Air Pro®

Simple | Secure | Trusted

L2-10G Uplink Intelligent Switch

OVERVIEW

The AirPro AP-SG4500-28GT-4XFP/52GT-4XFP is a Layer 2 10G uplink intelligent switch, specifically designed for carrier and MAN (Metropolitan Area Network) applications. It supports a comprehensive range of features, including advanced QoS, enhanced VLAN capabilities (such as Dynamic VLAN, Voice VLAN, QinQ, N:1 VLAN Translation), Ethernet Ring Protection Protocol (G.8032), classified bandwidth control, intelligent security controls, OAM (Operations, Administration, and Maintenance), and Triple-Play services. These features ensure the switch meets the stringent requirements of carrier-grade and MAN networks.

The AP-SG4500-28GT-4XFP/52GT-4XFP integrates full GE ports with 4 SFP+ uplink ports, delivering superior performance and scalability. With its advanced management and security functionalities, it is an ideal solution for high-demand network environments.

Additionally, the switch incorporates green energy features such as a fan-less design, significantly reducing power consumption and operating costs. This eco-friendly design helps carriers and MAN users achieve energy efficiency and cost savings while maintaining high performance.

Appearance	Description
AP-SG4500-28GT-4XFP	• 24 x 10/100/1000Base-T + 4 x 10GE(SFP+) • 1 Console, 1 Reset, 1 USB port • AC power supply • Switching capacity: 128Gbps • Forwarding rate: 95Mpps
AP-SG4500-52GT-4XFP	• 48 x 10/100/1000BaseT + 4 x 10GE(SFP+) • 1 Console, 1 Reset, 1 USB port, 1 10/100MBase-T Management port • AC power supply • Switching capacity: 176Gbps • Forwarding rate: 131Mpps

KEY FEATURES AND BENEFITS

10G Uplink Access Switch
Equipped with full GE ports and 4 SFP+ uplink ports, the AirPro AP-SG4500-28GT-4XFP offers a robust foundation with ample bandwidth to support your business applications both now and in the future.

L3 Forwarding
The AirPro AP-SG4500-28GT-4XFP supports Layer 3 forwarding, enabling seamless communication across VLANs while maintaining high application performance. This functionality allows you to efficiently segment your network into workgroups without compromising speed or reliability.

VSF (Virtual Switch Framework)
The Virtual Switch Framework (VSF) enables the virtualization of multiple AirPro switches into a single logical device, facilitating seamless sharing of information and data tables between switches. This significantly enhances the performance and port density of the virtualized device, while simplifying management tasks for network administrators and improving overall reliability.

Enhanced Security
The AirPro AP-SG4500-28GT-4XFP ensures secure network access through IEEE 802.1X port-based access control, which authorizes users before granting network access. User authentication is seamlessly integrated with standard RADIUS servers for centralized and robust access management.

The switch supports Access Control Lists (ACLs), which can restrict access to sensitive resources by defining specific packet-forwarding policies. Additionally, user-defined ACLs provide greater flexibility for customized access control tailored to user requirements.

With DHCP Snooping, the switch protects against DHCP attacks and unauthorized DHCP servers by differentiating between trusted and untrusted ports. By enabling DHCP Snooping binding and Option 82, it can work in conjunction with modules like dot1x and ARP or independently enforce user access controls.

The AP-SG4500-28GT-4XFP also offers robust Layer 2 security features, including ARP guard, Anti-ARP scanning, and advanced ARP/MAC security technologies to ensure network reliability and security.

High Reliability
The AirPro AP-SG4500-28GT-4XFP features 4 10G uplink ports, designed to provide redundant uplinks and support various ring protection applications. This enhances the network's scalability and overall performance, ensuring reliable connectivity.

The switch supports the G.8032 protocol, delivering sub-50ms protection and recovery switching for Ethernet traffic in carrier ring topologies. With G.8032 v2, the AP-SG4500-28GT-4XFP can be deployed in a range of complex network configurations, including single rings, tangent rings, intersecting rings, double rings, and other advanced networking setups.

Abundant Multicast Features
The AirPro AP-SG4500-28GT-4XFP supports MVR (Multicast VLAN Register), enabling selective traffic crossing between VLANs to optimize bandwidth and enhance security. The MVR Trunk function allows multicast VLANs to be associated with trunk ports, consolidating VLAN data into a single link, which significantly reduces resource usage and improves efficiency.

Additionally, the switch prevents multicast traffic flooding through IGMP Snooping, ensuring multicast traffic is only forwarded to ports connected to multicast-enabled devices. This minimizes unnecessary network load and enhances overall performance.

## PRODUCT SPECIFICATIONS

Hardware Specifications

Item	AP-SG4500-28GT-4XFP	AP-SG4500-52GT-4XFP
Ports	24 x 10/100/1000Base-T + 4 x 1/10GE(SFP+) Auto-MIDX	48 x 10/100/1000Base-T + 4 x 1/10GE(SFP+) Auto-MIDX
Management port	1x Console port	1x Console port
	1x USB2.0 interface	1x USB2.0 interface
	1x Reset key	1x Reset key
Performance		
Switching Capacity	128Gbps	176Gbps
Forwarding Rate	95Mpps	131Mpps
MAC ADDRESS	16K	16K
Jumbo Frame	10K bytes	10K bytes
Packet Buffer	12MBits	24MBits
ACL Table	216	442
Queues per port	8	8
VLAN TABLE	4K	4K
Physical		
Dimension(W×H×D)	440mm x 44mm x 207mm	440mm x44mm x280mm
Power Input	100~240VAC, 50~60Hz	100~240VAC, 50~60Hz
Power Consumption	21W	<50W
Cooling	Passive	Active
Temperature	Working 0°C~50°C, Storage-40°C~70°C	Working 0°C~50°C, Storage-40°C~70°C
Relative Humidity	5%~95%, non-condensing	5%~95%, non-condensing
EMC Safety	CE, RoHS	CE, RoHS
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, Option 37/38 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	64 groups / 8 ports
	L2 Ring Protection	MRPP ERPS (G.8032) Loopback Detection Fast Link
Security	IP ACL, MAC ACL, MAC-IP 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 ND Snooping DAI IEEE 802.1x Authentication, Authorization, Accounting Radius, TACACS+	
Multicast	IGMP v1/v2/v3 snooping, IGMP Proxy, IGMP v3 MLD v1/v2 snooping	

PRODUCT SPECIFICATIONS
Hardware Specifications

Main Features	AP-SG4500-28GT-4XFP/52GT-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 SP DWRR SDWRR SP+DWRR for Scheduling Match the IP fragmentation of a message	
Maintenance and Operation Management	TFTP/FTP CLI, Telnet, Console Cloud Managed Optional Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 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	
Green Energy	Fanless	Auto-speed fan

APPLICATIONS

AP-SG4500-28GT-4XFP provide Gigabit access with 10G uplink in a Campus / ISP network
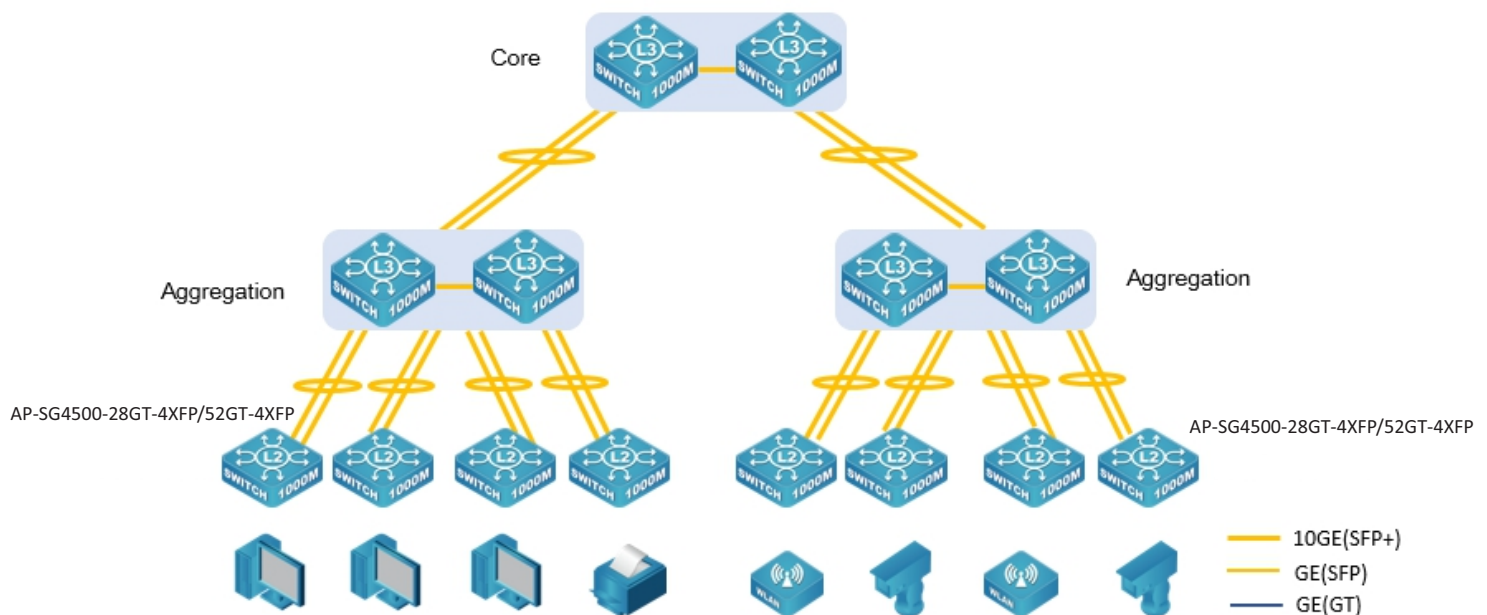
ORDER INFORMATION

Product	Description
AP-SG4500-28GT-4XFP	L2+ Full Gigabit Access Switch with 24 10/100/1000Base-T and 4 10GE(SFP+) ports, static routing, 1 fixed AC power
AP-SG4500-52GT-4XFP	L2+ Full Gigabit Access Switch with 48 10/100/1000Base-T and 4 10GE (SFP+) ports, static routing, 1 fixed AC power

www.airpronetworks.com