DATASHEET
AP-SG6500E-8G24XF2Q

Air Pro®
Simple | Secure | Trusted

Next-generation stackable routing switch with 1GE copper

PRODUCT OVERVIEW

AP-SG6500E-8G24XF2Q is AirPro's next-generation stackable routing switch with 1GE copper, 1GE/10GE fiber access and 40GE fiber uplink ports. AP-SG6500E-8G24XF2Q 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+).
- Dual Power AC+DC (48V).
- 1 Console, 1 USB, 1 RJ45 management port.
- 1 Reset Button.
- Forwarding Rate 488Mpps.
- Switching capacity 656Gbps.
- MAC Address 48K

KEY FEATURES AND HIGHLIGHTS

Flexible Access and Scalability
With multiple port types AP-SG6500E-8G24XF2Q support 100M or 1000M copper access and 1G or 10G fiber access. The 40 Gigabit Ethernet connectivity of AP-SG6500E-8G24XF2Q 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-SG6500E-8G24XF2Q 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-SG6500E-8G24XF2Q, customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

Strong Multicast
AP-SG6500E-8G24XF2Q 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-SG6500E-8G24XF2Q 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-SG6500E-8G24XF2Q 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-SG6500E-8G24XF2Q 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.

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PRODUCT SPECIFICATIONS

Hardware Specifications

Item	AP-SG6500E-8G24XF2Q
Physical port	8 x 10/100/1000BaseT + 24 x 10GE(SFP+) + 2 x 40G (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	16000
MAC Address	48000
ARP Table	16000
Routing Table	16000
ACL Table	3000
L3 Interface	Max 1000
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 Support hot plug, redundant power supply
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, MRPP, ERPS (G.8032)
	N:1 Port Mirroring RSPAN
	IEEEE802.1d(STP) IEEEE802.1w(RSTP) IEEEE802.1s(MSTP) Root Guard BPDU Guard
	802.1Q, 4000 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 processes LPM Routing, VRF-Lite 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

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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, Cloud management 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-SG6500E-8G24XF2Q	40G Ethernet Routing Switch, 8 x 10/100/1000Base-T (RJ45) + 24 x 10GE (SFP+) + 2 x 40GbE (QSFP+), AC + 48VDC power supply/Cloud management

www.airpronetworks.com

All specifications in this document are subject to change without notice. AirPro products are sold with a limited warranty described at: www.airpronetworks.com
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