

# Dual Stack 10G Ethernet Routing Fiber Switch

## PRODUCT OVERVIEW

AP6500E series next-generation 10G stack able routing switch has advanced hardware and software architecture design. These switches provide high availability, scalability, security, energy efficiency, and ease of operation with innovative features such as VSF, IEEE 802.3at optional. It is ideal for aggregation or access layer as its high performance, availability and reliability.



## MAIN FEATURES

- Performance and Scalability.
- VSF (Virtual Switch Framework).
- Rich L3 Features.
- Strong Multicast.
- Easy High Reliability network.
- Comprehensive QoS.
- Enhanced Security.
- Abundant IPv6 Support
- Green-Energy

## KEY FEATURES AND HIGHLIGHTS

### PERFORMANCE AND SCALABILITY:-

With high switching capacity, AP6500E series support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols. The 10 Gigabit Ethernet connectivity of AP6500E 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 the optical module chosen). AP6500E series fiber switches support AC+12VDC RPS power supplies.

### 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:-

AP6500E 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 AP6500E series, customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

### STRONG MULTICAST:-

AP6500E 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; AP6500E series provides great application experience for customer.

### EASY HIGH RELIABILITY NETWORK:-

MRPP is Multi-layer Ring Protection Protocol, which is AirPro 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, AP6500E 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. AP6500E series 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.

**ABUNDANT IPV6 SUPPORT:-**

AP6500E 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, AP6500E series will be a right product to meet this requirement.

**GREEN-ENERGY:-**

Temperature monitoring, alarming, automatic cooling, energy saving features are realized on AP6500E. According to the temperature monitoring, Fan speed can be adjusted or stopped to reduce energy consumption and noise.

**PRODUCT SPECIFICATIONS**

**Hardware Specifications**

<b>Item</b>	<b>AP-SG6500E-16F-4XG-R</b>
Physical port	8 x 100/1000Base-X (SFP) + 4 x GE Combo(RJ45/SFP) + 4 x 10GbE (SFP+)
Management port	1 x RJ45 Ethernet Management port 1x Console port 1x USB2.0 interface
<b>PERFORMANCE</b>	
Switching Capacity	112Gbps
Throughput	83Mbps
Jumbo Frame	10K
MAC Address	16K
ARP Table	4K
Routing Table	1K
ACL Table	1K
<b>PHYSICAL</b>	
Dimension(W*H*D)	330mm x44mm x 230mm
Relative Humidity	10%~90% non-condensing, storage 95%
Temperature	Working 0°C~50°C, storage -40°C~70°C
Power Supply	AC:100~240VAC, 50~60Hz + 12VDC RPS
Power Consumption	<22W
<b>Main Features</b>	
Ipv6	6 to 4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE 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 Any Cast RP, IPv6 ACL, IPv6 QoS
QoS	8 Queues SWRR, SP, WRR, DWRR, SDWRR Traffic Classification Based on 802.1p COS, ToS, Diff Serv 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 statistics 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
DHCPv4/v6 Traffic Monitor	MAB DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82 DHCP Snooping/Option 82
Traffic Monitor	sFlow Traffic Analysis

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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 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)
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 UDLD 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk LACP load balance N:1 Port Mirroring RSPAN ERSPAN IEEE802.1d(STP) IEEE802.1w(RSTP) IEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel 802.1Q, 4K VLAN MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN QinQ, Selective 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
L3 Features	Flow Control: HOL, IEEE802.3x Bandwidth Control Static Routing, RIPv1/v2, OSPFv2, BGP4 OSPFv3, BGP4+ OSPF multiple process 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 GRE Tunnel



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