Air Pro®

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DATASHEET

AP-SG6500E Series

L3 10G Copper Routing Switch

PRODUCT OVERVIEW

AirPro AP-SG6500E series switches are enterprise-class stackable routing switches with fixed, built-in 10GbE uplink ports. These fully managed switches provide high availability, scalability, security, energy efficiency, and easy operation with rich L3 features. It is ideal for aggregation or access layer for campus, enterprise, government and service provider networks.

AP-SG6500E-28X-4XG-R



- 24 x 10/100/1000BaseT 4 x 10GE(SFP).
- 1 console, 1 USB, 1 reset, 1 RJ45 management port.
- AC power supply.
- Switching capacity: 128Gbps.
- Forwarding rate: 95Mpps.

AP-SG65000E-52X-4XG-R



- 48 x 10/100/1000BaseT+ 4x 10GE(SFP+)
- 1 console, 1 USB, 1 reset, 1 RJ45 management port
- AC power supply
- Switching capacity: 176Gbps
- Forwarding rate: 131Mpps

AP-SG65000E-28X-P-4XG-R



- 20 x 10/100/1000BaseT+ 4 x GE Combo(GT/SFP) + 4 x 10GE(SFP+)
- 1 console, 1 USB, 1 reset, 1 RJ45 management port.
- PoE+ up to 370w.
- AC power supply
- Switching capacity: 128Gbps
- Forwarding rate: 95Mpps

AP-SG65000E-52X-P-4XG-R



- 48 x 10/100/1000BaseT+4 x 10GE(SFP+)
- 1 console. 1 USB, 1 reset, 1 RJ45 management port
- PoE+ up to 740w
- AC+DC: -52V~-57V power supply
- Switching capacity: 176Gbps
- Forwarding rate: 131Mpps

KEY FEATURES AND HIGHLIGHTS

Performance and Scalability:
With high switching capacity, AP-SG6500E series support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 10 Gigabit Ethernet connectivity of AP-SG6500E 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).

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 the virtualized device is greatly enlarged by times under VSF. VSF also simplifies management work for the network administrator and provides more reliability.

Rich L3 Features:
AP-SG6500E series 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 series, customers could easily achieve Policy-based Route (PBR), which is important when they need a multi exit application.

Strong Multicast:
AP-SG6500E series supports abundant multicast features. In Layer 2, such as IGMPv1/v2/v3 snooping and fast leave. L3 multicast protocols such as IGMPv1/v2/v3. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions; AP-SG6500E series provides a great application experience for the customer.

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

Comprehensive QoS:
With 8 queues per port, AP-SG6500E series 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 series also supports Bi-directional rate-limiting, per port or traffic class preserves network bandwidth, and allows full control of network resources.

Abundant IPv6 Support:
AP-SG6500E series supports IPv6 switching and routing based on hardware for maximum performance. With increased network devices growing the need for larger addressing and higher security become critical, AP-SG6500E series will be the right product to meet this requirement.

PRODUCT SPECIFICATIONS

Hardware Specifications

Item	AP-SG6500E-28X-4XG-R	AP-SG6500E-28X-P-4XG-R	AP-SG6500E-52X-4XG-R	AP-SG6500E-52X-P-4XG-R
Physical port	24 x 10/100/1000BaseT + 4 x 10GE(SFP+) Auto-MIDX	20 x 10/100/1000BaseT + 4 x GE Combo (GT/SFP) + 4 x 10GE(SFP+) Auto-MIDX	48 x 10/100/1000BaseT + 4 x 10GE(SFP+) Auto-MIDX	48x 10/100/1000BaseT + 4 x 10GE(SFP+) Auto-MIDX
Management port	1 x RJ45 Ethernet Management port			
	1 x Console port			
	1 x Reset port			
	1 x USB2.0 interface			
Performance				
Switching Capacity	128Gbps	128Gbps	176Gbps	176Gbps
Forwarding rate	95Mpps	95Mpps	131Mpps	131Mpps
Jumbo Frame	10K	10K	10K	10K
MAC Address	16K	16K	16K	16K
ARP Table	4K	4K	4K	512
Routing Table	1K	1K	1K	512
ACL Table	1K	1K	1K	512
Physical				
Dimension (W*H*D)	440mm x 44mm x 240mm	440mm x 44mm x 320mm	440mm x 44mm x 240mm	440mm x 44mm x 320mm
Relative Humidity	5%~95%,			
Temperature	Working 0°C~50°C, storage-40°C~70°C			
Power Supply	AC:100~240VAC, 50~60Hz	AC:100~240VAC, 50~60Hz	AC: 100~240VAC, 50~60Hz	AC: 100~240VAC, 50~60Hz; DC:-52V~-57V
Power Consumption	<30W	<471W	<50W	<897W
PoE	NA	IEEE 802.3af IEEE 802.3at Total PoE power: 370W	NA	IEEE 802.3af IEEE 802.3at Total PoE power: 740W

PRODUCT SPECIFICATIONS

Hardware Specifications

Main Features	AP-SG6500E Series
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)
	Port loopback detection LLDP and LLDP-MED ULDP 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk (AP-SG6500E-52X-P-4XG (R2.0) support max 64 group trunks with max 8 ports for each trunk) LACP load balance ERPS (G.8032)
	N:1 Port Mirroring RSPAN
	IEEEE802.1d(STP) IEEEE802.1w(RSTP) IEEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel BPDU Guard Protection STP Loop-Guard Protection Auto Port shut-down on receiving BPDU packets
	802.1Q, 4K VLAN MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN QinQ, Flexible QinQ GVRP N:1 VLAN Translation Broadcast / Multicast / Unicast Storm Control
	IGMP v1/v2/v3 Snooping and L2 Query 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 Policy-based routing (PBR) for IPv4 and Ipv6 VRRP URPF, ECMP BFD
	IGMP v1/v2/v3, IGMP Proxy, 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 Cheat, Anti ARP Scan
	DNS Client, DNS Relay
IPv6	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel 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, IPv6 ACL, IPv6 QoS
QoS	8 Queues SP, WDRR, SWDRR Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, port number Traffic Policing PRI Mark/Remark

PRODUCT SPECIFICATIONS

Hardware Specifications

Main Features	AP-SG6500E Series
ACL	IP ACL, MAC ACL, IP-MAC ACL, User-Defined 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 statistics Rules can be configured to port, VLAN Time Ranged ACL ACL rules can be configured to port, VLAN
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	DHCP Server/Client for IPv4/IPv6
Traffic	DHCP Relay/Option 82
Monitor	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 RMON 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)

The contents marked with "" need future upgrade or are under development*

ORDER INFORMATION

Product	Description
AP-SG6500E-28X-4XG-R	10G Ethernet Routing Switch, 24 x 10/100/1000BaseT + 4 x 10GE(SFP+), 1 fixed AC power supply
AP-SG6500-28X-P-4XG-R	10G Ethernet Routing Switch, 20 x 10/100/1000BaseT + 4 x GE Combo (GT/SFP) + 4 x 10GE(SFP+), 1 fixed AC power supply. up to 370W for PoE
AP-SG6500E-52X-4XG-R	10G Ethernet Routing Switch, 48 x 10/100/1000BaseT + 4 x 10GE(SFP+), 1 fixed AC power supply
AP-SG6500E-52X-P-4XG-R	10G Ethernet Routing Switch, 48 x 10/100/1000BaseT + 4 x 10GE(SFP+), fixed AC+DC redundant power supply, up to 740W for PoE

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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