

L3 Managed Multi Giga Switch with 10G uplink

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

L3-2TX2406

airlive®



Rich L3
Features

24 Port RJ45
2500Mbps

L3 DHCP
Server/Relay

L3 OSPF Routes
Support

L3 DHCP
Snooping

IPv4/v6 L3
Static Route

ACL, ERPS

10G SFP+
Uplink

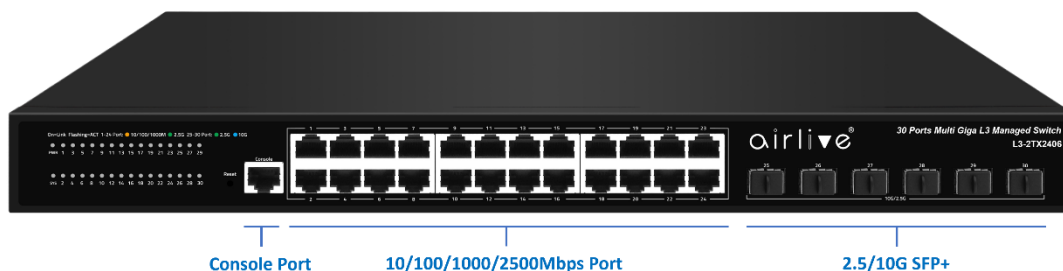
Overview

Rich L3 Features with Super High Speed

L3-2TX2406 series offers high performance full 24 port 2.5G RJ-45 and 6x 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 L3-2TX2406 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

- L3 Management, support DHCP Server, QoS, ACL, SNMP V1/V2/V3, IGMP Snooping v1/v2
- Fully L2 features provide easier manageability, security and QoS
- ITU-T G.8032 Ethernet Ring Protection Switching (ERPS)
- IPv4/IPv6 L3 static route
- Support STP/RSTP/MSTP (ERPS), Support loop detection and self-healing, support remote loopback monitoring and control (802.3ah OAM)
- 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
- Clear Statuses display including traffic, CPU, per-port status
- Easy management; Support WEB, TELNET, CLI, SSH, SNMP, RMON management

Major Specifications

- 24 x 10/100/1000/2500Mbps
- 6 x 2.5/10G SFP+
- Rich Layer 3 Features
- L3 DHCP Server/Relay
- L3 DHCP Snooping
- IPv4/IPv6 L3 static route
- OSPF Routes dynamic routing
- Surge Protection 4KV, ESD Protection 8KV
- 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.
- L3-2TX2406 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.

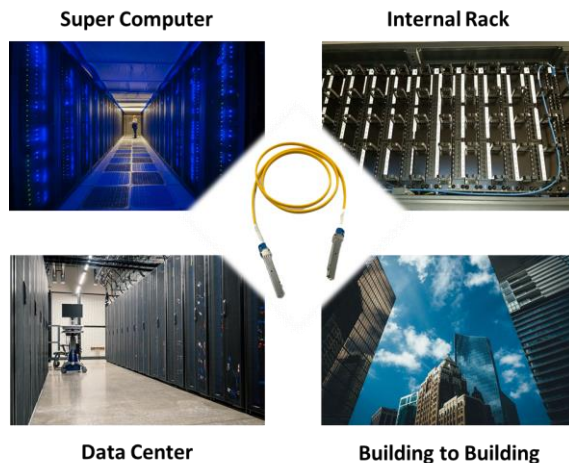


10G Performance and Scalability

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

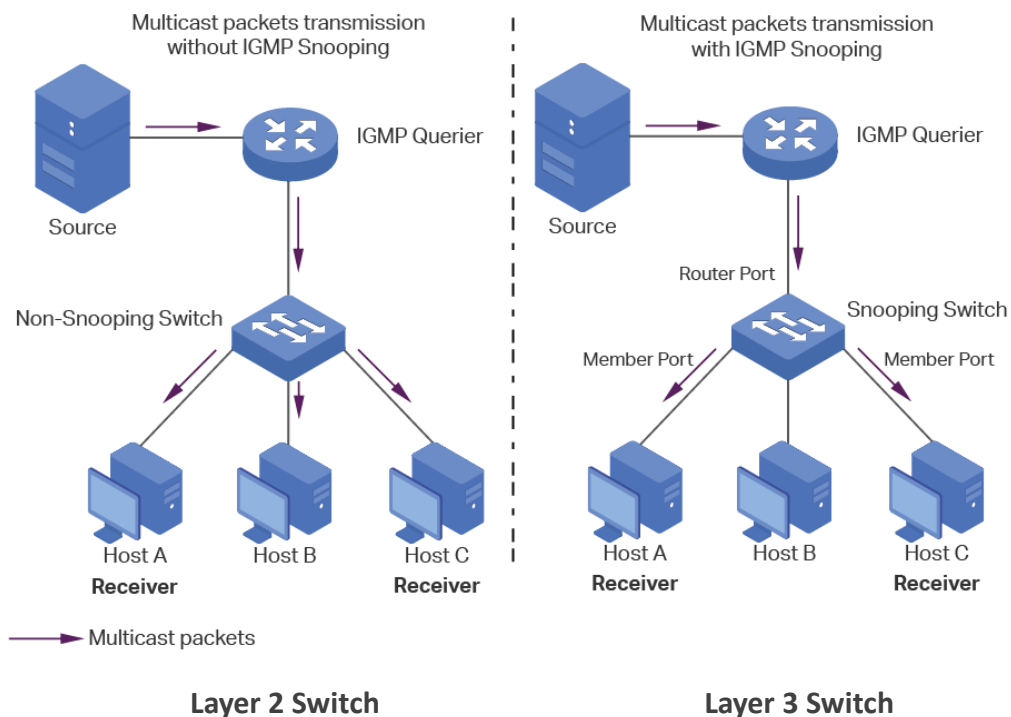
The 10 Gigabit connectivity of L3-2TX2406 is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber (The distance depends on the optical module chosen).

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; L3-2TX2406 fiber series provides a great application experience for the customer.



L3 OSPF Routes Management

Open shortest path first (OSPF) 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

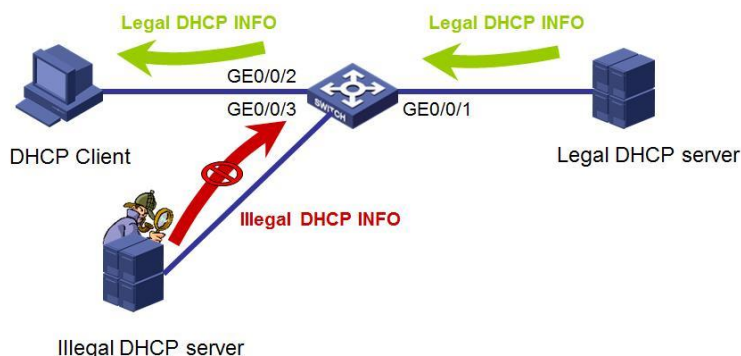
Prevention against illegal Router(DHCP Server) attacks or sending DHCP information.

DHCP Snooping Configuration

Snooping Mode: Enabled

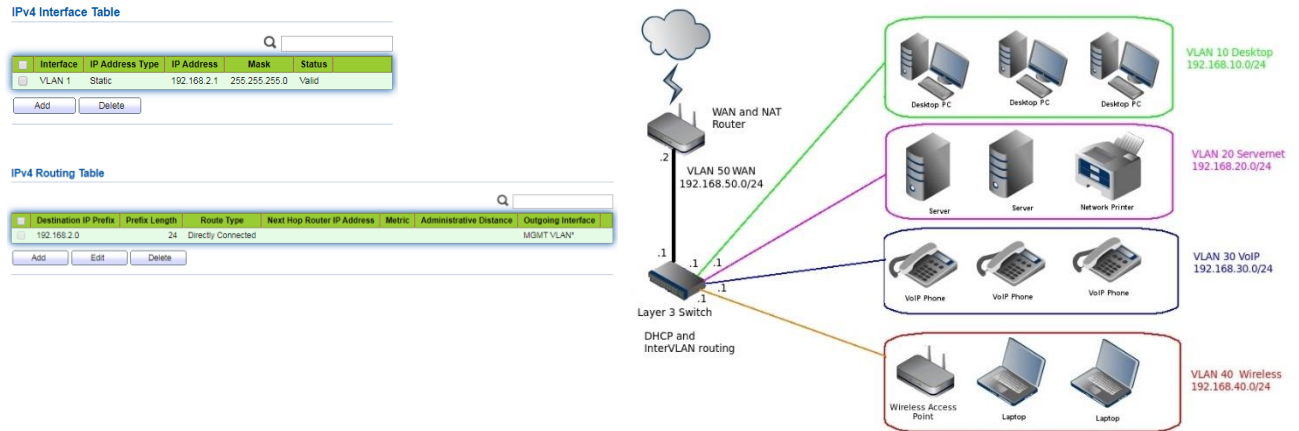
Port Mode Configuration

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



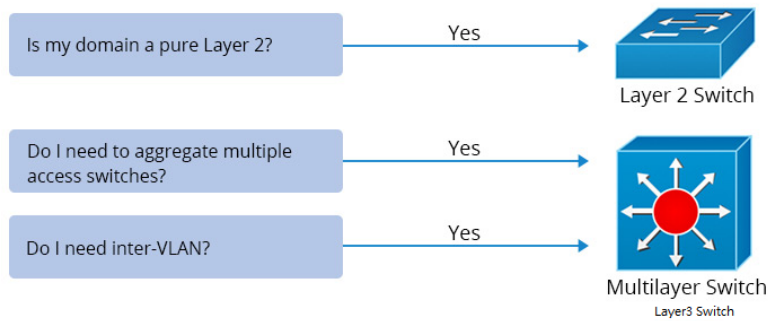
L3 VLAN IP Routing Interface Management

The L3-2TX2406 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 L3-2TX2406
<p>Hardware</p> <ul style="list-style-type: none"> • Device Interface: 24 x 10/100/1000/2500M Ports 6 x 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 • LED Indicators: PWR(Power indicator),SYS(System lights), Warning Light Temp/Voltage), Link RJ-45 port: Green 2.5G, Yellow 100/1000Mbps, Link SFP+ port: Blue 10G, Green 2.5G • Lighting Surge Protection: Support Port Surge Protection: Common Mode 6KV, Differential Mode 2KV; ESD: Contact 6KV, Air 8KV • Mechanical Solid metal 19" 1U rack-mountable <p>Power</p> <ul style="list-style-type: none"> • Power Input: AC100~240VAC • Power Consumption Switch: Maximum 52W <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>	<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>Software Function L3</p> <ul style="list-style-type: none"> • 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 <p>Software Function L2</p> <ul style="list-style-type: none"> • Port Function: Port Switch Configuration, Port Description Configuration, Port Speed Configuration, Port Duplex Configuration, Port Flow Control Configuration, Jumbo Frame up to 10K, 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), Configurable VID from 1 - 4094; Max. 4K static VLAN groups, Voice VLAN, MAC VLAN, Surveillance VLAN, Protocol VLAN, GVRP

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Model	AirLive L3-2TX2406
<p>MAC Address: Support Dynamic Address, Static MAC address, Filtering MAC Address</p> <p>Spanning Tree: Support STP(IEEE 802.1d), RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s) protocol Support BPDU Filter, BPDU Guard, Edge Port</p> <p>ERPS (Ethernet Ring Protection): Support G.8032 (ERPS), ERPS Instance</p> <p>LLDP: Support LLDP, LLDP MED</p> <p>Multicast: Support IGMP Snooping, IGMP v1/v2/v3, Router Port, Static IGMP group address, IGMP groups filtering, Querier, MLD Snooping, MVR</p> <p>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</p> <p>Services</p> <ul style="list-style-type: none"> DHCP: Support DHCP Server, IP Pool, Static Binding, DHCP Relay, Option 43 Access Protocol: Support HTTP, HTTPS, Telnet, SSHv2, Manager ACL, Session Timeout, Password Retry Count, Silent Time <p>Security</p> <ul style="list-style-type: none"> 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: Supported DOS Anti Attack: Supported ACL: Support MAC ACL, IPv4 ACL, IPv6 ACL <p>Diagnostics</p> <ul style="list-style-type: none"> Syslog: Support Logging Message, Remote Server Ping: Supported Copper Test: Supported UDLD: Supported 	<p>Management</p> <ul style="list-style-type: none"> 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: Supported Firmware: Support Double Image; Swap between Active and Alternate firmware image, Firmware Upgrade Configuration: Support Upload and download, Upload and download via USB interface, Save, Restart, Factory Defaults <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: 44.0 x 36.0 x 4.45 cm(L*W*H) Package Dimensions: 58.0 x 44.0 x 12.0 cm(L*W*H) 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> <p>Carton Dimensions: 60.0 x 46.0 x 27.8 cm(L*W*H) Packing QTY: 2 PCS Packing weight: 14.7kg</p> <p>Ordering Information</p> <ul style="list-style-type: none"> Model: L3-2TX2406 Name: L3 Managed Multi Giga switch, 24-Port including 6x 10G SFP+ Fiber ports.

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