





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 | AP-SG6500E-52X-4XG-R |
|---|---|
|  <ul style="list-style-type: none"> • 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. |  <ul style="list-style-type: none"> • 48 x 10/100/1000BaseT+ 4 x 10GE(SFP+) • 1 console, 1 USB, 1 reset, 1 RJ45 management port • AC power supply • Switching capacity: 176Gbps • Forwarding rate: 131Mpps |
| AP-SG6500E-28X-P-4XG-R | AP-SG6500E-52X-P-4XG-R |
|  <ul style="list-style-type: none"> • 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 |  <ul style="list-style-type: none"> • 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 | Total PoE power: 370W 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 | |
| | IEEE802.1d(STP) IEEE802.1w(RSTP) IEEE802.1s(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 SNTTP/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