

ALPHA BRIDGE- LAYER-3 Switch (AS300/56/XC)



Versatile IPv6 solution.



Carrier-Level
Layer-3 Functions



Advanced Hardware
Architecture and
Industry-leading Port
Density



Supports full data-center functions such as VxLAN, MLAG, Netconf

Product Overview

AS300/56/XC is a new generation high-performance data center full Gigabit TOR switch oriented for cloud computing, data centers, and high-end campus networks. AS300/56/XC adopts an advanced hardware architecture design, providing cutting-edge switching performance and rich data center service features.

AS300/56/XC provides high-density 10G/100G data center access capabilities. To meet the network resource pooling requirements of cloud computing data centers AS300/56/XC offers rich data center features such as VxLAN, EVPN, M-LAG, and NETCONF.

AS300/56/XC meets the requirements for building data center networks and deploying large layer-2 networks within data centers. In combination with the AS300/56/XC data center core switch, it can realize the access of 15,000+ 10 Gigabit servers, providing a complete network solution for super-large data centers.

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AS300/56/XC is equipped with the 6th generation operating system with Alpha Bridge Technologies.

providing high-performance L2/L3/L4 line-speed switching services, it further integrates various network services such as IPv6, network security, traffic analysis, and virtualization. Combined with a variety of data center high-reliability technologies such as uninterrupted upgrades, uninterrupted forwarding, graceful restart, and redundancy protection, the AS300/56/XC ensures the longest uninterrupted network communication.

AS300/56/XC which can meet the port density and performance requirements of different scale networks. Improving the networking efficiency and lowering operating costs

Product Characteristics

Advanced Hardware Architecture Design & Leading Processing Capacity

Adopts the advanced hardware architecture, high-density data center access design, 1U device supports up to 48-port 10G SFP28 + 8-port 100G QSFP28

Equipped with high-performance ASIC switching chips and multi-core processors, supports up to 2.6Tbps switching capacity, meeting the high-performance, high-capacity, high-density, and expandable requirements of data centers.

Standard front-to-back or back-to-front airflow design, supports flexible selection of airflow direction.

Rich Data Center Business Features

Supports VXLAN, EVPN, M-LAG, and NETCONF data center features.

Satisfies the data center Overlay network construction and large-scale layer-2 network deployment inside the data center.

End-to-end OAM based on IEEE802.1ag and ITU-T Y.1731 protocols enables Ethernet service providers to proactively monitor services and measure end-to-end performance;

Data Center High Reliability

Based on the HPS (Hitless Protection System), the key power supply system adopts a redundant design, modularized and hot-swappable, and supports seamless switching in case of failure without interrupting business.

Supports redundancy protection mechanisms such as STP/RSTP/MSTP protocol, VRRP protocol, ring network protection, dual uplink active/standby link protection, and LACP link aggregation.

Supports ISSU (In-Service Software Upgrade) and GR (Graceful Restart), guaranteeing the user data non-stop forwarding when the system is upgrading.

Supports ultra-high-precision BFD and realizes fault detection and service recovery in seconds through linking with layer-2 or layer-3 protocol.

Provides perfect Ethernet OAM, and supports 802.3ah, 802.1ag, and ITU-Y.1731, which can monitor the network operating state and rapidly locate the malfunction.

High Reliability (99.999%): MTTR is 50ms, meeting the requirement of the carrier-level service.

Abundant Business Features

Supports rich Ethernet layer 2 and layer 3 business features.

Supports IPv4/IPv6 dual protocol stack and rich unicast and multicast routing protocols, and provides flexible network communication solutions according to IPv4/IPv6 network planning and network status.

Comprehensive Security Mechanisms

Equipped with multiple reliability protections at the device level and link level.

Supports fast link failure recovery with 50~200ms to ensure uninterrupted transmission of key services.

Supports cross-device link aggregation, which is convenient for access to servers and dual-active link uplink of switches.

Adopts redundant backup design for key hardware components.

Adopts over-current protection, over-voltage protection, and over-heat protection technology.

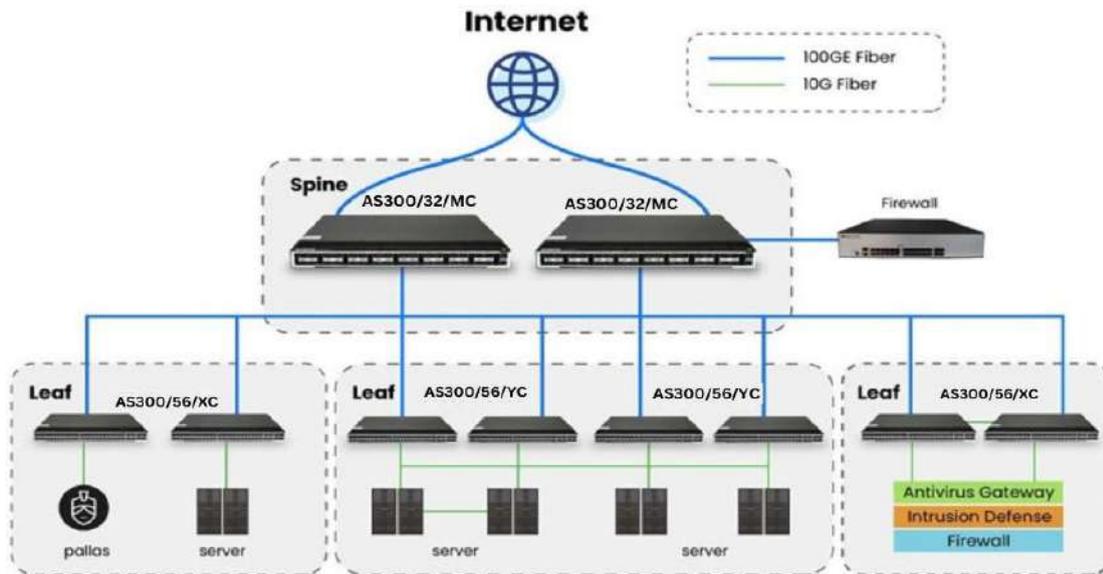
Comprehensive Security Mechanisms

Intelligent Power Management System: adopts advanced power system architecture design which can realize the function of efficient power switching, private power monitoring, soft start, real-time monitoring, intelligent adjustment, and energy-saving.

Intelligent Fan Management System: is designed with an intelligent fan and supports switching between front-back and back-front mode and fan automatic speed regulation.

Supports Efficient Ethernet and complies with International standard IEEE 802.3az.

Application Diagram



Product Specifications

Item	AS300/56/XC
Switching capacity	2.56Tbps
Forwarding	1920Mpps
Power supply slot	2
Ports	48-port 10G SFP+ 8-port 100G QSFP28
Power Consumption (No Load)	91W
Power Consumption (Full Load)	164W
Dimensions (WxDxH)(mm)	440x400x44
Environment	Operating temperature/humidity: -10°C-50°C; 10%-90% non-condensing Storage temperature/humidity: -20°C -70°C; 5%-95% non-condensing
Vxlan	Manually configuring the VxLAN tunnel VxLAN distributed gateway VxLAN dual-active link access VxLAN interconnection across data centers VxLAN pass-through of L2 Protocol packets Supports modification of VxLAN outer header DSCP BGP EVPN Supports overlay split horizon, and separate control on different VNIs
STP	802.1d STP, 802.1w RSTP, 802.1s MSTP BPDU protection, root protection, and ring protection
Multicast	IGMP v1/v2c/v3 IGMP Snooping IGMP Fast Leave Multicast group policy and multicast number limit MVR PIM-SM, PIM-DM
IPv4	Static routing, RIP v1/v2, OSPF, BGP, IS-IS, BEIGRP Policy Based Routing (PBR) ECMP BFD for OSPF, BGP
IPv6	ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet IPv6 neighbor discovery Path MTU discovery MLD v1/v2 MLD snooping IPv6 Static Routing, RIPng, OSPFv3, BGP4+ Manual tunnel, ISATAP tunnel, 6-to-4 tunnel
QoS	Traffic classification based on fields in L2/L3/L4 protocol headers Committed Access Rate (CAR) traffic restriction Re-marking of 802.1P/DSCP priority

	Multiple queuing algorithms such as SP, WRR, or SP+WRR Congestion avoidance mechanisms like Tail-Drop and WRED Traffic supervision and traffic shaping Ingress and Egress ACL, supports matching L2, L3, L4, and IP quintuples and performs replication, forwarding, and discarding Hash-based load balancing algorithm to ensure session integrity
Security features	L2~L4 ACL flow identification and filtering security mechanism DDoS attack prevention, TCP-SYN/UDP Flood attack prevention Suppression of multicast, broadcast, and unknown unicast packets Port isolation Port Security, IP+MAC+port binding DHCP Snooping, DHCP Option 82 IEEE 802.1x authentication Radius, TACACS+URPF Command line hierarchical protection
Reliability	Power 1+1 backup Static/LACP link aggregation EAPS, ERPS HSRP, VRRP GR for OSPF and BGP BFD for OSPF and BGP ISSU
Management	Console, Telnet, SSH 2.0 Zero Touch Provisioning (ZTP) Web-GUI SNMP v1/v2c/v3 Upload and download of FTP/TFTP/SFTP files RMON event history Traffic statistical analysis such as Sflow
Energy saving	IEEE 802.3az

Model

AS300/56/XC



- 48-Port 10G SFP+
- 8-Port 100G/40G QSFP28

Ordering Information

Item	Description
AS300/56/XC	48-Port 10G SFP+ 8-Port 40/100G QSFP28 L3 Stackable Managed Switch (2 hot-swappable power slots with dual AC220V power supplies; 1U, 19-inch rack-mounted installation)