ALPHA BRIDGE- LAYER 3-Lite Switch (AS200/28/XP)



Supports 24 Ports 1G RJ45 and 4 10G SFP+ Uplink Ports.

Ups to 16-unit Virtual Stack

Carrier-Level, High Reliability.

Verified Service characteristics, Versatile IPv6 solution, Complete Security Mechanism.

Product Overview

AS200/28/XP is an Alpha Bridge-developed multigigabit Ethernet switch oriented for the next generation IP metropolitan area network, large campus network, and enterprise network.

AS200/28/XP series adopts the cutting-edge hardware architecture and is equipped with the ABOS operating system with Alpha Bridge independent intellectual property rights. On the basis of providing high-performance L2/L3/L4 wire-speed switching services, AS200/28/XP further integrates various network services such as IPv6 and network security.

Combined with multiple high-reliability technologies such as uninterrupted upgrades, uninterrupted forwarding, graceful restart, and redundancy protection, AS200/28/XP ensures the long-term stable communication capability of the network.

Product Characteristics

Advanced hardware architecture, cutting edge processing capability

AS200/28/XP 1U pizza-box switch realizes the ultra-high port density of 24-Port 1G RJ45 Port and 4-Port 1G/10G SFP+. Equipped with high-performance ASIC switch chips, the Alpha Bridge series can meet the application requirements of various complex scenarios.

Doubled performance: The virtualized system makes full use of every link between physical devices avoiding the link congestion of the traditional networking model Spanning Tree Protocol, making the best use of devices, doubling the performance, and protecting the original link investment to the greatest extent.

High Reliability: Based on advanced distributed processing technology, the efficient cross-physical device link aggregation function separates the logical control plane, service control plane and service data plane, providing uninterrupted Layer 3 routing and forwarding and avoiding business interruption caused by the single failure.

Product Characteristics

Easy management: The entire virtual system realizes unified management of a single IP, and physical devices are visible to users, which simplifies the management of network devices and network topology, greatly improves operation efficiency, and effectively reduces operation and maintenance costs.

Carrier-level high reliability

Based on Hitless Protection System (HPS), the key components of the AS200/28/XP Series, such as power supply modules, are redundant backup and hot- swappable, which supports seamless switchover in case of failure without manual intervention.

AS200/28/XP supports STP/RSTP/MSTP, VRRP, ring network protection, dual uplink active/standby link protection, LACP and other simple and efficient redundancy protection mechanisms.

AS200/28/XP supports In-Service Software Upgrade (ISSU), ensuring the unremitting data forwarding during system upgrade.

The ultra-high-precision BFD mechanism, through linkage with Layer 2 and Layer 3 protocols, realizes millisecond-level fault detection and service recovery, which greatly improves the reliability of the network system.

Perfect Ethernet OAM mechanism, supporting 802.3ah and 802.1ag, realizes rapid detection and location of faults through real-time monitoring of network operation status.

The high-reliability hardware and software of the AS200/28/XP meet the fault recovery time requirement of 50ms for carrier-level services and truly achieve the high reliability (99.999%) of carrier-class core devices.

Innovative BVSS

The Alpha Bridge AS200/28/XP supports innovative AB Virtual Switch System (ABVSS), which can virtualize multiple physical devices into one logical device with unparalleled performance, reliability, and management compared to stand-alone physical devices.

Rich service features

Perfect Layer 2 and Layer 3 multicast routing protocols meet the access requirements of IPTV, multi-terminal high-definition video surveillance and video conferencing.

Complete Layer 3 routing protocols and large routing table capacity meet the needs of various network interconnection and can built up ultra-large campus network, enterprise network and industry private network.

Comprehensive IPv6 Solutions

Supports IPv6 multicast features such as MLD, MLD Snooping, IPv6 static routing, IPv6 Layer 3 routing protocols such as RIPng, OSPFv3, BGP4+, providing complete IPv6 Layer 2 and Layer 3 solutions.

Supports a wealth of IPv4 to IPv6 transition technologies, including: IPv6 manual tunnel, automatic tunnel, 6to4 tunnel, and ISATAP tunnel to ensure the smooth transition from IPv4 network to IPv6 network.

Perfect security mechanisms

Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP- related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions.

Perfect security authentication mechanisms: EEE 802.1x, Radius and TACACS+.

Enhanced service security mechanism: Supports clear text or MD5 authentication of related routing protocols, and Unicast Reverse Path Forwarding (uRPF), which can effectively control illegal services; supports in-depth detection and filtering of control packets and data packets, thereby effectively isolating illegal data packets and improving the security of the network system.

Innovative eco-friendly design

Intelligent power management system: AS200/28/XP adopt advanced power system architecture design to achieve efficient power conversion, unique power monitoring, slow start function, real-time monitoring of the running status, intelligent adjustment, and deep energy saving.

Intelligent fan management system: Intelligent fan design supports automatic speed regulation, effectively reduce the speed, reduces noise, and prolongs the service life of the fan.
Supports energy-efficient Ethernet function and complies with the international standard IEEE 802.3azEEE, effectively reducing energy consumption.

Product Specifications

Model	AS200/28/XP
Product Name	10G Uplink 4SFP+24GE L3 Managed POE Switch
Fixed Port	24*10/100/1000Base-TX PoE port (Data/Power) 4*100/1000/2500/10000M SFP
PoE Ports	1-2 port supports IEEE802.3af/at/poe++/bt, max 90W/port PoE out 3-24 port supports IEEE802.3af/at, max 30W/port, PoE out
Console port	1*console port
Reset Key	1
PoE Pin	af/at/bt: 12+ 45+; 36-78- af/at: 12+ 36-
PoE Bridge	max 400W
CPU	MIPS-34Kc 800GHz
DDR	4G DDR3
FLASH	512MBytes
RAM	512MBytes
Bandwidth	512Gbps
Packet Forwarding	95.23Mpps
MAC	16K
Buffer	12Mbit SRAM Packet Buffer
Jumbo Frame	Jumbo frame up to 12KB
VLAN Address	4K
Link Aggregation	Supports 128 trunk groups with up to 8 members per group
L3 Routing	IPV4 supports 6K; IPV6 supports 2K;
QoS Queue	8
Transmission Distance	10BASE-T ： Cat3,4,5 UTP(≤250 meter) 100BASE-TX ： Cat5 or later UTP(150 meter) 1000BASE-TX ： Cat6 or later UTP(150 meter) SFP: 100M/1G/10G single-mode multi-mode optical module, the maximum distance is ≤120km (depending on the optical module)
LED Indicator	PWR:Power LED SYS:System LED 1-24:10/100、1000M Network connection indicator 25-28:10G SFP connection indicator
Power	Built-in Dual AC：100-240Vac 50-60Hz 5A max 400W
Operating Temperature/Humidity	-10～+55°C; 5%～90% RH Non coagulation
Storage Temperature/Humidity	-40～+75°C; 5%～95% RH Non coagulation
Product /Packing Size (L*W*H)	440mm*290mm*45mm 515mm*375mm*95mm
N.W/G. W (kg)	3.5kg/4.2kg
Lightning Protection level	6KV 8/20us; IP30
Installation	Rack-mount
Certificate	CE-EMC; RoHS;
Warranty	Whole device for 1 year (Accessories not included)

Software specifications

PORT	
Port Shutdown	Support
Port Speed	Support auto negotiates, full-10000, full-2500, full-1000, full-100, half-100
Flow Control	support full-duplex IEEE 802.3x, half-duplex back pressure
Storm Control	Supports rate limit for broadcast, multicast, and DLF packets
Storm Constrain	Support the detection of broadcast packets, multicast packets, or unicast packets on the port, shutdown the port if the rate is over the threshold.
Port Mirror	Support
Port Rate Limit	Support port ingress and egress rate limit
Link Aggregation	Support manual link aggregation Support LACP dynamic link aggregation Supports up to 32 aggregation groups, each group up to 8 ports Support source MAC, destination MAC, source destination MAC, source IP, destination IP, source destination IP routing strategy
Port Isolate	Support
Jumbo Frame	Support up to 12KB packet
Redundant Port	Support
The DDM of fiber ports	Support
MAC	
MAC Table Capacity	16K
MAC Table Management	Support
Forwarding mode	Support IVL forwarding mode
Static MAC Address	Support
MAC Address Binding	Support
MAC Address Filtering	Support
MAC Learning Control	Control the MAC learning based on port
VLAN	
Number of VLANs	4K
802.1q-based VLAN	Support
MAC-based VLAN	Support
IP-based VLAN	Support
Protocol-based VLAN	Support
PVLAN	Support
Voice VLAN	Support
VLAN Mapping	Support 1:1 mapping
QinQ	Support basic QinQ Support flexible QinQ
GVRP	Support
Reliability	
Spanning Tree Protocol	Support STP/RSTP/MSTP
Port Loop Detection	Support
EAPS	Support RFC3619
ERPS	Support G.8032/Y.1344
LLDP	Support LLDP & LLDP-MED
UDLD	Fully compatible with CISCO's UDLD protocol
VLLP (VRRP Layer-2 Loop Protection)	Support, only used with VRRP
L3	
ARP	Support static and dynamic ARP
Static Route	Support static route based on IPv4 and IPv6
VLAN Interface	Support 32 VLAN interfaces
RIP	Support RIP v1/v2 & IPv6 RIPng
OSPF	Support OSPFv2 & IPv6 OSPFv3
BGP	Support BGP4 & IPv6 BGP4+

Policy Route	Support
VRRP	Support
Multicast	
Static Multicast MAC Address	Support
IGMP SNOOPING	Support IGMP SNOOPING v1/v2/v3 Support IGMP Querier Support IGMP SNOOPING Filter
MVR	Support
GMRP	Support
IGMP	Support IGMP v1/v2/v3
PIM-SM	Support
ACL	
Standard IP-based ACL	Support
Extended IP based ACL	Support
MAC IP-based ACL	Support
MAC ARP-based ACL	Support
ACL Port Filtering	Support
Time-based ACL	Support
QoS	
Port Queue Number	8
Port Queue Scheduling Mode	Support WRR, WFQ, SP
Port-based Classification	Support
802.1p-based Classification	Support
DSCP-based Classification	Support
ACL-based Classification	Support
QoS Policy	Support packets mapping to queue Support COS or DSCP Remarking Support rate limits of data flow Support data flow statistics Support mirroring of data flow
DHCP	
DHCP Client	Support
DHCP Snooping	Support
DHCP Relay	Support
DHCP Server	Support
DHCP option 82	Support
Management	
CLI Management	Support Console, Telnet and SSH Support multiple TELNET connections based on IPv4 and IPv6 Support multiple SSH connections based on IPv4 and IPv6
WEB Management	Support HTTP based on IPv4 and IPv6 Support HTTPS based on IPv4 and IPv6
SNMP Management	Support SNMP v1, v2c, v3 Support SNMP TRAP Support lots of standard and private MIBs Support SNMP and TRAP based on IPv4 and IPv6
User Management	Support multiple user management
TACACS+	support switch authentication via TACACS+ server remote username and password Support password encryption in PAP and CHAP mode Support TACACS+ server to authorize the switch's commands Support TACACS+ based on IPv4 and IPv6
Log Management	Support local log management Support SYSLOG
RMON	Support RMON 1, 2, 3 and 9 groups

Cluster Management	Support NDP Support NTDP Support manual and automatic joining of cluster groups Support cluster unified management
Configuration File	Support uploading and downloading configuration file Support TFTP transmission based IPv4 and IPv6
Upgrade software	Support TFTP transmission based IPv4 and IPv6
Clock Management	Support local clock management Support SNTP
Security	
Switch Management Security	Support enabling and disabling TELNET, SSH, HTTP, HTTPS and SNMP services Support TELNET, SSH, HTTP, HTTPS and SNMP services to bind to standard IP ACLs Support for limiting the number of TELNET and SSH connections
CPU Protection	The switch's own security protection prevents large data streams from attacking the switch itself.
AAA	Support 802.1x Support RADIUS Supports authentication, authorization, and accounting through RADIUS server Support port-based and MAC-based 802.1x Support 802.1x guest VLAN
IP MAC Binding	Support static configuration of IP, MAC and port binding
DHCP SNOOPING	Support dynamic ARP binding to prevent ARP spoofing Support dynamic IP, MAC and port binding Support fixed port to connect to DHCP server to prevent private connection to DHCP server
Prevent ARP Spoofing	Support manually configuring MAC ARP-based ACL rules to prevent ARP spoofing. Support the DHCP SNOOPING function. During the process of obtaining an IP address by DHCP, the switch dynamically binds ARP to the port to prevent ARP spoofing.
IPv6	
IPv4/IPv6 Dual Protocol Stack	Support
IPv6 Address	Support manual address configuration and stateless address auto-configuration
IPv6 Neighbor Discovery	Support
ICMPv6	Support
IPv6 Path MTU Discovery	Support
Debugging	
PING	Support
PING6	Support
TRACEROUTE	Support
TELNET Client	Support TELNET client based IPv4 and IPv6
SSH Client	Support SSH client based IPv4 and IPv6

Ordering Information

Item	Description
AS200/28/XP (SKU-18122224214330)	24-Port RJ45 PoE+ Ports, 4-Port 10G SFP+ L3 Managed Switch (built-in Dual AC-220V power supply; with cooling fan, 1U, standard 19-inch rack-mounted installation)

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