

# ALPHA BRIDGE- LAYER-3 Switch (AS300/32/MC)



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



Advanced Hardware Architecture and Industry-leading Port Density



Carrier-Level High-Reliability Full Layer-3 Functions



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

## Product Overview

AS300/32/MC is a new generation high-performance data center full Gigabit TOR switch oriented for cloud computing, data centers, and high-end campus networks. AS300/32/MC adopts an advanced hardware architecture design, providing cutting-edge switching performance and rich data center service features.

AS300/32/MC provides high-density 10G/25G/100G data center access capabilities. To meet the network resource pooling requirements of cloud computing data centers AS300/32/MC offers rich data center features such as VXLAN, EVPN, M-LAG, and NETCONF.

AS300/32/MC meets the requirements for building data center networks and deploying large layer-2 networks within data centers. In combination with the AS300/32/MC 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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switch, it can realize the access of 15,000+ 10 Gigabit servers, providing a complete network solution for super- large data centers.

AS300/32/MC is equipped with the 6th generation operating system with Alpha Bridge Technologies.

independent intellectual property rights. While providing high-performance L2/L3/L4 line-speed switching services, 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 upgrade, uninterrupted forwarding, graceful restart, and redundancy protection, the AS300/32/MC ensures the longest uninterrupted network communication.

AS300/32/MC 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 32-port 100G QSFP28 2-port 10G SFP+

Equipped with high-performance ASIC switching chips and multi-core processors, supports up to 6.4Tbps 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.

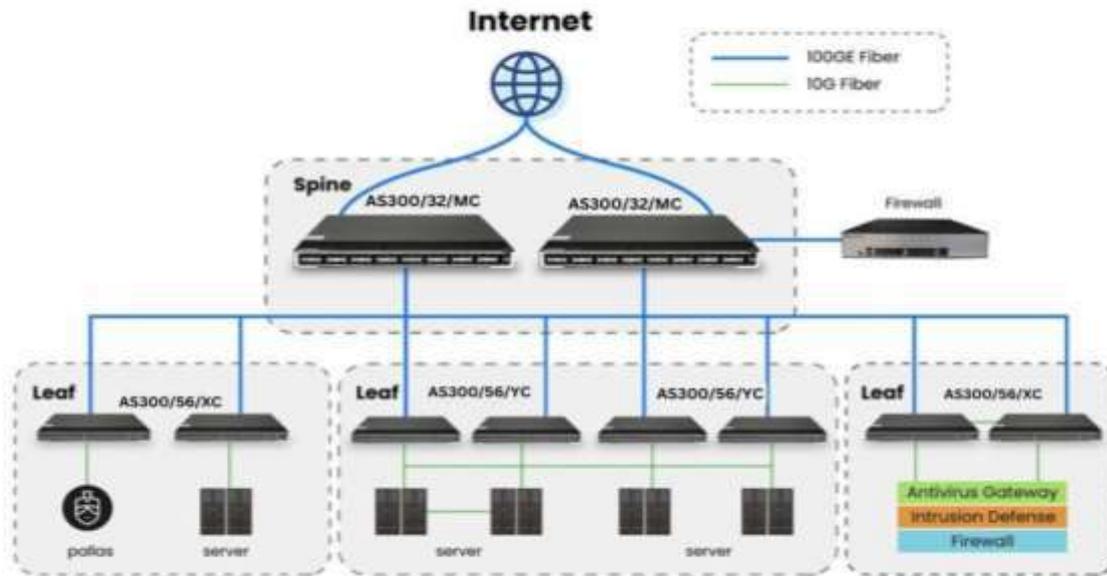
### Comprehensive Security Mechanisms

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                   | AS300/32/MC  |
|------------------------|--|
| Switching capacity     | 6.4Tbps  |
| Forwarding             | 4800Mpps   |
| Power supply slot      | 2  |
| Ports                  | 32-port 100G QSFP28<br>2-port 10G SFP+   |
| Dimensions (WxDxH)(mm) | 440x488x44   |
| Environment            | Operating temperature/humidity: -10°C-50°C; 10%-90% non-condensing<br>Storage temperature/humidity: -20°C -70°C; 5%-95% non-condensing   |
| Vxlan                  | Manually configuring VxLAN tunnel<br>VxLAN distributed gateway VxLAN dual-active link access<br>VxLAN interconnection across data centers VxLAN pass-through of L2 Protocol packets<br>Supports modification of VxLAN outer header DSCP<br>BGP EVPN<br>Supports overlay split horizon, and separate control on different VNIs  |
| STP                    | 802.1d STP, 802.1w RSTP, 802.1s MSTP<br>BPDU protection, root protection, and ring protection  |
| Multicast              | IGMP v1/v2c/v3 IGMP Snooping IGMP Fast Leave<br>Multicast group policy and multicast number limit MVR<br>PIM-SM, PIM-DM  |
| IPv4                   | Static routing, RIP v1/v2, OSPF, BGP, IS-IS, BEIGRP Policy Based Routing (PBR)<br>ECMP<br>BFD for OSPF, BGP  |
| IPv6                   | ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet IPv6 neighbor discovery<br>Path MTU discovery MLD v1/v2<br>MLD snooping<br>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<br>Re-marking of 802.1P/DSCP priority<br>Multiple queuing algorithms such as SP, WRR, or SP+WRR Congestion avoidance mechanisms like Tail-Drop and WRED Traffic supervision and traffic shaping<br>Ingress and Egress ACL, supports matching L2, L3, L4, and IP quintuples and performs replication, forwarding, and discarding<br>Hash-based load balancing algorithm to ensure session integrity |
|                        | L2~L4 ACL flow identification and filtering security mechanism DDoS attack prevention, TCP-SYN/UDP   |

|                   |   |
|-------------------|---|
| Security features | Flood attack prevention<br>Suppression of multicast, broadcast, and unknown unicast packets<br>Port isolation<br>Port Security, IP+MAC+port binding<br>DHCP Snooping, DHCP Option 82<br>IEEE 802.1x authentication<br>Radius, TACACS+URPF<br>Command line hierarchical protection |
| Reliability       | Power 1+1 backup<br>Static/LACP link aggregation<br>EAPS, ERPS<br>HSRP, VRRP<br>GR for OSPF and BGP<br>BFD for OSPF and BGP<br>ISSU   |
| Management        | Console, Telnet, SSH 2.0<br>Zero Touch Provisioning (ZTP)<br>Web-GUI<br>SNMP v1/v2c/v3<br>Upload and download of FTP/TFTP/SFTP files<br>RMON event history<br>Traffic statistical analysis such as Sflow  |
| Energy saving     | IEEE 802.3az  |

## Model

### AS300/32/MC



- 32-Port 100G/40G QSFP28
- 2-Port 10G SFP+

## Ordering Information

| Item               | Description  |
|--------------------|--|
| <b>AS300/32/MC</b> | 32-Port 40/100G QSFP28 + 2-Port 10G SFP+ L3 Stackable Managed Switch (2 power slots with dual AC220V power supplies; built-in 4 fans with left and right air ducts, 1U, 19-inch rack-mounted installation) |

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