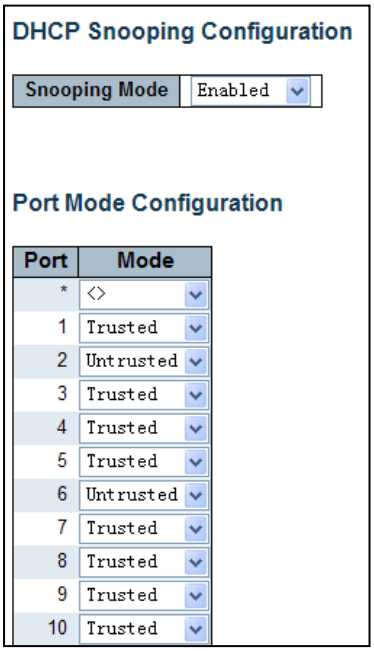
L3 OSPF Routes Management

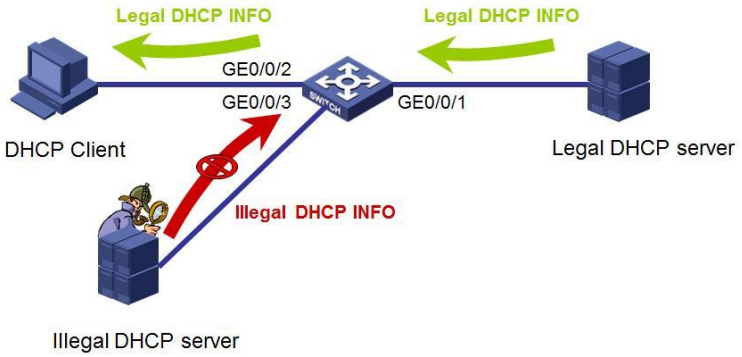
Open shortest path first (OSPF v2) is a link-state routing protocol that is used to find the best path between the source, which is generally used in the same routing domain. Here, routing domain refers to an autonomous system (as), which refers to a group of networks that exchange routing information through a unified routing policy or routing protocol. In this as, all OSPF routers maintain the same database describing the as structure, which stores the state information of the corresponding links in the routing domain. It is through this database that OSPF routers calculate their OSPF routing tables.
As a link state routing protocol, OSPF transmits link state multicast data LSA (link state advertisement) to all routers in a certain area, which is different from distance vector routing protocol. The router running distance vector routing protocol passes part or all of the routing tables to its neighboring routers.



L3 DHCP Snooping Support

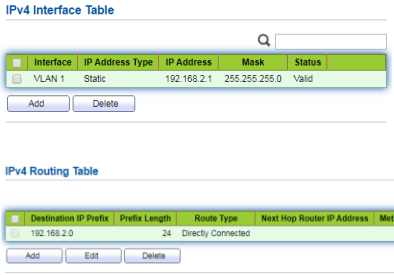
Prevention against illegal Router(DHCP Server) attacks or sending DHCP information.

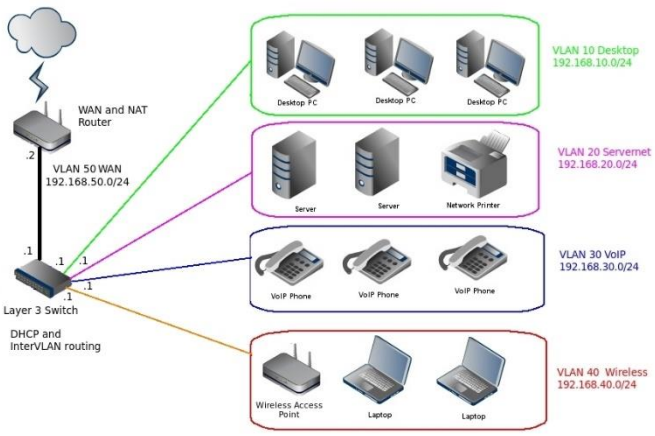




L3 VLAN IP Routing Interface Management

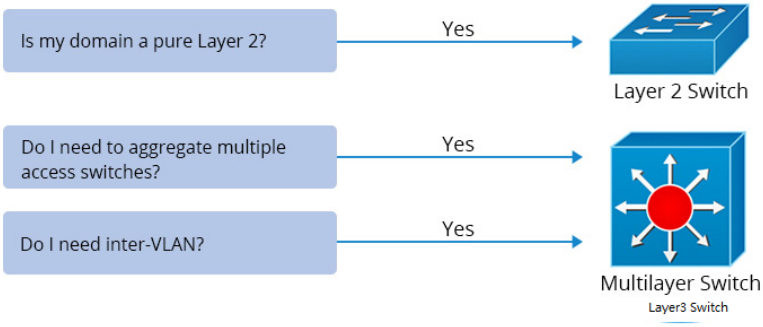
The L3POE-XGS4806 provides 3 layers of VLAN interface, which is used to communicate with network layer devices. VLAN interface is a network layer interface, which can be configured with IP address. Before creating VLAN interface, the corresponding VLAN should be created first. With the help of VLAN interface, switches can communicate with other network layer devices.





Layer 2 vs Layer 3 Switch

The layer 2 and Layer 3 differs mainly in the routing function. A Layer 2 switch works with MAC addresses only and does not care about IP address or any items of higher layers. Layer 3 switch, or multilayer switch, can do all the job of a layer 2 switch and additional static routing and dynamic routing as well. That means, a Layer 3 switch has both MAC address table and IP routing table and handles intra-VLAN communication and packets routing between different VLANs. There is also layer 2+ (layer 3 Lite) switch that adds only static routing. Other than routing packets, layer 3 switches also include functions that require to understand the IP address information of data entering the switch, such as tagging VLAN traffic based on IP address instead of manually configuring a port. Layer 3 switches are increased in power and security as demanded.



Item	Layer 2 Switch	Layer 3 Switch
Routing Function	Mac address only	Supports higher routing such as static routing and dynamic routing
VLAN Tagging Based on IP Address	No	Yes
Inter-VLAN	No	Yes
Using Scenario	Pure Layer 2 domain	Aggregate multiple access switches

Specification

Model	AirLive L3POE-XGS4806-460

Hardware

- **Device Interface:**
  48 x 10/100/1000M PoE 30W RJ-45 Ports
  6 x 10G SFP+ Ports
  1 x RJ45 Console Port (Backside)

Standard

IEEE 802.3: Ethernet MAC Protocol
IEEE 802.3u: 100BASE-TX Fast Ethernet
IEEE 802.3ab: 1000BASE-T Gigabit Ethernet
IEEE 802.3z: 1000BASE-X Gigabit Ethernet (optical fiber)
IEEE 802.3ae: 10G Ethernet (optical fiber)
IEEE 802.3az: Energy Efficient Ethernet
IEEE 802.3ad: Standard method for performing link aggregation
IEEE 802.3x: Flow control
IEEE 802.1ab: LLDP/LLDP-MED (Link Layer Discovery Protocol)
IEEE 802.1p: VLAN Tag LAN Layer QoS/CoS Protocol Traffic Prioritization (Multicast filtering function)
IEEE 802.1q: VLAN Bridge Operation
IEEE 802.1x: Client/Server Access Control and Authentication Protocol
IEEE 802.1d: STP
IEEE 802.1s: MSTP
IEEE 802.1w: RSTP
IEEE 802.3af（15.4W）
IEEE 802.3at（30W）

- **LED Indicators**:
  PWR Green LED (Power indicator),SYS Green LED (System lights), Port 1~48: Green LED 1G, Yellow LED 100/1000Mbps, Port 49-54: Blue LED 10G, Green LED 1/2.5G. PoE Green LED; On: PoE powered on, Off: PoE powered off.
  PoE Max Green LED:
  Off: Indicates PoE power usage is less than 90%
  Flashing (Once per second): Indicates PoE power usage of 90% ≤ P ≤ 95%
  On: Indicates that PoE power is used at 95%<P<100%
- **Lighting Surge Protection:**
  Port Surge: Common mode 6KV, Differential mode 2KV
  Electrostatic ESD: Air 15KV, Contact 8KV (Class C)
- **Mechanical**
  Solid metal 19" 1U rack-mountable,
  Fan Quantity: 2, Fan Noise: Max 45.7dB

Power and PoE

- **Power Input:** AC100~240VAC
- **Protocol**: IEEE802.3at (30W), IEEE802.3af (15.4W)
- **PoE Port**: 48
- **PoE Power Output / PoE Port 1~48:** max. 30W
- **PoE Power Output / PoE Switch**: max. 400W
- **Switch Power Usage**: max. 43.84W
- **PoE Port Output Voltage**: DC 44-57V
- **PoE Software Function:** Support PoE time management, Support PoE automatic monitoring and watchdog, Support PoE Port power supply and power configuration

Switch Architecture | Performance

- **Switching Performance**
  Bandwidth: 216Gbps
  Packet Forwarding Rate: 160.76Mpps
  Package Buffer: 16Mbit
  MAC Address: 32K
  Jumbo Frame: Up to 10K
  VLANs: VLAN range 1-4094, maximum active VLAN is 4K
  MTBF: 100000 hour

Software Function L3

- **IPv4:** Support IPv4 VLAN Interface, IPv4 Static Routes, ARP
- **IPv6:** Support IPv6 VLAN Interface, IPv6 Static Routes, IPv6 ND
- **RIP**: Support V1/V2
- **OSPF**: Support Router-ID, Authentication, V2

Software Function L2

- **Port Function:**
  Port Switch Configuration, Port Description Configuration, Port Speed Configuration, Port Duplex Configuration, Port Flow Control Configuration, Jumbo Frame up to 10K, EEE, Fiber Module (DDM)
  Link Aggregation:
  Support load balance policy; Based on MAC and IP-MAC, Static and Dynamic Group, Support LACP Up to 8 groups
- **Storm Control:**
  Support Broadcast Suppression, Unknown Multicast, Unknown Unicast
- **Port Mirroring:**
  Support One to one monitor, Many to one monitor, Ingress/Egress/Both, Up to 4 session groups
  Port Security:
  Support MAC Address Constraints, Port Security MAC Address, Protect/Restrict/Shutdown
- **Port Isolation:**
  Supported
- **Port Rate-limit:**
  Supported
- **Loopback Detection**:
  Supported
- **VLAN:**
  Support Access/Trunk/Hybrid, VLAN Tunnel (Q-in-Q Tunnel), VLAN range 1-4094, maximum active VLAN is 4K, Voice VLAN, MAC VLAN, Surveillance VLAN, Protocol VLAN, GVRP

** Specification will be changed without prior notice*

Specification

Model	AirLive L3POE-XGS4806-460

- **MAC Address:**
  Support Dynamic Address, Static MAC address, Filtering MAC Address
- **Spanning Tree:**
  Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocol
  Support BPDU Filter, BPDU Guard, Edge Port
- **ERPS (Ethernet Ring Protection):**
  Support Only SFP port
- **LLDP:**
  Support LLDP, LLDP MED
- **Multicast:**
  Support IGMP Snooping, IGMP v1/v2/v3, Router Port, Static IGMP group address, IGMP groups filtering, Querier, MLD Snooping, MVR
- **QoS:**
  Support Traffic classification based, Strict priority and WRR, Port Priority, 802.1P Priority, IP TOS Priority, IP DSCP Priority, Supports up to 8 queues per port, Priority Remarking

Services

- **DHCP:**
  Support DHCP Server, IP Pool, Static Binding, Option 43, DHCP Relay
- **Access Protocol**:
  Support HTTP, HTTPS, Telnet, SSHv2, Manager ACL, Session Timeout, Password Retry Count, Silent Time

Security

- **AAA:**
  Support RADIUS, TACACS+, 802.1X, Based on port/MAC/local/WEB
- **DHCP Snooping:**
  Support Global/VLAN, Option 82, Circuit ID
- **IP Source Guard:** Supported
- **Dynamic ARP Inspection**: Supported
- **DOS Anti Attack**: Supported
- **ACL**: Support MAC ACL, IPv4 ACL, IPv6 ACL

Diagnostics

- **Syslog**: Support Logging Message, Remote Server
- **Ping:** Supported
- **Copper Test**: Supported
- **UDLD**: Supported

Management

- **Manager Access:** Support Console, HTTP/HTTPS, Telnet, SSH, SNMP
- **Manager IP**: Support Static Address, DHCP Client, Supports IPv4 and IPv6 address, Manager VLAN, DNS
- **Time Synchronization**: Support SNTP, Manual Time
- **SNMP**: Support V1/V2C/V3, Community, V3 User, Group, Trap Host
- **SNMP MIB**: Support RFC 1213 MIB-II, RFC 1493 Bridge MIB, RFC 1643 Ethernet MIB, RFC 2819 RMON MIB (Groups 1, 2, 3 and 9), RFC 2863 Interface MIB, LLDP, Private MIB
- **RMON**: Support Statistics, History, Event, Alarm
- **User Management**: Supported
- **Firmware Management**: Support Firmware Upgrade, Double Image; Swap between Active and Alternate Firmware image.
- **Configuration Management**: Support Upload and Download, Save, Restart, Factory Defaults

Environment

- **Operating Temperature:** 0°C to +40°C
- **Storage Temperature:** -40°C to +70°C
- **Working Humidity**: 10%~90%, non-condensing
- **Storage Humidity**: 5%~95%, non-condensing

Standard package of Switch

- **Product size:**
  44.0 x 34.6 x 4.4 cm(L*W*H)
- **Package size:**
  58.0 x 44.0 x 12.0 cm(L*W*H)
- **Package Weight:**
  N.W: 5.27kg; G.W: 6.57kg
- **Package content**:
  PoE Switch x 1, QIG x 1, Power cord x 1, Rack ear x 1

Standard carton package

- **Quantity:** 2 pcs / 1 carton
- **Dimensions**
  60.0 x 46.0 x 27.8cm (L*W*H)
- **Weight**
  14.14kg (G.W)

Ordering Information

- **Model:**
  L3POE-XGS4806-460
- **Name:**
  L3 Managed Gigabit PoE+ 802.3at switch, 460W 48-Port including 6x 10G SFP+ Fiber ports.

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