

L3 450W Managed Multi Giga POE+/++ Switch with 10G uplink

30-Port PoE+/++ Multi Giga + 6 Ports 10G SFP+

L3POE-2TX2406-450 BT

airlive®



Rich L3
Features

24 Port RJ45
2500Mbps

L3 DHCP
Server/Relay

L3 OSPF Routes
Support

L3 DHCP
Snooping

PoE Watchdog
802.3bt support

ACL, ERPS

10G SFP+
Uplink

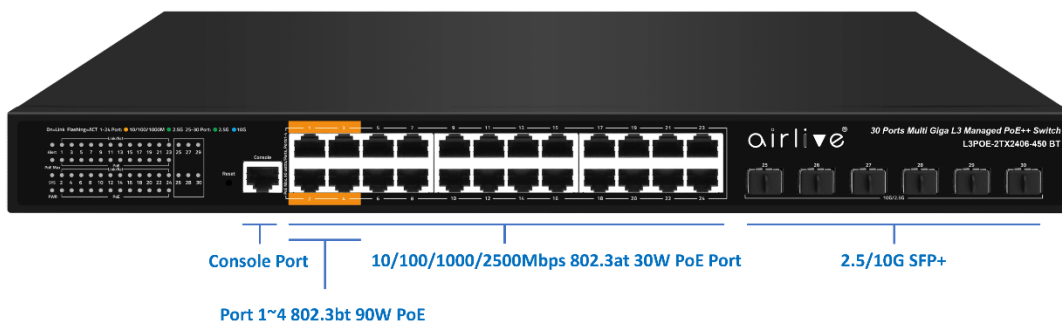
Overview

Rich L3 Features with Super High Speed

L3POE-2TX2406-450 BT series offers high performance full 24 port 2.5G PoE 30W (802.3at/af) RJ-45 including PoE++ 802.3bt (90W) for port 1~4, and 6 10G SFP+ ports hardware IP routing. Static route, OSPF, and RIP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers. With L3POE-2TX2406-450 BT series, customers could easily achieve a Policy-based Route (PBR), which is important when they need 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
- ITU-T G.8032 Ethernet Ring Protection Switching (ERPS)
- SNMP, WEB, CLI, SSH2.0, Telnet
- Multiple VLAN divisions
- IPv4/IPv6 L3 static route
- OSPF Routes dynamic routing
- SFP+ 10Gbps Fiber Long Distance
- Voice, Surveillance VLAN Support
- PoE Port configuration and scheduling
- Supports PoE++ up to 90W (Port 1~4 90W per port),
- 450W High PoE power, ensure full power for connected device
- Clear Statuses display including traffic, CPU, POE Consumption, per-port status
- Web-UI for easy management; CLI and Command Script for advance setting; SNMP used for popular network tools management.

Major Specifications

- 24 x 30W PoE (including 4x 90W) 100/1000/2500Mbps
- 6 x 2.5/10G SFP+
- 802.3bt/802.3at/802.3af compliant
- Each port up to 30Watts, Port 1~4 up to 90W; PoE Power 450W
- 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 12KV
- PoE management, PoE Watchdog
- Authentication: 802.1x, AAA
- DHCP Snooping prevents unauthorized router installed

Applications of Layer-3 Switches

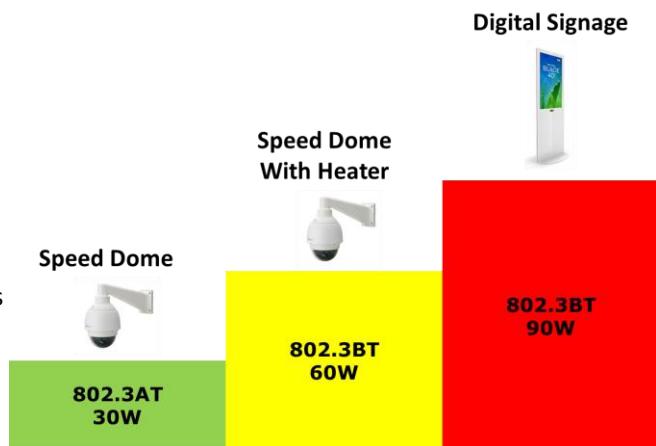
- Layer3 Switch is widely used in data centers and universities, factory, enterprise where there is a very big setup of computer networking. Owing to its features like static and dynamic routing and its fast-switching speed than a router, it is used in LAN connectivity for interconnection of several VLAN and LAN networks.
- L3POE-2TX2406-450 BT have 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.



802.3BT High Power PoE

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 802.3bt 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-2TX2406-450 BT supports the high-power output PoE++ at 90W for ports 1~4. This higher output allows it to power more device than just an IP camera or Access point. The 90W PoE can be used to power on high power needed PoE Systems, Digital Signage or even PoE LED lighting and much more. Giving you much more flexibility on the usage, as you are no longer restricted to only 30W.

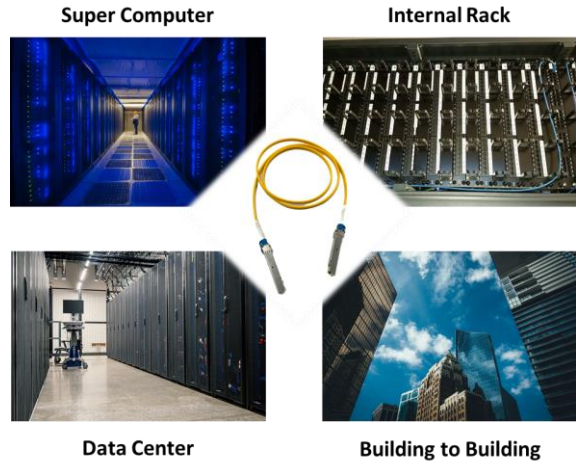


10G Performance and Scalability

With high switching capacity, L3POE-2TX2406-450 BT support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

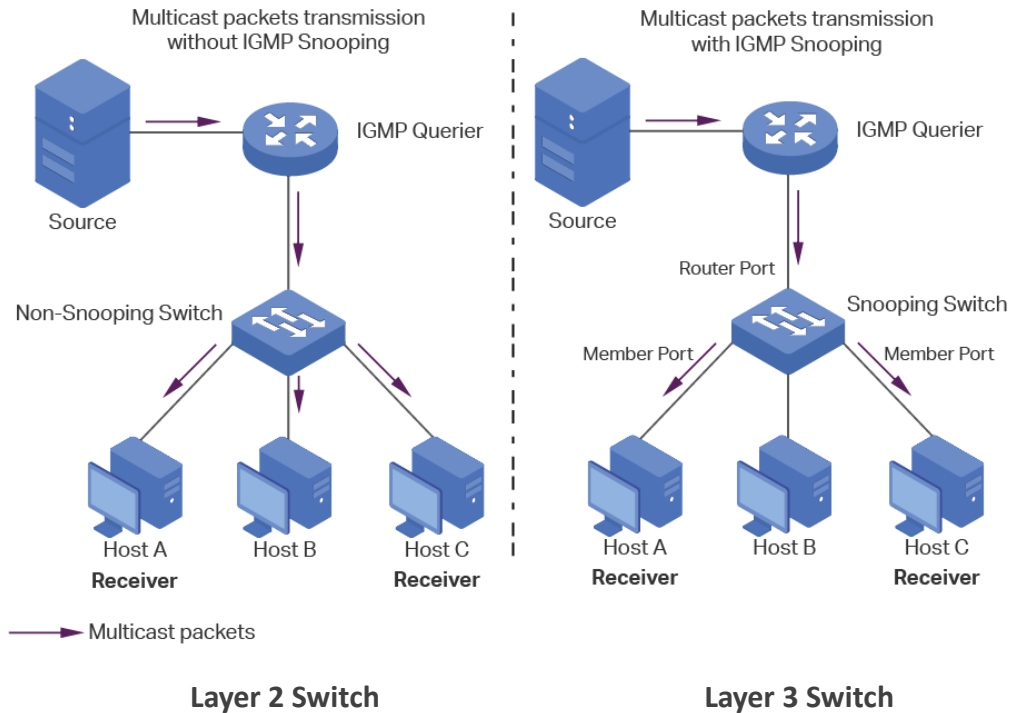
The 10 Gigabit connectivity of L3POE-2TX2406-450 BT is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber (The distance depends on the optical module chosen).

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; L3POE-2TX2406-450 BT fiber series provides a great application experience for the customer.



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.

OSPF Routes Info

OSPF Routes status Enable

Apply

Area Network Setting table

Showing [All] entries Showing 0 to 0 of 0 entries

Area Id	Network Ipv4 Address	Network Mask
0 results found.		

First Previous 1 Next Last

Add Delete

Area Network Setting table

Area Id	<input type="text" value="A.B.C.D"/>
Network Ipv4 Address	<input type="text"/>
Network Mask	<input type="text"/>

Apply Close

L3 DHCP Snooping Support

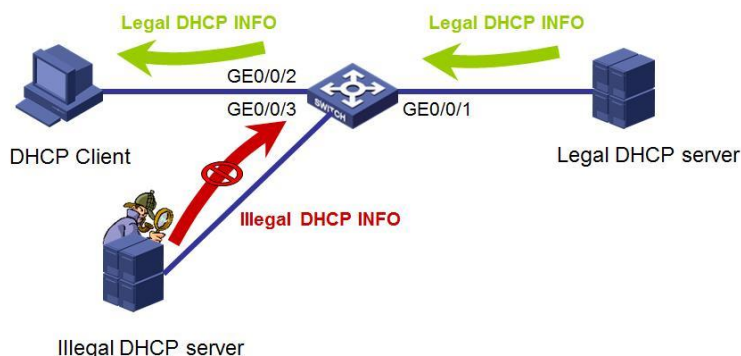
Prevention against illegal Router(DHCP Server) attacks or sending DHCP information.

DHCP Snooping Configuration

Snooping Mode: Enabled

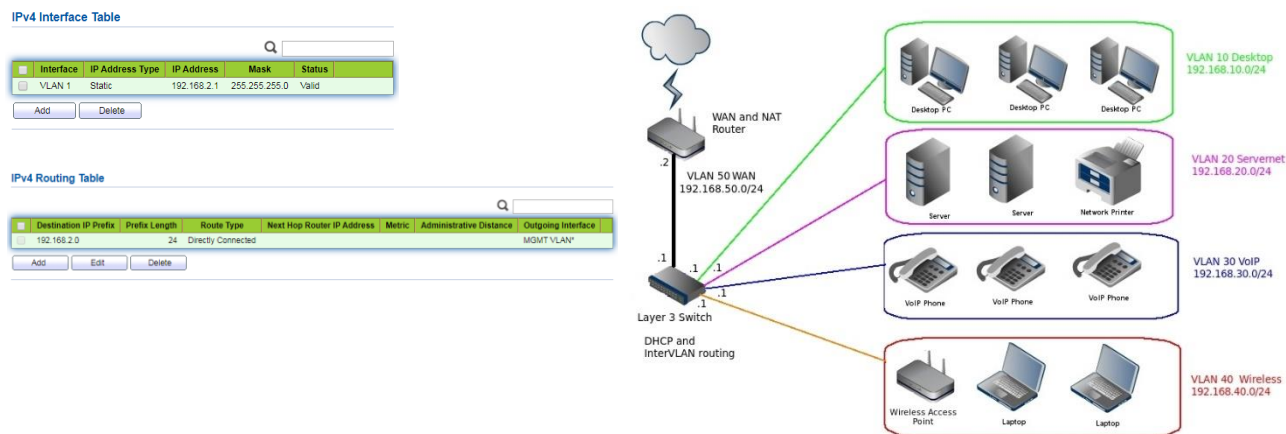
Port Mode Configuration

Port	Mode
*	<>
1	Trusted
2	Untrusted
3	Trusted
4	Trusted
5	Trusted
6	Untrusted
7	Trusted
8	Trusted
9	Trusted
10	Trusted



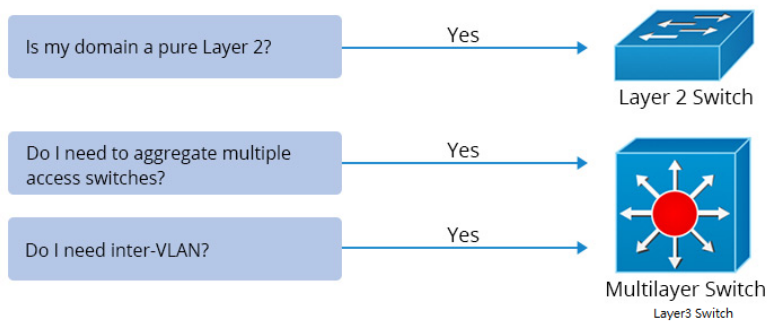
L3 VLAN IP Routing Interface Management

The L3POE-2TX2406-450 BT 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

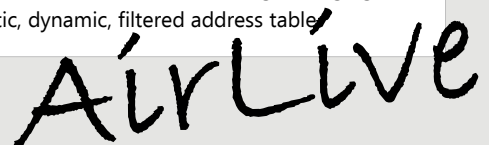
The layer 2 and Layer 3 differs mainly in the routing function. A Layer 2 switch works with MAC addresses only and does not care about IP address or any items of higher layers. Layer 3 switch, or multilayer switch, can do all the job of a layer 2 switch and additional static routing and dynamic routing 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

Model	AirLive L3POE-2TX2406-450 BT
<p>Hardware</p> <ul style="list-style-type: none"> • Device Interface: 24 x 10/100/1000/2500M PoE 30W Ports (Port 1~4 PoE 90W) 6 x 2.5/10G SFP+ Ports 1 x RJ45 Console Port 30 Port Totally <p>Standard</p> <p>IEEE 802.3 : Ethernet MAC Protocol IEEE 802.3i : 10BASE-T Ethernet 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 802.3bz : 2.5GBASE-T IEEE 802.3x : Flow control IEEE 802.1ab : LLDP/LLDP-MED (Link Layer Discovery Protocol) IEEE 802.1p : 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, IEEE 802.3bt 90W <ul style="list-style-type: none"> • LED Indicators: PWR(Power indicator),SYS(System lights), Warning Light Temp/Voltage), Link RJ-45 port: Green 2.5G, Yellow 100/1000Mbps, PoE LED (On/Off), Link SFP+ port: Blue 10G, Green 2.5G PoE Max LED: Off: indicates PoE power usage is less than 90% Flashing: indicates PoE power usage of 90% ≤ P ≤ 95% On: indicates that PoE power is used at 95% < P < 100% • Lighting Surge Protection: Support Port Surge Protection: General 4KV, Differential 2KV (level B), ESD 12KV air, 6KV contact (level B) • Mechanical Solid metal 19" 1U rack-mountable <p>Power</p> <ul style="list-style-type: none"> • Power Input: AC100~240VAC • Power Consumption: PoE: PoE Total Power maximum 400W, Power Consumption Switch: maximum 52W <p>Power and PoE</p> <ul style="list-style-type: none"> • Protocol: IEEE802.3bt (90W, IEEE802.3at (30W), IEEE802.3af (15.4W) • PoE Port: 24 • PoE Power Output / PoE Port 1~4: max. 90 watts • PoE Power Output / PoE Port 5~24: max. 30 watts • PoE Power Output / PoE switch: max. 400 watts • PoE Software Function: Support PoE time management Support PoE automatic monitoring and watchdog Support PoE Port power supply and power configuration </p>	<p>Switch Architecture Performance</p> <ul style="list-style-type: none"> • Switching Performance Bandwidth: 240Gbps Packet Forwarding Rate: 178.56Mpps DDR SDRAM: 512MB Flash Memory: 32MB Package cache: 16Mbit MAC Address: 32K Jumbo frame: 10Kbyte VLANs: 4096 MTBF: 100000 hour <p>Fiber Medium:</p> <p>Multi-mode Fiber: 50/125 、 62.5/125 、 100/140um Single-mode Fiber: 8/125 、 8.7/125 、 9/125 、 10/125um</p> <p>ERPS Ethernet Ring Protection</p> <ul style="list-style-type: none"> • Support G.8032 (ERPS), support 255 loops at most, and supports 1024 devices per ring. • The self-healing time of the ring network is less than 12ms <p>Software Function</p> <ul style="list-style-type: none"> • Basic function: Support hardware watchdog, factory reset, system and port LED Support global information, statistical information, log information Support User management, alarm management, configuration management Support Port rate, duplex, flow control, maximum frame length configuration Support Port mirroring, port speed limit, port energy saving • Layer 3 Interface: Support Layer 3 interface, Support IPv4, IPv6 VLAN Interface, Support ARP configuration Support ND configuration • Layer 3 Routing: Support IPv4 static routing, Support IPv6 static routing Support RIP V1/V2, Support OSPF V2, Router-ID • DHCP: Support DHCP server, Support DHCP relay, Support DHCP Snooping, IP Pool, Static Binding, Option 43 • VLAN: Support 4K VLAN Support 802.1Q VLAN · based on port VLAN Support Access · Trunk · Hybrid VLAN mode Support GVRP (VLAN registration protocol) Support MAC VLAN · IP VLAN Support Voice VLAN, Surveillance VLAN • MAC Address: Support MAC address automatic learning and aging Support Static, dynamic, filtered address table

* Specification will be changed without prior notice



Model	AirLive L3POE-2TX2406-450 BT
<ul style="list-style-type: none"> • Security features: <ul style="list-style-type: none"> Password protection Support Restrict user access based on port number, IP address, MAC address Support HTTPS、SSH V1/V2 Support VLAN-IP-MAC-PORT binding Support ARP detection, IP source protection, DoS protection Support DHCP Snooping、DHCP Attack protection Support 802.1X Certification Support AAA (Authentication, Authorization, Accounting), Support RADIUS protocol Support Port security, port isolation MAC ACL, IPv4 ACL, IPv6 ACL • Access control: <ul style="list-style-type: none"> Support L2(Layer 2)~L4(Layer 4) Packet filtering function Support Port mirroring, flow rate limiting, QoS remarking • QoS: <ul style="list-style-type: none"> Support Port Priority, 802.1P Priority, IP TOS Priority, IP DSCP Priority, Supports up to 8 queues per port, Priority Remarking • Spanning tree: <ul style="list-style-type: none"> Support STP(IEEE 802.1d), RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s) protocol Support Multi-instance, Support Aggregate interface Support BPDU protection • Multicast: <ul style="list-style-type: none"> Support IGMP v1/v2/v3 Snooping Support MLD v1/v2 Snooping Support Layer 2 multicast fast leave mechanism, querier Support Layer 2 IPv4 static multicast Support Layer 2 IPv6 static multicast Support IGMP v1/v2/v3 Layer 3 multicast • Storm Suppression: <ul style="list-style-type: none"> Support multicast suppression Support broadcast storm suppression Support unknown unicast suppression • Ring protection <ul style="list-style-type: none"> Support Ring protection • Link Aggregation <ul style="list-style-type: none"> Support Static Aggregation Support LACP Dynamic Aggregation Support based on IP, MAC, mixed load-balancing modes Maximum support 8 aggregation groups (8 ports per aggregation group) • IPv6 <ul style="list-style-type: none"> Support IPv6 Ping、IPv6 Traceroute、IPv6 Telnet Support IPv6 SSH Support IPv6 HTTP、IPv6 HTTPS 	<p>Management and Maintenance</p> <ul style="list-style-type: none"> Support WEB Management (HTTP、HTTPS) Support CLI (Telnet, SSH V1/V2, Local serial port) Support SNMP V1/V2/V3/MIB Support RMON V2 Support LLDP Device discovery Support SNTP Time synchronization Support CPU Monitoring, Memory Monitoring Support System log, classification warning Support Ping, Traceroute detection, cable detection <p>Environment</p> <ul style="list-style-type: none"> • Operating Temperature: -10°C to +50°C • Storage Temperature: -40°C to +70°C • Working Humidity: 10%~90%, non-condensing • Storage Humidity: 5%~95%, non-condensing <p>Standard package of switch</p> <ul style="list-style-type: none"> • Product size: 44x36x4.45 cm • Package Dimensions: 58x44x12 cm • Package Weight: N.W: 5.49KG/ G.W: 6.85KG • Package content: Switch x 1, QIG x 1, Power cord x 1, Serial cable x 1, Rack ear x 1 <p>Standard carton package</p> <ul style="list-style-type: none"> Carton Dimensions: 60x46x27.8 cm Packing QTY: 2 PCS Packing weight: 14.7 KGS <p>Ordering Information</p> <ul style="list-style-type: none"> • Model: L3POE-2TX2406-450 BT • Name: L3 POE Managed Multi Giga switch, 24-Port including 6x 10G SFP+ Fiber ports.

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