LAYER 2+ MANAGED GIGABIT POE+ SWITCHES

APS Series Layer 2+ SNMP Managed Gigabit PoE+ Switches

With a comprehensive range of latest generation Layer 2+, QoS and Security features and integrated, high density support of standards-based Power over Ethernet, APS series switches are the ideal solution for businesses of all sizes.

High Density, High Bandwidth Ports

APS Series switch models offer flexible port configurations, with combinations of 1000Base-T 10/100/1000mbps RJ-45, paired 1000Base-T/SFP arrays (with the SFP slot supporting 100Mbps or 1Gbps mini-GBIC modules), unpaired SFP slots (also supporting 100Mbps or 1Gbps mini-GBIC modules), and SFP+ slots for 1Gbps or 10Gbps mini-GBIC modules. Port densities range from 10 to 48 ports.

IEEE PoE High Power

Energy Efficient Ethernet

The Power of PoE+

All APS series switches provide IEEE 802.3af and the latest 802.2at 'PoE+' Power over Ethernet. With all RJ-45 ports supporting PoE+, devices such as IP Phones and Wireless Access Points can now connected directly to the network with data and power supplied over a single UTP cable, reducing deployment and maintenance costs and making it much easier to install devices exactly where they are required. With APS series support of 802.3at PoE+, up to 30 watts power can be supplied per port, so power hungry devices such an Pan Tilt Zoom IP Security Cameras can be connected directly to the network. Whatever you PoE requirement may be, the APS series offers a solution with individual models supporting from 8 to 48 PoE+ ports

Powerful Layer 2+ Management Features

All models in the range feature advanced Layer 2+ management functions, ensuring the high performance required by modern networks supporting data voice and video applications. An intuitive web GUI management interface can be accessed via HTTP or HTTPS. SNMP versions 1, 2 and 3 are supported as well as RMON, allowing the network administrator to manage, configure and control the switch from any SNMP based software application. Console port, and CLI are also supported. A dual IPv4/IPv6 protocol stack is provided, supporting a wide range of IPv6 applications including Web/SSL, Telnet/SSH, ping, SNTP, TFTP, SNMP, RADIUS and Syslog. Other supported functions include: Link Aggregation Control Protocol (LACP) trunking; VLAN, IGMP and MLD; Link Layer Detection Protocol (LLDP); v1 and v2 SSH, IP source Guard, RADIUS/TACACS+ and Access Control Lists (ACLs).

Standards-based Energy Efficient Green Ethernet

APS series switches comply with the latest IEEE 802.3az Energy Efficient Green Ethernet standard to minimise power usage, with features such as Link Detection and Cable Length Detection are supported. Link Detection automatically turns the power off/on to individual ports depending on link/idle traffic status. Cable Length Detection adjusts the signal strength based on the length of the cable - when using shorter cables the power consumption is reduced.

KEY FEATURES

ALLOY APS LAYER 2+ SNMP MANAGED GIGABIT POE+ SWITCHES

- Up to 48 PoE+ IEEE 802.3at Power over Ethernet RJ-45 ports (802.3af compatible)
- Each PoE plus port provides up to 30 watts power - enough for IP security cameras
- Up to 380 watt per switch power budget
- Wirespeed performance - up to 130.94mpps switching architecture, 136Gbps forwarding rate
- High density port configurations - up to 48 ports
- Dual speed SFP+ slots supporting Gigabit or 10Gigabit mini-GBICs modules
- Dual speed SFP slots for Fast Ethernet or Gigabit mini-GBIC modules
- Layer 2 Plus features provide enhanced manageability, security, QoS and Performance
- Easy to use Web Based Management
- Comprehensive VLAN, GVRP, DHCP Relay, IGMP and MLD Snooping functions
- Advanced QoS features including hardware Priority Queues, SR and WRR Scheduling, all major Classification regimes, Rate limiting and IPv6 Applications
- IPv6 and s-Flow support
- IEEE 802.3az Energy Efficient Ethernet standard
- Robust security features including SSH, SSL, HTTPS, 802.1x, Layer 2 Isolation, IP Source Guard, RADIUS/TACACS+, and ACLs.

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APS Series Layer 2+ Managed

Specifications

	APS-10T2SFP	APS-24T6SFP	APS-48T4SFP	APS-24T4S4SFP	APS-48T4S4SFP
Interface					
Total Ports, comprising:	10x GbE	26x GbE	48x GbE	28x GbE/10GbE	52x GbE/10GbE
UTP (10/100/1000Mbps)	8	20	44	20	44
UTP/SFP Array (100Mbps/1Gbps)	2	4	4	4	4
SFP (100Mbps/1Gbps)	•	2	•	•	•
SFP+ (1Gbps/10Gbps)	•	•	•	4	4
Power over Ethernet					
Total IEEE 802.3af/at PoE Ports	8	24	48	24	48
PoE compliant Ports	UTP Ports 1-8	UTP ports 1-24	UTP ports 1-48	UTP ports 1-24	UTP ports 1-48
Max AF/AT Power Per Port (watts)	15.4W 802.3af / 30W 802.3af				
Total Power Budget (watts)	130W	250W	360W	250W	380W
General					
Jumbo frames	9Kb on Gigabit Interfaces				
MAC Table	8K	32K	32K	32K	32K
Performance					
Switching capacity	14.88mpps	38.69mpps	71.42mpps	95.23mpps	130.94mpps
Forwarding rate	20Gbps	52Gbps	96Gbps	128Gbps	136Gbps
Layer 2+ Switching					
Spanning Tree	Spanning Tree Protocols supported: STP, RSTP, MSTP				
LACP Trunking	5 groups, 10 ports per group	12 groups, 8 ports per group	24 groups, 12 ports per group	14 groups, 8 ports per group	24 groups, 12 ports per group
VLAN	4K VLAN's: Port based VLAN's; 802.1Q; MAC Based VLAN's; Management VLAN; Private VLAN				
Voice VLAN	Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS				
GVRP	Supported				
DHCP Relay	Relay of DHCP traffic to DHCP server in different VLAN. Works with DHCP Option 82				
IGMP Snooping	V1, V2 and v3 . Supports 1024 Multicast Groups				
IGMP Querier	Supported				
IGMP Proxy	Supported				
MLD Snooping	v1 and v2				
Security					
SSH	v1 and v2 are supported				
SSL	Supported				
IEEE 802.1x	IEEE 802.1x: RADIUS authentication, authorisation and accounting, MD5 hash, guest VLAN, single/multiple host mode and single/multiple sessions. Supports IGMP-RADIUS based 802.1x Dynamic VLAN assignment.				
Layer 2 Isolation	PVE (Private VLAN Edge, aka protected ports) for L2 isolation between clients in the same VLAN. Supports multiple uplinks.				
Port Security	Locks MAC Addresses to ports, and limits the number of learned MAC addresses				
IP Source Guard	Supports illegal IP address from accessing to specific port in the switch				

Gigabit PoE+ Switches

Specifications (continued)

	APS-10T2SFP	APS-24T6SFP	APS-48T4SFP	APS-24T4S4SFP	APS-48T4S4SFP
Security (cont.)					
Port Security	Locks MAC Addresses to ports, and limits the number of learned MAC addresses				
RADIUS/ TACACS+	Supports RADIUS and TACACS+ authentication. Switch as a client.				
Storm control	Prevents broadcast, multicast, or unicast storm on a port.				
ACLs	Supports up to 256 entries Drop or rate limitation based on source and destination MAC, VLAN ID or IP address, protocol, port, differentiated services code point (DSCP) / IP precedence, TCP/ UDP source and destination ports, 802.1p priority, Ethernet type, Internet Control Message Protocol (ICMP) packets, IGMP packets, TCP flag.				
Quality of Service					
H/W Priority Queue	Supports 8 hardware priority queues				
Scheduling	Strict priority and weighted round-robin (WRR). Queue assignment based on DSCP and class of service (802.1p/ CoS)				
Classification	Port based; 802.1p VLAN priority based; IPv4/IPv6 precedence/ type of service (ToS) / DSCP based; Differentiated Services (DiffServ); classification and re-marking ACLs, trusted QoS				
Rate Limiting	Ingress policer; egress shaping and rate control; per VLAN, per port and flow based				
IPv6 applications	Web/SSL, Telnet/SSH, Ping, Simple Network Time Protocol (SNTP), Trivial File Transfer Protocol (TFTP), SNMP, RADIUS, Syslog				
Management					
Web GUI interface	HTTP/ HTTPS				
Dual Image	Dual image provides independent primary and secondary OS files for backup while upgrading.				
SNMP	SNMP version 1, 2c and 3				
RMON	RMON (Remote Monitoring) groups 1,2,3,9				
IPv4 and IPv6	Dual protocol stack supported				
Firmware Upgrade	Web browser upgrade (HTTP/ HTTPS) and TFTP Upgrade through console port also supported.				
Port mirroring	Up to 8 source ports can be mirrored to single destination port				
s-Flow	Monitoring for high speed switched networks supported				
UPnP	Universal Plug and Play supported				
Green Ethernet					
Link detection	Compliant with IEEE 802.3az Energy Efficient Ethernet. Automatically turns off power on Gigabit Ethernet RJ-45 port when detecting link down or client idle. Active mode is resumed without loss of any packets when the switch detects link up.				
Cable length detection	Adjusts the signal strength based on the cable length. Reduces the power consumption for shorter cables.				
Discovery					
LLDP	IEEE 802.1AB - Link Layer Detection Protocol with LLDP-MED extensions				
Physical					
Case	Desktop, 1RU		19" Rackmount, 1RU		
Dimensions (WxHxD)	280x44x230 mm	442x44x300 mm	442x44x385 mm		
Weight	2Kg	4.6Kg	5Kg		
Temperature	0^0 to 40^0 operating; -20^0 to 70^0 storage				
Humidity	10% to 90% , relative, non-condensing				
Power Supply	100-240VAC 50-60Hz, internal , universal				
Certification	CE Mark, FCC Part 15 (CFR47) Class A, C-Tick				

System requirement information for the APS Series Switch Series on back page

APS Series Layer 2+ SNMP Managed Gigabit PoE+ Switches

LAYER 2+ MANAGED GIGABIT POE+ SWITCHES

Advanced Layer 2+ Management

Alloy's APS switch series brings together the latest Layer 2+ technologies to provide highly reliable network infrastructure with advanced management features. APS series switches deliver the latest intelligent features, improving availability of critical business applications, protecting sensitive data and optimising network bandwidth to ensure effective delivery of information and applications. Strong security is ensured through features such as SSH/SSL, ACL, Port Security, Private VLAN Edge, IP Source Guard, Radius/TACACS+ and Storm Control. APS switches are easy of use with features such as LLDP for central management and auto-discovery, port configuration routines for IP phone, WiFi and IP camera clients and fast QoS and security function setup.

Up to 48 PoE/PoE+ Ports In One Switch

APS series models support both IEEE 802.3af and 802.3at Power over Ethernet standards, with up to and 48 PoE+ ports per switch. Where networks need to support devices such as IP Phones, Wireless Access Points and IP Paging equipment, power is supplied over UTP cable infrastructure. With 802.3at PoE+ supported and delivering up to 30 watts per port devices such as PTZ IP Security Cameras can now be powered via the network, supporting a more efficient, better connected workforce at a very affordable price.

PoE Switching Solutions For Businesses Of All Sizes

Our comprehensive range of PoE switch solutions offers unrivaled advantages for SMB and large enterprises. All models feature high performance wirespeed arcchitecture. Individual models offer from 8 Gigabit to 48 10/100/1000Mbps RJ-45 Gigabit ports - all supporting IEEE 802.3af/at PoE. All models ensure scalability and flexibility with the provision of RJ-45/SFP port arrays. Selected models support ultra high bandwidth connectivity via 10Gigabit Ethernet SFP+ slots.

Energy Efficient Design

All models in the series have a power saving design, utilising the latest IEEE IEEE 802.3az Energy Efficient Green Ethernet standard supporting Link and Cable Length Detection.

APS Series L2+ SNMP Gigabit PoE Switches: Part Numbers and Ports

APS-10T2SFP	1Gig Switch: 8x PoE RJ45, 2x RJ45/SFP
APS-24T6SFP	1Gig Switch: 20x PoE RJ45, 4x PoE RJ45/SFP, 2x SFP
APS-48T4SFP	1Gig Switch: 44x PoE RJ45, 4x PoE RJ45/SFP
APS-24T4S4SFP	1Gig/10Gig: 20x PoE RJ45, 4x PoE RJ45/SFP, 4x SFP+
APS-48T4S4SFP	1Gig/10Gig: 44x PoE RJ45, 4x PoE RJ45/SFP, 4x SFP+

APS Series System Requirements and Package Contents

	APS-10T2SFP	APS-A24T6SFP	APS-48T4SFP	APS-24T4S4SFP	APS-48T4S4SFP
Minimum Requirements					
Web Browser	Mozilla Firefox version 2.5 or later, Microsoft Internet Explorer version 6 or later				
Network Cable	Category 5 UTP or STP Ethernet network cable (or higher)				
Network Protocol	TCP/IP. Network Adapter and Network Operating System (e.g. MS Windows, Linux, Mac OSX) installed on all network PC's				
Package Contents					
Individual APS series switch model; power cord; 19" rackmount kit; serial console cable; user manual (PDF on CD-ROM)					

Complete technical specifications for the APS Series Switch Series on inner pages

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