Air Pro®

Simple | Secure | Trusted

Next-generation stackable routing switch with 1GE copper

PRODUCT OVERVIEW

AP-SG6500-8G24S2Q is AirPro's next-generation stackable routing switch with 1GE copper, 1GE/10GE fiber access and 40GE fiber uplink ports. AP-SG6500-8G24S2Q has advanced hardware and software architecture design, built-in dual redundant power supplies. These switches provide high availability, scalability, security, energy efficiency, and ease of operation with innovative features such as VSF (Virtual Switch Framework) and 3 fixed Auto-adjusted fan units. It is ideal for high-density aggregation or core layer in Enterprise networks or Campus networks.

MAIN FEATURES

- 8 x 10/100/1000BaseT + 24 x 10GE(SFP+) + 2 x 40GE(QSFP+).

- Redundant Fixed AC+DC(48V) Power Supply.

- 1 console, 1 USB, 1 RJ45 management port.

- 1 Rest Button.

- Forwarding performance: 488Mpps.

- Switching capacity: 656Gbps.

KEY FEATURES AND HIGHLIGHTS

Flexible Access and Scalability
With multiple port types AP-SG6500-8G24S2Q support 100M or 1000M copper access and 1G or 10G fiber access. The 40 Gigabit Ethernet connectivity of AP-SG6500-8G24S2Q is accomplished via a hot-pluggable 40 Gigabit QSFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber (The distance depends the optical module chosen).

VSF (Virtual Switch Framework)
Virtual Switch Framework can virtualize multiple AirPro switches into one logical device, achieving the sharing of information and data tables between different switches. The performance and ports density of virtualized device are greatly enlarged by times under VSF. VSF also simplifies management work for network administrator and provides more reliability.

Rich L3 Features
AP-SG6500-8G24S2Q delivers high-performance, hardware-based IP routing.RIP, OSPF and BGP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers. With AP-SG6500-8G24S2Q, customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

Strong Multicast
AP-SG6500-8G24S2Q supports abundant multicast features. In Layer 2, such as IGMPv1/v2/v3 snooping and fast leave. L3 multicast protocols such as IGMPv1/v2/v3, PIM-DM, PIM-SM, PIM-SSM and even MSDP. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions; AP-SG6500-8G24S2Q provides great application experience for customer.

Easy High Reliability network

MRPP is Multi-layer Ring Protection Protocol, which is AirPro's private fast Ethernet ring protocol. Comparing to spanning tree protocol, it has advantages of fast convergence, simple protocol calculation, less system resources cost and so on, which can improve the reliability of Ethernet network operation.

Comprehensive QoS
With 8 queues per port, AP-SG6500-8G24S2Q enable differentiated management of up to 8 traffic types. The traffic is prioritized according to IEEE802.1p, DSCP, IP precedence and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video.

AP-SG6500-8G24S2Q also supports Bi-directional rate-limiting, per port or traffic class, preserves network bandwidth and allows full control of network resources.

Enhanced Security
IEEE 802.1X port-based access control and MAC-based access control ensure all users are authorized before being granted access to the network.

Ingress/Egress Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers information. And for some services are based on time, the product can support time-based ACL to match the requirement.

Secure Shell (SSH) encrypts network management information via Telnet providing secure network management.

RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

PRODUCT SPECIFICATIONS
Hardware Specifications

Item	AP-SG6500-8G24S2Q
Physical port	8 x 10/100/1000BaseT + 24 x 10GE(SFP+) + 2 x 40GE(QSFP+)
Management port	1 x RJ45 Ethernet Management port
	1x Console port
	1x USB2.0 interface
Performance	
Switching Capacity	656Gbps
Forwarding Rate	488Mpps
Jumbo Frame	16K
MAC Address	32K
ARP Table	16K
Routing Table	16K
ACL Table	3K
L3 Interface	Max 1K
Physical	
Dimension (W*H*D)	440mm x 44mm x 320mm
Relative Humidity	5%~90% non-condensing, storage 95%
Temperature	Working 0°C~50°C, storage -40°C~70°C
Power Supply	AC: 100~240VAC, 50~60Hz
	+ 48VDC
Power Consumption	<85W
Main Features	
L1, L2 Features	IEEE802.3(10Base-T), IEEE802.3u(100Base-TX), IEEE802.3z(1000BASE-X), IEEE802.3ab(1000Base-T), IEEE802.3ae(10GBase), IEEE802.3x, IEEE802.3ak(10GBASE-CX4), IEEE 802.3ba, Auto MDI/MDIX
	Port loopback detection
	LLDP and LLDP-MED
	UDLD
	802.3ad LACP, max 128 group trunks with max 8 ports for each trunk
	LACP load balance
	N:1 Port Mirroring
	RSPAN
	IEEEE802.1d(STP)
	IEEEE802.1w(RSTP)
	IEEEE802.1s(MSTP)
	Root Guard
	BPDU Guard
	802.1Q, 4K VLAN
	MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN
	QinQ, Selective QinQ, Flexible QinQ
	GVRP
	Broadcast / Multicast / Unicast Storm Control
	IGMP v1/v2/v3 Snooping and L2 Query IGMP Proxy
	ND Snooping
	MLDv1/v2 Snooping
	Port Security
	Flow Control: HOL, IEEE802.3x
	Bandwidth Control
L3 Features	Static Routing, RIPv1/v2,OSPFv2,BGP4
	OSPFv3, BGP4+
	OSPF multiple process
	LPM Routing
	Policy-based Routing (PBR) for IPv4 and Ipv6
	VRRP
	URPF,
	ECMP
	BFD
	DVMRP, PIM-DM, PIM-SM, PIM-SSM, Any Cast RP, MSDP
	Static Multicast Route
	Multicast Receive Control
	Illegal Multicast Source Detect
	ARP Guard, Local ARP proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit
	Anti ARP/NDP Cheat, Anti ARP/NDP Scan
	DNS Client, DNS Relay
Ipv6	ICMPv6, ND, DNSv6
	IPv6 LPM Routing, IPv6 Policy-based Routing (PBR)
	IPv6 VRRPv3, IPv6 URPF, IPv6 RA
	RIPng, OSPFv3, BGP4+
	MLD Snooping, IPv6 Multicast VLAN
	MLDv1/v2, PIM-SM/DM for IPv6, IPv6 Any Cast RP, IPv6 ACL, IPv6 QoS

PRODUCT SPECIFICATIONS
Hardware Specifications

QoS	*8 Queues* *SWRR, SP, WRR, WDRR, SWDRR* *Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, port number* *Traffic Policing* *PRI Mark/Remark*
ACL	*IP ACL, MAC ACL, IP-MAC ACL* *Standard and Expanded ACL Based on source/destination IP or MAC, IP Protocol, TCP/UDP port,* *DSCP, ToS, IP Precedence), VLAN, Tag/Untag, CoS* *REDIRECT and Accounting based ACL* *Rules can be configured to port, VLAN, VLAN routing interfaces* *Time Ranged ACL*
Security	*802.1x AAA* *Port, MAC based authentication* *Accounting based on time length and traffic* *Guest VLAN and auto VLAN* *RADIUS for IPv4 and Ipv6* *TACACS+ for IPv4 and Ipv6* *MAB*
DHCPv4/v6 Traffic Monitor	*DHCP Server/Client for IPv4/IPv6* *DHCP Relay/Option 82* *DHCP Snooping/Option 82*
Traffic Monitor	*sFlow Traffic Analysis*
Security Network Management	*CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6* *Syslog and external Syslog Server* *HTTP SSL* *SNMP MIB, SNMP TRAP* *FTP/TFTP* *SNTP/NTP* *RMOM 1,2,3,9* *Authentication by Radius/TACACS* *SSH v1/v2* *Dual firmware images/ Configuration files* *802.3ah OAM, 802.1ag OAM*
Data Center Features	*VSF(Virtual Switch Framework)*

PRODUCT INFORMATION

Product	Description
AP-SG6500-8G24S2Q	40G Ethernet Routing Switch, 8 x 10/100/1000Base-T (RJ45) + 24 x 10GE (SFP+) + 2 x 40GbE (QSFP+), AC + 48VDC power supply

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