DATASHEET
AP-SG4500-52GT-P-4XFP

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Simple | Secure | Trusted

L2-10G Uplink Intelligent Switch

OVERVIEW

The AP-SG4500-52GT-P-4XFP is a Layer 2 intelligent access switch with 10G uplinks, designed for carrier-grade and Metropolitan Area Network (MAN) environments. It delivers comprehensive QoS, advanced VLAN capabilities, and robust network protection, meeting the demanding requirements of carrier networks and MAN access deployments.

The switch supports enhanced VLAN features such as Dynamic VLAN, Voice VLAN, QinQ, and N:1 VLAN Translation, along with Ethernet Ring Protection Protocol (G.8032) for fast network recovery. It also provides classified bandwidth control, intelligent security control, OAM (Operations, Administration, and Maintenance), advanced manageability, and Triple-Play services, ensuring reliable and efficient service delivery.

The AP-SG4500 Series incorporates green energy-saving features, including a fan-less design, which significantly reduces power consumption, supports environmentally friendly operation, and lowers operational costs for carrier and MAN users.

Equipped with full Gigabit Ethernet ports and 4 / 6 × 10G SFP+ uplink ports, the AP-SG4500 delivers high performance, scalability, and strong security, making it an ideal solution for next generation carrier and enterprise access networks.

Appearance	Description
 **AP-SG4500-52GT-P-4XFP**	• 48 x 10/100/1000BaseT + 6x 10GE(SFP+) • 1 Console • PoE+ up to 740w • Switching capacity: 216Gbps • Forwarding rate: 161Mpps

KEY FEATURES AND BENEFITS

10G Uplink Access Switch
Equipped with full Gigabit Ethernet ports and high speed SFP+ uplink ports, the AP-SG4500 provides a robust foundation and ample bandwidth to support today's business applications while ensuring scalability for future network growth.

Its high-capacity 10G uplink design enables seamless aggregation, improved performance, and reliable data transmission, making it ideal for enterprise, carrier, and MAN access network deployments.

Layer 3 Forwarding
The AP-SG4500 supports Layer 3 forwarding, enabling efficient network segmentation into multiple workgroups and seamless inter - VLAN communication without compromising application performance. By handling routing functions directly at the switch level, the AP-SG4500 reduces network latency, improves traffic efficiency, and ensures consistent performance for business-critical applications.

VSF (Virtual Switch Framework)
The Virtual Switch Framework (VSF) enables multiple AirPro switches to be virtualized into a single logical device, allowing the sharing of control information and data tables across all member switches.

By operating as one virtual switch, VSF significantly increases overall performance and port density, providing scalable switching capacity to meet growing network demands. VSF also simplifies network management by allowing centralized configuration and monitoring through a single management interface. In addition, VSF enhances network reliability and availability, ensuring stable operation and seamless service continuity for enterprise and carrier-grade networks.

Enhanced Security
IEEE 802.1X port-based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server.

Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets and forward by different policies. Userdefined ACL provides more flexible access control for users.

AP-SG4500supports DHCP snooping, which prevents DHCP attacks and illegal DHCP SERVER by setting trust ports and untrust ports. With DHCP Snooping binding and option82 enabled, it can combine modules like dot1x and ARP, or implement user-access-control independently.

AP-SG4500supports abundant L2 security features such as ARP guard, Anti-ARP scanning, and other ARP and MAC Security technology to protect network security and reliability.

High Reliability

AP-SG4500supports 4/6 10G uplink ports, which could be designed to offer redundant uplinks with various ring protection applications, effectively raised the expansibility and performance of the network.

G.8032 provides sub-50ms protection and recovery switching for Ethernet traffic in a carrier ring topology. AP-SG4500supports G.8032 v2 and can be deployed in a variety of complex network topologies including single ring, tangent ring, intersecting rings, double rings, and other home networking.

Abundant Multicast Features

AP-SG4500also supports MVR (Multicast VLAN Register), selectively allows traffic to cross between different VLANs for bandwidth and security reasons. With the MVR Trunk function, which could associate multicast VLAN to trunk port, APSG4500combines the VLAN data into the same link, saving lots of resources for users.

AP-SG4500 could prevent multicast traffic from flooding via IGMP Snooping, while multicast traffic is only forwarded to ports associated with multicast devices.

PRODUCT SPECIFICATIONS

Hardware Specifications

Item		AP-SG4500-52GT-P-4XFP
Ports		48 x 10/100/1000Base-T + 6 x 1/10GE(SFP+) Auto-MIDX
Management port		1x Console port
Performance		
Switching Capacity		216Gbps
Forwarding Rate		161Mpps
MAC ADDRESS		32K
Jumbo Frame		12K bytes
Packet Buffer		24MB
ACL Table		3K
Queues per port		8
VLAN TABLE		4K
Physical		
Dimension(W×H×D)		440mm x44mm x320mm
Power Input		100~240VAC, 50~60Hz
Power Consumption		<800W
Cooling		Active
Temperature		Working 0°C~50°C, Storage -40°C~70°C
Relative Humidity		5%~95%, non-condensing
EMC Safety		CE, RoHS
PoE		IEEE 802.3af POE (15.4W) IEEE 802.3at POE+ (30W) PoE output 740w
Mean Time Between Failure (MTBF)		>500000h
Main Features		
Forwarding		Storage and Forwarding
VLAN		Port-based VLAN, IEEE802.1Q, private VLAN, Protocol VLAN, Voice VLAN, MAC VLAN Normal QinQ, Flexible QinQ VLAN Translation, N:1 VLAN Translation
L3 Features		Static Routing, PBR
DHCP		IPv4/IPv6 DHCP Client, IPv4/IPv6 DHCP Relay Option 82 IPv4/IPv6 DHCP Snooping, IPv4/IPv6 DHCP Server
Reliability	Spanning Tree	802.1D STP, 802.1W RSTP, 802.1S MSTP Root Guard, BPDU Guard, BPDU Forwarding, TCN filtering
	LACP	128 groups / 8 ports
	L2 Ring Protection	MRPP ERPS (G.8032) Loopback Detection Fast Link
Security		IP ACL, MAC ACL, User-Defined ACL Time Range ACL ACL rules can be configured to port, VLAN Storm Control based on packets Port Security, MAC Limit based on VLAN and Port Anti-ARP-Spoofing, Anti-ARP-Scan, ARP Binding DAI IEEE 802.1x Authentication, Authorization, Accounting Radius, TACACS+
Multicast		IGMP v1/v2/v3 snooping, IGMP Proxy, IGMP v3 MLD v1/v2 snooping

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Hardware Specifications

Main Features	AP-SG4500-52GT-P-4XFP
QoS	8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Match the IP fragmentation of a message Maintenance and Operation
Management and Operation Management	TFTP/FTP CLI, Telnet, Console Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2/v3 SNMP Trap Public & Private MIB interface Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, RSPAN sFlow OAM EFM VCT, DDM ULDP (like Cisco UDLD) LLDP/LLDP MED
Data Center Features	MC-LAG (SG4500-52GT-SI and SG4500-52GT-P-4XFP) VSF (Virtual Switch Framework, support mixed stacking among models SG4500-52GT-SI and SG4500-52GT-P-4XFP)

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